

The Value of Network Neutrality to European Consumers

No 2013-BEREC-OT-02

Full Results Report

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1 Introduction

This document is the full results report for the project “The Value of Network Neutrality to European Consumers - No 2013-BEREC-OT-02”. The purpose of this document is to present the final project results in full detail. Readers interested in a condensed presentation of project results are encouraged to consult the summary report instead, which has been published together with the full results report.

The Body of the European Regulators of Electronic Communications (BEREC) commissioned WIK-Consult, Deloitte and YouGov with the study design, conduct, and evaluation. BEREC’s decision to commission an external study reflects the fact that the demand side of Internet Access Service – and its perception of network neutrality – has not been explored in detail yet.

The study has been designed to provide an in-depth understanding of:

- How consumers value aspects of network neutrality

And,

- The degree to which consumers’ value attribution is addressed by Internet Access Products (IAPs) offered on the market by Internet Service Providers (ISPs).

The study design considers the support of longer term research objectives, notably including how the results of the intended study could support BEREC in anticipating interactions between consumers and suppliers, which facilitate an understanding of the resulting market dynamics.

Driven by these objectives an approach that is structured in three stages has been chosen. These stages are arranged according to a waterfall model, meaning that the outcomes of the first stage influence both subsequent stages, while the outcomes of the second stage influence the third stage.

The first stage in the project developed and applied a rigorous methodology to select representative test areas. Test areas are BEREC member or observer states, in which the qualitative and quantitative research of the second and third stages, respectively, have been performed. We first identified relevant data sets that offer variables, which in turn allow robust categorisation of test areas. Following a carefully determined methodology, we then selected test areas. Thus, the primary outcome of the first stage in the project is the list of test areas. The key instrument to identify these test areas is a cluster analysis. The present report addresses the selection of test areas as follows:

- Section 2.1 introduces the respective research objectives.
- Chapter 4 presents the four selected test areas. It gives comprehensive insight into the electronic communications market situation as well as Internet consumer behaviour in the areas.
- Section 5.1 explains the chosen cluster analysis methodology. This also includes a detailed outline of indicators used in the cluster analysis.

The second stage focused primarily on qualitative research methods. It developed an understanding of what consumers use the Internet for, and what matters to them regarding the characteristics of their Internet access. We began by investigating the electronic communication market environment and the existing Internet Access Service (IAS) offerings in the test areas. This was followed by an investigation into Internet consumer behaviour in the test areas focusing on usage patterns, the role that Internet plays in consumers' lives, and their attitudes to network neutrality. The research included an exploration of consumers' Internet usage patterns, their perceptions of the test area's electronic communications market, and their understanding and conceptualisation of network neutrality. The primary outcome of the second stage is an information package, which was used in the survey conducted during the third stage, to inform consumers regarding network neutrality aspects. The key instrument to gain a solid basis for preparing the information package were focus group discussions conducted in the test areas. This report addresses the qualitative research of this project as follows:

- Section 2.2 introduces the respective research objectives.
- The majority of Chapter 3 documents outcomes from related research work of relevance to the design of the focus groups.
- Section 5.1.1 explains the chosen focus group methodology.
- Chapter 6 is dedicated to the detailed result presentation of the focus groups performed in the test areas. This covers both test area-specific results and themes emerging across test areas.
- The discussion of results, including those of the qualitative research portion, takes place in Chapter 8.
- The conclusions and implications presented in Chapter 9 relate in part to insight obtained in the qualitative research.

The third stage measured the value of network neutrality in the test areas and compared the results across test areas. Measuring and comparing in this context refers to quantitative research methods. In particular, the research quantitatively assessed the extent to which aspects of network neutrality influence a consumer's choice for an (IAS) product. To this end, a survey has investigated consumers' socio-demographic and other relevant characteristics as well as consumers' Internet usage patterns. The survey captured the effect of individual IAS attributes on consumers' choice. By comparing survey results with IAPs offered in the test areas we were able to conclude whether electronic communication markets in the test areas work efficiently. The primary outcome of Stage C is insight into the value that consumers attribute to network neutrality in their choice of Internet access. The key instrument to implement the survey was a conjoint experiment. This report addresses the quantitative research of this project as follows:

- Section 2.3 introduces the respective research objectives.
- Several parts of Chapter 3 document outcomes from related research work of relevance to the design of the survey, especially the conjoint choice experiment.
- Section 5.3 explains the chosen survey and conjoint choice methodology.
- Chapter 7 is dedicated to the detailed result presentation of the survey (integrating the conjoint choice experiment) performed in the test areas. This covers both test area-specific results and themes emerging across test areas.
- The discussion of results, including those of the quantitative research portion, takes place in Chapter 8.
- The conclusions and implications presented in Chapter 9 relate to a great extent to insight obtained in the quantitative research.

2 Research Objectives

The study's overall research objectives served as a structural means to organise the project into the three major stages introduced in the previous section. For each stage, specific research objectives have been determined as follows:

- Drawing a List of Test Areas
 - i. To identify relevant data sets that offer variables that allow robust categorisation of countries.
 - ii. To identify an appropriate methodology to select test areas.
 - iii. To identify the specific test areas.
- Exploring consumers' understanding and conceptualisation of network neutrality
 - iv. To investigate the electronic communication market environment and specifically existing IAS offerings in the test areas.
 - v. To investigate Internet consumer behaviour in the test areas focussing on usage patterns, the role that Internet plays in consumers' lives and their attitudes to network neutrality.
 - vi. To explore consumers' Internet usage patterns, perceptions of the test area's electronic communications market as well as their understanding and conceptualisation of network neutrality.
- Explaining consumers' choices of IAS offerings
 - vii. To investigate consumers' socio-demographic and other relevant characteristics.
 - viii. To investigate consumers' Internet usage patterns.
 - ix. To investigate the effect of individual IAS offerings attributes on consumers' choice.
 - x. To make an assessment of the degree to which electronic communication markets in the test areas work efficiently.

The subsequent sections provide detailed information on these ten specific research objectives, structured according to the project stage they belong to. Each research objective is explained, a suited approach is depicted, and the intended research outcomes are determined.

2.1 Drawing a list of test areas

The overarching research objective of this first project stage was to select a set of test areas representative for BEREC member and observer countries. Naturally, such a selection has to be based on a rigorous methodology. First, however, one has to identify data sources that offer insights into the relevant variables to conduct such a selection process. The resulting selection of test areas was intended to build a robust panel of users in order to evidence general trends and patterns of behaviour across Europe. Thus, in summary, the overarching research objective to be fulfilled could split up in three smaller, methodologically addressable research objectives:

- i. By conducting desk research, to identify relevant data sets that offer variables that allow robust categorisation of countries.
- ii. By conducting desk research, to identify an appropriate methodology to select test areas.
- iii. By quantitative analysis of secondary data, to identify the specific test areas.

Fulfilling these research objectives enabled the project to answer the respective research questions in the project's tender specifications. Table 2-1 illustrates how the research objectives map onto the research questions identified in the tender specifications.

Table 2-1: Mapping of research objectives i, ii and iii onto relevant research questions as laid out in the tender specifications

	Research Objective		
	i	ii	iii
Which data can identify non-obvious differences and similarities between the different parts of the BEREC member and observer countries?	•	•	
Which methodology will be chosen to identify the categories of similar geographic areas, according to relevant criteria, and then to choose one or more typical test areas from within each category?		•	
Which geographic unit should be used for the test areas?		•	
How many test areas will be needed to present a representative picture, in light of the criteria and geographic categories identified as relevant?			•
How is representativeness of the sample of consumers achieved in each of the test areas?	This question refers more to the sampling technique of survey and is hence addressed by the accordingly determined methodology for the quantitative research.		
To what extent is it possible to extrapolate any conclusions for the test areas to other geographic areas, taking into account considerations of differences and similarities between areas in a given category and between categories?*		•	•

2.1.1 Research objective i – Identification of relevant data sets

It is a key goal of this project to move beyond the current body of knowledge in order to create a better understanding of the ecosystem, practices of ISPs, market dynamics and consumer behaviour and expectations in the light of network neutrality and the value that consumers attach to this. It is clear that multiple perspectives are required in order to create this improved understanding.

A natural starting point for this was to explore available data sources and gather relevant variables that facilitate understanding and act as a baseline for gaining insights into characteristics and dynamics in the current ecosystem. Based on available data it is possible to identify similar clusters or segments of the ecosystem as a basis for further exploration. Table 2-2 provides an indication of such variables and the availability of data sources linked to each of them.

Table 2-2: Relevant criteria/variables and available data sources

Relevant Variable		(Potential) Data Source			
Variables Identified in the Tender Specifications					
General Economic Health Criteria		EUROSTAT ¹	OECD ²	ITU ³	Other
	Internet Penetration Rate for Mobile Access	X	X		
	Internet Penetration Rate for Fixed Access	X	X	X	
Competition Criteria		EUROSTAT	OECD	ITU	Other
	Population Size	X			
	Profitability of ISPs	X	X		
	Number of Network Providers (mobile)				BEREC
	Number of Network Providers (fixed)				BEREC
	Market Shares of Network Providers (mobile)	X			
	Market Shares of Network Providers (fixed)	X		X	
	Levels of Switching				X ⁴
Technical Criteria		EUROSTAT	OECD	ITU	Other
	Penetration Rate of Specialised Services (e.g. IPTV)				X ^{5,6}
	Availability of Tiered Bundles		X ⁷		
	Number of NN Incidents		X		X ⁸

1 EUROSTAT statistics derived from Information society statistics (isoc/t_isoc) indicators. See: http://epp.eurostat.ec.europa.eu/portal/page/portal/information_society/data/main_tables.

2 OECD statistics are provided on the OECD Broadband Portal, see:

<http://www.oecd.org/sti/broadband/oecdbroadbandportal.htm>.

3 ITU statistics are provided ITU's portal for key ICT data and statistics, see:

<http://www.itu.int/net4/itu-d/icteye/>.

4 Has indicators on Internet services with regard to Market Performance Indicators (MPIs), see:

http://ec.europa.eu/consumers/consumer_research/dashboard_part1_en.htm.

5 IPTV Statistics – market analysis, Point Topic (2013), see:

<http://point-topic.com/wp-content/uploads/2013/02/Point-Topic-Global-IPTV-Statistics-Q1-2013.pdf>.

6 VoIP Statistics Market Analysis, Point Topic (2012), see:

<http://point-topic.com/wp-content/uploads/2013/02/Sample-Report-Global-VoIP-Statistics-Q2-2012.pdf>.

7 OECD (2011): Broadband Bundling – Trends and Policy Implications.

8 A view of traffic management and other practices resulting in restrictions to the open Internet in Europe, BEREC (2012).

Levels of Digital Literacy	X			
Legal / Regulatory Criteria	EUROSTAT	OECD	ITU	Other
Levels of Enforcement of Network neutrality (3 Groups)			X	X ⁹
<i>Preliminary Suggestions for Additional Relevant Variables</i>				
Internet Use Criteria	EUROSTAT	OECD	ITU	Other
Use of Internet	X			
Devices Used to Connect to the Internet	X			
Relevant Policy Indicators			X	
Levels of Internet Traffic			X	

Based on the preliminary scan of the data available it became clear that a considerable amount of data is available to generate an overview of the characteristics and trends in Europe's Internet ecosystem. Relevant data sources include:

- **EUROSTAT** provides an extensive list of Information Society related datasets as well as datasets concerning the Telecom Industry.
- The **OECD Broadband Portal** provides a number of additional datasets (in particular in relation to pricing) and provides data points for BEREC members or observer countries that are not always covered by Eurostat data (e.g. Former Yugoslav Republic of Macedonia, Liechtenstein, Montenegro, Switzerland, Turkey¹⁰).
- The **ITU ICT Eye portal** for key ICT data and statistics contains relevant statistics as well as more regulatory related variables.
- The **World Economic Forum** provides, in their Global Information Technology Index¹¹, a number of datasets for 144 different countries (covering 23 of BEREC member countries, including countries such as Iceland, FYROM, Norway, Serbia, Switzerland and Turkey), which are divided in 10 pillars. These include Infrastructure and digital content (regrouping indicators such as mobile network coverage, Internet bandwidth, accessibility of digital content), Affordability (regrouping indicators such as prepaid mobile cellular tariffs, fixed broadband Internet tariffs, Internet & telephony competition), and Individual usage (regrouping indicators such as Mobile phone subscriptions, Fixed broadband Internet subs, Mobile broadband subscriptions).

As fixed and mobile Internet indicators differ significantly, the variables presented in Table 2-2 have been re-structured, and are presented in Table 2-3. It indicates with an

See: http://ec.europa.eu/digital-agenda/sites/digital-agenda/files/Traffic%20Management%20Investigation%20BEREC_2.pdf.

9 Open Forum Academy – Net Neutrality in the EU country Factsheets (2013), see:

<http://www.openforumacademy.org/library/ofa-research/OFA%20Net%20Neutrality%20in%20the%20EU%20-%20Country%20Factsheets%2020130905.pdf>.

10 Iceland and Norway are often also covered in EUROSTAT, while Serbia is not generally covered by EUROSTAT nor the OECD.

11 <http://www.weforum.org/reports/global-information-technology-report-2014>.

'X' where a data source has data for each of the relevant variables, as well as the number of countries which are covered.

Table 2-3: Mobile/fixed Internet: relevant criteria/variables and available data sources

<i>Relevant Variable</i>	<i>(Potential) Data Source</i>				
<i>Fixed Internet</i>	EUROSTAT	OECD	ITU	Other	Countries covered
Internet Penetration Rate for Fixed Access	X	X	X		31
<i>Fixed Internet Market Characteristics</i>	EUROSTAT	OECD	ITU	Other	
Number of Network Providers (fixed)				BEREC	27
Market Shares of Network Providers (fixed)	X		X		27
Revenues (Profitability of ISPs)	X	X			27
<i>Mobile Internet</i>	EUROSTAT	OECD	ITU	Other	
Internet Penetration Rate for Mobile Access	X	X			31
<i>Mobile Internet Market Characteristics</i>	EUROSTAT	OECD	ITU	Other	
Number of Network Providers (mobile)				BEREC	
Market Shares of Network Providers (mobile)	X				31
Revenue	X				31
Availability of Tiered Bundles					20
<i>Consumer Characteristics</i>	EUROSTAT	OECD	ITU	Other	
Use of Internet	X	X			32
Devices Used to Connect to the Internet	X				28
Levels of Internet Traffic - broadband			X		3
Levels of Internet Traffic - mobile			X		11
Levels of Digital Literacy	X				31
Levels of Switching				X	28
Penetration Rate of Specialised Services (e.g. IPTV)				X	5
<i>Network neutrality</i>	EUROSTAT	OECD	ITU	Other	
Levels of enforcement of network neutrality (3 Groups)			X	X	
Number of NN incidents		X			
Data Caps		X			
<i>Policy Indicators</i>	EUROSTAT	OECD	ITU	Other	
Relevant Policy Indicators			X		

The analysis of these data sources allowed the following conclusions for the research to be drawn:

- A lot of data is available concerning Internet penetration; both from the perspective of the supply side (in terms of coverage (e.g. broadband, NGA, advanced 3G), advertised speeds, price ranges and data caps) and from the demand side (e.g. number of subscriptions, their speed, technology and penetrations rates (by individuals, households, enterprises)). However, the data which has been identified regarding the level of Internet traffic and the

penetration rate of specialised services currently only covers a limited number of countries.

- With respect to competition, sufficient data is available to gain insight into the supply side (regarding operators, market shares (e.g. incumbents versus new entrants) and revenues) as well as the demand side perspective (regarding Internet services and levels of switching, consumer perceptions of choice, comparability, etc.). However, at this stage, insufficient aggregate data regarding the number of fixed and mobile network providers per country has been identified.
- With regard to technical as well as legal criteria the available data seems more dispersed upon first inspection, although we have already identified relevant studies and some EUROSTAT data is available as well as from ITU.
- With regard to network neutrality, and particularly levels of enforcement of network neutrality, and the number of NN incidents, it seems to be difficult to identify country specific data. The Country Factsheets on 'Net Neutrality in the EU'¹² do provide reports of incidents in specific countries, but do not provide a complete overview per country.
- It is also clear that data is difficult to identify for specific countries. For non-EU countries that are part of the OECD (such as Iceland, Norway, Switzerland) some relevant data is available, however, for countries such as Croatia, FYROM, Liechtenstein and Serbia it is more difficult to find comparable data.

Research Outcomes:

- Comprehensive dataset for BEREC member and observer countries

2.1.2 Research objective ii – Identification of a rigorous segmentation methodology

The collection of micro-level data with a sufficient level of detail to give a meaningful construction of consumer preferences required an intense data collection. Given the need for high quality and detailed data collection and subsequent analysis, covering the entire set of BEREC member and observer countries (the BEREC Member and Observer NRAs comprise a total of 36 countries¹³) was not feasible within the scope of this project. For this reason, it was crucial to draw a limited, but meaningful list of countries or geographic segmentation (further referred to as strata) that was

¹² Openforum Academy (2013), <http://www.openforumacademy.org/library/ofa-research/OFA%20Net%20Neutrality%20in%20the%20EU%20-%20Country%20Factsheets%2020130905.pdf>.

¹³ The 28 EU Member States; Candidate Countries: Former Yugoslav Republic of Macedonia, Iceland, Montenegro, Serbia and Turkey; European Economic Area (EEA) countries: Liechtenstein, Norway; and Switzerland.

representative of the diversity of the European electronic communications markets. This section sets out to discuss the accordingly determined approach to sketch a rigorous methodology for country segmentation.

Each of these strata had to be internally as homogenous as possible, whilst ensuring differences between the strata are as large as possible across the variables identified in the preceding section. Cluster analysis is a statistical methodology that lends itself naturally to this purpose. Therefore, we applied it in order to select the test areas for the study. The methodology itself, how it ensures a rigorous selection of test areas and potential limitations, are discussed in-depth in Section 5.1.

Research Outcomes:

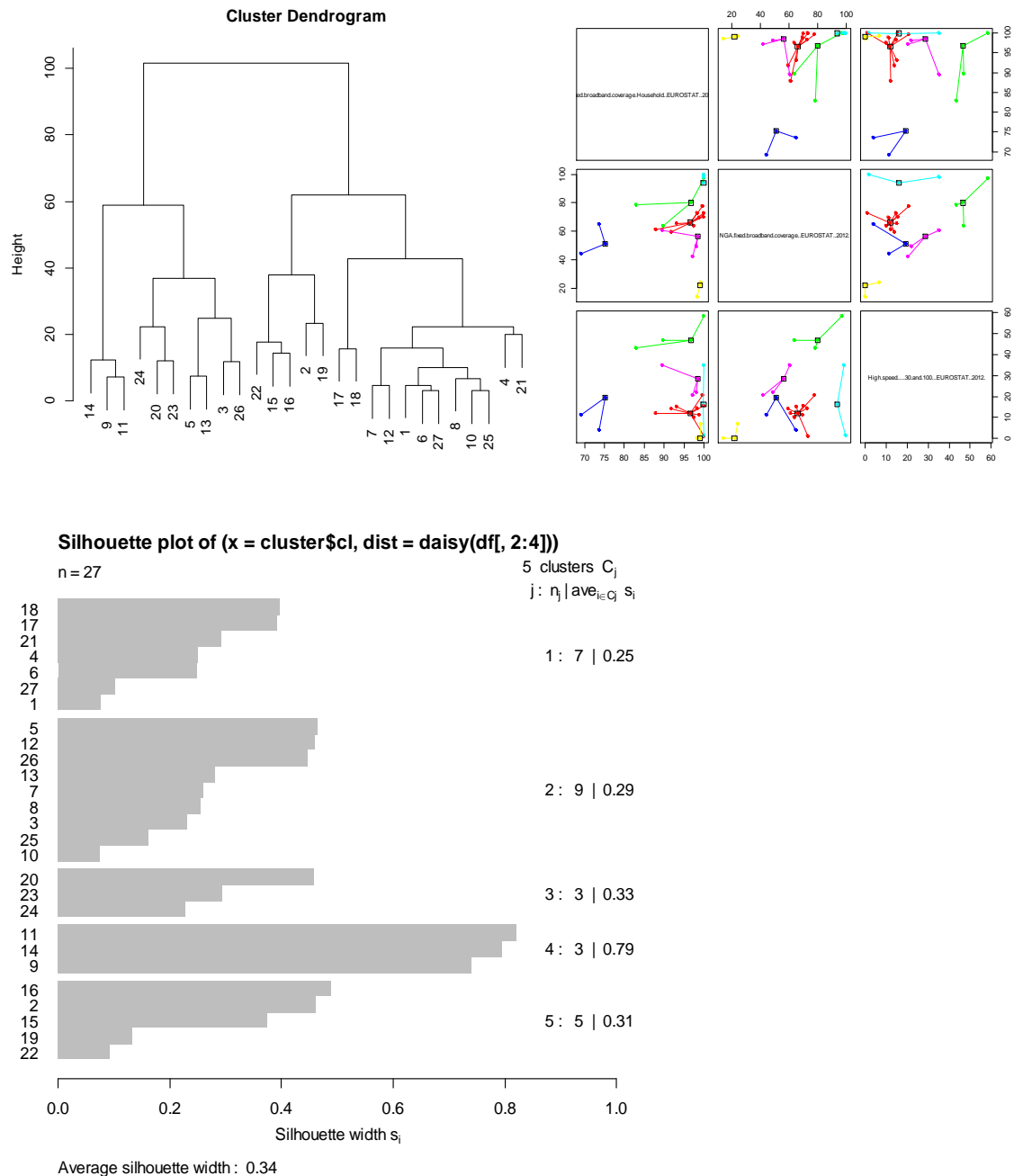
- Validated segmentation criteria.
- A rigorous methodology to select the test areas.

2.1.3 Research objective iii – Identification of test areas

The techniques deployed for a cluster analysis largely depend on the nature of the data. While Section 5.1 provides information about how the cluster analysis was implemented in the project, and based on which indicator data, the following gives a brief introduction into cluster analyses. It reflects two sample cluster analyses for fixed and mobile Internet, which were conducted as proof-of-concept on a limited set of indicators.

Data used for the cluster analyses of fixed broadband include broadband penetration rate, NGA fixed broadband coverage and the take-up rate of high-speed Internet connection (from 30 Mps upward), for the 27 countries for which we had data available. From left to right Figure 2-1 shows the dendrogram for this dataset, the heatmap and the silhouette plot, all for fixed broadband.

Figure 2-1: Clustering based on broadband penetration rate, NGA intensity and high-speed Internet take-up for fixed broadband

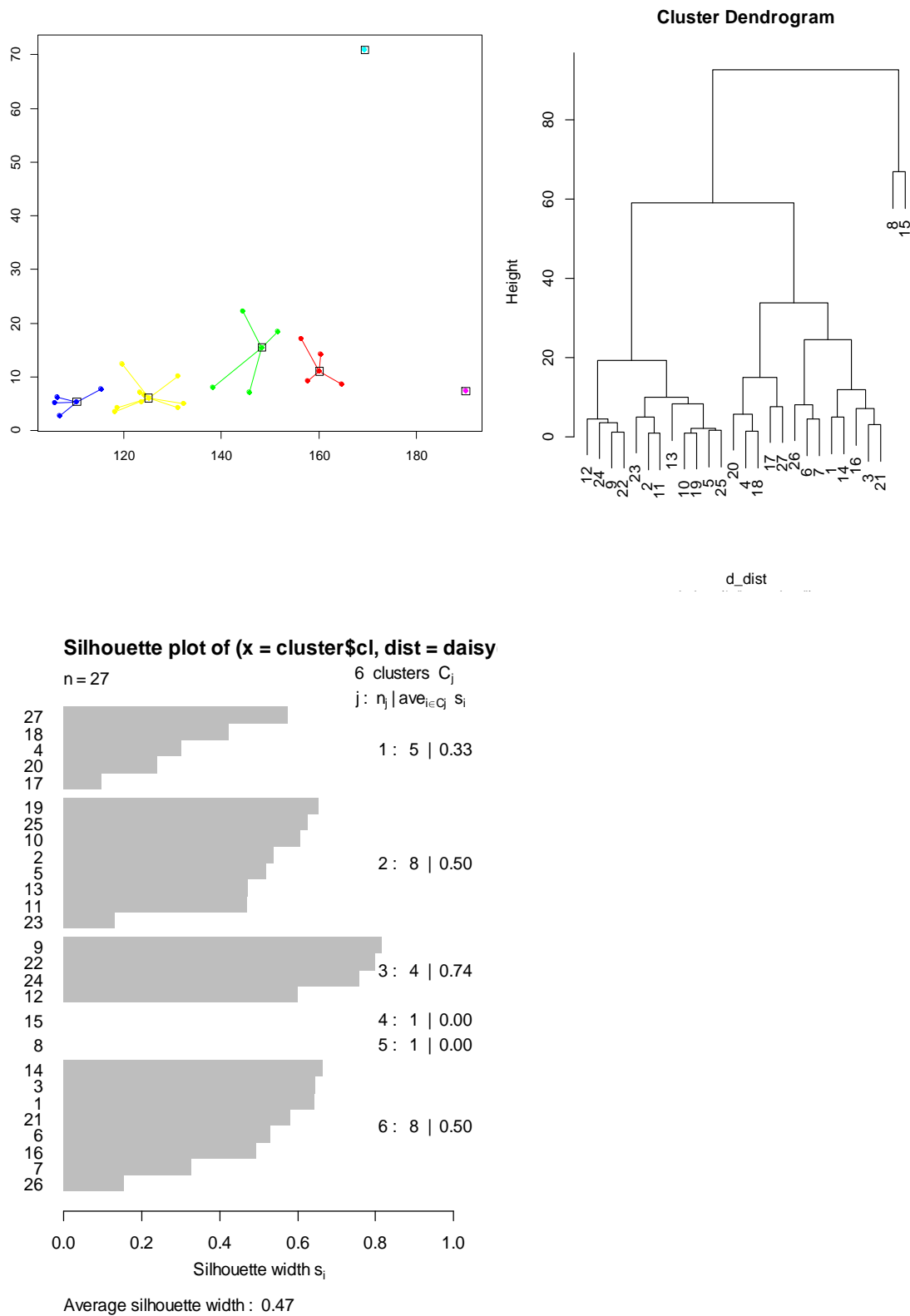


Based on the affinity propagation (AP) clustering method the optimal amount of clusters for this dataset is 5. The clusters are as follows:

- **High broadband penetration, high NGA coverage and low high-speed Internet take-up.** This cluster is formed by seven countries, mostly of small and medium size: five are small countries (less than 10 million inhabitants), one medium country (from 10 to 40 million inhabitants) and one large country (more than 40 million inhabitants).
- **High broadband penetration, medium NGA coverage and medium high-speed Internet take-up.** This cluster groups nine countries, quite heterogeneous in terms of size: two are large countries, three are medium countries while four are small countries.
- **Comparatively low broadband penetration, low NGA coverage and low high-speed Internet take-up.** This is the only cluster with a relatively low broadband penetration rate. This cluster groups three countries, one of large size and two small ones.
- **High broadband penetration rate, very low GA coverage and very low high-speed Internet take-up.** Three countries compose this cluster, two large countries and one medium.
- **High broadband penetration rate, high NGA coverage and high high-speed Internet take-up.** This cluster includes five countries, all of relatively small size: three are medium countries, two are small countries.

A similar proof-of-concept analysis was performed for mobile Internet. The data used for the cluster analysis of mobile Internet included mobile penetration rate and mobile broadband penetration for data. It was decided not to include 3G penetration rate as it is very high for all countries, therefore its relevance as illustrative variable is quite limited. From left to right Figure 2-2 shows the dendrogram for this dataset, the heatmap and the silhouette plot, all for mobile Internet.

Figure 2-2: Clustering based on mobile menetration and mobile data broadband penetration for mobile Internet



Based on the affinity propagation (AP) clustering method the optimal amount of clusters for this dataset is 6. The large number of clusters is due in part to the presence of two outliers, which each create a cluster. The clusters that emerge from the analysis are as follows:

- **Medium to high mobile penetration, medium to high mobile data broadband penetration.** This cluster groups five countries, of which one is a large country (more than 40 million inhabitants), one is a medium country (between 10 and 40 million inhabitants) and three are small countries (less than 10 million inhabitants).
- **Medium mobile penetration, medium mobile data broadband penetration.** This cluster is formed by eight countries, quite heterogeneous in terms of size: two are large countries, three are medium countries and three are small countries.
- **Low mobile penetration, low mobile data broadband penetration.** This cluster groups four countries, one of which is a large country, while one is a medium country and the remaining two are small countries.
- **Very high mobile penetration, medium mobile data broadband penetration.** This cluster is formed by just one small country, which stands as an outlier among the 27 countries included in the cluster analysis.
- **Very high mobile penetration, very high mobile data broadband penetration.** This cluster is formed by just one medium country, which stands as an outlier among the 27 countries included in the cluster analysis.
- **High mobile penetration, high mobile data broadband penetration.** This cluster groups eight countries, including one large country, four medium countries and three small countries.

As the two proof-of-concept analyses above show, it was paramount that the treatment of the data for the analysis was transparent and that a sensitivity analysis is carried out to ensure the robustness of the clustering results. As part of this exercise, it was paramount that the identified clusters were clearly interpreted. The characteristics that describe each cluster needed to be carefully examined. This assessment provided key insights as to why certain groups of countries were different from others and in what respect. This facilitated the understanding of the European Internet ecosystem and at the same time allowed for a sound basis for the selection of test areas.

A comparison of the proof-of-concept cluster analysis for fixed broadband and mobile Internet showed how much the number and characteristics of countries differed with respect to those two technologies, so that it is difficult to find common elements for grouping. In fact, the result of the cluster analysis for mobile Internet was conspicuous, with six clusters, two of which were formed by outliers which cannot be compared to the other clusters. The results emphasise the fact that fixed broadband and mobile Internet are quite different and cannot, as such, be grouped for the analysis. One way to address this issue was to keep the “at home” and the “out of home” usage situations

separate. This enabled a coherent, methodologically sound and representative selection of countries.

Research Outcomes:

- Clusters of homogenous groups of countries that differ between groups as a basis for segmentation
- Selection of test areas

2.2 Exploring consumers' understanding and conceptualisation of network neutrality

The overarching objective of the second project stage was to explore consumers' understanding and conceptualisation of network neutrality in the selected test areas. First and foremost, it was necessary to investigate both the supply and demand in each of the test areas. To understand the supply side, it was necessary to gather information on the electronic communication market environment in general as well as specifically on existing IAS offerings. As regards the demand side, we conducted a review of existing studies on Internet consumer behaviour with a focus on usage patterns, the role that the Internet plays in consumers' lives and their attitudes to network neutrality. Both parts of the desk research have built the frame for exploring consumers' understanding and conceptualisation of network neutrality through focus group discussions in each of the test areas. The focus groups, which formed the main element of the qualitative research in the study, also served to unveil significant cultural and social differences between the test areas, as well as the terminology that consumers use to describe network neutrality and other specifications of IAS offerings. Thus, in summary, the overarching research objective to be fulfilled was split up into three smaller, methodologically addressable research objectives:

- i. By conducting desk research, to investigate the electronic communication market environment and specifically existing Internet Access Service offerings in the test areas.
- ii. By conducting desk research, to investigate Internet consumer behaviour in the test areas focussing on usage patterns, the role that Internet plays in consumers' lives and their attitudes to network neutrality.
- iii. By conducting focus group discussions, to explore consumers' Internet usage patterns and perceptions of the test area's electronic communications market as well as their understanding and conceptualisation of network neutrality.

Fulfilling these three research objectives also enabled the project to answer the respective research questions raised by the tender specifications. Table 2-4 depicts how the three research objectives map onto these research questions. It should be noted that the research objectives are strongly intertwined. For instance, in-depth

knowledge of the specific electronic communications market was needed to conduct the focus groups, but the knowledge gained in the focus group led to insight as regards which IAS attributes consumers look out for. We therefore applied a grounded theory (Corbin & Strauss 1990, 2008)¹⁴ inspired approach by building evidence from different sources using constant comparison along the way¹⁵.

Table 2-4: Mapping of research objectives iv, v and vi onto relevant research questions as laid out in the tender specifications

	Research Objective		
	i	ii	iii
What is the appropriate way (e.g. terminology, tone of language, educational material) to describe network neutrality to consumers in each of the test areas?		•	•
In the different test areas, what are the aspects of network neutrality that seem to have the most influence on customer choice?	•	•	•
Are there risks of biases in the quantitative study that should be mitigated?	•		•
Should specific factors be taken into account when analysing the causes supposedly inefficient behaviour of ISPs?	•	•	•

2.2.1 Research objective iv - Investigation of electronic communication market environment

Research objective iv refers to investigating the supply-side of the electronic communication market in the respective test areas. This investigation drew on the data already gathered for the cluster analysis performed for selecting test areas. It extended and detailed this data further as regards the specifics of existing IAS offerings. In order to achieve a comprehensive overview of the electronic communication markets' environment in the test areas, we drew on data sets already in place at WIK-Consult, Deloitte and YouGov. In order to sort and further detail these data sets, we referred to other secondary sources. We focused on sources that allow a deeper understanding of the supply-side in the test areas such as:

- DG Connect (2012): Broadband Internet Access Costs (BIAC)
- DG Comm (2012): Broadband coverage in Europe in 2012
- OECD (2011): Broadband Bundling – Trends and Policy Implications
- Eurostat: Data on the information society, especially the e-Communications Household Survey
- EU (2013): Digital Agenda Scoreboard

¹⁴ Corbin, J. M. & Strauss, A. (1990), Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 13(1), 3-21.

Corbin, J. M., & Strauss, A. L. (2008), *Basics of qualitative research: techniques and procedures for developing grounded theory* (3 ed.). Thousand Oaks, Calif.: Sage Publications, Inc.

¹⁵ We describe the principles of grounded theory and constant comparison in more depth in Section 5.2.

- OECD (2013): Communications Outlook
- EITO, ICT Market Report 2013/14
- Reports by NRAs from the selected test areas
- Desk Research of actual ISP's offers incl. information presented on their websites as regards network neutrality, product price lists and catalogues
- Desk Research of country-specific reports of electronic communication markets
- Consultation with experts from the World Internet Project¹⁶ for specific countries

Research Outcomes:

- Dataset comprising information on the variables relevant for the analysis of the electronic communications markets in the test areas as regards available broadband products covering the main consumer types and representative ISPs, including:
- Information on bundling practices and pricing. Bundling may mean 2/3/4/5-play as well as a bundled offer of IAS with content or applications (e.g. with a music flat rate).
- Information about network neutrality policies in the test areas
- Information about how ISPs present that information to consumers

Chapter 4 reflects the outcome of a coordinated effort between the study team and local NRAs in the test areas regarding research objective iv and v (see next section). We worked in close coordination with local NRAs, who know their market and the existing research for it best. We discussed and consolidated with them the data we prepared for research objective iv and v. Primary focus in this coordination activity was on robust data – the respective NRA's experience facilitated a critical assessment of data quality.

2.2.2 Research objective v – Investigation of Internet consumer behaviour

Whilst research objective iv has shed light on the supply-side of the electronic communications markets in the selected test areas, research objective v focuses on demand-side data. Again, we drew from data sources already available amongst the study team as well as secondary sources. Informative secondary sources for the second research objective included:

- Cisco VNI Data
- ComScore Data
- StatCounter Global Internet Traffic Data

¹⁶ See <http://www.worldinternetproject.net>; WIK-Consult heads the German chapter of the World Internet Project and is an active part of this expert network.

- DG Comm (2013): E-Communications Household Survey
- DG Health and Consumers (2012): Consumer Market Monitoring Survey
- TNS Infratest Digital Life Data
- Desk Research into specific publications referring to consumer behaviour in the test areas e.g. by NRAs, local ISPs market research, NGOs, consumer rights groups
- Data from the World Internet Project (2013) and consultation with experts from the World Internet Project¹⁷ for specific countries

One key framing factor of consumer behaviour that had to be taken into account for the envisaged research project was the (perceived) ability and motivation of consumers to switch providers. The Consumer Market Monitoring Survey (DG Health and Consumers¹⁸) provides comprehensive insights into the perceived breadth of ISP choice as well as actual switching of ISPs across Europe. The data indicates that in 23 out of the 29 surveyed countries more than 50 percent of the respondents feel that there are enough ISPs available to choose from. The lowest scores stem from Iceland, Ireland and Cyprus. As regards actual switching, significant differences between countries emerge. Lithuania and Germany exhibit the lowest actual switching rates with just 3 and 4 percent of respondents having switched their supplier in the respective year. In Portugal and Spain this share is at 21 and 20 percent respectively. This is somewhat surprising inasmuch as consumers across all countries do not seem to perceive switching as particularly difficult according to the same survey.

Research Outcomes:

- Information about the demand for Internet Access Service offerings in the test areas
- Information about Internet usage patterns in the test areas
- Information about switching behaviour and perceived breadth of ISP choice / ability to switch

Chapter 4 reflects the outcome of a coordinated effort between the study team and local NRAs in the test areas regarding research objective iv and v (see next section). We worked in close coordination with local NRAs, who know their market and the existing research for it best. We discussed and consolidated with them the data we prepared for research objective iv and v. Primary focus in this coordination activity was on robust data – the respective NRA's experience facilitated a critical assessment of data quality.

¹⁷ See <http://www.worldinternetproject.net>; WIK-Consult heads the German chapter of the World Internet Project and is an active part of this expert network.

¹⁸ http://ec.europa.eu/consumers/consumer_research/dashboard_part2_en.htm .

2.2.3 Research objective iv – Exploration of consumers’ understanding and conceptualisation of network neutrality

Although the main purpose of the focus group discussions was to explore consumers’ understanding and conceptualisation of network neutrality, they also served to explore the broader role that the Internet plays in consumers’ lives and the process they go through and the service attributes they consider when selecting a new IAS provider. In general, a funnel approach was deemed most appropriate to develop a discussion guide for a focus group discussion, i.e. starting with broad, general and easy to answer questions and steering the discussion to more complex and detailed issues¹⁹. Thus, it seemed most natural to first discuss the role that the Internet plays in participants’ lives in general before turning to their selection process for a new IAS provider and leading the participants carefully to an extended discussion about network neutrality.

Published qualitative research on the role that the Internet plays in consumers’ lives and consumers’ ISP choices is, however, scarce. Published research either revolves around a period, when the public Internet was much less mature, and its potential effects on consumer behaviour or explores particularly vulnerable groups using specific Internet-based applications. These papers seem to have little relevance to the project.

One key research outcome of this first part of the focus group discussions was an understanding of how participants in the specific test areas approach ISP choice, which IAS attributes they find most relevant for their choice and how they understand and describe them. This information guided the development of attributes and levels for the conjoint analysis in the survey (cf. research objective ix). Additionally, the insights gathered as regards the role that the Internet plays in participants’ lives aided in the development of the parts of the survey that investigated general Internet behaviour and usage patterns (cf. research objective viii).

As regards the specific issue of network neutrality, two relevant qualitative explorations of consumers’ attitudes were identified in an initial literature review. Lawford et al. (2009)²⁰ conducted a study of immediate relevance to the project. They used focus group discussions to explore Canadian consumers’ perceptions of network neutrality. Given the highly involved profile of the focus group participants, it still seems surprising that one major finding in the focus group discussions was that participants’ “awareness and recognition of the Term “net neutrality” was very limited”. The majority of participants were unfamiliar with the term. Those who had heard the term before still lacked a clear idea of its meaning. Quail and Larabie (2010) present similar findings, albeit based on less substantive evidence. In addition to their discourse analysis of newspaper articles on network neutrality, they conducted one focus group with communication studies students at a Canadian university in March 2010. Their participants were also (in spite of their involvement in the matter) largely unaware of the

¹⁹ We describe our approach to focus groups in more detail in Section 5.2.

²⁰ Lawford, J.; Lo, J. & De Santis, M. (2009): Staying Neutral: Canadian Consumers and the Fight for Net Neutrality. Public Interest Advocacy Centre: Ottawa. Available at: <http://tinyurl.com/6fnbu73> (accessed January 2014).

term network neutrality. When provided with information about network neutrality, they gained an understanding of the concept and engaged more in the discussion.

These qualitative results are further supported by a mixed-methods study conducted by Kisielowska-Lipman (2012)²¹. As part of this study, a survey of 2,048 UK consumers was carried out to shed light on their understanding of traffic management. First and foremost, her results concur with Lawford et al.'s (2009) and Quail and Larabie's (2010) findings as regards consumers' lack of awareness of the term "traffic management". She found that even technology-savvy participants had difficulties grasping the term and vulnerable consumers were even unable to link the term to the Internet. However, her work substantially extends the studies discussed in the above as she also shed light on participants' actual information search behaviour.

Two conclusions with immediate relevance to the planned research have been drawn from these papers. First, it appeared to be unlikely that the consumers would arrive at the focus group discussions with significant prior knowledge about network neutrality, nor would they likely have formed strong attitudes about network neutrality. This needed to be reflected in the discussion guide for the focus groups which had to be designed in such a way that it can uncover participants' attitudes towards network neutrality without asking them directly or unduly biasing their views. Second, these results show that respondents in the survey may place undue weight on service attributes they can easily grasp such as price, whilst neglecting potentially more important aspects of the service offer because of their technical jargon. However, Lawford et al.'s (2009) paper indicates that consumers do not take network neutrality issues lightly when presented with factual information about, e.g., traffic management practices. This lends support to this research project, part of which was to develop an unbiased information package. The following paragraphs briefly summarise insights gathered from the field of consumer behaviour research as well as behavioural economics on how to effectively design such an information package.

In order to approach the development of an information package encapsulating information about the functioning of the Internet and how it can be used for different purposes as well as mainly network neutrality issues, one has first to realise that the human information processing system is notoriously idiosyncratic and complex. People mentally construct, interpret and (mis-)understand information. Thus, it is unlikely that merely presenting all relevant options and correct information generates the appropriate interpretation and response.

Kisielowska-Lipman (2012) provides some tentative insights into consumers' understanding of technical terms frequently used in current information about traffic management procedures by broadband providers. The results indicate that technological jargon without sufficient explanation is unlikely to aid consumers' understanding of network neutrality. This further underlines the relevance of careful information package development.

21 Kisielowska-Lipman, M. (2013), Lost on the Broadband Super Highway. Consumer Focus.

After performing focus groups in the test areas, we were able to conduct an analysis regarding specific technical terms and their understanding by the participants in the focus groups. As focus groups took place in four test areas, we were able to conduct this analysis both for each test area and in aggregated form across all test areas. This allowed us to identify differences and commonalities.

To aid the development of regulated consumer information, the Better Regulation Executive and National Consumer Council, as an outcome of their study in 2007²², recommends five “tests” to consider when developing information packages:

1. Have you **defined the behavioural outcomes** that you wish to achieve?
2. Have you **understood and assessed the level of incentives and potential risk / harm** for the target audience?
3. Have you **considered and understood the impact of making this information available on businesses’ incentives** to achieve desired outcomes?
4. To what extent can the information being provided **simplify a choice for a consumer** (and hence achieve desired outcomes)?
5. Have you considered the fit with **existing regulated information requirements**?

These five questions served as a first guidance to develop the information packages for the research project. As regards the actual formulation of the information package, we drew in addition from general insights from communication research, insights gathered from questionnaire design literature, as well as from consumer behaviour research in particular, focussing on framing effects and advertising effectiveness.

²² Better Regulation Executive and National Consumer Council (2007), 11.

Research Outcomes:

- A set of Internet Access Service attributes which are likely to influence consumers' choice in the test areas.
- Terminology and tone of language as well as technical understanding of consumers in the test areas as regards the identified Internet Access Service attributes
- Understanding and conceptualisation of network neutrality in the test areas
- Terminology and tone of language as well as technical understanding of consumers in the test areas as regards network neutrality

2.3 Explaining consumers' choices of IAS offerings

The overarching research objective of the third project stage was to explain consumers' choices of Internet Access Service offerings and within that the influence of IAS' network neutrality policies. To fulfil this research objective, we developed a survey that was capable of measuring the influence of individual Internet Access Service offerings attributes on consumer choice; however, given that consumer choice is a very complex matter, and that product/service attributes alone were unlikely to explain it, several other aspects had to be accounted for. First and foremost, consumers' personal characteristics such as age, sex, income and so forth were likely to influence their choice of a broadband connection. Furthermore, their Internet usage pattern may steer them towards a specific offer. Besides the actual choice of any IAS offering, this research also had a wider aspect of identifying whether electronic communication markets are efficient. Thus, the overarching research objective to be fulfilled has been split up into four smaller research objectives, which were directly addressed by specific sections in the survey, or rather, by comparing the survey results with the insights gained into the electronic communication markets in the test areas (cf. research objective iv):

- i. By a survey, to investigate consumers' socio-demographic and other relevant characteristics.
- ii. By a survey, to investigate consumers' Internet usage patterns.
- iii. By a survey, to investigate the effect of individual Internet Access Service offerings attributes on consumers' choice.
- iv. By comparing survey results and desk research results from Stage B, to make an assessment of the degree to which electronic communication markets in the test areas work efficiently.

Fulfilling these research objectives also enabled us to answer the respective research questions raised in the tender specifications. Table 2-5 illustrates how research objectives map onto research questions.

Table 2-5: Mapping of research objective vii, viii, ix and x onto research questions as laid out in the tender specifications

	Research Objective			
	i	ii	iii	iv
Are electronic communication markets efficient?				•
Which attributes drive consumers' choice between the competing broadband offerings available to them?			•	
What is the relative weight of Internet Access Service offerings attributes in broadband consumption decisions?			•	
How do the weights of these attributes differ across consumer segments?	•	•	•	
What is a consumer's willingness to pay for a given broadband package?			•	

2.3.1 Research objective vii – Investigation of consumer characteristics in the test areas

Consumer markets are commonly segmented by consumers' individual characteristics, as this allows the researcher to predict consumer behaviour with some degree of likelihood. Typically (more or less) enduring demographic characteristics such as age, sex, social status (e.g. the social grade as defined in the National Readership Survey (NRS))²³, income, personal life-style, involvement or a combination of these are used. Under the research objective vii, we applied a selection of these variables to learn something about the respondents in the survey and hence be able to make predictions on the wider market for IAS offerings in the specific test area based on the combination of the results of this section of the questionnaire and the other two sections (usage patterns and conjoint task).

The major challenge for developing this part of the questionnaire was to transfer the insights gained in the focus groups and the investigation of test areas into meaningful questions that were standardised across the selected test areas. The standardisation of these questions was important for comparisons across test areas and for potentially identifying categories of similar consumers across test areas. Ahead of conducting the focus groups and before investigating the test areas in detail, we were already able to identify some variables that were likely to be employed to categorise respondents in the research.

First and foremost, demographic variables could be considered a key feature of any segmentation task as they allowed us to easily link the results of the survey to the actual market place. Furthermore, they were likely to explain a significant part of the variance in Internet usage patterns. For instance, younger people were more likely to

²³ <http://www.nrs.co.uk/lifestyle.html>.

use the Internet frequently across practically all countries²⁴. Therefore, they may pay attention to a different set of attributes when selecting their ISP as compared to more mature consumers. Similarly, men watch 1.8 times as many videos online as women²⁵ and therefore may take data caps more seriously in their ISP choice. Income also represented an important variable, as it may influence a respondent's willingness-to-pay.

Personal life-style and involvement were also identified ex ante as potentially important variables for the categorisation of respondents. Again, life-style may influence Internet usage patterns significantly. For instance, the use of mobile devices and mobile broadband may depend heavily on personal life-style. Involvement, in particular purchasing involvement²⁶, on the other hand, may be strongly linked to respondents switching behaviour. Purchasing involvement describes the effort consumers are willing to invest into their purchasing decisions. People high in purchasing involvement may be expected to expend significant effort to obtain the best perceived value for their needs. Persons low in purchasing involvement instead were more likely to spend less time and effort dealing with purchasing decisions. As such, purchasing involvement was likely to be a good predictor for how intensely respondents are likely to engage with the conjoint choice tasks and hence for how intensely they are likely to engage with ISP choices in real life.

Research Outcomes:

- Insights into consumers' individual characteristics in the test areas
- Categorisation of consumers in conjunction with the results from the other sections of the survey questionnaire

2.3.2 Research objective viii – Investigation of consumer Internet usage patterns in test areas

Similar to research objective vii, research objective viii aimed at segmenting consumers. However, the segmentation here was based on their Internet usage patterns instead of their individual characteristics. Internet usage patterns are likely to change more rapidly over time. As a stand-alone result, they consequently offer little in-depth insight or predictive power. Nonetheless, they offer important insights into the current state of the demand-side in each of the test areas. More importantly still, we used these insights to construct consumers' "ideal" choices from amongst the fictitious IAS offers in the conjoint experiment that constitutes the third section of the questionnaire. This enabled us to extend the analysis of the electronic communications market efficiency analysis envisioned in the tender specifications.

²⁴ See for instance World Internet Project Reports 2010 to 2013 – <http://www.worldinternetproject.com>.

²⁵ ComScore (2013): Online Video – A Statistical Review. Data for the US. URL: <http://goo.gl/80dwFV>.

²⁶ Slama, M.E. & Tashchian, A. (1985), Selected socioeconomic and demographic characteristics associated with purchasing involvement. *Journal of Marketing* 49 (Winter) 72-82.

The insights gathered in this section of the questionnaire in conjunction with the ones from the preceding questionnaire section (see above) enabled us to categorise consumers meaningfully within, as well as across, test areas. The development of these consumer categories was based on reports that also categorise consumers by their Internet usage patterns such as Ofcom (2013)²⁷ or the Initiative D21 Digital Index (2013)²⁸.

Typical variables as regards Internet usage patterns include time-spent online, use of Internet-enabled devices, digital inclusion, online video consumption, online gaming, IPTV and potentially many more. In addition to these typical variables, we asked questions about switching behaviour, which together with the insights on purchasing involvement were likely to provide us with an important building block for consumer categories neatly linked to the study's purpose. First and foremost, the results from the focus groups and the investigation of the test areas guided our selection process of these variables. Additionally, we drew from the wealth of experience in the area of ISP market research that YouGov brought into the team.

Research Outcomes:

- Insights into Internet usage patterns in each test area
- “ideal” ISP choice benchmark for market efficiency analysis (research objective iv in Stage C)
- Categories of consumers in the test areas

2.3.3 Research objective ix – Investigation of the effects of individual Internet access service attributes on consumer choice

Predicting which ISP consumers are likely to choose has certainly been an issue for ISP marketers ever since the Internet turned into a civil communication tool over 20 years ago. Thus, it is not surprising that there are an abundance of published and unpublished studies on this subject. Publicly available primary research that more concretely deals with the role of network neutrality within that choice, however, is scarce. The following paragraphs briefly summarise the existing literature on ISP choice. Papers published before 2009 will only be touched upon, while more recent work is described in some detail as it appeared to be more relevant given the fast-paced development of the Internet and ISPs' service offerings. Before these results are discussed, it is important to note some specifics of broadband access service offerings.

Commonly, such insights are generated by quantitative research methods such as surveys sometimes including conjoint experiments as was used for the present study.

²⁷ Ofcom (2013): Adults' Media Use and Attitudes Report. London.

²⁸ Initiative D21 (2013): D21 Digital Index – Auf dem Weg in ein digitales Deutschland?

The focus group study²⁹ conducted on behalf of PTS (Swedish NRA) is a noteworthy exception here. First and foremost, it was found that consumers in Sweden find selecting an ISP difficult due to commonly long, cumbersome and overly technical terms and conditions that apply. Thus, they, more often than not, refrain from reading the contracts resulting in a feeling of insecurity as regards the actual costs they will have to bear at the end of the month. The remainder of this Section discusses insights generated from more typical quantitative studies investigating consumers' ISP choice criteria.

First and foremost, it is important to establish that there were numerous indications that consumers find it all but easy to choose a new ISP or a new connectivity service bundle respectively. For instance, DG Connect's E-Communication Household Survey 2013 shows that only 53 percent of consumers agree or tend to agree with the statement "You can easily compare the terms of services and tariffs, included in bundled offers." Furthermore, one has to be aware of the specific product characteristics of broadband access. First, switching an ISP can be a very cumbersome and frustrating undertaking (Kenny & Dennis 2013). Second, broadband access can be categorised as a so called "experience good". Consumers cannot learn about the actual quality of access e.g. speed or latency before purchase and use of the actual service. Thus, there is significant risk involved in switching ISPs. On the other hand, broadband access may also be considered a "commodity product", meaning that unless there is significant trouble (e.g. quality problems) with it, consumers are indifferent to it. In addition, there are numerous explicit and implicit barriers to switching, which Kenny and Dennis (2013) review in their study of consumer lock-in for fixed broadband document from various perspectives³⁰. Thus, it is not surprising that, according to DG Connect's E-Communication Household Survey 2013, the majority of consumers have never considered switching their ISP.

An initial literature review of relevant studies for the present study identified six relevant research papers. Two major insights have been taken away from the reviewed papers in the area of ISP choice. First, most of these papers apply several attributes in addition to broadband speed and price, which feature in all papers. Most commonly, these features stretch either into additional services such as IPTV or into offering additional security. We have identified only two of the papers applying conjoint analysis to understand consumers' ISP choice preferences that also introduce network neutrality into the choice experiment³¹. Second, price, access speed and brand commonly emerge as the three most important attributes³².

²⁹ Stelacon (2012): Konsumentstudie – En fokusgruppstudie om information om innehåll i avtal (available only in Swedish).

³⁰ Kenny, R. & Dennis, A. (2013): Consumer lock-in for fixed broadband. Communications Chambers.

³¹ It should be noted that this question was also asked in the qualitative study conducted by Kisielowska-Lipman (2012). "Traffic management" ranked seventh amongst eight items tested. Price, availability in the area and speed were the three attributes perceived to be most important by the 32 participants in the study.

³² It should be noted that conjoint analysis commonly omits word of mouth, which, however, is known to influence consumer choice most strongly (see for instance: '3G mobile bill-payers' understanding of billing and charging arrangements', ACMA Report May 2011.cf Xavier 2011).

Referring to network neutrality, the two papers that include network neutrality-related attributes in their conjoint experiments that were identified in this initial literature review highlight the need for further research, as they fail to unveil the actual importance of the attribute to end-users. However, they provide indications of issues to be tackled in future research. Consequently, we needed to purposefully build the information package, but also all the other elements of the questionnaire, on the insights gathered in the focus groups.

Research Outcomes:

- Insights into consumers' preferences for Internet Access Service offers
- Insights into consumers' part-worth utilities for each attribute and corresponding levels tested
- Insights into consumers' willingness to pay

2.3.4 Research objective x - Evaluation of electronic communications market efficiency in test areas

Research objective x is about analysing the efficiency of electronic communication markets in the test areas. In reference to the tender specifications, this was understood as “comparing data about the representative ISP’s value propositions [...] to the representative consumers’ real informed preferences and expectations, [...]”. We extended this approach to evaluating the electronic communications market efficiency in the test areas by two additional facets, which, in light of the insights gathered in the literature review that we conducted for the present study, we deemed to be relevant precursors for market efficiency:

- The influence of unbiased information on consumers choice
- The gap between consumers’ actual and ideal i.e. fully rational choices

Informed vs. uninformed choices

The tender specifications accentuated the role that unbiased information plays in consumers’ choice. They stipulated that the information package needed to provide respondents with “correct and unbiased” information and thus had to render them “informed consumers” who are able to “answer all possible questions with as little bias as possible.” This, in effect, was thought to remove “information asymmetry or other exogenous bias.”

In general, we subscribed to this line of thought. The evidence presented in the literature review in this project clearly showed that consumers who have been educated about how the Internet works, how the Internet can be used for different purposes and, in particular, about network neutrality issues were likely to exhibit substantial interest in these matters and to take these issues seriously. Therefore, it was also likely that they

make significantly more rational choices than they would have had they not been so informed.

However, one also had to take into account that the human information processing system is notoriously idiosyncratic and complex. People mentally construct, interpret and (mis-)understand information. Thus, it was unlikely that merely presenting all relevant options and correct information would generate the appropriate interpretation and response (Shafir 2007). Huck and Wallace's (2011) results point to a statistically significant effect of how information is presented (numerical vs. colour coded). On the other hand, they also show that respondents who were unable to identify the optimal in the fictitious choice task tended to search at random. There was little profit in terms of correctness of their choices.

On a more general level, one should also consider one of the fundamental paradigms of communication research brought up by Watzlawick (1971)³³ that one cannot not communicate. Thus, in essence, any information is bound to have an effect on respondents. Furthermore, one can significantly increase the odds that the specified effect will be achieved by taking the necessary precautions in the design of the actual information package as regards language, style of presentation etc. drawing on insights from questionnaire design, communication research and advertising effectiveness research. However, without a measure of the effectiveness of the information treatment, one cannot know which effect it actually had. Consequently, not introducing a way to measure the effect of the information treatment into the study design was likely to undermine the scientific value of the planned study and would have rendered the result prone to criticism.

Besides this very fundamental point, a measure of the effectiveness of the information package was also expected to aid the exploitation of results. Even if we found out that the information package had little or no measurable effect, this would still add significantly to the scientific value of the study and provide indications of how to approach the exploitation, or rather, avenues for further research.

Rational vs. irrational choices

The assumption of rational behaviour underlies the positivist approach to consumer behaviour and has been guiding a large part of research conducted in this area for decades. For instance, popular Stimulus-Organism-Response (S-O-R) models conceptualised consumer behaviour and in particular consumer purchase choices, in law-like relationships.

The notion of consumers' purchase choices being law-like in nature is also apparent in Lancaster's (1966)³⁴ conceptualisation of the product as "a bundle of attributes". The conceptualisation proposes that to understand products and services as consumable

³³ Watzlawick, P. F.; Beavin, J. H. & Jackson, D. D. (1971): *Menschliche Kommunikation: Formen, Störungen, Paradoxien*, 2nd edition, Bern/Stuttgart/Vienna.

³⁴ Lancaster, K. J. (1966): A New Approach to Consumer Theory. *The Journal of Political Economy*, 74(2), 132-157.

items and to predict consumer preferences for them, they can be usefully split into their constituent attributes. It constitutes the underlying assumption for conjoint analysis, which can be used to test consumers' reactions to different product attribute mixes. In fact, the 'bundle of attributes' concept provides a major building block of Fishbein and Ajzen's (1975)³⁵ Theory of Reasoned Action (TRA), one of the most widely applied models of purchase intention in consumer research. The TRA posits that consumers base their attitudes towards products on a formally or informally identified set of attributes that they have weighted and summed. Consequently, their expectancy-value model defines an attitude A as the sum of the products of beliefs b and evaluation v formed upon salient product attributes i .

$$A = \sum_{i=1}^n b_i v_i$$

Applying the assumption of rationality, one can predict consumer choice based on this theory. However, as already stipulated in the tender specifications, "consumers [...] may not always be fully rational in their purchasing habits, [...]". In fact, the evidence gathered in the literature review for this study more than supported this. Shafir (2007) points to consumers' (mis)interpretation of information and resulting irrationality of choices. Wallace and Huck's (2011) respondents frequently showed irrational behaviour in picking the more expensive option when the cheaper one would have done. Furthermore, the importance attached to brand in the reviewed conjoint studies may indicate some degree of irrationality guiding consumer choices as the actual quality of service depends more strongly on largely technical factors and not the ISP brand³⁶. Next to these results, it is also well-documented in consumer behaviour literature that other motives linked mainly to the individual's social sphere constitute important drivers of (irrational) consumer behaviour. This is mainly echoed in the second grand school of thought in consumer behaviour (Constructivism) (Mahoney 2003)³⁷ and widely acknowledged across consumer behaviour research in general.

In essence, it was likely that the information package would improve respondents' rationality, whilst it was still very unlikely that it would result in fully rational choices. Based on the answer in the first two sections of the questionnaire relating to respondent's characteristics and Internet usage patterns, we were however able to calculate the most rational "ideal" choice from our set of IAS attributes. Hence, we could benchmark this against their actual preference. This enabled us, first and foremost, to show vividly the effect of our information treatment (see above) i.e. we were able to show whether consumers provided with correct and unbiased information actually act more rationally. Furthermore, in combination with the other pieces of information

³⁵ Fishbein, M., & Ajzen, I. (1975): *Belief, attitude, intention, and behavior*. Reading, MA: Addison-Wesley.

³⁶ Please note, we do not say that there is no correlation whatsoever between ISP brand and QoS.

³⁷ Mahoney, M. J. (2003): *Constructive psychotherapy: a practical guide*. New York; London: The Guilford Press.

gathered from the survey, it allowed us to evaluate the full scope of electronic communications market effectiveness in the test areas.

The correspondence between consumer demand and ISP's offers

The outlined research design allowed us to rigorously test the implicit hypotheses underlying the research:

- Hypothesis A: The information package has an effect on respondents' choices. (Identification of the effect)
- Hypothesis B: The information package increases the rationality of respondents' choices. (Qualification of the effect)

It also allowed us to shed light on more facets of market efficiency than was envisioned in the tender specifications. In sum, we could identify whether existing ISPs' offerings fit:

- Consumers' "ideal" demand (rational choice)
- Consumers' actual demand under informed conditions
- Consumers' actual demand under uninformed conditions

These three perspectives on market efficiency have been further qualified by regional availability of ISPs' offerings.

Research Outcomes:

- Definition of ideal Internet Access Service offerings for categories of consumers in each test area (and potentially across test areas)
- Evaluation of electronic communication market effectiveness in the test areas

3 Literature Review

3.1 Introduction

Although the main purpose of the focus group discussions was to explore consumers' understanding and conceptualisation of network neutrality, they also served to explore the broader role that the Internet plays in consumers' lives and the process that they go through as well as the service attributes that they consider when selecting a new Internet Access Service (IAS) provider.

The natural focus of this literature review is on studies that apply qualitative research methods and that are therefore comparable to the focus groups of this project. However, some issues discussed in the focus groups here have rarely featured in published qualitative studies, for example ISP choice criteria. Consequently, this literature review also refers to quantitative studies of consumer behaviour and consumer choice wherever it seems appropriate.

The chapter is structured along the major themes that were addressed in the focus group discussions. First, relevant insights regarding the role of the Internet in consumers' lives are presented. Second, existing insights on consumers' ISP choice criteria are discussed in depth. Third, the chapter reviews relevant studies in the area of consumers' understanding and conceptualisation of network neutrality. Finally, it gives insights on information processing that were particularly relevant for developing the information package for the survey, with a focus on how consumers can be supported in their comprehension of how the Internet works, network neutrality and traffic management. A brief conclusion at the end of the chapter summarises the main findings.

3.2 The role of the Internet in consumers' lives

Published qualitative research on the role that the Internet plays in consumers' lives is scarce. It is either potentially outdated as a result of being published when the Internet had not been around as long as it has been today, and revolves around its potential effects on consumer behaviour (e.g. Geissler & Zinkhan, 1998³⁸), or it explores particularly vulnerable groups using specific Internet-based applications (e.g. the elderly – Papa et al., 2011³⁹ or rural communities – Macintyre & Macdonald, 2011⁴⁰). These papers seem to have little relevance to the research described in this report. Therefore the first part of the qualitative research adds new insights to the public debate.

³⁸ Geissler, G.L. & Zinkhan, G.M. (1998): Consumer Perceptions of the World Wide Web: An Exploratory Study Using Focus Group Interviews. *Advances in Consumer Research* 25, 386-392.

³⁹ Papa, F.; Sapio, B. & Pelagalli, M.F. (2011): User Experience of Elderly People with Digital Television: A Qualitative Investigation. *EuroITV 2011 - Proceedings of the 9th international interactive conference on Interactive television*, 223-226.

⁴⁰ Macintyre, R. & Macdonald, J. (2011): 'Remote from what?' Perspectives of distance learning students in remote rural areas of Scotland. *The International Review of Research in Open and Distance Learning* 12(4).

3.3 Criteria of ISP choice

One key research outcome from the first part of the focus group discussions was an understanding of how participants in the specific test areas approach the choice of an ISP, which IAS attributes they find most relevant for their choice and how they understand and describe them. This information guided the development of the attributes and levels for the conjoint experiment in the survey. Additionally, the insights gathered into the role that the Internet plays in participants' lives aided the development of the parts of the survey that investigated general Internet behaviour and usage patterns.

Such insights are usually generated by quantitative research methods such as surveys, which sometimes also include conjoint experiments as this study did. The focus group study⁴¹ conducted on behalf of PTS (Swedish NRA) is a noteworthy exception here. Consumers between 18 and 70 years of age took part in the focus groups discussions conducted to explore their ISP choice behaviour and criteria. It was found that consumers in Sweden find selecting an ISP difficult due to the frequently long, cumbersome and overly technical terms and conditions that apply. Therefore more often than not they refrain from reading the contracts, which results in a feeling of insecurity regarding the actual costs that they will be charged at the end of the month. Consumers have the feeling that ISPs do "what they want" regardless and that there are only minor differences between them anyway. Consequently there is also an element of helplessness, as they have the impression that their situation does not essentially change with a switch of providers, and this hinders switching. In this light, it is not surprising that participants rarely reported that they make any real effort to research and compare contracts. Their major choice criteria are the stability and quality of the connection, the length of the contract, the connection speed and in case of mobile contracts a high data cap or none at all. A major issue that participants raised during the discussions was that they would find it helpful to have advertisements indicating the actual speed and actual cost of an Internet package, which they find is currently not the case due to 'up to' terminology and extra charges that sometimes occur but are not shown upfront. The remainder of this section discusses insights generated from more typical quantitative studies investigating consumers' ISP choice criteria.

Due to ISPs' interest in consumers' choice criteria, it is not surprising that there is an abundance of such papers available and it is likely that even more studies have been conducted and are confidential to the ISPs themselves. However, only rarely do such papers include attributes on network neutrality. The following paragraphs briefly summarise the existing literature on ISP choice. Papers published before 2009 are only touched upon, while more recent work is described in some detail as it appears to be more relevant given the fast-paced development of the Internet and ISPs' service offerings. Before these results are discussed, it is important to note some of the specifics of broadband access service offerings.

⁴¹ Stelacon (2012): Konsumentstudie – En fokusgruppstudie om information om innehåll i avtal (available only in Swedish).

First of all, there are numerous indications that consumers find it all but easy to choose a new ISP or a new connectivity service bundle. For instance, DG Connect's E-Communication Household Survey 2013 shows that only 53 percent of consumers agree or tend to agree with the statement "You can easily compare the terms of services and tariffs included in bundled offers." Furthermore, one has to be aware of the specific product characteristics of broadband access and compared to typical Fast Moving Consumer Goods (FMCGs) and other products, there is very little opportunity for seeking variety. Consumers are not usually confronted with a large choice of products placed next to each other on a shelf, which would render switching easy and effortless. Instead, switching an ISP can be a very cumbersome and frustrating undertaking (Kenny & Dennis, 2013). Second, broadband access can be categorised as a so-called "experience good" (Nelson, 1970⁴²). Consumers cannot learn about the actual quality of access (for example characteristics such as speed or latency) before the purchase and use of the actual service. Thus there is significant risk involved in switching ISPs. On the other hand, broadband access could also be considered a "commodity product", meaning that unless there is significant trouble with it, such as problems with the quality, consumers are indifferent to it. In addition, there are numerous explicit and implicit barriers to switching, which Kenny and Dennis (2013) document in their study of consumer lock-in for fixed broadband from various perspectives⁴³. Therefore it is not surprising that according to DG Connect's E-Communication Household Survey 2013, the majority of consumers have never considered switching their ISP. Consequently, we do not expect a high share of participants in the focus groups to have switched their provider recently, although it should be noted that the test areas show a good spread across the different levels of provider switching intensity across Europe, with Greece having the highest percentage⁴⁴.

The literature review of relevant studies for this study identified six relevant research papers listed in Table 3-1. Numerous other papers investigating broadband choices were identified⁴⁵, but they did not fully match the selection criteria outlined in the above. Two major insights can be taken from the reviewed papers in the area of ISP choice. First, most of these papers apply several attributes in addition to broadband speed and price, which feature in all of them. These features usually stretch either into additional services such as IPTV or into offering additional security. Only two of the papers apply conjoint analysis to understand consumers' ISP choice preferences while also introducing network neutrality-related attributes into the choice experiment⁴⁶. Second, price, access speed and brand commonly emerge as the three most important attributes⁴⁷.

⁴² Nelson, P. (1970): Information and Consumer Behavior. *Journal of Political Economy* 78, 311-329.

⁴³ Kenny, R. & Dennis, A. (2013): Consumer lock-in for fixed broadband. *Communications Chambers*.

⁴⁴ See Final Interim Report Stage B.

⁴⁵ List of additional papers that have been identified in the literature review of the present proposal that may be reviewed in more depth at the beginning of the contract: Byun, S., Bae, H., & Kim, H. (2006): A contingent valuation of terrestrial DMB services. In R. Cooper, G. Madden, A. Lloyd, & M. Schipp (Eds.), *The economics of online markets and ICT networks* (pp. 215-225). Heidelberg: Physica-Verlag.

Therefore the remainder of this section is structured along these two insights. First, we discuss the three most important attributes for consumer choice in some depth, then we review in detail the two papers that already contribute insights from choice experiments to the network neutrality debate.

Table 3-1: Summary of choice-based studies on broadband choice

Author(s) (year)	Attributes Tested	Major Results
Van Camp (2012) ⁴⁸	<ul style="list-style-type: none"> • TV provider • No. of channels • No. of HD channels • Price TV • BB provider • Download speed • Upload speed • Price • Telephony 	Price and brand reputation dictate over 60% of consumers' choice of IAS
Deere et al.	<ul style="list-style-type: none"> • BB speed • TV package 	<ul style="list-style-type: none"> • Price is the most important driver of preference • A basic package can generate significant revenue

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- Cardona, M., Schwarz, A., Yurtoglu, B. B., & Zulehner, C. (2009): Demand estimation and market definition for broadband Internet services. *Journal of Regulatory Economics*, 35, 70-95.
- Ida, T., & Kuroda, T., (2006): Discrete choice analysis of demand for broadband in Japan. *Journal of Regulatory Economics*, 29(1), 5-22.
- Ida, T., & Kuroda, T., (2009): Discrete choice model analysis of mobile telephone service demand in Japan. *Empirical Economics*, 36, 65-80.
- Ida, T., & Sakahira, K. (2008): Broadband migration and lock-in effects: Mixed logit model analysis of Japan's high-speed Internet access services. *Telecommunications Policy* 32, 615–625.
- Kim, Y. (2005). Estimation of consumer preferences on new telecommunications services: IMT-2000 service in Korea. *Information Economics and Policy*, 17, 73-84.
- Madden, G., & Simpson, M. (1997): Residential broadband subscription demand: An econometric analysis of Australian choice experiment data. *Applied Economics*, 29(8), 1073-1078.
- OfCom Consumer Panel. (2008, September): What is the value of next generation broadband?
- Plum Consulting. (2008): A framework for evaluating the value of next generation broadband: A report for the Broadband Stakeholder Group.
- Rappoport, P., Taylor, L. D., & Alleman, J. (2004): WTP analysis of mobile Internet demand. In R. Cooper & G. Madden (Eds.), *Frontiers of broadband, electronic and mobile commerce* (pp. 165-180). Heidelberg: Physica-Verlag.
- Rappoport, P., Taylor, L. D. and Alleman, J. (2006): Estimating the demand for Voice over IP Services: A contingent valuation approach. In B. Preissl & J. Müller (Eds.), *Governance of communication networks: Connecting societies and markets with IT* (pp. 227-240). Heidelberg: Physica-Verlag.
- Savage, S. J., & Waldman, D. (2004): United States demand for Internet access. *Review of Network Economics*, 3(3), 228-247.
- Savage, S. J., & Waldman, D. (2005): Broadband Internet access, awareness and use: Analysis of United States household data. *Telecommunications Policy*, 29, 615-633.
- Yoo, S.-H. (2002): Extending dichotomous choice contingent valuation methods to pre-test-market evaluation: The case of a cable television service. *Applied Economics Letters*, 9, 315-318.
- Yoo, S.-H., & Moon, H.-S. (2006): An estimation of the future demand for portable Internet service in Korea. *Technological Forecasting & Social Change*, 73, 575–587.
- Yu, K., & Prud'homme, M. (2010): Econometric issues in hedonic price indices: The case of Internet service providers. *Applied Economics*, 42, 1973-1994.
- ⁴⁶ It should be noted that this question was also asked in the qualitative study conducted by Kisielowska-Lipman (2012): "Traffic management" ranked seventh amongst eight items tested. Price, availability in the area and speed were the three attributes perceived to be most important by the 32 participants in the study.
- ⁴⁷ It should be noted that conjoint analysis commonly omits word of mouth, which, however, is known to influence consumer choice most strongly (see for instance: '3G mobile bill-payers' understanding of billing and charging arrangements', ACMA Report May 2011, cf Xavier 2011).
- ⁴⁸ Van Camp, F. (2012): FTTH Moves the Market. FTTH Conference 2012, Munich.

Author(s) (year)	Attributes Tested	Major Results
(2008) ⁴⁹	<ul style="list-style-type: none"> • Telephony (fixed) • Telephony (mobile) • Provider • Price • Promotion (e.g. free router) 	<p>at £34.99 and a premium package at £50 to £64.99.</p> <ul style="list-style-type: none"> • Mobile offers increased in popularity compared to earlier studies, although all four service elements remain important throughout. • There is little preference between 8 Mbit/s and 16 Mbit/s. • Premium TV services have also increased in popularity. • Brand is less important than price and service provision.
Takano (2013) ⁵⁰	<ul style="list-style-type: none"> • Download speed • TV • Level of Internet Security • Provider • Price 	Availability of TV and brand of service provider are more important than download speed and Internet security.
Ida & Sato (2006) ⁵¹	<ul style="list-style-type: none"> • Price • Download speed • IP Telephony • TV • Provider • Symmetry of access speed 	Consumers in areas where FTTH is already available have a lower willingness to pay for high speed access than people living FTTH-deprived areas.
Klie (2012) ⁵²	<ul style="list-style-type: none"> • Price • Download speed • Mobile access 	Mobile access is more important to consumers than additional speed.
Rouston et al. (2010) ⁵³	<ul style="list-style-type: none"> • Price • Speed (download and upload in one attribute) • Reliability • Mobile access • Movie Rental • Priority (ability to assign different priority levels to specific downloads) • Telehealth • Videophone 	Reliability and speed are perceived as the most important features of broadband access. Experienced consumers value Internet access higher than inexperienced ones.
Nam et al. (2011) ⁵⁴	<ul style="list-style-type: none"> • Price • Speed (guaranteed, minimum and up-to speed) • Content availability • Quality of public (low-tier) network 	The most important features for consumers are price and access speed (> 60 % importance) followed by the two attributes in relation to network neutrality.

⁴⁹ Deere, G.; Brice, L. & Barton, S. (2008): Winning and losing in the Multi-play market using Conjoint and Construct. Research sponsored by BT Wholesale. Ipsos MediaCT.

⁵⁰ Takano, N. (2013): A conjoint analysis of a Next Generation Network (NGN) in Japan. Res Socionetwork Strat: in press.

⁵¹ Ida, T. & Sata, M. (2006): Conjoint Analysis of Consumer Preferences for Broadband Services in Japan. The Kyoto Economic Review, 5(2), 115-127.

⁵² Klie, A. (2012): Broadband: What do consumers want? Examining willingness-to-pay. A Work Project, presented as part of the requirements for the Award of a Masters Degree in Economics from the NOVA – School of Business and Economics

⁵³ Rosston, G., Savage S. J., & Waldman, D. M. (2010): Household demand for broadband Internet in 2010. The B.E. Journal of Economic Analysis & Policy, 10(1), Article 79.

⁵⁴ Nam, C.; Lee, H.; Kim, S. & Kim, T. (2011): Network Neutrality: An End-User's Perspective. International Telecommunications Policy Review 18(1), 1-15.

Author(s) (year)	Attributes Tested	Major Results
Huck and Wallace (2011)	<ul style="list-style-type: none"> • Average download speed (actual speed) • Upload speed • Monthly usage allowance • Price • Traffic management (possible measures were download data consistency during peak time (none, download slowdown at peak times, download slowdown of P2P at peak times) and prioritisation of real time services (prioritisation of gaming, prioritisation of VoIP, prioritisation of streamed video, prioritisation of P2P)). 	Subjects in the survey rarely made optimal choices. They did not identify part worth utilities. Thus we cannot determine which attributes influenced subjects' choices.

Price

Price commonly emerged from the conjoint experiments reviewed in the above as the most important attribute for consumers' choice of ISP. Thus, IAS does not seem to differ from most other products and services. Price in the eyes of consumers usually acts as a mental shortcut to infer the quality of a product or service, so it is not surprising that price also ranks highly when consumers are directly asked about the importance of IAS attributes (see Table 3-2).

Table 3-2: Main reason for choosing service provider, by relevant product*

	TOTAL	Internet	Mobile Phone	Home Telephone	Bundled Services
	%	%	%	%	%
Price	26	30	27	19	21
Coverage	14	13	17	10	14
Only provider available in area when signed up	11	11	7	15	12

Base: Contacted CSP in last six months n=1,364; Internet n=497; Mobile Phone 425; Home Phone n=242; Bundled services n=180

*Question asked: Which of these was the main reason you chose your service provider as your service provider? Source: 'Community Research into telecommunications customer service experiences and associated behaviours', ACMA Report May 2011

Source: Xavier (2011)

Access speed

Access speed is the IAS attribute that features most prominently in the marketing of ISPs in most markets. It also determines a large part of the Quality of Experience (QoE) that consumers are likely to enjoy with their Internet access. Therefore it is not surprising that consumers find this an important attribute for their choice. It should be noted that according to Van Camp's (2012) research, there is a decreasing incremental utility for broadband access speeds above 25 Mbit/s as these enable practically all relevant applications. The same is true for upload speeds from 2 Mbit/s upwards. Based on these results, it appears sensible to assume that the utility in conjoint experiments also shows decreasing incremental growth.

Brand

In addition to price, brand is also a long-established part of consumer choice research. It usually has a strong influence on consumer choice, in particular in conspicuous consumption items such as clothes or cars. For the choice of ISP, brand may therefore be less important; however, the importance of familiarity with the brand should not be underestimated. Xavier (2007) concludes that consumers may overlook the consent process with a familiar brand due to vested trust, but may be more likely to read the terms and conditions with an unfamiliar brand. Also the brand may act as a heuristic for the quality of Internet access.

Network neutrality

As outlined in the above, network neutrality has thus far played only a minor role in conjoint experiments involving consumers. The literature review returned only two papers that included network neutrality in their choice experiments (Huck & Wallace, 2011 and Nam et al., 2011). This section reviews these two papers in some detail as they were particularly relevant for this study and for developing network neutrality-related attributes for the survey.

Huck and Wallace (2011) conducted a choice experiment with 156 students at the University College London, in which they focused on the influence of colour as compared to numerical coding of information about broadband speed and network neutrality in fictitious ISPs' offerings. The subjects were asked to make appropriate decisions for given individual or multi-user scenarios based on usage pattern descriptions. Subjects received an incentive (0.25 GBP for each optimal decision) for correct answers. Each subject had to go through 50 choices (40 single user and 10 multi-user households) and was informed about his/her performance after 25 choices. For each choice, there was the opportunity to "search" for more information by clicking on a button on the computer screen. All subjects completed an IQ-test and a questionnaire probing their general broadband knowledge.

The fictitious packages were developed around their access speed (up to 10, 20 and 50 Mbit/s). For each of these levels, there was a distribution on:

- Average download speed (actual speed)
- Upload speed
- Monthly usage allowance
- Price
- Traffic management (possible measures were download data consistency during peak time, none, download slowdown at peak times, download slowdown of P2P at peak times and prioritisation of real time services (prioritisation of gaming, prioritisation of VoIP, prioritisation of streamed video, prioritisation of P2P)).

Additionally, some fictitious offers included superfluous information such as adult content filtering, free modem, free anti-virus, etc.

The first and most relevant result of Huck and Wallace's (2011) study is that subjects found it difficult to make the rational choices. On average they made the right choice in less than half of the choice exercises, which is less than one would have expected if they had picked the broadband packages at random. Subjects who received the numerical information performed significantly better. They chose the right option in 50.7% of the exercises. The existence of superfluous information did not have a statistically significant influence on the number of optimal choices. Subjects tended to use the additional search too much, and those unable to identify the right answer at once seemed to search at random, with the additional information having little or no measureable effect on their choices. Subjects often opted for the more expensive package, suggesting that they use price as a proxy for the quality of service.

With regard to the personal characteristics (IQ and broadband knowledge), their experiment did not reveal any statistically significant differences. They note that one might expect that IQ ought to have some influence, especially if it is too low; however this was not visible in the experiment, as all subjects were above the threshold that allowed them to solve the tasks in the experiment. Meanwhile, it should be noted that Huck and Wallace do not publish the part-worth utilities⁵⁵ for the attributes they tested, for obvious methodological reasons. Thus, the importance of network neutrality for the end-user cannot be derived from their paper.

Nam et al. (2011) address this issue. Their objective is to add the end-user's perspective to the network neutrality debate. To achieve this, they conduct a conjoint choice experiment with Korean end-users employing four attributes:

- Price (low 28US\$, medium 34US\$, high 40US\$)

⁵⁵ See Section 5.3.2 for an explanation.

- Access speed in Mbit/s (guaranteed minimum speed/maximum advertised speed: 1/10, 5/50, 10/100)
- Content Availability (free access to all content, access except for some content)
- Quality of the Public (Low-Tier) Network (access speed of public network is guaranteed, access speed of public network can be reduced)

Nam et al. (2011) state that they used “detailed explanations using simple language so that respondents would understand each attribute clearly.” However, they do not provide any detailed insight into how they developed these explanations nor whether there was any attempt to measure whether consumers had actually understood them. They conducted their conjoint experiment in an online survey with 1,049 Internet users.

Respondents considered price to be the most important attribute in their broadband choice, followed by access speed. Taken together, these two attributes add up to more than 60 percent of part-worth-utilities. The relative importance of the two attributes directly linked to network neutrality were considerably lower in end-users’ choices. The quality of the public network scored 19 percent and content availability scored 14 percent. The latter seems especially surprising given that unblocked access to all content is one of the characteristics of the Internet commonly referred to by consumers as highly desirable⁵⁶.

Nam et al.’s (2011) research seems somewhat limited in comparison to the other conjoint experiments reviewed in that the number of attributes tested is low. Therefore it seems likely that the relative importance of network neutrality is identified unreliably and would likely change significantly if other important attributes such as bundling with TV or the brand of the ISP had been introduced to the experimental setting. This highlights that there was a need for further research in this area.

In conclusion, the two papers that include network neutrality-related attributes in their conjoint experiments that were identified in this initial literature review highlighted the need for further research, as they fail to ascertain its actual importance to end-users. However, they did provide indications of the issues to be tackled. First, network neutrality-related attributes have to be tested within the breadth of relevant attributes, and not just a very simplified subset of what is likely to influence consumers’ choice. The other papers reviewed here provide some examples of attributes that they found play an important role in consumers’ choice of ISP; however it also appeared that network neutrality was likely to play a minor role in that choice. Consequently, we decided to conduct an Adaptive Conjoint Analysis (ACA) instead of a Choice Based Conjoint (CBC) analysis, because the former enables a deeper understanding of attributes’ effects that on the surface may appear to have little relevance for consumers. We discuss our suggestion in depth in Section 5.3.

⁵⁶ See for instance the discussion of network neutrality in the qualitative research reviewed in Section 3.4.

Also they highlighted the need for clear and easy-to-understand information on network neutrality for survey respondents. Whilst network neutrality is indeed a difficult concept to grasp for consumers, the survey design also had to take into account their general lack of knowledge and limited ability to understand the technological aspects of electronic communications. For instance, the e-communication household survey commissioned by DG Connect indicates that consumers have very limited knowledge about their Internet access products. Across the EU 27, 57% of respondents admitted that they did not know their advertised broadband access speed. A further 6% gave an implausible answer to the question. In some markets, such as in France, 85% of respondents did not know the answer or gave an incorrect response⁵⁷. Consequently, we needed to consider the insights about the consumers' knowledge and preferences gathered in the focus group discussions when we built the information package, and also all the other elements of the questionnaire.

3.4 Consumers' perception of network neutrality

Two relevant qualitative explorations of consumers' attitudes to the specific issue of network neutrality were identified in the literature review. Lawford et al. (2009)⁵⁸ conducted a study of immediate relevance. They used focus group discussions to explore Canadian consumers' perceptions of network neutrality. For these groups, they selected "heavy users of the Internet at home (i.e. over 20 hours per week)", who used "applications such as VoIP, P2P file transferring, live streaming of TV or radio programming" and "indicated they were very interested in public policy issues and in issues around the future of the Internet and how it may be regulated."⁵⁹ Therefore it can be assumed that the focus group participants were very well-informed and proficient users of the Internet, who were significantly more interested in Internet issues than the average Canadian consumer.

In total, Lawford et al. (2009) conducted six focus group discussions in various Canadian cities in January 2009. Although the debate about network neutrality initiated in part by complaints filed with CRTC in April 2008 was visible in public debate⁶⁰, Quail and Larabie (2010) conclude from their analysis of newspaper articles in the US and Canada referring to it that their "number hardly suggest a vibrant public discussion of network neutrality"⁶¹ (p.39). In spite of this, given the profile of the participants as being well-informed, it still seems surprising that one major finding in the focus group discussions was that their "awareness and recognition of the term 'network neutrality' was very limited" and that the majority of them were unfamiliar with it. Those who had

⁵⁷ DG Connect (2013): E-Communications Household Survey.

⁵⁸ Lawford, J.; Lo, J. & De Santis, M. (2009): Staying Neutral: Canadian Consumers and the Fight for Net Neutrality. Public Interest Advocacy Centre: Ottawa. Available at: <http://tinyurl.com/6fnbu73> (accessed January 2014).

⁵⁹ Lawford et al. (2009): 13.

⁶⁰ E.g. CBC News Article on 21-04-2008: <http://www.cbc.ca/news/technology/ndp-calls-for-net-neutrality-1.740683> or itBusiness Article on 08-07-2008: <http://www.itbusiness.ca/news/controversy-over-traffic-throttling-by-canadian-isps-heats-up/3632>.

⁶¹ Quail, C. & Larabie, C. (2010): Net Neutrality: Media Discourses and Public Perception. Global Media Journal- Canadian Edition 3(1), 31-50.

heard the term before still lacked a clear idea of its meaning. Perspectives that the participants expressed in the discussions ranged from network neutrality representing the uncensored Internet where everybody connected can access every site and express their opinions freely, to network neutrality representing an Internet unbiased by business interests, such as content or search results being influenced. They often blamed their lack of awareness on being complacent about their ISP's service. In fact, when disturbances occurred, which all participants had previously experienced, they usually did not blame their ISP but rather their own hardware and/or software, or another entity's server. These views can also be seen in Kenny and Dennis (2013).⁶²

However, when participants were made aware of issues such as throttling and other means of traffic management that are actually linked to network neutrality, they showed great interest in them. More often than not, they were concerned about what they had learned about Internet traffic management practices, and opposed the idea of the throttling or prioritisation of specific content unless it is really necessary. ISPs' interest in profit represented an insufficient reason for Internet traffic management to almost all participants. Regarding network neutrality, Lawford et al. (2009) conclude that "[t]his lack of awareness is troubling, since it makes the creation of network neutrality policies more difficult."⁶³

Quail and Larabie (2010) present similar findings, albeit based on less substantial evidence. In addition to their discourse analysis of newspaper articles on network neutrality, they conducted a focus group with communication studies students at a Canadian university in March 2010. Their participants were also largely unaware of the term "net neutrality", in spite of their studies. When provided with information about it, they understood the concept and engaged more in the discussion. Generally, they also seemed concerned about the influence that corporations might have on the Internet, which they thought of as a public utility.

The major results of recent Ofcom research⁶⁴ lend further support to the finding that consumers are generally unaware of how the Internet works and are particularly unaware of traffic management practices. Only around 1 in 10 consumers were aware of the term 'traffic management', and even if they were aware of it, more often than not they did not know that ISPs in the UK currently use it. This suggests that UK Internet users are unlikely to grasp the potential relevance of traffic management to their choices of Internet access service products. However, the research also found that Key Facts Illustrations (KFIs) and surrounding material were relatively easy to comprehend, at least for those consumers who had prior knowledge of traffic management. Potential avenues to improve the information provided by ISPs were identified as:

- Provide an introduction to the KFIs that summarises the relevance of the policy
- Outline how it affects the ISP's product set

⁶² Kenny, R. & Dennis, A. (2013): Consumer lock-in for fixed broadband. Communications Chambers.

⁶³ Lawford et al. (2009), 17.

⁶⁴ Summary document published at:

<http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/1145655/traffic-research.pdf>.

- Ensure that technical terms are explained in clear and simple (non-technical) language
- Provide specific and meaningful measurement criteria for when high usage or 'fair usage' policies are applied (for example 'Hours' of streaming as opposed to 'MB')
- Use clear symbols to designate 'yes', 'no' and 'not applicable' responses in the KFI tables

This research led to the development of an information package somewhat similar to the one for the survey of this project, which is described in detail in Section 6.7.

These qualitative results are further backed by a mixed-methods study conducted by Kisielowska-Lipman (2012)⁶⁵. As part of this study, a survey of 2,048 UK consumers was carried out to shed light on their understanding of traffic management. In total, 45% of the respondents had never heard of the term "traffic management". A further 21% had heard the term, but did not know what it meant. The same research finds that most consumers also have little or no knowledge about the terms "data caps", "fair usage policy", "peer-to-peer" and "VoIP". As part of the qualitative research conducted for the study, participants in the in-depth interviews were also asked to perform a search on traffic management policies, in which they had to find the information that is available and try to make informed choices. The results concur with Lawford et al.'s (2009) and Quail and Larabie's (2010) findings on consumers' lack of understanding of the term "traffic management". She finds that even technology-savvy participants had difficulties grasping the term and vulnerable consumers were even unable to link the term to the Internet. However, her work goes significantly beyond the studies discussed earlier as she also sheds light on participants' actual behaviour when searching for information.

The 32 participants in the study were asked to perform two search tasks: research broadband providers and choose a preferred one, and compare three broadband providers for their own use, depending on what sort of service they currently use (fixed-line broadband package, bundled package or mobile broadband). The in-depth interviews built on participants' experiences during these tasks and revolved around:

- Their own experience of traffic management at home (for example, their access being slowed down)
- Their information search experience in the research tasks (for example difficulties that they might have had, their perception of information)
- Their understanding of and attitude towards traffic management and managed services

Kisielowska-Lipman summarised the result as follows: "Low awareness, patchy technical understanding and complicated website paths made it impossible to find and compare all the information sought for the three broadband providers."

⁶⁵ Kisielowska-Lipman, M. (2013): Lost on the Broadband Super Highway. Consumer Focus.

Two conclusions with immediate relevance to this research were drawn from these papers. First, it appeared to be unlikely that the consumers would arrive at the focus group discussions with significant prior knowledge about network neutrality, nor were they likely to have formed strong attitudes about it. This was reflected in the discussion guide for the focus groups, which was designed in such a way that it could uncover participants' attitudes towards network neutrality without asking them directly or unduly biasing their views⁶⁶. Second, these results showed that respondents in the survey might place undue weight on service attributes that they can easily grasp such as price, whilst neglecting certain aspects of the service that they might consider to be more important if they fully understood them, but did not due to the technical jargon used to describe them. However, Lawford et al.'s (2009) paper indicates that consumers do not take network neutrality issues lightly when presented with factual information about traffic management practices, which lent support to the development of an unbiased information package for respondents to the survey. This information package was one of the major research outcomes from the qualitative research of the project and is discussed in detail in Section 6.7.

3.5 Information processing

In order to approach the development of an information package that encapsulated information about how the Internet works and how it can be used for different purposes, while focusing on network neutrality issues, it was important to first to realise that the human information processing system is notoriously idiosyncratic and complex. People mentally construct, interpret and (mis)understand information. It is therefore unlikely that merely presenting all relevant options and correct information will generate the appropriate interpretation and response (Shafir, 2007)⁶⁷. Common mistakes made in consumer information include presenting too much and/or too complex information, as both are likely to adversely impact its effectiveness. Too much information is likely to result in consumers ignoring or misunderstanding it (Xavier, 2011)⁶⁸, while overly complex information may be perceived not only as difficult, but even humiliating by more vulnerable groups of consumers (Better Regulation Executive and National Consumer Council, 2007)⁶⁹. On the other hand oversimplification, such as using a colour coding procedure, also does not necessarily lead to satisfactory results. Huck and Wallace (2011) show in their choice experiments on broadband suppliers that when information is colour-coded, respondents performed statistically significantly worse than when provided with numerical information⁷⁰.

⁶⁶ See Annex.

⁶⁷ Shafir, E. (2007): A behavioural background for economic policy. In Behavioural Economics and Public Policy. Roundtable Proceedings. Australian Government – Productivity Commission: Melbourne.

⁶⁸ Xavier, P. (2011): Behavioural Economics and Customer Complaints in Communication Markets. A report prepared for the Australian Communications and Media Authority (ACMA) in connection with the public inquiry "Reconnecting the Consumer".

⁶⁹ Better Regulation Executive and National Consumer Council (2007): Warning: Too much information can harm.

⁷⁰ Huck, S. & Wallace, B. (2011): Consumer Information on Broadband Speed and Net Neutrality Experiment. London Economics. (We discuss the paper in more depth in Section 3.3.)

Kisielowska-Lipman (2012) provides some tentative insights into consumers' understanding of technical terms frequently used in current information about traffic management procedures by broadband providers. The terms she highlights are listed in Table 3-3. The results indicate that technological jargon without sufficient explanation is unlikely to aid consumers' understanding of network neutrality. This further underlined the need for the careful development of the information package.

Table 3-3: Commonly used traffic management terminology and consumer understanding (Kisielowska-Lipman, 2012)

Technical Term	Participants' understanding
Data caps	Very limited or no understanding
Peer-to-peer and newsgroups	
Fair usage policy	
VoIP	
Premium charges	
Guarantees	
Streaming and downloading	Good understanding, but difficulties identifying the difference between these two activities
Browsing and email, instant messaging, gaming and software updates	Good understanding

To aid the development of regulated consumer information, the Better Regulation Executive and National Consumer Council, as an outcome of their study in 2007⁷¹, recommended five "tests" to consider when developing information packages:

1. Have you **defined the behavioural outcomes** that you wish to achieve?
2. Have you **understood and assessed the level of incentives and potential risk/harm** for the target audience?
3. Have you **considered and understood the impact of making this information available on businesses' incentives** to achieve desired outcomes?
4. To what extent can the information being provided **simplify a choice for a consumer** (and hence achieve desired outcomes)?
5. Have you considered the fit with **existing regulated information requirements**?

These five questions served as a starting point in the development of the information packages for the research project; questions 1 and 4 are strongly linked to it. The behavioural outcome of the planned information package was foreseen in the tender specifications for this project: "allow consumers to answer all possible questions with as

⁷¹ Better Regulation Executive and National Consumer Council (2007): 11.

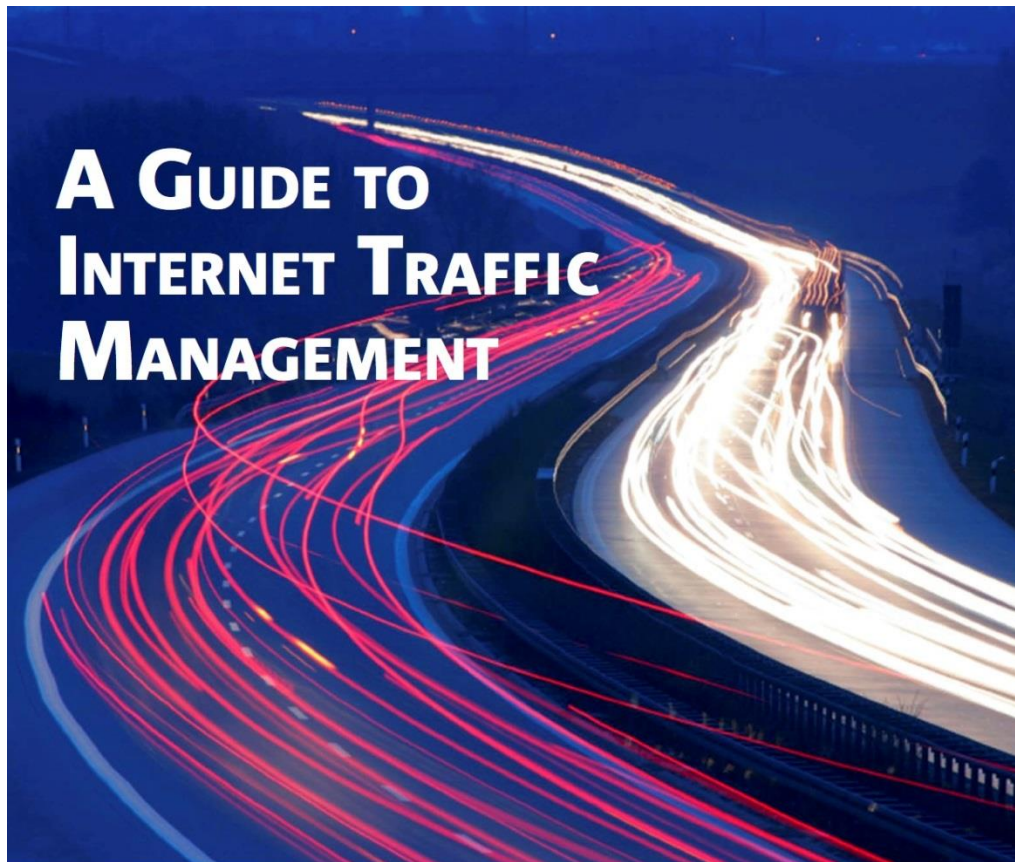
little bias as possible.” This involved encouraging respondents to conduct comparisons that they might not have conducted intuitively. Per-unit pricing information displayed in proximity to prices in supermarkets and other vendors is an example of an information practice where this might have been achieved. Therefore the implication for the development of the information package was to identify effective ways of consolidating the concept of network neutrality and other relevant information so that it enabled these important comparisons that wouldn’t otherwise have been carried out, which in turn were likely to simplify respondents’ choices in the conjoint exercise.

Questions 2 and 3 summarise what has been addressed above in this report. In order for information to be meaningful, it has to account for consumers’ incentives. We sought to give insights as to what these incentives are through fulfilling the second and in part the third research objective of the qualitative research in the project. On the other hand, to develop effective information one also needs to understand and address supply-side incentives. This is echoed in the first research objective of the qualitative research in the project.

Finally, the consumer information package developed by Ofcom as a result of their research into consumers’ understanding of network neutrality and traffic management practices provided some inspiration for the essentially similar task in this project. It was found from the results that consumers are generally unaware of the term and require an explanation that uses everyday language and might be supported by illustrations that allow them to easily approach the subject by linking it to concepts well-known to them. This led Ofcom to approach the issue by a motorway metaphor. The figures below reproduce Ofcom’s final information package on traffic management; this can also be found online⁷².

⁷² See:
<http://consumers.ofcom.org.uk/files/2013/09/traffic.pdf>.

Figure 3-1: Ofcom information package on traffic management - cover



More of us are using the internet – and using it for longer – than ever before.

What we do online has also changed dramatically.

All this has led to the internet becoming increasingly busy.

To ensure that networks operate efficiently, fixed-line and mobile internet service providers (ISPs) can restrict or ration traffic on their networks, or give priority to some types of traffic over others during peak periods or more generally.

This is known as '**traffic management**' or '**traffic shaping**'.



Figure 3-2: Ofcom information package on traffic management - page 1

Why do ISPs do this?

Congestion is one reason.

Think of the internet as a series of motorways.

In the early days of the web, it was mainly used for email and browsing, and fewer people were online. Back then there was little problem with congestion.

But as the internet grew in popularity – and we wanted to do more and more online – the old dial-up phone connection couldn't cope with demand and things became congested and slow.

Broadband was the answer – it provided the internet with more motorway lanes to speed up travel.

It also provided greater opportunities for people to do more – such as stream films, download files, play games and make video calls.

But many of these activities require a lot of bandwidth and so the internet has become very busy.

To deal with congestion, ISPs had to come up with a way to keep the internet running without slowing everything down.

So they reconfigured their motorways by introducing 'priority lanes' for certain types of internet traffic.

Internet traffic can be thought of as being represented by different types of vehicles. Activities like streaming video are the lorries and take up a lot of space, whereas emailing or browsing are smart cars and much smaller.



Types of traffic on the motorway



Figure 3-3: Ofcom information package on traffic management - page 2

What does this mean in practice?

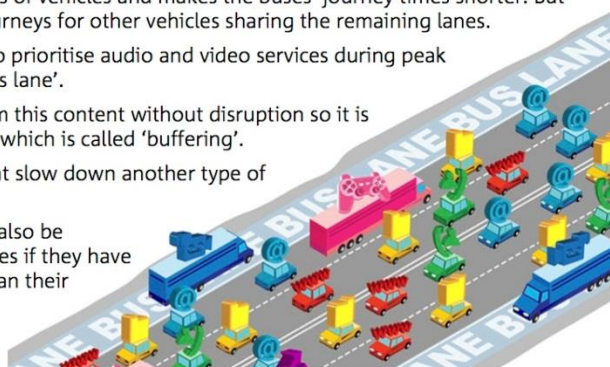
You can think of it in the same way that traffic is managed on roads. For example, a bus lane gives priority to buses over other types of vehicles and makes the buses' journey times shorter. But this can mean slightly longer journeys for other vehicles sharing the remaining lanes.

An individual ISP might decide to prioritise audio and video services during peak times by putting them in the 'bus lane'.

This should allow users to stream this content without disruption so it is less likely to suffer interruption, which is called 'buffering'.

To protect this service they might slow down another type of traffic – such as file sharing.

Speeds for individual users may also be temporarily reduced at peak times if they have been using the internet more than their package allows.



Other factors can also affect your fixed or mobile broadband connection

Regardless of your ISP's traffic management policy there are a number of other reasons why the speed or quality of your connection may not be performing to the level that you expect.

A few of these include:

- The line that provides your internet connection to your home could be damaged;
- The device that you use to access the internet (computer, mobile phone, dongle, gaming console) may not be set up correctly;
- The quality of your phone signal and whether you are indoors or outdoors;
- There could be issues with the performance of your internet router or hub (e.g. WiFi interference); or
- There could be faults related to specific content providers or their applications.

So if you have a problem with your connection we suggest contacting your provider in the first instance. They should be able to help you work out what the cause is and how you might be able to fix it.

How can I find out about my ISP's internet traffic management policy?

Each ISP has its own traffic management policy and so when choosing a provider you should check their policy meets your needs.

Below you will find links to policies of the largest providers. If your ISP is not on this list, visit your provider's website or speak to their customer services department.

BT	Virgin Media (National and Cable)
Karoo	O2 (Home broadband and mobile broadband)
Plusnet	EE (Handsets, broadband and mobile broadband)
Sky	Three
TalkTalk	Vodafone



3.6 Summary

This chapter reviewed existing studies that are relevant to the major subjects covered in this project's focus group discussions. Interestingly, few researchers have so far explored the role that the Internet plays in consumers' lives using qualitative research methods. When they have done, they have usually focused on very specific groups of consumers, rather than the average consumer. Therefore our research added new results to the existing literature in this area. Studies in the field of ISP choice criteria are by and large conducted using quantitative methods, and above all they highlight that switching ISPs is perceived by consumers as a cumbersome, difficult and sometimes annoying process. Often they do not see much to gain from switching providers as their offers appear to be quite similar. Most studies agree that the major choice criteria are the following:

- Price
- Access Speed
- Brand
- Product Bundle

Very few studies have yet introduced attributes relating to network neutrality into their investigation of ISP choice criteria. When they have done, they find that consumers do have difficulty evaluating them and do not attach great weight to them in their decision-making. However, it should be noted that the two studies that were identified in the literature review that deal with network neutrality-related attributes both have some methodological shortcomings that may have had an impact on the results. One used only a small student sample, which may not be representative for the market, while the other focused on a very limited set of attributes alongside the ones referring to network neutrality and so may have overestimated its effect on consumer choice. We are confident that we have overcome these shortcomings in this study.

The studies that we reviewed on information processing highlight that the human information processing system is notoriously idiosyncratic and complex. People mentally construct, interpret and (mis)understand information. Furthermore, the studies exploring consumers' understanding of how the Internet works, network neutrality and traffic management showed that these concepts are very difficult to grasp for consumers. Findings from the studies on information processing as well as research conducted on behalf of Ofcom clearly indicate that the information package for the survey has to use everyday language and needs to have visual elements in order to be able to convey the intended message.

4 Test Areas and Their Electronic Communications Markets

4.1 Introduction

The qualitative (focus groups) and quantitative (survey) research in this project has been performed in test areas. BEREC member or observer states qualified initially as test areas. The selection of test areas was based on a cluster analysis⁷³ that incorporated in total 14 supply- and demand-oriented indicators. The final step of the cluster analysis produced a two-dimensional plot that positioned the analysed countries in one out of four quadrants. Each quadrant represents a single combination of low/high demand and low/high supply. In total four test areas – one per quadrant – have been selected.

This is based on the assumption that each country which is selected from a specific cluster is representative for the whole cluster. It should be noted, however, that countries close to the middle of the respective quadrant represent more ‘average’ countries, whilst the ones at the outer edges of each quadrant represent more extreme cases from the specific cluster. Thus for the quadrants with mixed supply and demand results, the most natural choice is a country close to the middle of these clusters. This ensures that there are two countries in the sample that represent their cluster well, but also bear some similarities to the average of countries in the respective cluster analysis. For the quadrants that represent the obvious early adopters (high demand, high supply) and the late adopters (low demand, low supply), it is more logical to select countries representing a more extreme case of their cluster as this allows studying the specific effect of a very ‘active’ market as compared to a more ‘inactive’ market in more depth. The final selection of test areas reflects this.

Furthermore, it is obvious that the final selection of test areas needed to represent a good mix of small and large countries as well as a good geographic dispersion across the countries that featured in the cluster analysis. This was the second rationale that the study team kept in mind when making the final selection of test areas for the present study.

Given the objective of the entire study – studying the value of network neutrality for consumers – policy indicators on national legislation regarding network neutrality appear to be of high importance for the cluster analysis. In fact, selecting a country that already has a legislation prescribing strict network neutrality would have been misleading and would have most likely biased the qualitative and quantitative research results. As consumers in such a country do not realistically have a choice of IAS offers that implement different network neutrality policies, we could not have measured their impact. The existence of a legislation prescribing strict network neutrality was thus used as an exclusion criterion, affecting the possible selection of the Netherlands and Slovenia as a test area.

⁷³ The cluster analysis is presented in detail in Section 5.1.

4.2 Selected test areas

In consideration of the above rationale the following test areas have been selected for carrying out the focus groups and the survey:

- Croatia
- Czech Republic
- Greece
- Sweden

Croatia represents a rather extreme example of the lower left quadrant i.e. late adopter countries. Therefore, consumer data from this test area reflects best the situation of low supply and low demand. The comparison to Sweden (an extreme country from the 'early adopter' quadrant is especially likely to yield interesting results as regards the role the Internet and network neutrality play in consumers' lives as well as consumers' choice criteria. Furthermore, Croatia is a small country and represents the South of Europe. A high share (46%) of consumers in Croatia have indicated experiencing blocking on their Internet connection.

Czech Republic is situated in the middle of the cluster in the upper left quadrant with high supply but comparatively low demand. It has been selected as it represents a medium sized country from Eastern Europe that appears most representative of its cluster. A low share (20%) of consumers in the Czech Republic have indicated experiencing blocking on their Internet connection.

Greece is selected as it represents the most populated cluster in the lower right quadrant (comparatively high demand, average supply) quite well given its relative position. It is a medium-sized country from Southern Europe. A low to medium share (24%) of consumers in Greece have indicated experiencing blocking on their Internet connection.

Sweden is selected as it represents an extreme case from the upper right cluster and thus the direct opposite of Croatia. Furthermore, it serves as an example for a medium-sized Northern European country. A medium share (27%) of consumers in Sweden have indicated experiencing blocking on their Internet connection.

4.3 Country profile of Croatia

4.3.1 Croatia: The electronic communications market environment

4.3.1.1 Specific broadband products with their market shares

Broadband products can be mainly characterised by their availability, speed and technology (e.g. Cable, xDSL, FTTx, etc.). The recent study on 'Broadband internet

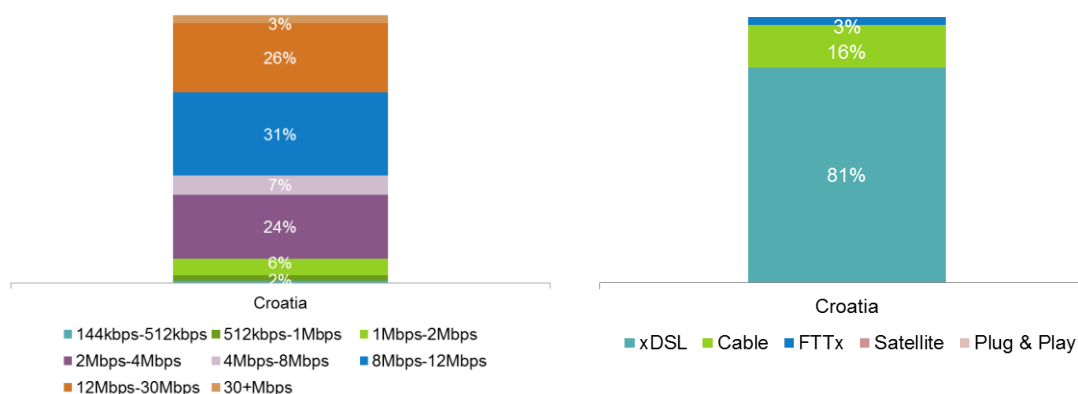
access cost (BIAC)⁷⁴ provides country profiles based on a number of indicators that characterise the broadband market. For Croatia this study collected a total of 96 broadband Internet offers. These offers are collected from four different operators that represent more than 90% of market share, being T-Hrvatski Telekom (incumbent), OT Optima Telekom⁷⁵ (new entrant), B.net Hrvatska⁷⁶ (new entrant), and Iskon⁷⁷ (new entrant). The following characteristics are provided:

- All offers investigated do not require line rental or a cable TV subscription;
- Most of these offers (49%) are unmetered, which means that an unlimited volume of data can be downloaded at any time, whereas 47% does have a volume cap (metered);
- Offers from incumbents accounted for 38% of all the offers, whereas 63% of these were offers from new entrants;

In terms of speed offers per basket: most offers are in the 8Mbps-12Mbps speed range (31%), followed by 12Mbps – 30Mbps (26%), 2Mbps-4Mbps (24%) and 4Mbps – 8 Mbps (7%) (Covering 97% of offers, see also Figure 4-1);

- In terms of technology: most offers are xDSL (81%), followed by cable (16%) and FTTx (3%).

Figure 4-1: Offers per basket (speed) and technology (Croatia)



The following sections provide more information for relevant indicators on:

- Download speed of fixed broadband subscriptions
- Broadband subscriptions per type of technology

⁷⁴ 2013, Broadband internet access cost (BIAC), see: <http://ec.europa.eu/digital-agenda/en/news/study-retail-broadband-access-prices-2013-smart-20100038>.

⁷⁵ It should be noted, that as a result of pre-bankruptcy-settlement procedure representatives of HT have been appointed as members of Optima's Supervisory Board and a former employee of HT has been appointed as CEO of Optima.

⁷⁶ B.net has become part of the VIPnet in 2011.

⁷⁷ Note: 100% owned by the incumbent.

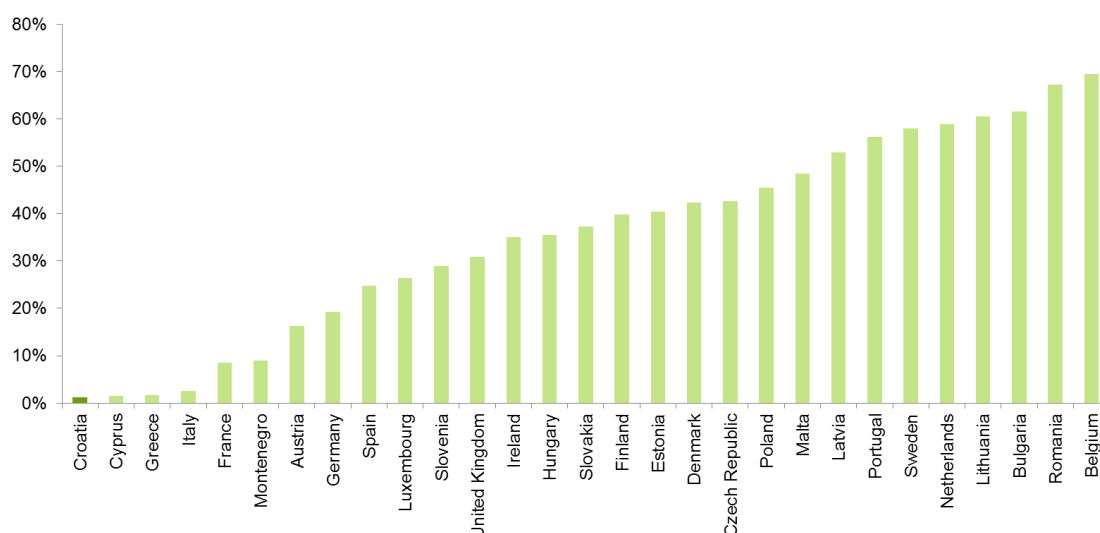
4.3.1.2 Download speed of fixed broadband subscriptions

As far as download speed as a share of fixed broadband subscriptions is concerned, there is little data available on the situation in Croatia. Most of the subscriptions are 2 Mbps and faster (advertised download speed).

4.3.1.3 Broadband subscriptions per type of technology

The DAE Scoreboard provides data on NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions for 2013. As shown in Figure 4-2, NGA share of broadband connections ranges from 69,5% in Belgium to 1,2% in Croatia. The average NGA broadband coverage as a percentage of total fixed broadband subscriptions is 35,3%.

Figure 4-2: NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions in 2013



Source: DAE Scoreboard

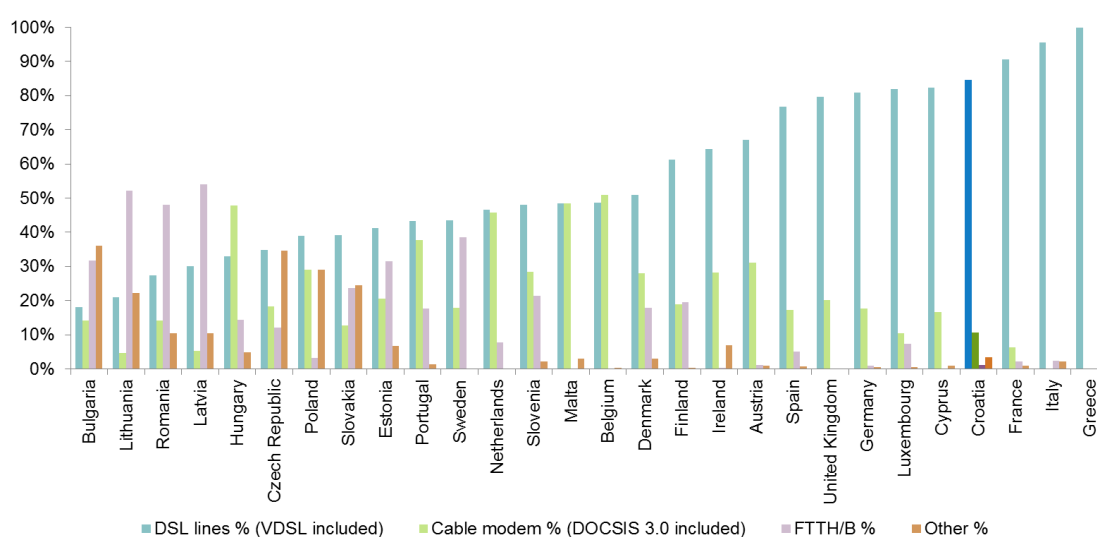
Note that the data provided on the Digital Agenda Scoreboard for Croatia does not include DOCSIS 3.0 subscriptions according to HAKOM. According to data provided by HAKOM, in Q2 2014 there were 102.200 DOCSIS 3.0 subscriptions and 10.977 FTTH subscriptions. This means that, taking into account this data, the total number of NGA subscriptions in Q2 2014 was 113.177 (excluding VDSL) meaning about 12,1% of total fixed broadband subscriptions (936.769 in Q2 2014).⁷⁸

On the basis of data from the DAE Scoreboard the Figure 4-3 below indicates fixed broadband subscriptions as technology market shares:

⁷⁸ These figures were not updated in the figure in order to ensure comparability across countries in the original dataset.

- **DSL lines % (VDSL included)** range from 99,79% in Greece to 15% in Bulgaria. In Croatia they are 85%; whereas the average share is 56%;
- **Cable modem % (DOCSIS 3.0 included)** ranges from 51% in Belgium to 0% in Greece and Italy. In Croatia it amounts to 11%, whereas the average share is 21%;
- **FTTH/B %** ranges from 54% in Latvia to 0% Greece and Malta. In Croatia it is only 1%, whereas the average share is 14%.
- **Other %** range from 36% in Bulgaria to 0% in the Netherlands and Sweden, while the average share is 7,4%. For Croatia it is 3%.

Figure 4-3: Broadband subscriptions per type of technology in 2013



Source: DAE Scoreboard

4.3.1.4 Specific pricing plans for Internet access, including typical promotional offers, major contract terms and conditions

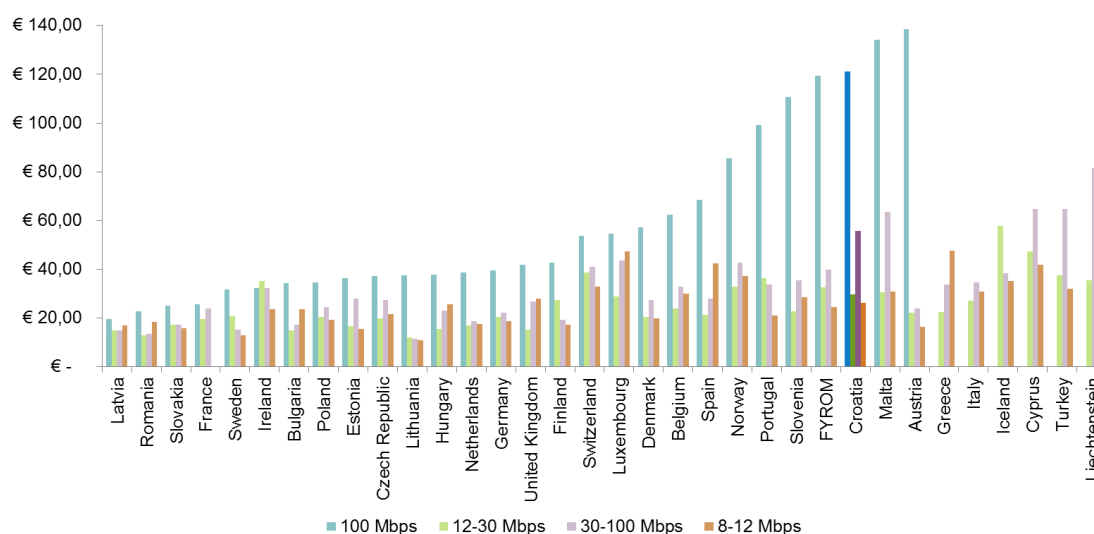
This section presents monthly prices of Internet access (least expensive offer in EUR/PPP) in Croatia in comparison to other countries. The DAE Scoreboard provides data on the monthly price of standalone Internet access per speed range in 2014.

As shown in Figure 4-4, prices for:

- **Internet Access 8-12 Mbps** range from €10,90 in Lithuania to €47.71 in Greece (note that this price is based only on one offer (satellite)). The average price across BEREC member and observer countries (for which data is available) is €26,49. Croatia is slightly below the average with the price at €26,26
- **Internet Access 12-30 Mbps** range from €12,01 in Lithuania to €57.86 in Iceland; the average price is €25,51. In Croatia the price is above average at €29,70

- **Internet Access 30-100 Mbps** range from €11,53 in Lithuania to €81,52 in Liechtenstein with the average price of €32,96. Croatia reached the price of €55,69
- **Internet Access 100 Mbps** range from €19,54 in Latvia to €138,45 in Austria, whereas the average price across BEREC member and observer countries (for which data is available) is €58,65. Croatia is much above the average with the price at €121,24.

Figure 4-4: Monthly price of Internet access per speed in 2014



Source: DAE Scoreboard

According to the Croatian Regulatory Authority for Network Industries (HAKOM), biggest operators in Croatia offer Internet Access Services in the following ranges (prices without VAT⁷⁹, Flat traffic included) for:

- 4 Mbps - from 159,20 HRK to 188,98 HRK (approximately 20-25 EUR)
- 10 Mbps - from 108,00 HRK to 222,92 HRK (approximately 23-25 EUR)
- 30 Mbps - 188,00 HRK (approximately 25 EUR)
- 100 Mbps - 236,98 HRK (approximately 31 EUR)

According to the “Ordinance on the Manner and Conditions for Provision of Electronic Communications Networks and Services” minimum speed guaranteed must be 50% of the advertised speed for speeds up to 10 Mbps and 70% of the advertised speed for speeds above 10 Mbps. Operators offer three different kinds of contract: without contract obligation, 12-month minimal contract duration and 24-month minimal contract duration.

⁷⁹ Please note that these prices are not fully comparable to the ones shown in the figure relating to the DAE Scoreboard data. The latter are prices in purchase parity.

It is normal for an operator to have some promotional offers, for example, first three months for free, three or six months - 50% percent discount, or discount for a new device or a gadget.

In the case of early contract termination, users have to pay fees defined by the general contract terms and conditions. The fee for early termination is calculated as a sum of the monthly fees for a package for the rest of the minimum contract duration or other fees in the amount of discounts on products and services that the subscriber achieved if the payment of such compensation is favourable to the subscriber.

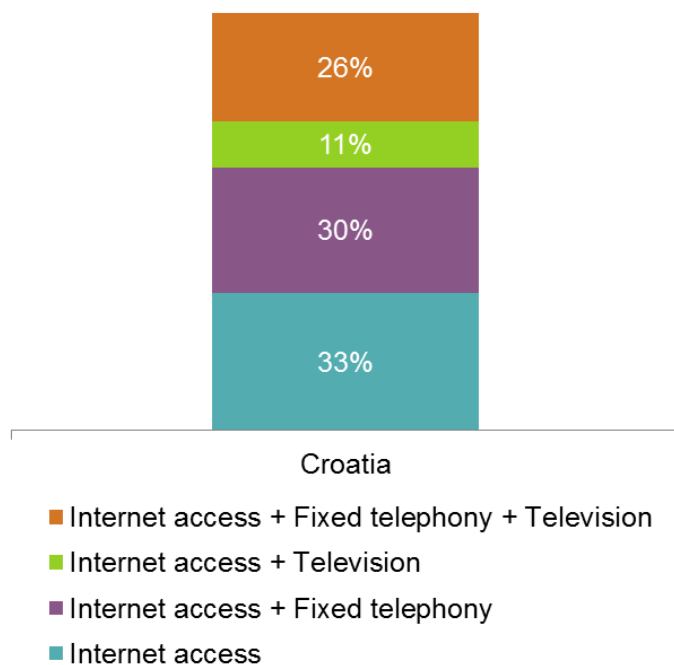
4.3.1.5 Information on bundling practices and pricing of such bundles

This section presents bundle penetration and pricing of such bundles in Croatia.

The study on 'Broadband Internet access cost (BIAC)'⁸⁰ provides data on the penetration of types of bundled offers.

In terms of types of offers in Croatia in relation to bundling: 32% were Internet access only, 30% Internet access and fixed telephony, 11% Internet access and TV and 26% Internet access, fixed telephony and TV.

Figure 4-5: Offers per offer type in Croatia, 2013



Source: BIAC study

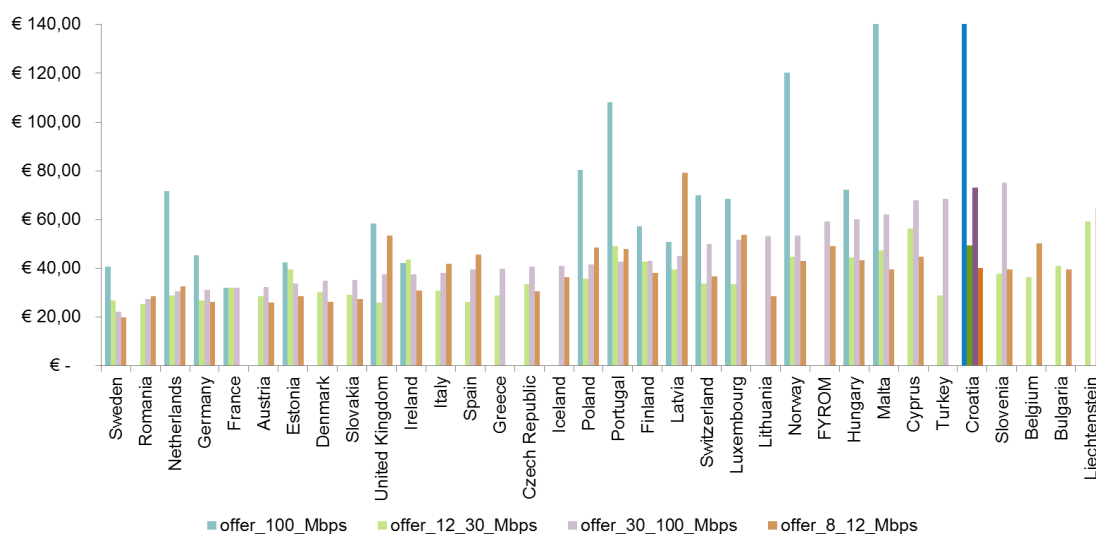
⁸⁰ 2013, Broadband internet access cost (BIAC), see: <http://ec.europa.eu/digital-agenda/en/news/study-retail-broadband-access-prices-2013-smart-20100038>.

The DAE Scoreboard provides data on the monthly price of standalone Internet access, as well as bundles according to different speed (least expensive offer in EUR/PPP).

As shown in Figure 4-6, monthly price of Internet access, together with fixed telephony bundles for:

- **Offer 8-12 Mbps** ranges from €19,95 in Sweden to €79.24 in Latvia. The average price is €39,99, similarly in Croatia is €39,98
- **Offer 12-30 Mbps** ranges from €25,32 in Romania to €59.25 in Liechtenstein; the average price is €36,63. In Croatia the price is also above the average is €49,45
- **Offer 30-100 Mbps** ranges from €22,25 in Sweden to €75.25 in Slovenia; the average price is €45,19. This type of bundle in Croatia costs €73,14
- **Offer 100 Mbps** ranges from €32,13 in France to €147,59 in Malta; the average price across BEREC member and observer countries (for which data is available) is €73,44. For Croatia the price is much above the average at €141,69.

Figure 4-6: Monthly price of Internet access + fixed telephony bundles in 2014



Source: DAE Scoreboard

Table 4-1: Monthly price of Internet access + fixed telephony bundles in 2014

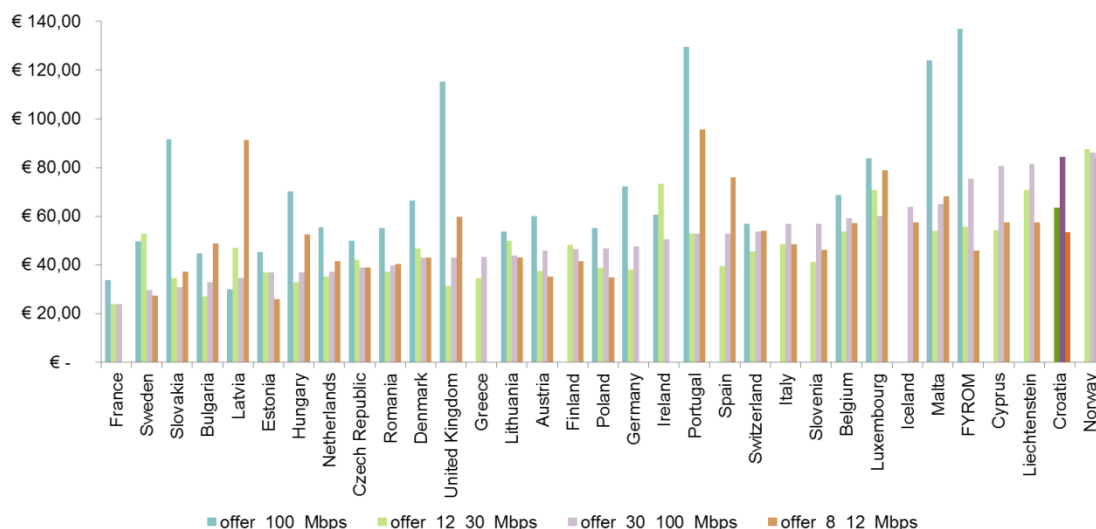
Speeds	HT	Iskon	Optima	Vipnet
4 Mbit/s	214,45 kn	155,99 kn	166,40 kn	159,20 kn
5 Mbit/s		131,99 kn		
10Mbit/s	238,45 kn	135,99 kn	216,00 kn	183,20 kn
		175,99 kn		
15 Mbit/s				151,20 kn
20 Mbit	296,85 kn		255,20 kn	231,20 kn
30 Mbit/s				231,20 kn
40 Mbit	254,45 kn			
	214,45 kn			
60 Mbit/s				471,20 kn
				479,20 kn
100 Mbit	270,45 kn			
	230,45 kn			
120 Mbit/s				551,20 kn
				559,20 kn

Source: HAKOM 2014

Figure 4-7 below presents monthly price of Internet access, together with fixed telephony and TV bundles (least expensive offer in EUR/PPP) for:

- **Offer 8-12 Mbps**, which ranges from €25,81 in Estonia to €95,61 in Portugal. The average price across BEREC member and observer countries (for which data is available) is €53,16. This type of bundle in Croatia costs €53,48
- **Offer 12-30 Mbps**, which ranges from €23,77 in France to €87,57 in Norway; the average price is €47,05. In Croatia the price is higher than the average at €63,65
- **Offer 30-100 Mbps**, which ranges from €23,77 in France to €86,24 in Norway; the average price is €50,96. This type of bundle in Croatia costs €84,29
- **offer 100 Mbps**, which ranges from €29,84 in Latvia to €137,02 in FYROM; the average price across BEREC member and observer countries (for which data is available) is €69,93. For this type of bundle there is no information available for Croatia.

Figure 4-7: Monthly price of Internet access + fixed telephony + TV bundles in 2014



Source: DAE Scoreboard

4.3.1.6 Information about network neutrality policies of ISPs

According to Croatian Regulatory Authority for Network Industries (HAKOM), operators in Croatia do not have any restrictions regarding use of the Internet and only have an obligation to inform users about maximum and minimum speed for Internet access. Also, consumers have the possibility to measure broadband speed with a certificated tool provided by HAKOM (HAKOMetar). These results can be used as a proof in case of a user complaint.

Table 4-2: Monthly price of Internet access + telephony + TV bundles

Speeds	HT	Iskon	Optima	Vipnet
4 Mbit	236,00 kn	231,99 kn	230,40 kn	239,20 kn
5 Mbit		195,99 kn		
10 Mbit	260,00 kn	199,99 kn	280,00 kn	263,20 kn
		263,99 kn		
20 Mbit	318,40 kn			311,20 kn
30Mbit				204,00 kn
				284,00 kn
40 Mbit	236,00 kn			
	268,00 kn			
60 Mbit				524,00 kn
				559,20 kn
100 Mbit	252,00 kn			
	284,00 kn			
120 Mbit				604,00 kn
				639,20 kn

Source: HAKOM 2014

4.3.1.7 Information about how ISPs typically present information to consumers in advertising, own websites

As explained by the Croatian Regulatory Authority for Network Industries (HAKOM), operators in fixed networks have an obligation to present information about the speed by using a term „from – up to“, for broadband speed in general terms of conditions, advertising, websites, etc. Mobile operators on their websites need to indicate that maximum speed is possible only if all conditions are satisfied (e.g. network congestion).

4.3.2 Croatia: Internet consumer behaviour

This part explains consumer behaviour in Croatia with regard to Internet access and network neutrality in particular. The information is presented against the background of other countries.

4.3.2.1 Switching behaviour and choice criteria for Internet access services and actual / perceived breadth of potential choices

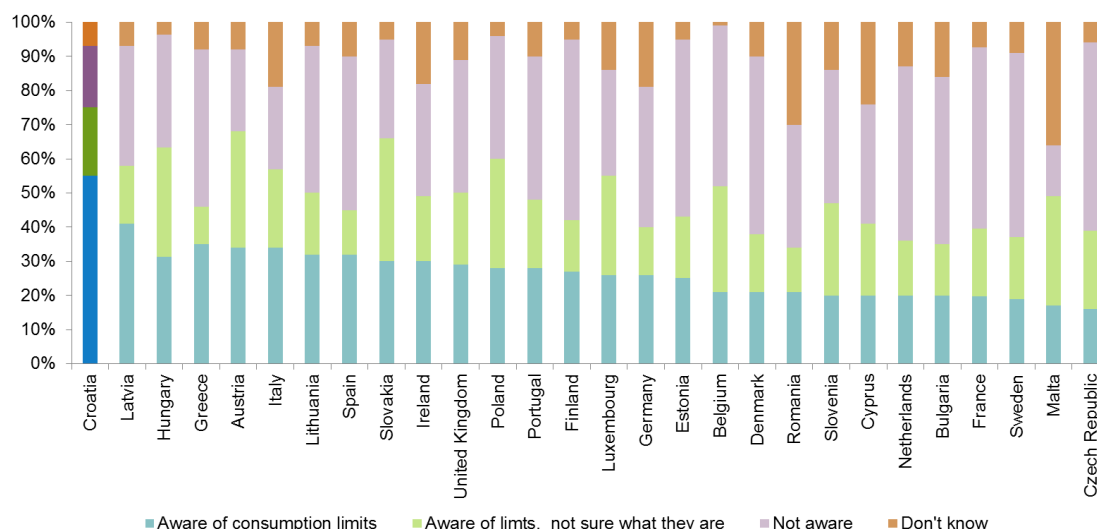
The aim of the study is to look at the value of network neutrality for consumers. The following sections provide available data on network neutrality incidents, as well as consumer behaviour in terms of switching ISPs.

4.3.2.1.1 Network neutrality incidents

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the awareness of data consumption limits of Internet connections for 2014. As shown in Figure 4-8, awareness of data consumption limits ranges from 55% in Croatia to 16% in the Czech Republic, with an average of 27% across BEREC member and observer countries (for which data is available).

20% of Croatian respondents are aware of the limits of Internet connections, but they are not sure what they are, which is nearly at the average of 22%. 18% of the surveyed population in the Croatia seems to be 'not aware' of the data consumption limits, whereas the average for the analysed countries is 40%. 7% of the Croatian respondents replied 'I don't know'.

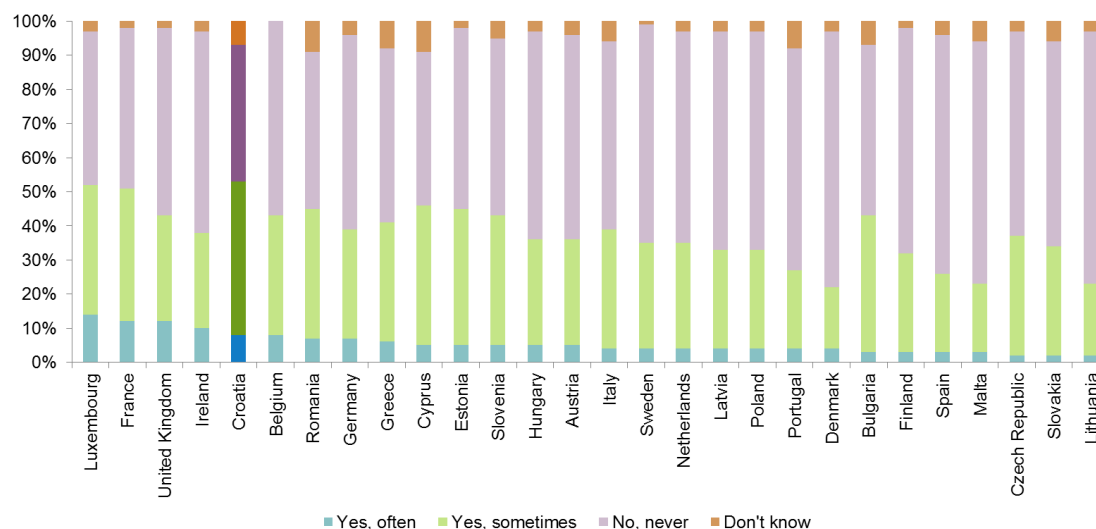
Figure 4-8: Awareness of data consumption limits of Internet connections in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the difficulty of accessing online content and applications due to insufficient speed or downloading capacity for 2014. As shown in the Figure 4-9, respondents 'often' having difficulties ranges from 14% in Luxembourg to 2% in Lithuania, with an average of 5,5% across BEREC member and observer countries (for which data is available). As for the Croatia, 8% of respondents admitted 'often' having such difficulties. On the other hand, 45% of the Croatian respondents confirm that they 'sometimes' experience difficulties due to insufficient Internet speed, which is above the average of 32%. 40% of the surveyed population in this country claim to 'never' experience such difficulties, whereas the average is 60%. 7% of the Croatian respondents replied 'I don't know'.

Figure 4-9: Difficulties experienced due to insufficient speed in 2014

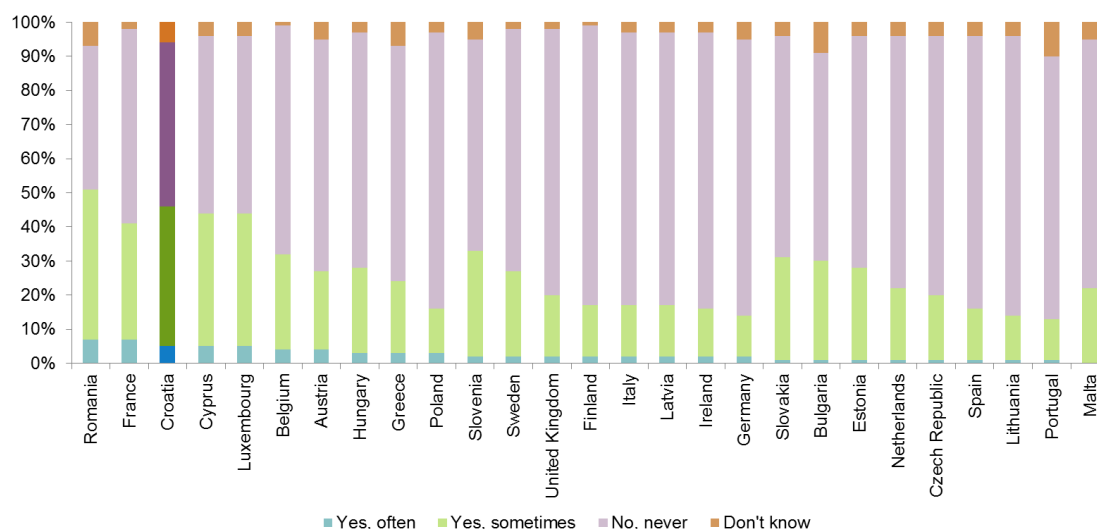


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the number of cases in which users experienced any kind of blocking of online content or applications for 2014. As shown in Figure 4-10, regular blocks ('Yes, often') range from 7% in Romania to 0% in Malta, with an average of 2,6% across BEREC member and observer countries (for which data is available), whereas occasional blocking ("Yes, sometimes") is reported more frequently (23.7% on average).

As for Croatia, 5% of the respondents 'often' experience blocking of online content or applications, whereas for 41% it happens 'sometimes'. 48% of the surveyed Croats 'never' cope with such blockings, which is below the average of the analysed countries of 69%. 6% of the Croat respondents replied 'I don't know'.

Figure 4-10: Blocking of online content or applications in 2014

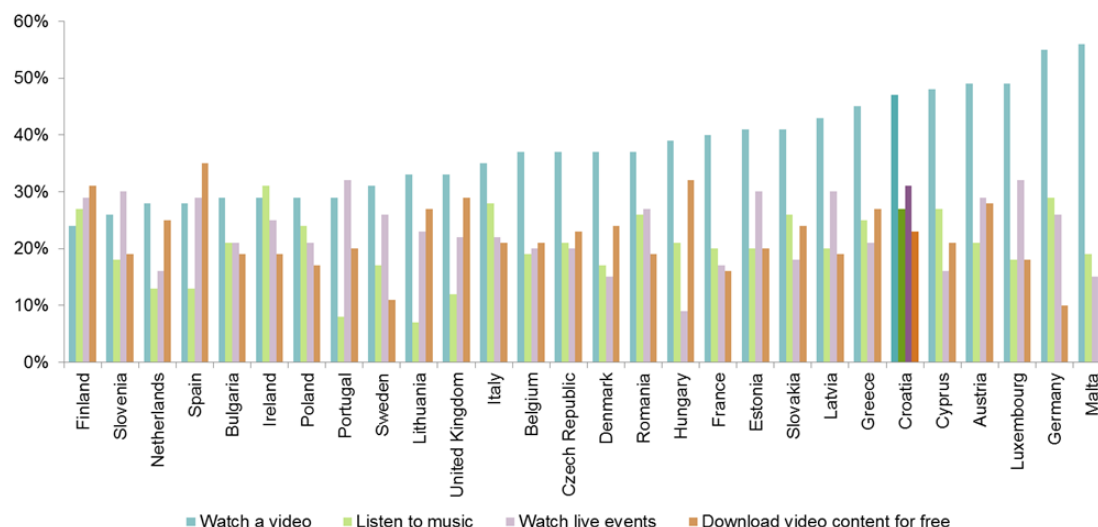


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey also provides data on the types of content and applications for which users experienced Internet blocking for 2014. As shown in Figure 4-11, on average 38% of users experienced online blocking when watching a video, with data ranging from 56% in Malta to 24% in Finland, whereas the average of 23% experienced blocking while watching live events, with data ranging from 32% in Luxembourg to 9% in Hungary (across BEREC member and observer countries for which data is available).

In Croatia, 47% of respondents experienced online blocking when watching a video and 31% while watching live events. 27% of the surveyed Croats claim to have experienced such blocking while listening to music, which is a bit above the average of 20%. 23% of the respondents in this country coped with online blocking when downloading video content for free; the average is 22%.

Figure 4-11: Experience of Internet blocking in 2014



Source: Eurobarometer

4.3.2.1.2 Switching behaviour

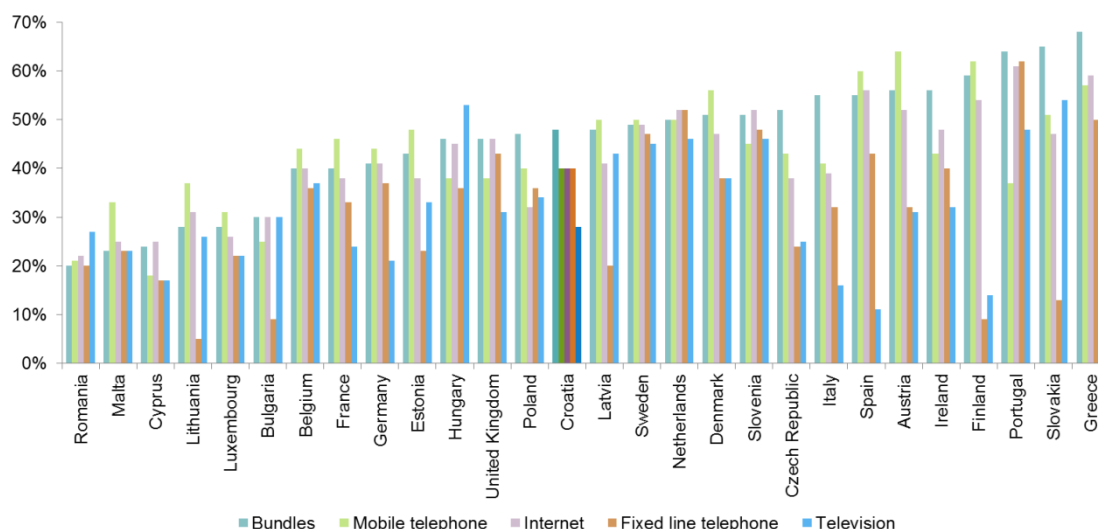
The 2014 eCommunications and telecoms single market Eurobarometer⁸¹ survey provides data on the percentage of households that switched their Internet service provider at least once up to the time of the survey. Eurobarometer data covers the EU28 (see Figure 4-12). Figures for Croatia are as follows:

- **Bundles** ranges from 20% to 68%; the average is 45%. Croatia is above the average with 48%
- **Mobile telephone** ranges from 18% to 64%; the average is 44%. Croatia is below the average with 40%
- **Internet**⁸² ranges from 22% to 61%, whereas the average amounts to 43%. In Croatia it is 40%
- **Fixed line telephone** ranges from 5% to 62%; the average is 37%. In Croatia 40% of households switched their provider for this service.
- **Television** ranges from 11% to 54%, whereas the average amounts to 26%. In Croatia 28% of households did such a switch.

⁸¹ It should be noted that these figures refer to a representative survey and not an analysis of actual switching data from the providers. HAKOM estimates that the actual percentage of users have switched their ISP within the last 12 months is between 20 and 30 %.

⁸² FYROM (not covered in the Eurobarometer data set) reported a value of 2.2% for this indicator.

Figure 4-12: Percentage of households that switched their Internet service provider⁸³



Source: 2014 eCommunications and telecoms single market Eurobarometer

Unfortunately, there is no in-depth data on switching reasons or criteria reflected in the CHAFAE report for Croatia, from which data were drawn for the other test areas. However, the Croatian Regulatory Authority for Network Industries (HAKOM) indicated that the most common criteria for choosing IAS package are:

- price (the most common),
- quality,
- maximum upload/download speed.

Web browsing, streaming, downloading and uploading files are the typical patterns of Internet usage among the Croatian society that will be further examined in the following Sections.

4.3.2.2 Consumers' preferences and willingness to pay for Internet access services

This chapter presents overview of the situation in Croatia, as far as consumer's preferences and willingness to pay for Internet Access Services (IAS) are concerned.

4.3.2.2.1 Typical patterns of Internet usage

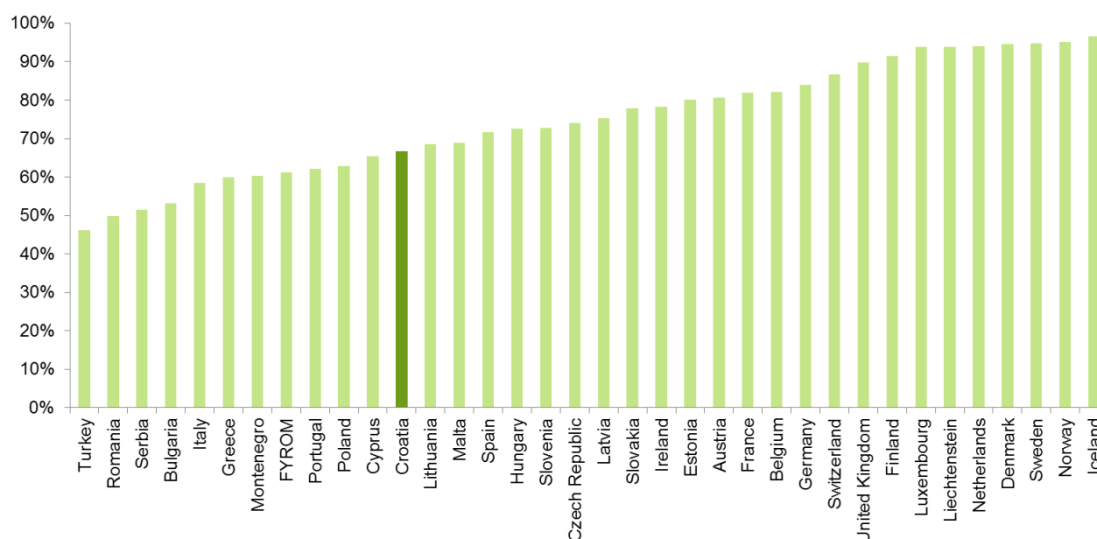
The analysis of typical patterns of Internet usage in Croatia concentrates on such aspects as: frequency of the usage, its' location, purpose of the use and digital skills.

⁸³ HAKOM positions this value somewhat lower between 20 and 30 percent. Accordingly, the remaining shares may in reality be higher.

4.3.2.2.2 Internet use and its frequency

ITU provides data on the percentage of individuals using the Internet, whereas Eurostat provides data on the number of individuals who are frequent users (every day or almost every day) for 2013. As shown in Figure 4-13, the percentage of individuals using the Internet ranges from 96,5% in Iceland to 46,3% in Turkey, with an average of 74,9% across BEREC member and observer countries (for which data is available). Croatia is a bit below the average with 67%.

Figure 4-13: Internet use in 2013

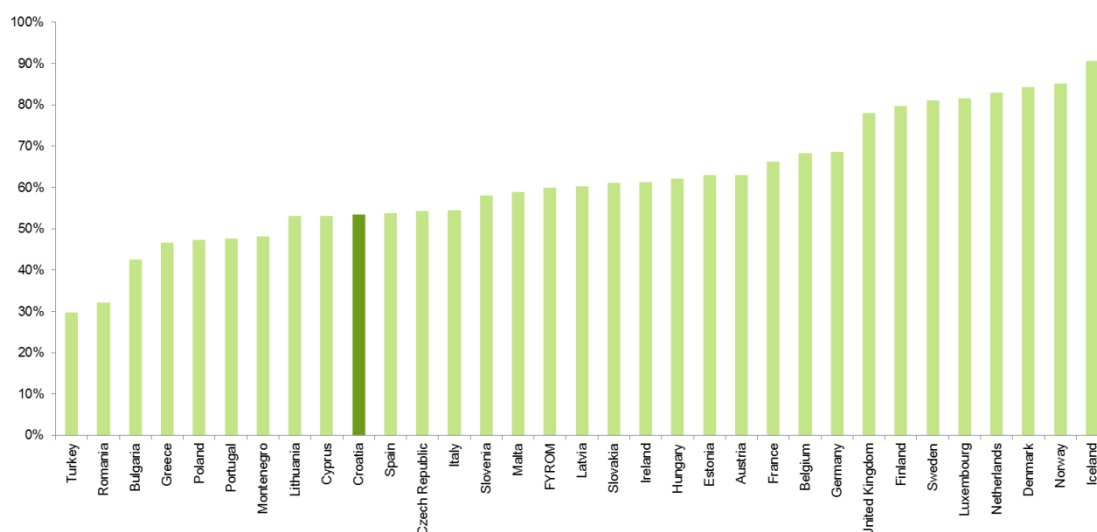


Source: ITU - ICT Eye, Eurostat

According to the ICT Households survey (Figure 4-14), the percentage of individuals who are frequent Internet users ranges from 91% in Iceland to 30% in Turkey⁸⁴. In Croatia 53% belong to frequent Internet users, which is below the average of 61% of the surveyed BEREC member and observer countries (for which data is available).

⁸⁴ Note that Eurostat also provides a value for Serbia that is included in this dataset, however this value is for latest available year (2009).

Figure 4-14: Individuals who are frequent Internet users (every day or almost every day), 2013



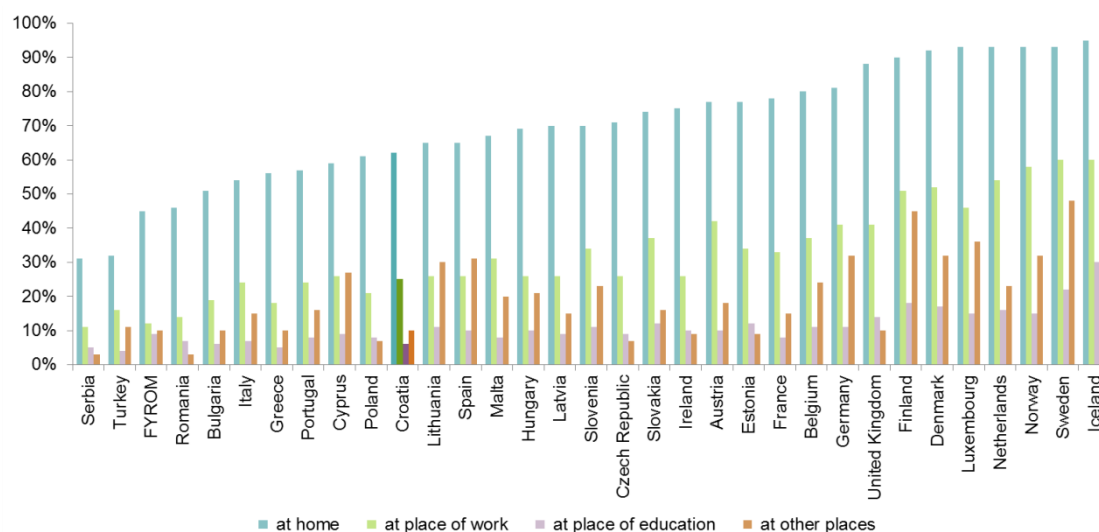
Source: EUROSTAT, ICT Households survey

4.3.2.3 Location and purpose of using Internet

EUROSTAT provides information on individuals using the Internet, by place of use in 2013 (% of individuals aged 16 to 74). As presented in the Figure 4-15, data on using the Internet:

- **At home** ranges from 31% to 95%; the average is 70% across the BEREC member and observer countries (for which data is available). In Croatia 62% of individuals use the Internet at home, which is below the average.
- **At place of work** ranges from 11% to 60%; the average is 33%. In Croatia 25% of individuals use the Internet at work, which is below the average.
- **At place of education** ranges from 4% to 30%, whereas the average is 11%. 6% of Croatian individuals use the Internet at this place.
- **At other places** ranges from 3% to 48%, whereas the average is 20%. 10% of Croatian individuals use the Internet at other places.

Figure 4-15: Individuals using the Internet, by place of use (% of individuals aged 16 to 74), 2013

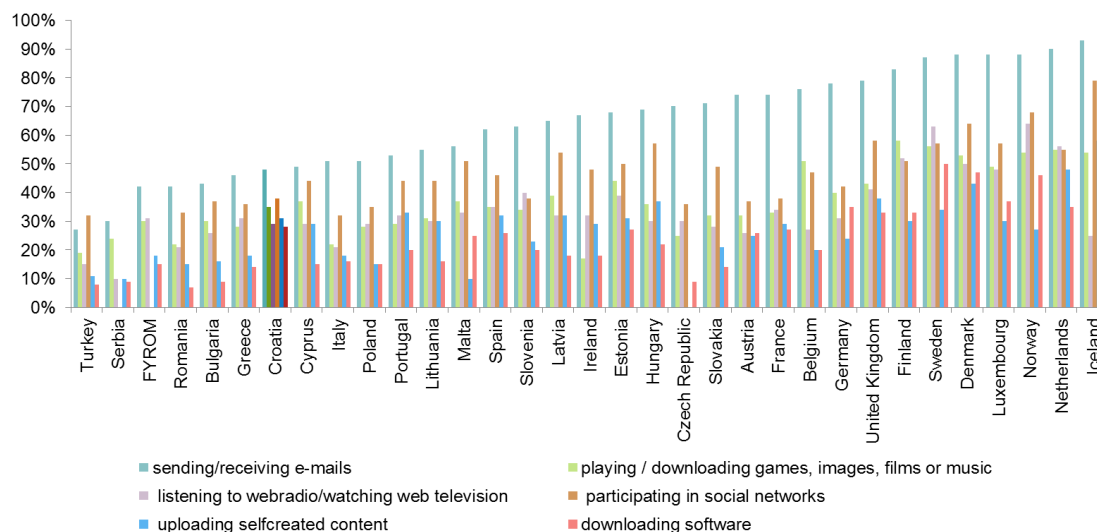


Source: EUROSTAT

EUROSTAT in its' ICT Household Survey also provides data on the type of Internet use for 2012 and 2013. Figure 4-16 reveals that the average number of individuals using the Internet for:

- sending/receiving e-mails is 64%, whereas in Croatia it is 48%
- playing or downloading games, images, films or music is 37% whereas in Croatia it is 35%
- listening to web radio/watching web television is 33%, whereas in Croatia it is 29%
- participating in social networks is 47%, whereas in Croatia it is 38%
- uploading self-created content is 26%. In Croatia it is 31%
- downloading software 24%, whereas in Croatia it is 28%.

Figure 4-16: Internet use: sending/receiving e-mails in 2013, playing or downloading games, images, films or music in 2012, listening to web radio/watching web television in 2012, participating in social networks in 2013, uploading self-created content in 2012, downloading software in 2013



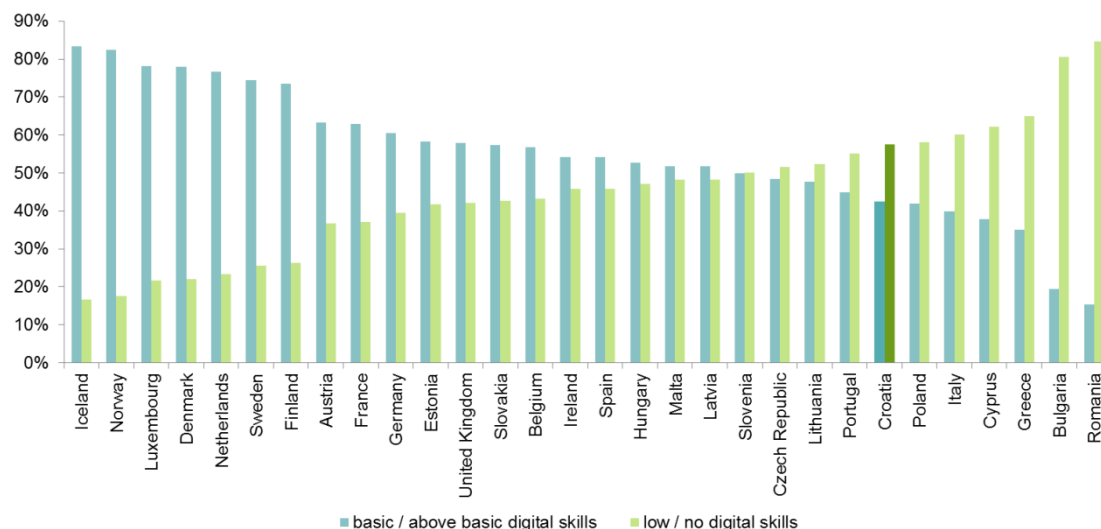
Source: EUROSTAT

4.3.2.4 Digital skills

The DAE Scoreboard provides data on digital skills. As shown in Figure 4-17, the percentage of people with basic digital skills ranges from 83% in Iceland to 15% in Romania, with an average of 54% across BEREC member and observer countries (for which data is available). Furthermore, in 19 countries, the percentage of people with basic or above digital skills is above 50%.

Croatia is below the average with the number of individuals with basic or above basic digital skills at 42%. 58% of people in this country have low or no digital skills, which is more than the average of 45%.

Figure 4-17: Individuals with basic or above basic digital skills, 2012



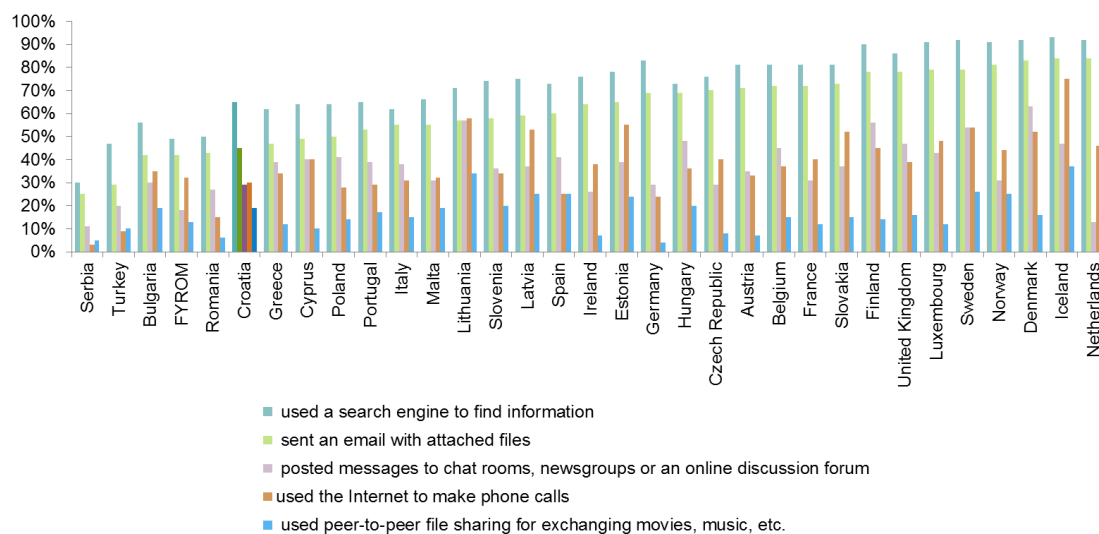
Source: DAE Scoreboard

Level of digital skills can be also described through the use of the Internet by individuals for particular tasks.

According to EUROSTAT and as shown in Figure 4-18, the average number of individuals who have:

- used a search engine to find information is 73%, whereas in Croatia it is 65%
- sent an email with attached files is 62% whereas in Croatia it is 45%
- posted messages to chat rooms, newsgroups or an online discussion forum is 37%, whereas in Croatia it is 29%
- used the Internet to make phone calls is 37%, whereas in Croatia it is 30%
- used peer-to-peer file sharing for exchanging movies, music, etc. is 17%, whereas in Croatia it is 19%.

Figure 4-18: Individuals' level of Internet skills - Individuals who have used the Internet to perform different activities, 2013



Source: EUROSTAT

4.3.2.5 Additional insights

Additional insights for Internet consumer behaviour in Croatia from market research sources are scarce.

Gemius (2014)⁸⁵ report offers some insight into Croatian Internet consumer behaviour. First of all, it is noticed that web engagement similarly to other countries in the same region has decreased from Dec 2012 to Dec 2013. For Croatia, this decrease was from 11:12h per month spent online to 8:33 hours per month spent online. In this time, the average has visited 533 pages (2012) and 411 pages (2013) respectively. This significant decrease in time spent on the Internet using desktop computers / laptops has been induced by Croatians switching to mobile devices more and more. Around 18 % of Internet traffic came from devices such as smartphones (15 %) and tablets (3 %) in Dec 2013.

Table 4-3 below shows the ten most popular local websites in Croatia including time spent on the site by the average site user in hours per month and their reach of the population with Internet access.

⁸⁵ Gemius (2014): ONLINE LANDSCAPE: South-East Europe.

Table 4-3: Top 10 most popular local websites in Croatia

		Number of Real Users ⁴	Page views per user	Average time per user (h:m)	Reach
1	24sata.hr	1 167 371	82	2h14min	48%
2	jutarnji.hr	1 012 276	87	2h9min	41%
3	index.hr	984 447	106	3h2min	40%
4	njuskalo.hr	905 581	261	2h44min	37%
5	tportal.hr	900 687	95	1h46min	37%
6	dnevnik.hr	864 699	60	1h26min	35%
7	vecernji.hr	791 659	59	1h26min	32%
8	coolinarika.com	528 952	59	49min	22%
9	dnevno.hr	369 885	34	51min	15%
10	slobodnadalmacija.hr	358 946	46	1h16min	15%

Table 4-4 shows the 10 websites in Croatia that attract the fastest growing number of users in 2013.

Table 4-4: Top 10 fastest growing websites in Croatia

		Real Users growth (XII.2012 , XII.2013)	
1	dnevno.hr	245 302	
2	24sata.hr	165 014	
3	jutarnji.hr	102 847	
4	vecernji.hr	86 857	
5	gastro.hr	76 377	
6	njuskalo.hr	63 282	
7	novilist.hr	50 901	
8	zdravakrava.hr	47 546	
9	roditelji.hr	41 152	
10	dnevnik.hr	35 984	

Naturally, Croatian Internet users are active on social networks. The latest figure that was currently available indicates just under 1.5 million Facebook users in Croatia (Socialbakers 2011)⁸⁶. The data on the most relevant pages and brands is much more recent. Socialbakers (2014) show that the page with the most local fans in Croatia is index.hr followed by Texas Holdem Poker and 24sata.hr, which is also amongst the top

⁸⁶ See:

<https://cdn.socialbakers.com/www/archive/storage/www/hr-nov2011.png>.

three website of the country. Samsung is the brand with the highest number of local fans in Croatia followed by two brands of chemists (BIPA and dm). Four more retail brands feature amongst the top 10 in Croatia's Facebook – Njuškalo, Monika-posredovanje.hr, Lidl, H&M. Interestingly, there is also a provider of electronic communications amongst the top 10 pages (vipnet.hr on place 9).

Data on e-commerce activity is provided by the European Consumer Conditions Scoreboard⁸⁷. Croatia has seen the steepest growth rate in e-commerce activity of all European countries. From 2008 to 2012, the share of people, who have bought a product or service online has grown from 7 to 23 percent. Compared to the average of the EU 27, this is, however, still a relatively small share. For all European countries, the same figure grew from 32 to 45 percent in the same period. It is also interesting to note the Croatians have the lowest confidence level in online shopping across the EU. This may indicate also a lack of trust in other online activities.

As regards video streaming there is no direct consumer data available, however, one may take the offer of audio-visual content on demand as proxy for how mature the local market is and how strong the demand for such services is. In Croatia, there are 31 on-demand sources for audio-visual content (officially) available. Within that, there are 10 branded YouTube channels, 7 catch-up TV services and 11 VoD services. Almost all of these offers are targeted mainly at the Croatian market⁸⁸.

4.4 Country profile of Czech Republic

4.4.1 Czech Republic: The electronic communications market environment

4.4.1.1 Specific broadband products with their market shares

Broadband products can be mainly characterised by their availability, speed and technology (e.g. Cable, xDSL, FTTx, etc.). The recent study on 'Broadband Internet access cost (BIAC)'⁸⁹ provides country profiles based on a number of indicators that characterise the broadband market. For Czech Republic this study collected a total of 69 broadband Internet offers. These offers are collected from six different operators that represent more than 90% of market share, being Telefónica O2 (incumbent), RIO media (new entrant), UPC Česká republika (new entrant), GTS Czech (new entrant), U:fon (new entrant) and T-mobile (new entrant). The following characteristics are provided:

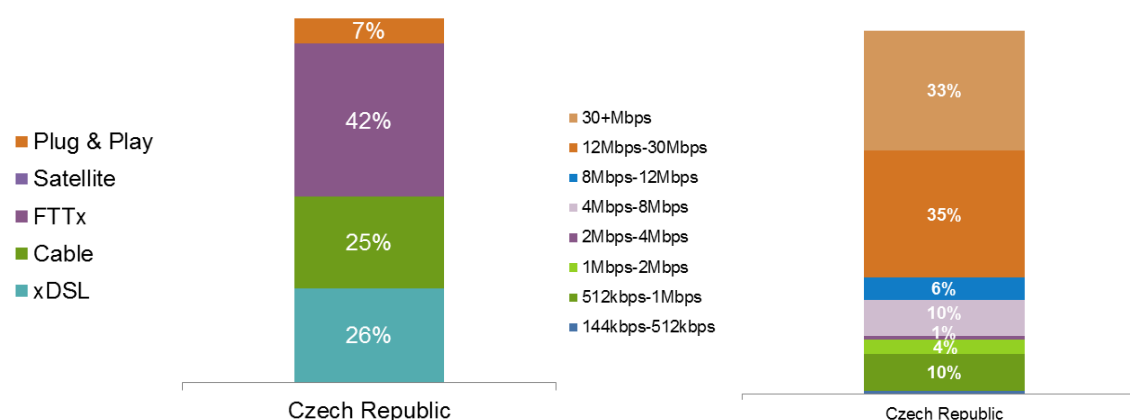
⁸⁷ European Commission (2013): The Consumer Conditions Scoreboard – Consumer at home in a single market. 9th edition July 2013.

⁸⁸ MAVISE database <http://mavise.obs.coe.int/welcome>.

⁸⁹ 2013, Broadband internet access cost (BIAC), see: <http://ec.europa.eu/digital-agenda/en/news/study-retail-broadband-access-prices-2013-smart-20100038>.

- 88% of offers investigated do not require line rental or a cable TV subscription.
- All these offers (100%) are unmetered, which means that an unlimited volume of data can be downloaded at any time.
- Offers from incumbents accounted for 19% of all the offers, whereas 81% of these were offers from new entrants.
- In terms of types of offers in relation to bundling: 57% were Internet access only, 12% Internet access and fixed telephony, 19% Internet access and TV and 13% Internet access, fixed telephony and TV.
- In terms of speed offers per basket: most offers are in the 12Mbps – 30Mbps (35%) followed by 30+ Mbps (33%), 4Mbps – 8 Mbps (10%) and 512kbps – 1Mbps (also 10%) and 8Mbps-12Mbps (6%) (covering 94% of offers, see also Figure 4-19).
- In terms of technology: most offers are FTTx (42%), xDSL (26%), followed by cable (25%) and Plug & Play (7%).

Figure 4-19: Offers per basket (speed) and technology (Czech Republic)



The following sections provide more information for relevant indicators on:

- Download speed of fixed broadband subscriptions
- Broadband subscriptions per type of technology

4.4.1.2 Download speed of fixed broadband subscriptions

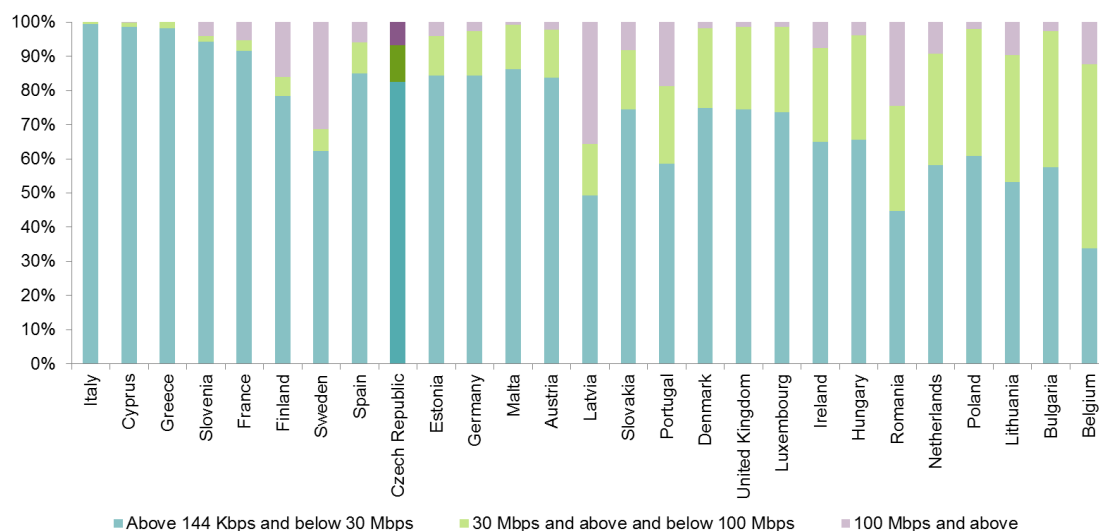
Digital Agenda Scoreboard provides data on fixed broadband subscriptions by speed in 2014.

Czech Republic is below average (19%) with the share of fixed broadband subscriptions **30Mbps and above and below 100Mbps** amounting to 11%.

The country is very close to average as far as fixed broadband subscriptions **100 Mbps and above** are concerned – with 7% compared to 8% being the average.

73% is the average for fixed broadband subscriptions **above 144 and below 30Mbps** and Czech Republic is above, with the share of 83%.

Figure 4-20: Fixed broadband subscriptions by speed (Digital Agenda categories), 2014

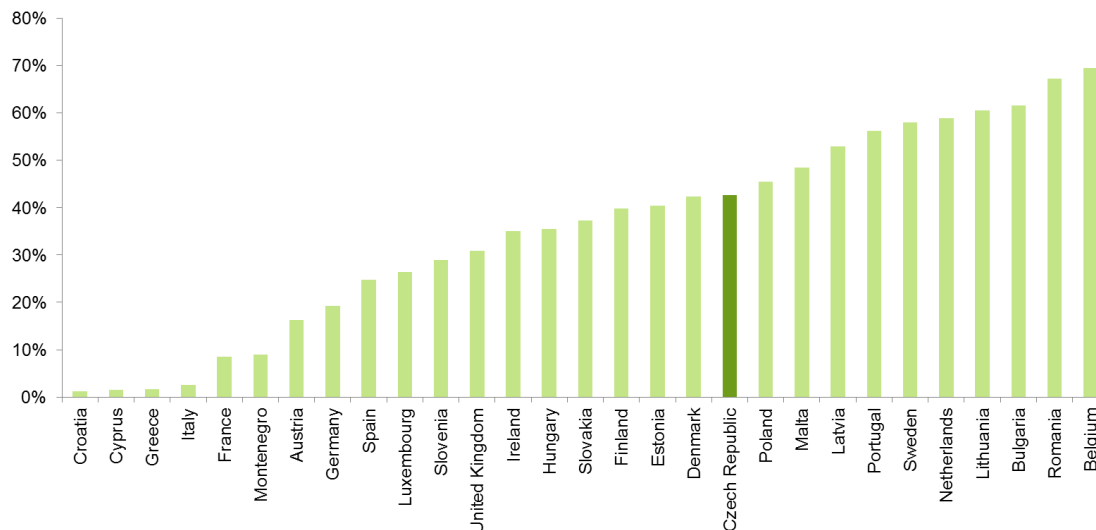


Source: DAE Scoreboard

4.4.1.3 Broadband subscriptions per type of technology

The DAE Scoreboard also provides data on NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions for 2013. As shown in Figure 4-21, NGA share of broadband connections ranges from 69,5% in Belgium to 1,2% in Croatia. For Czech Republic the NGA share is 42,6%. The average NGA broadband coverage as a percentage of total fixed broadband subscriptions is 35,3%.

Figure 4-21: NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions in 2013

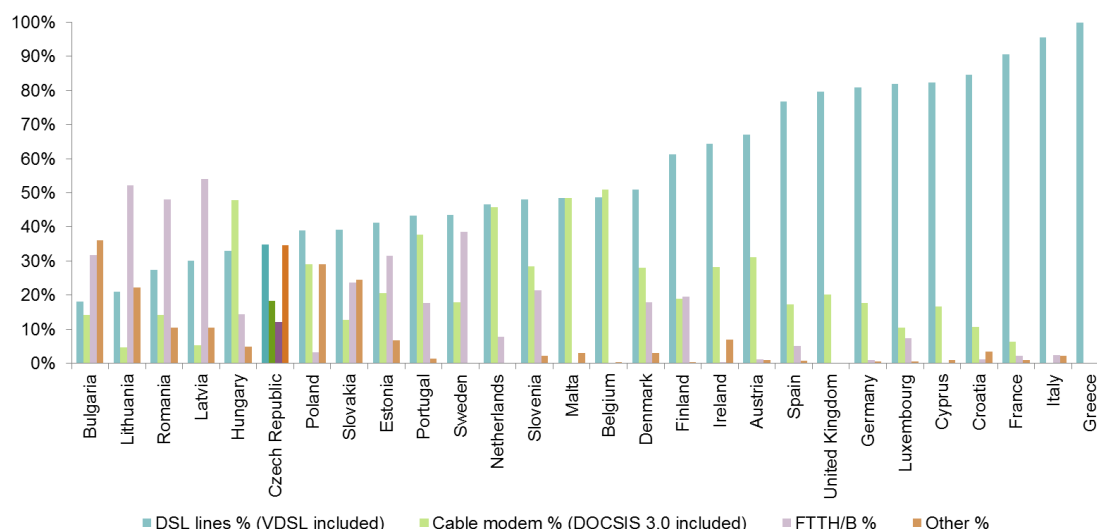


Source: DAE Scoreboard

On the basis of data from the DAE Scoreboard the Figure 4-22 below indicates fixed broadband subscriptions as technology market shares:

- **DSL lines % (VDSL included)** range from 99,79% in Greece to 15% in Bulgaria. In Czech Republic they are 35%; whereas the average share is 56%;
- **Cable modem % (DOCSIS 3.0 included)** ranges from 51% in Belgium to 0% in Greece and Italy. In Czech Republic it amounts to 18%, whereas the average share is 21%;
- **FTTH/B %** ranges from 54% in Latvia to 0% Greece and Malta. In Czech Republic it is 12%, whereas the average share is 14%.
- **Other %** range from 36% in Bulgaria to 0% in the Netherlands and Sweden, while the average share is 7,4%. For Czech Republic it is 35%.

Figure 4-22: Broadband subscriptions per type of technology in 2013

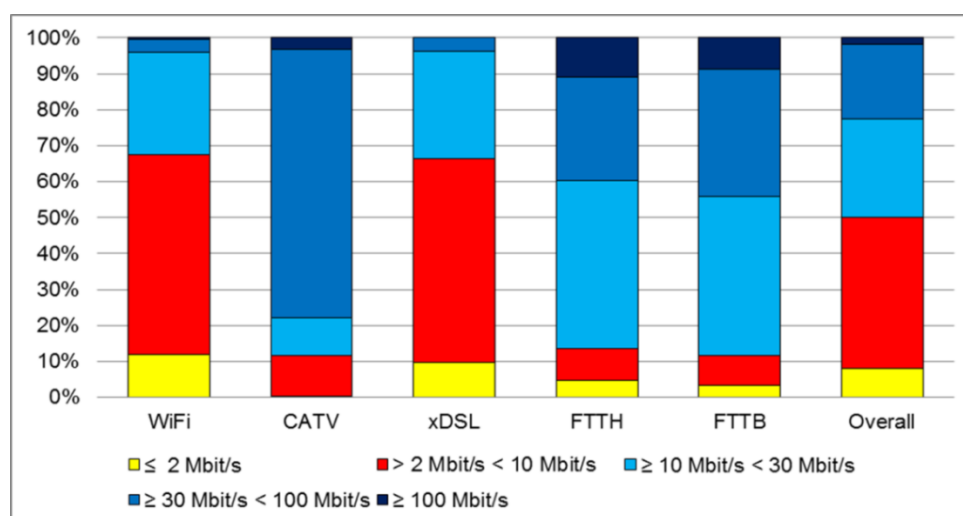


Source: DAE Scoreboard

The Czech Telecommunication Office (CTU) provides information on the share of broadband access speeds by type of access technology (see Figure 4-23 below). Speed range 2-10 Mbps has the highest share within the copper network (xDSL) and wireless network (WiFi) technologies – around 60%. Speed range of 10 Mbps and above and below 30 Mbps dominates within fiber network technologies (FTTH and FTTB) – around 50%. These technologies enable also a speed range of 30Mbps and above and below 100 Mbps – with around 30% of the share for FTTH and around 35% for FTTB. For cable TV networks (CATV) share of the speed range of 30Mbps and above and below 100 Mbps is the highest – a bit more than 70%. In general, an increase in higher bandwidth offers can be noticed in the Czech Republic⁹⁰.

⁹⁰ Review of M4 and M5 analyses in Czech Republic, presentation given by Ing. Jiří Šefčík, Czech Telecommunication Office, April 2014, Minsk, Belarus.

Figure 4-23: Share of broadband accesses speeds by type of access technology, 2Q 2013



Source: CTU

4.4.1.4 Specific pricing plans for Internet access, including typical promotional offers, major contract terms and conditions

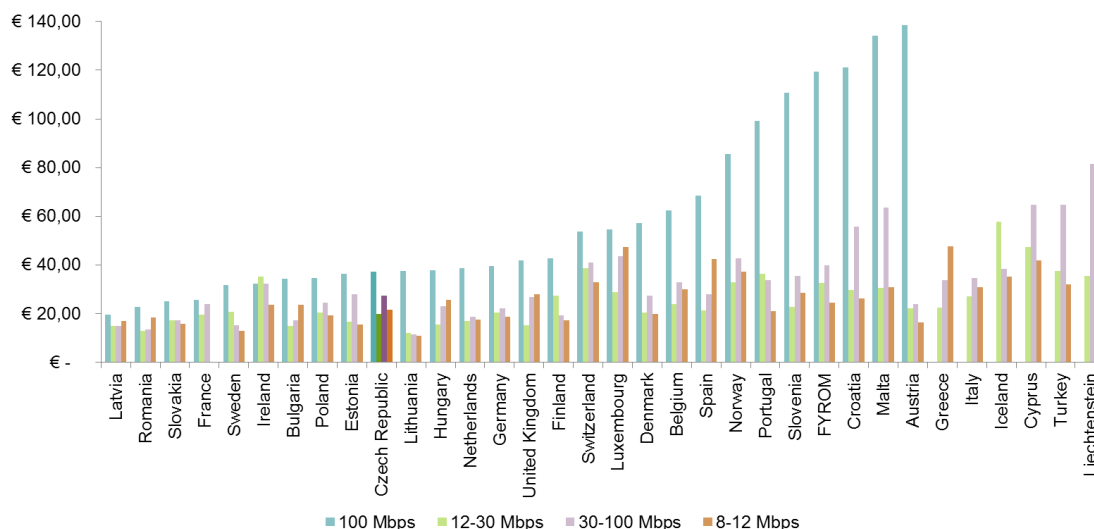
This section presents monthly prices of Internet access (least expensive offer in EUR/PPP) in Czech Republic in comparison to other countries.

The DAE Scoreboard provides data on the monthly price of standalone Internet access per speed range in 2014.

As shown in Figure 4-24, prices for:

- **Internet access 8-12 Mbps** range from €10,90 in Lithuania to €47.71 in Greece (note that this price is based only on one offer (satellite)). The average price across BEREC member and observer countries (for which data is available) is €26,49. Czech Republic is again below the average with the price at €21,59.
- **Internet access 12-30 Mbps** range from €12,01 in Lithuania to €57.86 in Iceland; the average price is €25,51. In Czech Republic the price is below average at €19,87.
- **Internet access 30-100 Mbps** range from €11,53 in Lithuania to €81,52 in Liechtenstein with the average price of €32,96. Czech Republic reached the price of €21,24.
- **Internet access 100 Mbps** range from €19,54 in Latvia to €138,45 in Austria, whereas the average price across BEREC member and observer countries (for which data is available) is €58,65. Czech Republic is below average with the price €37,30.

Figure 4-24: Monthly price of Internet access per speed in 2014



Source: DAE Scoreboard

4.4.1.5 Information on bundling practices and pricing of such bundles

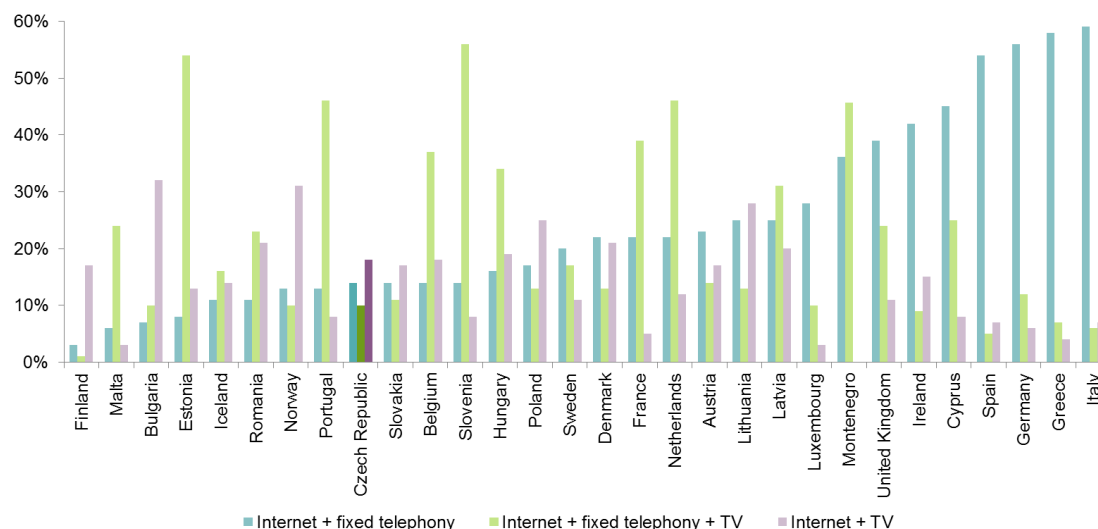
This section presents bundle penetration and pricing of such bundles in Czech Republic in comparison to the rest of the countries.

As presented in chapter 1.1 according to BIAC Study, the following types of offers in relation to bundling are available in Czech Republic: 57% Internet access only, 12% Internet access and fixed telephony, 19% Internet access and TV and 13% Internet access, fixed telephony and TV.

The Consumers Health and Food Executive Agency (CHAFEA) provides more detailed data on the penetration of types of bundled offers and taking into account a different reference period. As shown in Figure 4-25, the data for:

- **Internet and fixed telephony** ranges from 3% in Finland to 59% in Italy, with an average of 24,6% across BEREC member and observer countries (for which data is available). These types of bundles achieve 14% in Czech Republic.
- **Internet, fixed telephony and TV** ranges from 1% in Finland to 56% in Slovenia, with an average of 22,1%. These types of bundles amount to 10% in Czech Republic.
- **Internet and TV** ranges from 3% in Malta to 32% in Bulgaria; whereas the average is 14,4%. Czech Republic turns out here to be above the average with 18%.

Figure 4-25: Bundled offer penetration in 2012 (1)

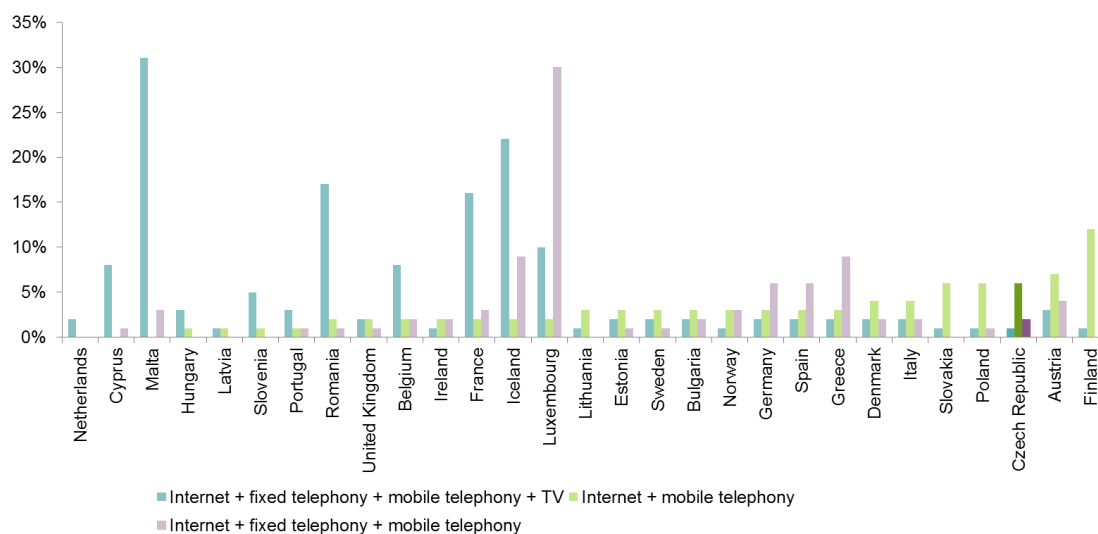


Source: CHAFAEA

Figure 4-26 below, indicates CHAFAEA data for:

- **Internet and fixed telephony and mobile telephony and TV** which ranges from 1% in several countries, such as Finland, Poland, Slovakia, Norway, Lithuania, Ireland and Czech Republic, up to 31% in Malta. The average amounts to 5,3% across BEREC member and observer countries (for which data is available).
- **Internet and mobile telephony** which ranges from 0% in in several countries, such as the Netherlands, Cyprus, Malta up to 12% in Finland. The average is 3%. These types of bundles achieve 6% in Czech Republic.
- **Internet and fixed telephony and mobile telephony** which ranges from 0% in several countries (Finland, Slovakia, Latvia, Slovenia, Lithuania, the Netherlands and Hungary) up to 30% in Luxembourg. The average is 3,2%. These types of bundles are below the average in Czech Republic at 2%.

Figure 4-26: Bundled offer penetration in 2012 (2)

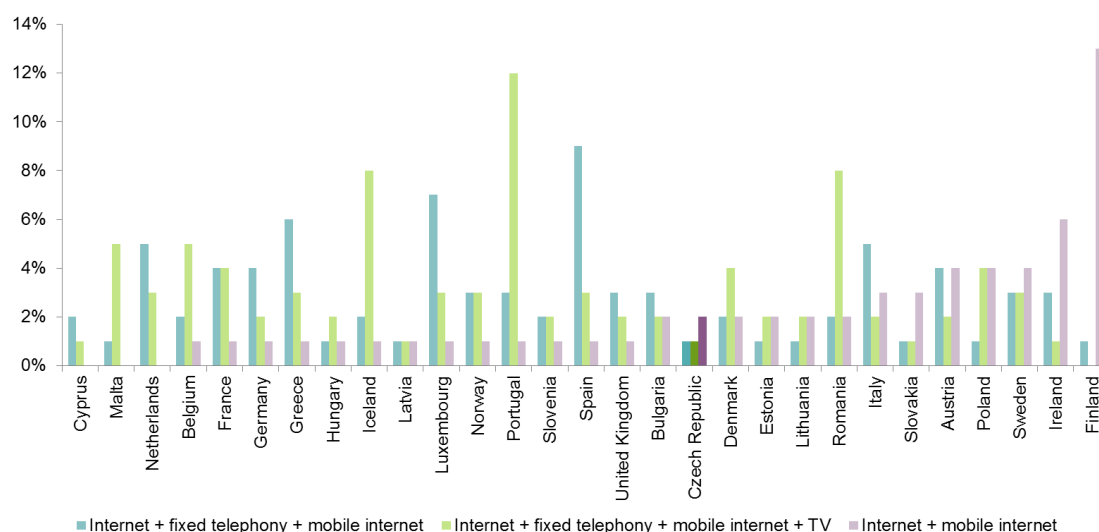


Source: CHAFAEA

Analysis on the penetration of other types of bundled offers is presented in Figure 4-27:

- **Internet and fixed telephony and mobile Internet** ranges from 1% in several countries (Finland, Poland, Slovakia, Lithuania, Latvia, Malta, Hungary and Czech Republic) up to 9% in Spain. The average amounts to 2,9% across BEREC member and observer countries (for which data is available).
- **Internet and fixed telephony and mobile Internet and TV** ranges from 0% in Finland to 12% in Portugal. The average is 3,1%. These types of bundles achieve 1% in Czech Republic.
- **Internet and mobile Internet** ranges from 0% in Cyprus, Malta and the Netherlands up to 13% in Finland. The average is 2,1%. These types of bundles are also below the average in Czech Republic at 2%.

Figure 4-27: Bundled offer penetration in 2012 (3)

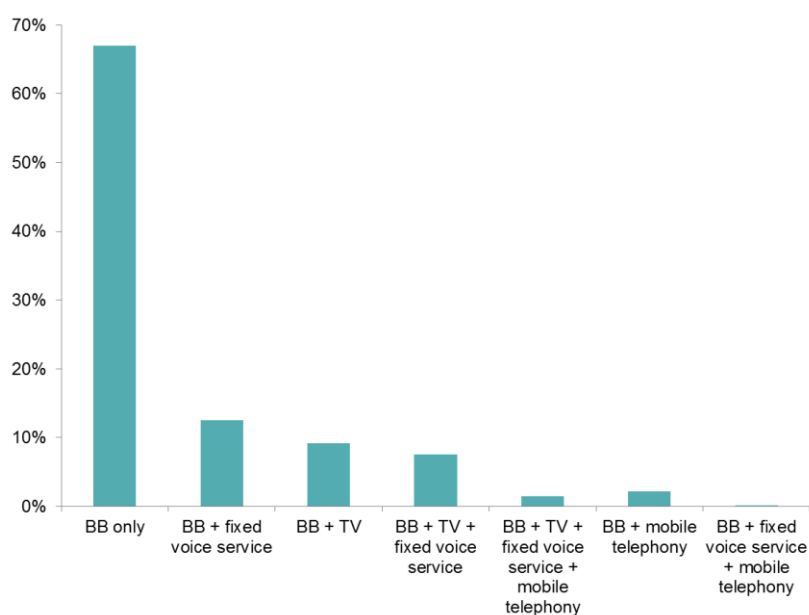


Source: CHAFAE

According to more recent data provided by the Czech Telecommunication Office (CTU) for 2013, out of all broadband access subscriptions (2,820,941 in total) the total penetration of bundled services is 34,35% (968,982 in total). Most of these account for services including broadband access (33.02%, 931,602 in total). There are 709,912 subscriptions for double-play bundled offers, 218,087 subscriptions for triple-play offers and 40,983 subscriptions for quadruple-play offers.

The table below provides the penetration rates of different types of broadband access bundles based on numbers provided by CTU.

Figure 4-28: Broadband access bundled offer penetration in 2013



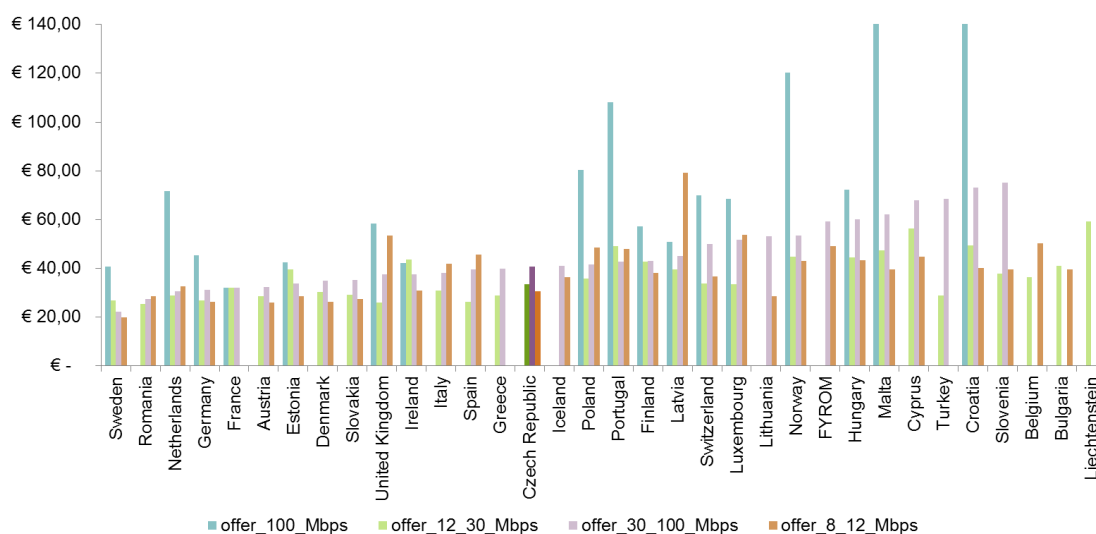
Source: CTU

As far as prices of bundling offers are concerned, the DAE Scoreboard provides data on the monthly price of standalone Internet access, as well as bundles, according to different speed (least expensive offer in EUR/PPP).

As shown in Figure 4-29, the monthly price of Internet access, together with fixed telephony bundles for:

- **Offer 8-12 Mbps** ranges from €19,95 in Sweden to €79.24 in Latvia; the average price is €39,99. This type of bundle costs in Czech Republic €30,45.
- **Offer 12-30 Mbps** ranges from €25,32 in Romania to €59.25 in Liechtenstein; the average price is €36,63. In Czech Republic the price is lower than the average at €33,42.
- **Offer 30-100 Mbps** ranges from €22,25 in Sweden to €75.25 in Slovenia; the average price is €45,19. This type of bundle costs in Czech Republic €40,80.
- **Offer 100 Mbps** ranges from €32,13 in France to €147,59 in Malta; the average price is €73,44. For Czech Republic there is no information available on this type of bundle.

Figure 4-29: Monthly price of Internet access + fixed telephony bundles in 2014



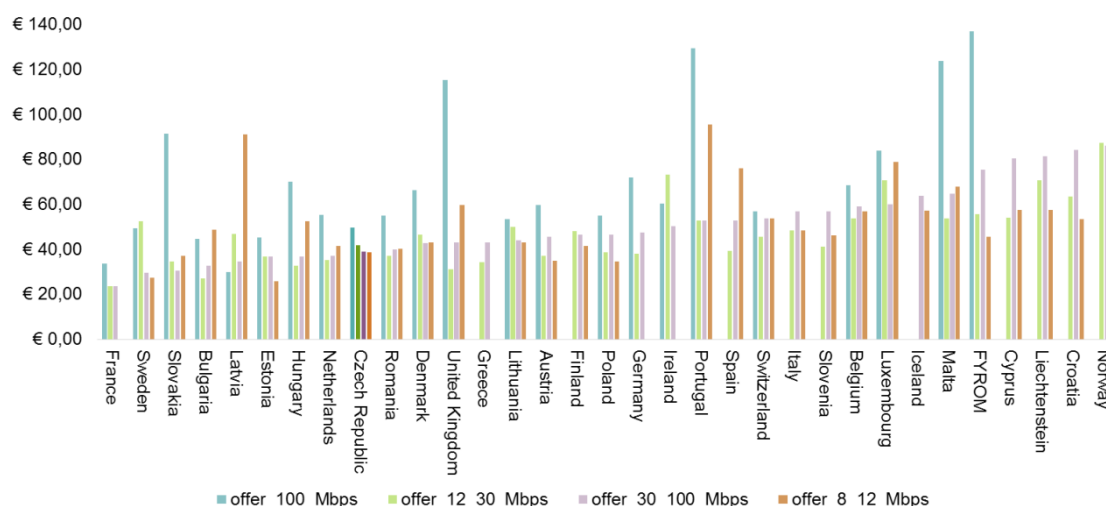
Source: DAE Scoreboard

Figure 4-30 below presents the monthly price of Internet access, together with fixed telephony and TV bundles (least expensive offer in EUR/PPP) for:

- **Offer 8-12 Mbps**, which ranges from €25,81 in Estonia to €95,61 in Portugal; the average price is €53,16. This type of bundle costs in the Czech Republic €38,84.
- **Offer 12-30 Mbps**, which ranges from €23,77 in France to €87,57 in Norway; the average price is €47,05. In the Czech Republic the price is lower than the average at €42,05.

- **Offer 30-100 Mbps**, which ranges from €23,77 in France to €86,24 in Norway; the average price is €50,96. This type of bundle costs in the Czech Republic is €39,06.
- **Offer 100 Mbps**, which ranges from €29,84 in Latvia to €137,02 in FYROM; the average price is €69,93. For the Czech Republic it is less than average at €49,79.

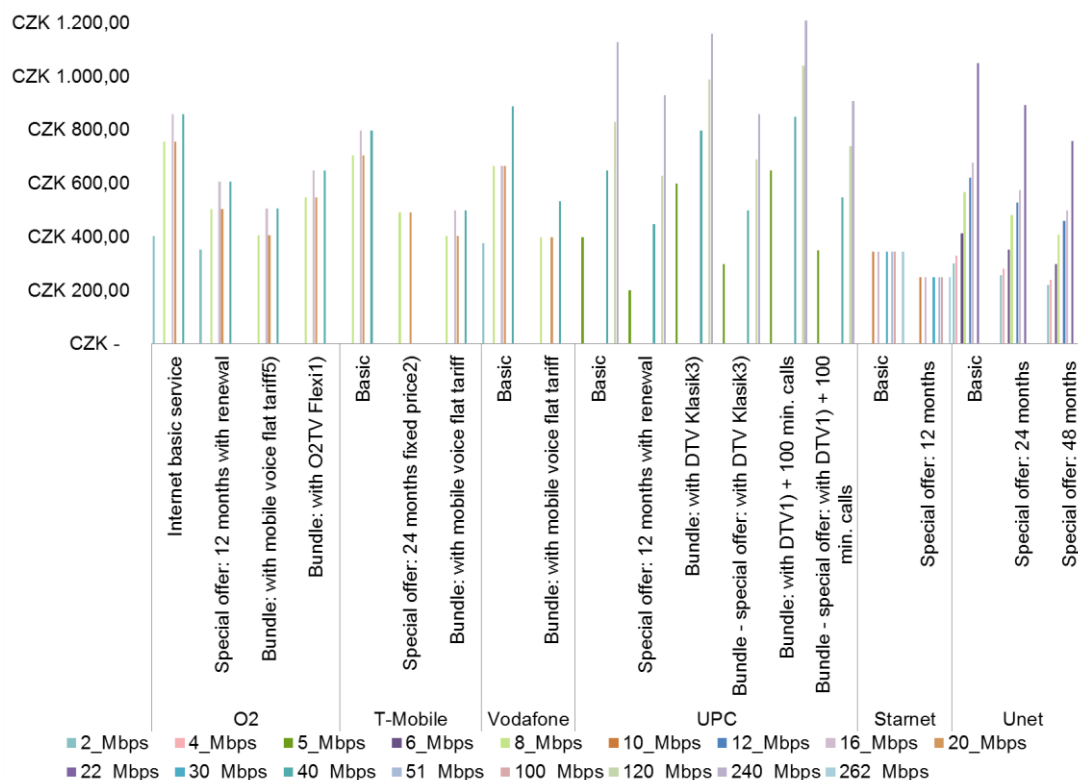
Figure 4-30: Monthly price of Internet access + fixed telephony + TV bundles in 2014



Source: DAE Scoreboard

Data on individual offers from six different ISPs provided by the Czech Telecommunication Office (CTU) for 2014 is provided in Figure 4-31. These figures show the different types of offers (basic Internet, bundled offers and special offers with conditions for these) by speed.

Figure 4-31: Monthly price of Internet access of different ISPs by type of offer and speed in 2014



Source: CTU

4.4.1.6 Information about network neutrality policies of ISPs

The Czech Telecommunication Office (CTU) published a set of general rules and recommendations for the use of data traffic management in the provision of Internet access service (IAS).

In order to ensure the adequate quality of the IAS for the end user and to ensure that the end user is informed, the Office has set several rules, defined in line with and respecting the requirements laid down by the European regulatory framework for networks and the services of electronic communications and the Electronic Communications Act:

- **Rule No. 1: Freedom of choice of the Internet access service and its quality**

When offering and selling IAS to end users it is necessary to ensure:

- possibility to receive and send information/data according to the end user's choice.
- possibility to use the services and applications according to the end user's choice.

- possibility to install own hardware and software if it does not damage the network.
- provision of contractually agreed-upon quality of service while complying with the contractually agreed-upon terms and conditions and provision of transparent information on services provided by the service provider.

- **Rule No. 2: Prohibition of discrimination, blocking or degradation of the individual data streams**

In the IAS it is prohibited to distinguish between individual data streams according to the content, service, application, equipment, source address and destination of the data stream for the purpose of blocking, slowing down or reduction of quality of processing thereof. Such situation must be avoided also in the cases where it is caused by the so-called positive discrimination. Exceptions to this rule must be in accordance with the following rule No. 3.

- **Rule No. 3: Possible exceptions to rules No. 1 and 2**

The following exceptions are considered substantiated traffic management. They can be applied within the IAS provided, but their application must always be justified.

It concerns the following traffic management methods:

- to comply with obligations directly following from a legal regulation or based on a court ruling;
- to prevent extraordinary situations and to preserve the integrity and security of the networks and services provided through these networks;
- to minimize the effects of an extraordinary risk of network congestion.

These exceptions to rules No. 1 and 2 must be based on general principles of relevance, proportionality, effectiveness, non-discrimination and transparency. In cases where the transmission of content and messages is prevented due to a demonstrable decision of the end user such limitation shouldn't be considered a violation of rules No. 1 and 2. The provider of the IAS must respect the decision of the end user as well as the change thereof, if any.

- **Rule No. 4: Transparency of information**

The principles of freedom of use and non-discrimination between data streams specified in rules No. 1 and 2 must be explicitly mentioned in the terms and conditions of service provision of the providers of the IAS and in the contractual clauses, if any, in a clear and comprehensible manner.

Throughout the terms of the agreement on provision of the IAS all parties involved must be provided, in particular, with the following information in a clear, comprehensible and sufficiently transparent manner:

- on the quality of the service,
- on the possible limitations,
- on the use of traffic management methods and the impact thereof for all methods affecting the principles specified in rules No. 1 and 2.

In the case of the IAS (with and without limitation) the contract terms must specify in a clear and comprehensible manner the possibility of application of a

substantiated traffic management according to rule No. 3 including the conditions under which it can take place.

In the case of the IAS with limitation the description of the rules and conditions of the data traffic management method used must be included in the contract terms in a clear and comprehensible manner.

- **Rule No. 5: Offer of Internet access service (service without limitation)**

Only a service in which the methods of substantiated traffic management in accordance with rule No. 3 are used can be considered IAS.

In the case of using data traffic management methods beyond rule No. 1, 2 and 3 it is necessary to specify clearly that it is an IAS with limitation, and such limitation must be clearly declared and described in the contract terms. A description such as “unlimited services” and the like shouldn’t be used for Internet access services where data volume limit is applied or where the service provision is suspended during the use of the service or where an additional payment for the renewal of the service or its quality is required⁹¹.

- **Rule No. 6: Offer of services with a data volume limit**

The IAS, which is contractually limited in terms of the volume of the data transferred within a certain time period and, which is still provided after that volume has been used up, however with reduced speed of inbound and outbound data traffic, must include in the contract terms this guaranteed minimum speed and other limitations, if any applicable after the depletion of the data limit. Before this limit has been used up the rules No. 1 and 2 with exceptions specified in rule No. 3 cannot be breached.

- **Rule No. 7: Offer of specialized services**

Provision of specialized services uses data traffic management beyond rules No. 1, 2 and 3 to ensure the required quality properties of the service. Users of these services must be informed in a clear and comprehensible manner about the possible impact of the use of the specialized service on the Internet access service.

4.4.1.7 Information about how ISPs typically present information on network neutrality policies to consumers in advertising, own websites

Information presentation of ISPs in Czech Republic on network neutrality policies on their own websites and while advertising their services is assumed to be in line with the rules outlined in the previous section. For information about rules and recommendations for the use of data traffic management in Czech Republic, please see Section 4.4.1.6 above. However, it should be noted, that according to CTU, ISPs in the Czech market rarely use information about network neutrality for their marketing or advertising activities.

⁹¹ In these services, however, compliance with rules No. 1 through No. 4 is envisaged up to the depletion of the agreed-upon volume of data transmitted.

4.4.2 Czech Republic: Internet consumer behaviour

This part explains consumer behaviour in Czech Republic with regard to Internet access and network neutrality in particular. The information is presented against the background of other countries.

4.4.2.1 Switching behaviour and choice criteria for Internet access services and actual / perceived breadth of potential choices

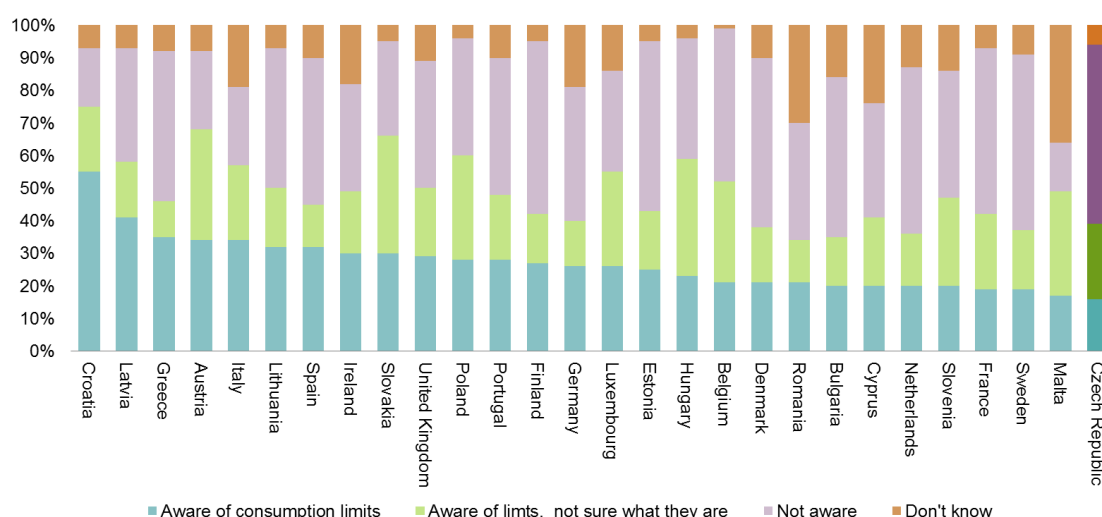
The aim of the study is to look at the value of network neutrality for consumers. The following sections provide available data on network neutrality incidents, as well as consumer behaviour in terms of switching ISPs.

4.4.2.1.1 Network neutrality incidents

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the awareness of data consumption limits of Internet connections for 2014. As shown in Figure 4-32, awareness of data consumption limits ranges from 55% in Croatia to 16% in the Czech Republic, with an average of 27%.

23% of Czech respondents are aware of limits of Internet connections, but they are not sure what they are, which is above the average of 22%. 55% of the surveyed population in the Czech Republic seems to be 'not aware' of the data consumption limits, whereas the average for the analysed countries is 40%. 6% of the Czech respondents replied 'I don't know'.

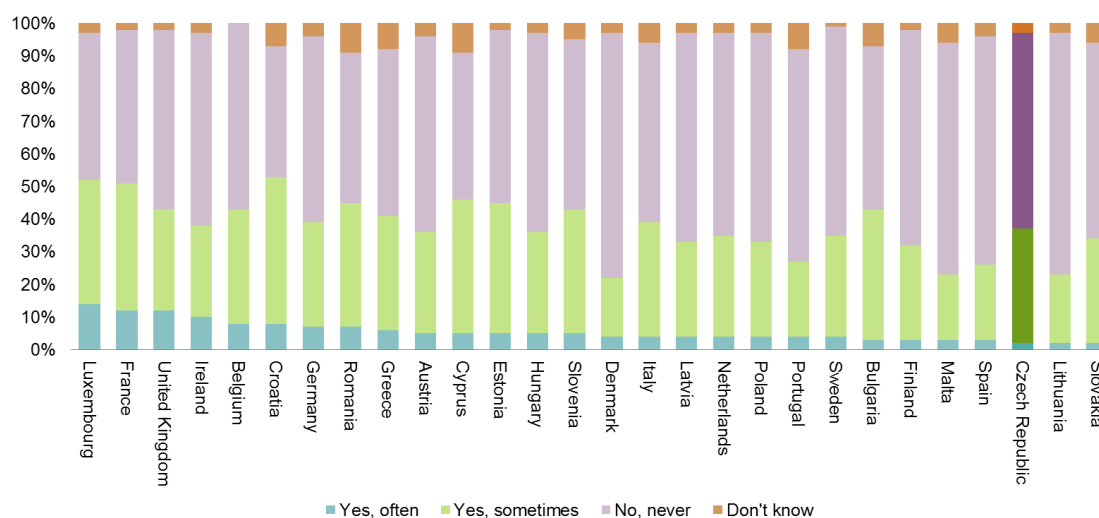
Figure 4-32: Awareness of data consumption limits of Internet connections in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the difficulty of accessing online content and applications due to insufficient speed or downloading capacity for 2014. As shown in the Figure 4-33, respondents 'often' having difficulties ranges from 14% in Luxembourg to 2% in Lithuania, with an average of 5,5% across BEREC member and observer countries (for which data is available). As for the Czech Republic, only 2% of respondents admitted having 'often' such difficulties. On the other hand, 35% of the Czech respondents confirm that they 'sometimes' experience difficulties due to insufficient Internet speed, which is below the average of 32%. 58% of the surveyed population in this country claim to 'never' experience such difficulties, whereas the average is 60%. 4% of the Czech respondents replied 'I don't know'.

Figure 4-33: Difficulties experienced due to insufficient speed in 2014

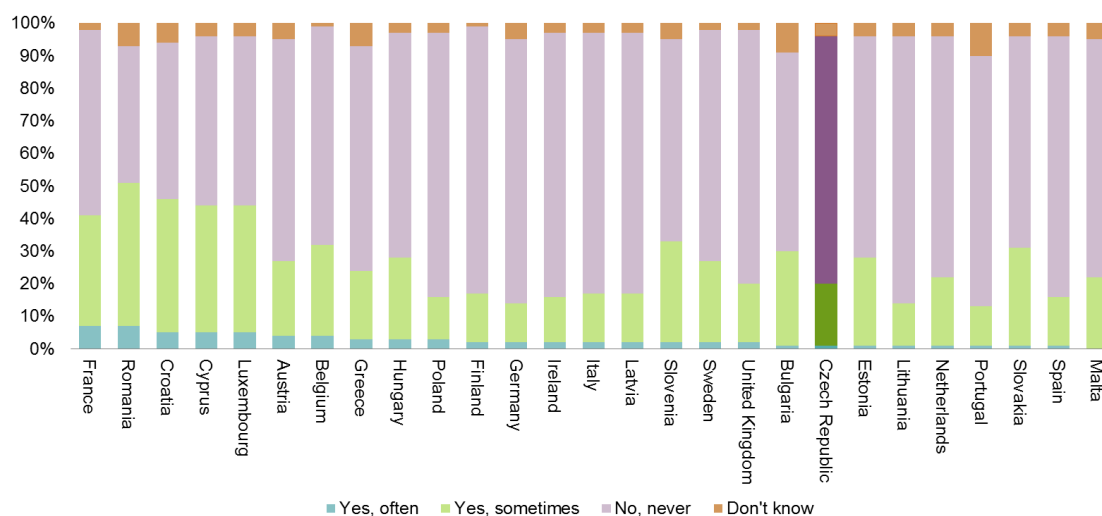


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the number of cases in which users experienced any kind of blocking of online content or applications for 2014. As shown in Figure 4-34, regular blocks ('Yes, often') range from 7% in Romania to 0% in Malta, with an average of 2,6% across BEREC member and observer countries (for which data is available), whereas occasional blocking ("Yes, sometimes") is reported more frequently (23.7% on average).

As for the Czech Republic, 1% of the respondents 'often' experience blocking of online content or applications, whereas for 19% it happens 'sometimes'. 76% of the surveyed Czechs 'never' cope with such blockings, which is above the average of the analysed countries of 69%. 4% of the Czech respondents replied 'I don't know'.

Figure 4-34: Blocking of online content or applications in 2014

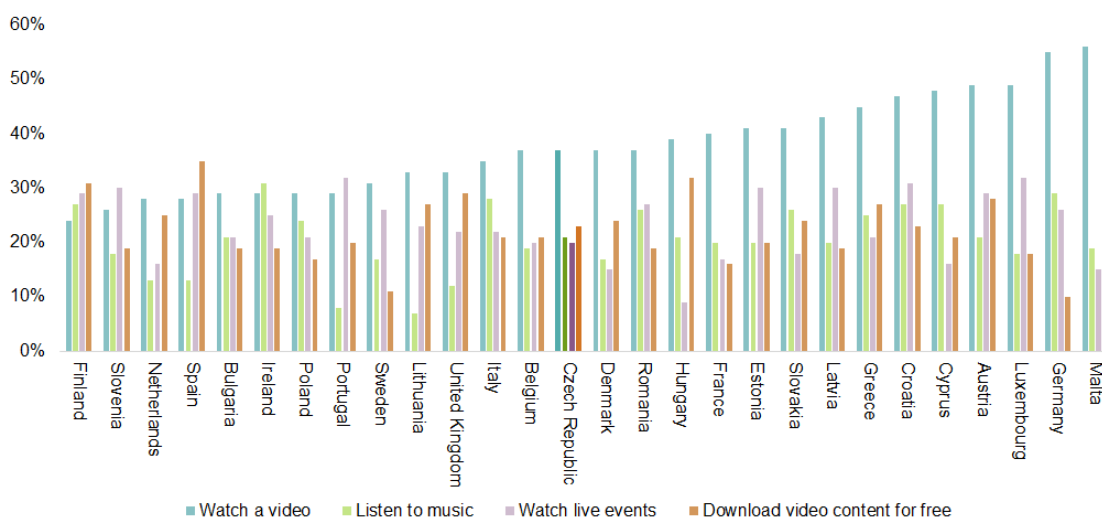


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey also provides data on the types of content and applications for which users experienced Internet blocking for 2014. As shown in Figure 4-35, on average 38% of users experienced online blocking when watching a video, with data ranging from 56% in Malta to 24% in Finland, whereas the average of 23% experienced blocking while watching live events, with data ranging from 32% in Luxembourg to 9% in Hungary (across BEREC member and observer countries for which data is available).

In Czech Republic, 37% of respondents experienced online blocking when watching a video and 20% while watching live events. 21% of the surveyed Czechs claim to have experienced such blocking while listening to music, which is just above the average of 20%. 23% of the respondents in this country coped with online blocking when downloading video content for free; the average is 22%.

Figure 4-35: Experience of Internet blocking in 2014



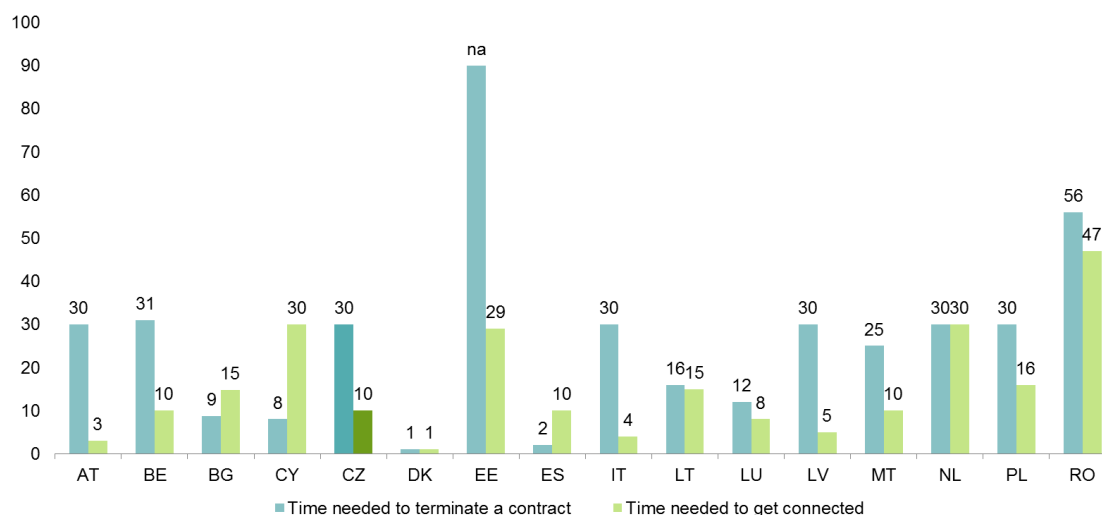
Source: Eurobarometer

4.4.2.1.2 Switching behaviour

The DAE Scoreboard provides data on switching behaviour for 2014. As shown in Figure 4-36, the average time needed to get connected ranges from 1 day in Denmark, with an average of 15 days, whereas the average time needed to terminate a contract ranges from 1 day, also in Denmark, to 90 days in Estonia, with an average of 26 days.

In Czech Republic 10 days are needed to get connected, which is faster than the average. Termination of the contract can last 30 days being 4 days above the average time to do so.

Figure 4-36: Time needed to terminate a contract\get connected in at major fixed broadband operators in 2014



Source: DAE Scoreboard

The eCommunications and telecoms single market Eurobarometer provides data on the percentage of households that switched their Internet service provider at least once up to the time of the survey. Eurobarometer data covers the EU28 (see Figure 4-37).

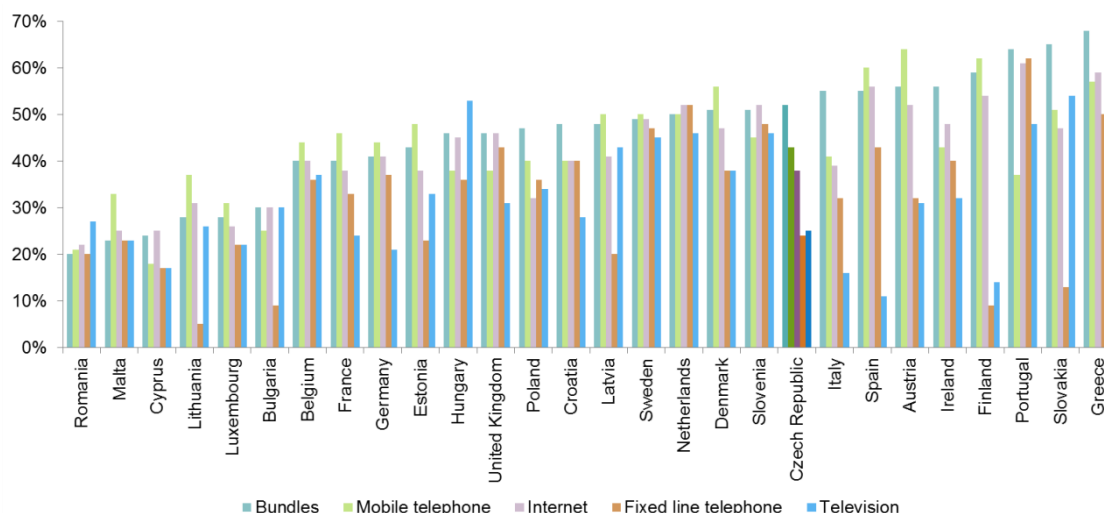
Figures for Czech Republic are as follows:

- **Bundles** ranges from 20% to 68%; the average is 45%. Czech Republic is above the average with 52%
- **Mobile telephone** ranges from 18% to 64%; the average is 44%. Czech Republic is below the average with 43%
- **Internet**⁹² ranges from 22% to 61%, whereas the average amounts to 43%. In Czech Republic it is 38%

⁹² FYROM (not covered in the Eurobarometer data set) reported a value of 2.2% for this indicator.

- **Fixed line telephone** ranges from 5% to 62%; the average is 37%. In Czech Republic 24% of households switched their provider for this service.
- **Television** ranges from 11% to 54%, whereas the average amounts to 26%. In Czech Republic 25% of households did such a switch.

Figure 4-37: Percentage of households that switched their Internet service provider



Source: 2014 eCommunications and telecoms single market Eurobarometer

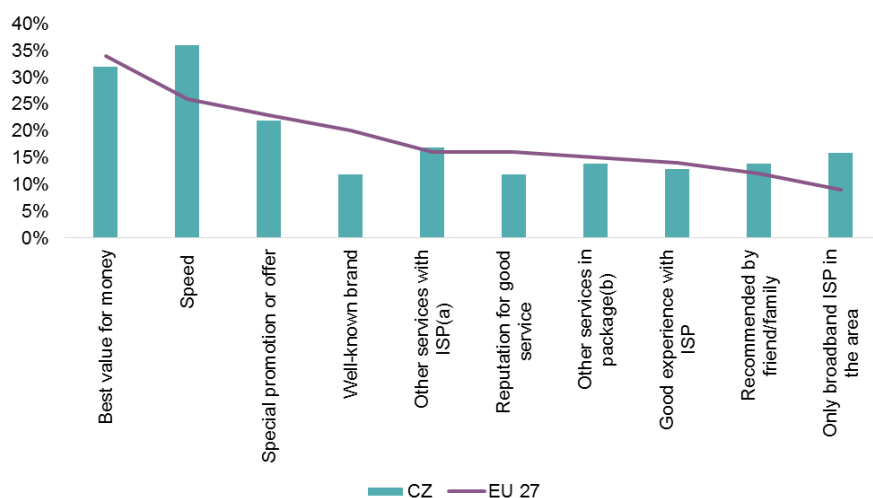
The “Consumer market study on the functioning of the market for Internet access and provision from a consumer perspective” (2012)⁹³ investigated problems that consumers are experiencing in their arrangements with ISPs, in particular in relation to switching provider.

The main reason for switching provider in the Czech Republic was the speed of the connection, followed by ‘best value for money’ and ‘special promotion or offer’. Compared to the EU 27, where the most common reason was the ‘best value for money’, speed seems to have been the main motivator for consumer to switch their ISP.

⁹³ See:

http://ec.europa.eu/consumers/archive/consumer_research/market_studies/docs/internet-service-study-full_en.pdf.

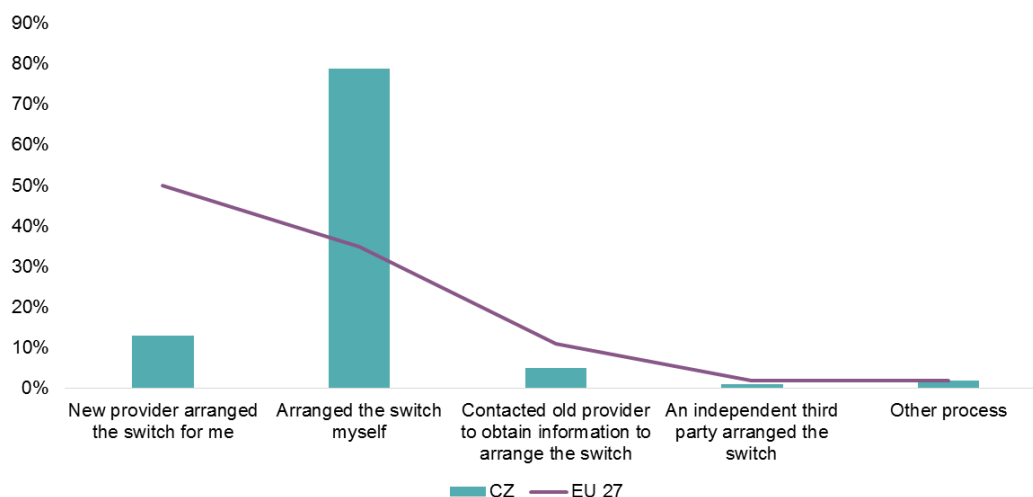
Figure 4-38: Main reason for choosing current Internet provider in 2012



Source: CHAFAEA

Concerning the arrangements for switching provider it is clear that most consumers arranged the switch themselves as opposed to the new provider arranging the switch (which was the most common arrangement in the EU 27). The national regulator had received complaints on the necessity to receive a customer identification number from the old provider and provide it to the new provider.

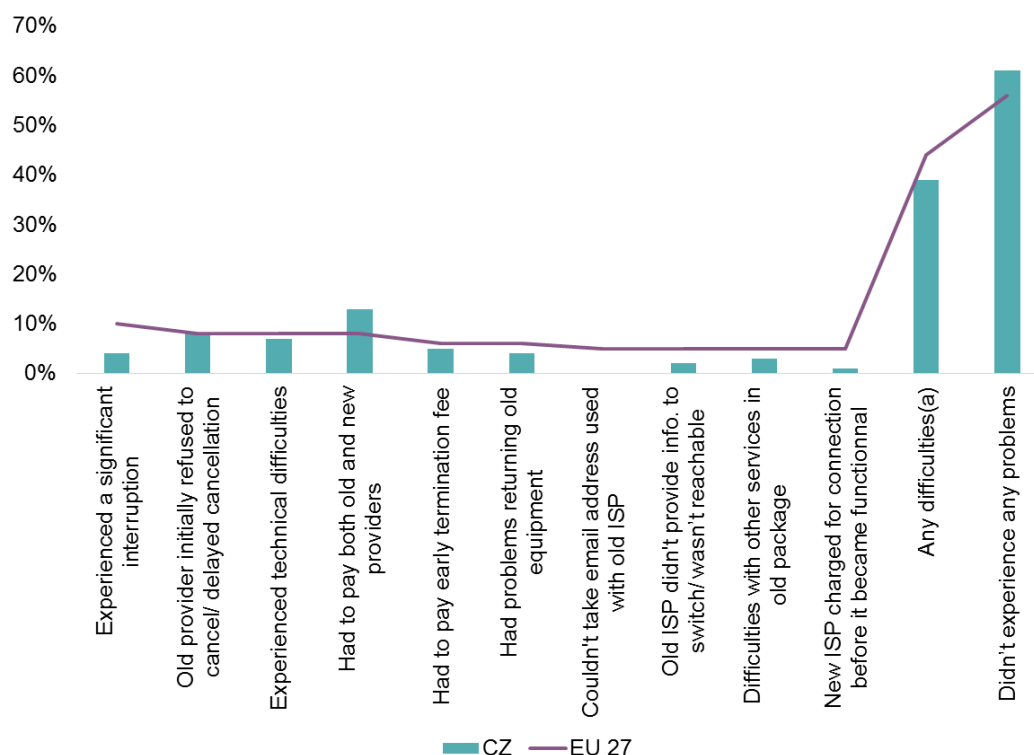
Figure 4-39: Arrangements for switching provider in 2012



Source: CHAFAEA

About 40% of consumers experienced problems when switching mainly in relation to having to pay both the old and new providers (13%), refusal to cancel or delayed cancellations by the old provider (8%) and technical difficulties (7%). Overall 61% of consumers didn't experience any problems (above the EU 27 average (56%)).

Figure 4-40: Problems experienced when switching in 2012

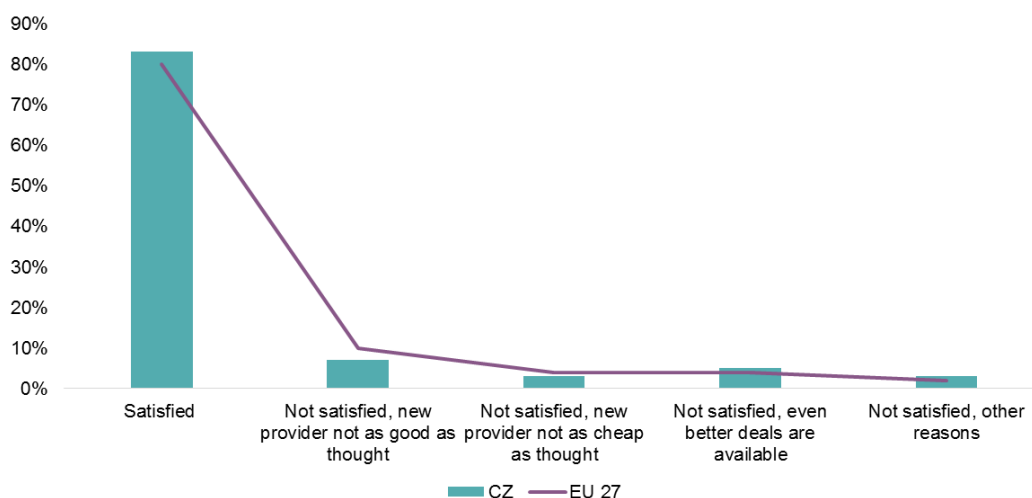


Source: CHAFAEA

The average time without the Internet as a result of switching provider was 3.9 days (below the EU 27 average of 4.7 days), while 42% of consumers experienced no interruption (above the EU 27 average of 24%).

The majority of consumers (83%) was satisfied with the switching provider (above EU 27 average (80%)). The remainder of consumers that were not satisfied reported mostly that the 'new provider not as good as thought' (7%) or 'even better deals are available' (5%). The average reported monthly savings were € 14.60 (slightly below EU 27 average (€ 14.70)).

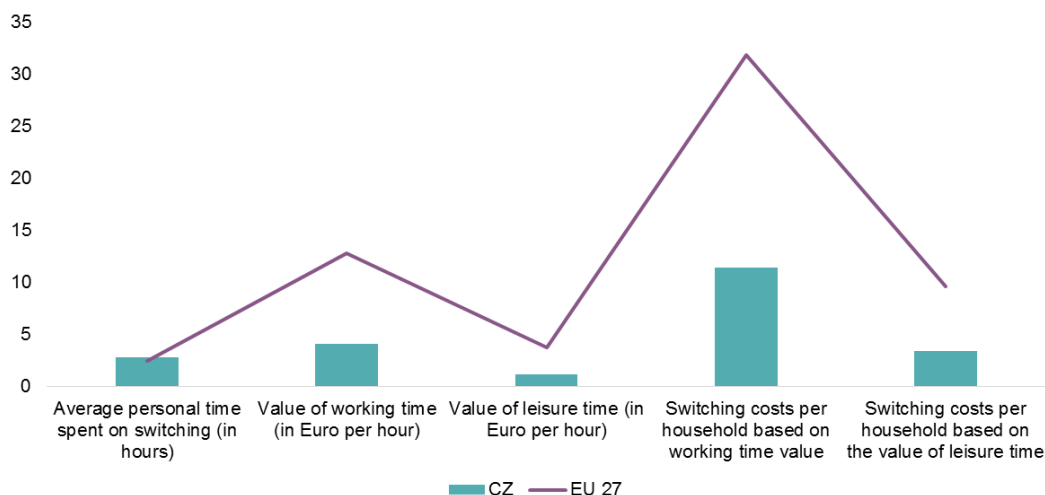
Figure 4-41: Satisfaction with switching provider in 2012



Source: CHAFAEA

The average time spent by the consumer on switching was 2.8 hours (above the EU 27 average of 2.5 hours), while the associated costs expressed in value of working time or leisure time was well below the EU 27 average.

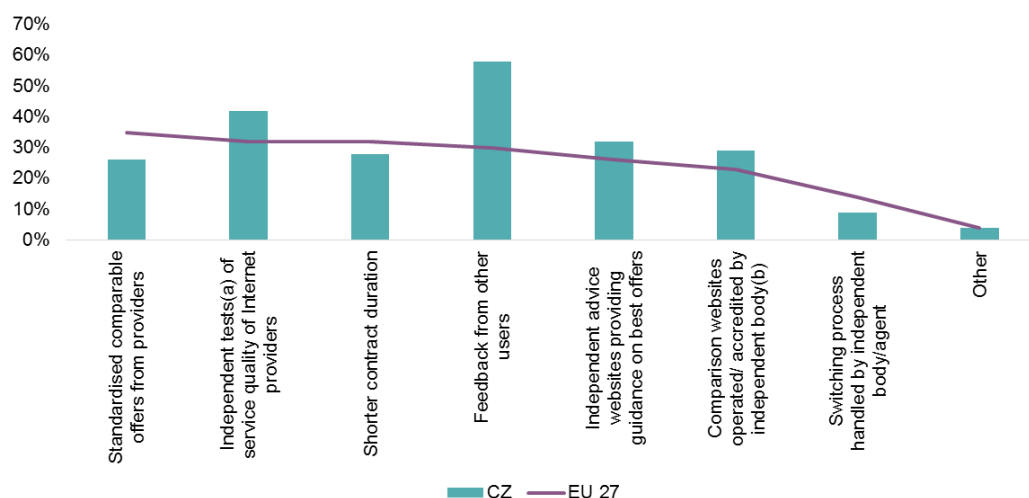
Figure 4-42: Switching costs in 2012



Source: CHAFAEA

The most important factors that facilitate the consumer in switching provider were feedback from other users (58%, above EU 27 average (30%)), an independent test of service quality of Internet providers (42%, above EU 27 average (32%)) and comparison websites operated/ accredited by independent body (29%, above EU 27 average (23%)).

Figure 4-43: Facilitators to switching in 2012



Source: CHAFAEA

In February 2014 Czech market research agency - STEM/MARK, a.s - compiled a report on residents' and business customers' perceptions towards broadband connection technologies on the Czech market⁹⁴. The market research was commissioned by the Czech Telecommunication Office (CTU). Switching behaviour was one of the topics analysed within the study. After increasing the price of 50 CZK, one third of the Czech respondents would move to a different service provider, but they would not like to pay anything for introduction of new services. A third of respondents would react to the increase of prices by asking to be offered the same quality at a lower cost. Nearly a third of the respondents would seek to be offered a similar price and a higher quality of service. 24% of respondents would not change anything. Equipment for the new service should be free (according to 62% respondents) or cost up to 500 CZK (32%). One-third of respondents have no prior commitment when signing a contract. One fifth has a contract for the next 7-12 months and another fifth for 13-24 months. 18% of people do not know whether they have a contract or how long it will last. The largest share of commitments is among users of ADSL / VDSL. Compared to a previous survey conducted in 2011, respondents would prefer more choice of higher quality for a similar price. Willingness to pay for the introduction of new services has decreased significantly.

When changing a service provider, 30% of respondents prefer a particular technology; for almost half of the people only price and download speed are important. In the case of preference for a specific technology, respondents most often indicate optical network (14%), as well as WiFi and ADSL / VDSL. Optical networks' users are the most loyal; optical network would still be preferred for most of its users. Optical network is chosen

⁹⁴ BROADBAND CONNECTION, STEM/MARK, a.s,
http://www.ctu.cz/cs/download/art/oop/navrhy/oop_art-05-xx_2014-yy_navrh_17_04_2014_priloha-1_marketingovy-pruzkum.pdf.

by respondents because of the speed and the quality of service. For all other technologies, the reason of choice is the long-term good experience.

4.4.2.2 Consumers' preferences and willingness to pay for Internet access services

This chapter presents an overview of the situation in the Czech Republic, as far as consumer's preferences and willingness to pay for Internet Access Services (IAS) are concerned.

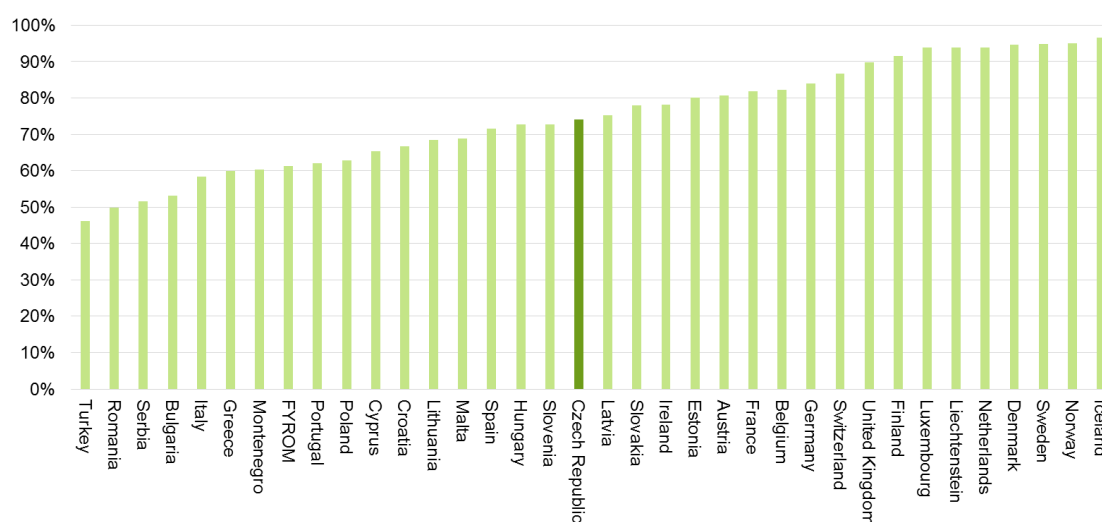
4.4.2.3 Typical patterns of Internet usage

The analysis of typical patterns of Internet usage in Czech Republic concentrates on such aspects as: frequency of the usage, its location, purposes of the use and digital skills.

4.4.2.3.1 Internet use and its frequency

ITU provides data on the percentage of individuals using the Internet, whereas Eurostat provides data on the number of individuals who are frequent users (every day or almost every day) for 2013. As shown in Figure 4-44, the percentage of individuals using the Internet ranges from 96,5% in Iceland to 46,3% in Turkey, with an average of 74,9% across BEREC member and observer countries (for which data is available). Czech Republic is nearly at the level of the average with 74,1%.

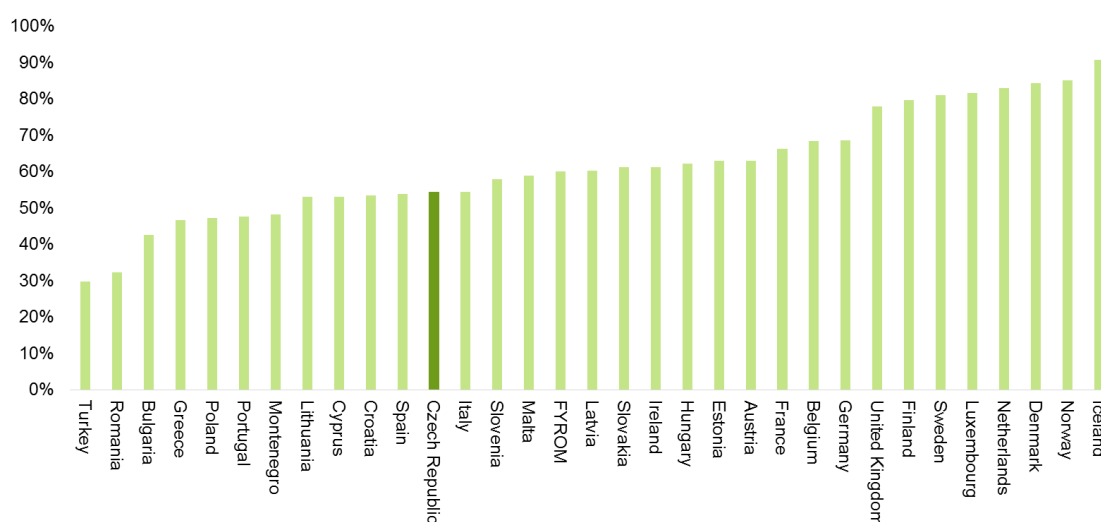
Figure 4-44: Internet use in 2013



Source: ITU - ICT Eye, Eurostat

According to the ICT Households survey (Figure 4-45), the percentage of individuals who are frequent Internet users ranges from 91% in Iceland to 30% in Turkey⁹⁵. In Czech Republic 54% belongs to frequent Internet users, which is below the average of 61% of the surveyed BEREC member and observer countries (for which data is available).

Figure 4-45: Individuals who are frequent Internet users (every day or almost every day), 2013



Source: EUROSTAT, ICT Households survey

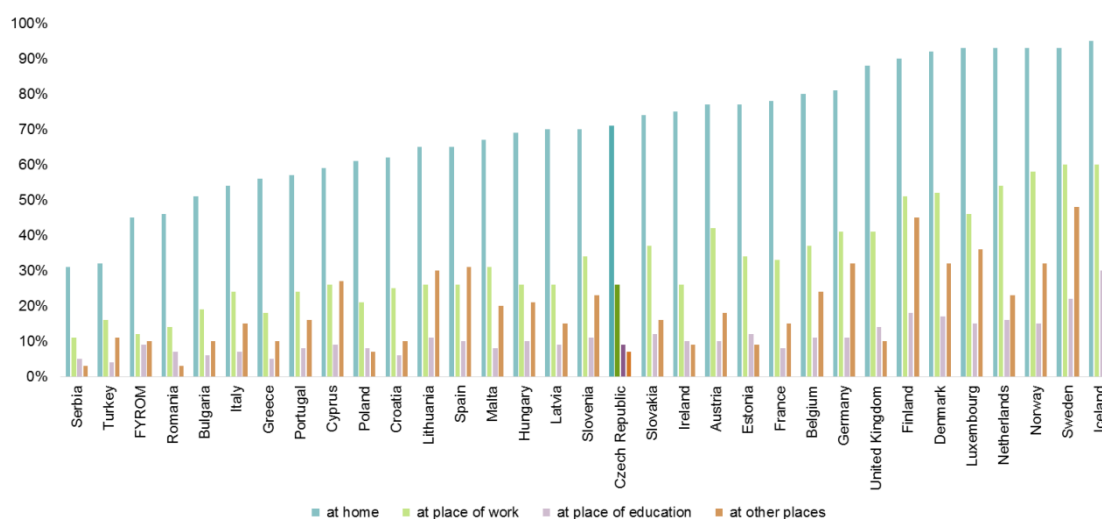
4.4.2.3.2 Location and purpose of using Internet

EUROSTAT provides information on individuals using the Internet, by place of use in 2013 (% of individuals aged 16 to 74). As presented in the Figure 4-46, data on using the Internet:

- **At home** ranges from 31% to 95%; the average is 70% across the BEREC member and observer countries (for which data is available). In Czech Republic 71% of individuals use the Internet at home, which is above the average.
- **At place of work** ranges from 11% to 60%; the average is 33%. In Czech Republic 26% of individuals use the Internet at work, which is below the average.
- **At place of education** ranges from 4% to 30%, whereas the average is 11%. 9% of the Czech individuals use the Internet at this place.
- **At other places** ranges from 3% to 48%, whereas the average is 20%. 7% of the Czech individuals use the Internet at other places.

⁹⁵ Note that Eurostat also provides a value for Serbia that is included in this dataset, however this value is for latest available year (2009).

Figure 4-46: Individuals using the Internet, by place of use (% of individuals aged 16 to 74), 2013

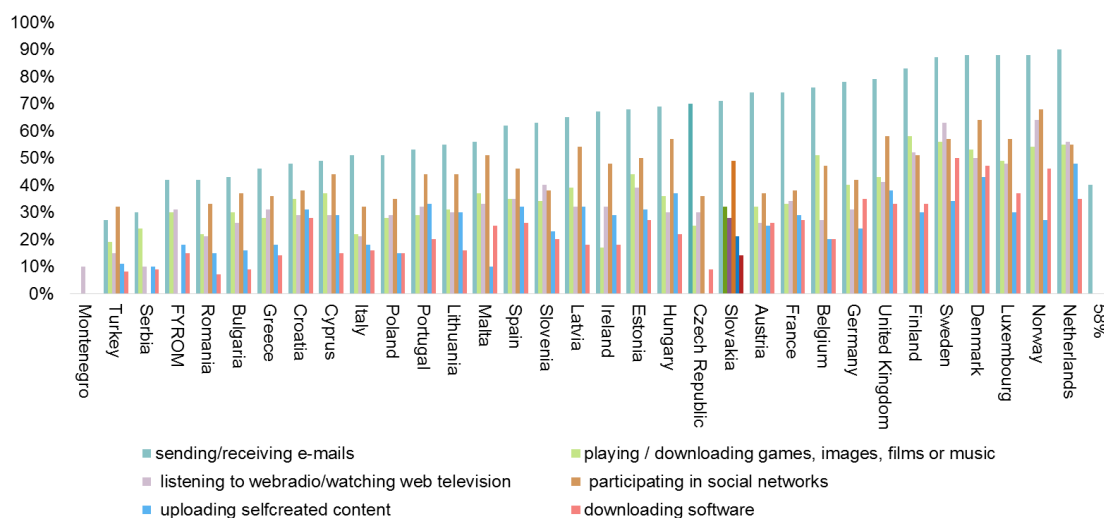


Source: EUROSTAT

EUROSTAT in its' ICT Household Survey also provides data on the type of Internet use for 2012 and 2013. Figure 4-47 reveals that the average number of individuals using the Internet for:

- sending/receiving e-mails is 64%, whereas in Czech Republic it is 70%
- playing or downloading games, images, films or music is 37% whereas in Czech Republic it is 25%
- listening to web radio/watching web television is 33%, whereas in Czech Republic it is 30%
- participating in social networks is 47%, whereas in Czech Republic it is 36%
- uploading self-created content is 26%. In Czech Republic 0%
- downloading software 24%, whereas in Czech Republic it is 9%.

Figure 4-47: Internet use: sending/receiving e-mails in 2013, playing or downloading games, images, films or music in 2012, listening to web radio/watching web television in 2012, participating in social networks in 2013, uploading self-created content in 2012, downloading software in 2013



Source: EUROSTAT

A market survey 'The Use of Computers and the Internet'⁹⁶ commissioned by the Czech Telecommunication Office (CTU) and conducted in 2012 by Kolesárová and Tomek in cooperation with Czech market research agency - STEM/MARK, a.s. – provides additional information on typical patterns of Internet usage in Czech Republic.

In Czech Republic 76% of respondents use the Internet; 61% regularly (daily or almost daily). The use of the Internet decreases with age. Most Internet users are in the youngest age group. In the second place in terms of number of Internet users are respondents with university education. The proportion of Internet users depends on the size of the municipality. In municipalities up to 999 inhabitants Internet use is slightly higher than in municipalities with more than 999 inhabitants.

Respondents use the Internet 17 hours a week on average. Number of hours spent on the Internet decreases proportionally with age. While the youngest age group (15-29 years) spends on the Internet 23 hours on average, the oldest age group spends only 10 hours.

The Internet is most often used at home (72%). 29% of respondents use it at work. At other sites the Internet is used significantly less (between 4% and 11%).

Respondents who use the Internet in several places were asked whether some of the places are more important. Definitely, the most important place is home. 77% claim that this place is the most important. The use of Internet at home is important for older

⁹⁶ The Use of Computers and the Internet, STEM/MARK, a.s., <http://www.ctu.cz/aktuality/tiskove-zpravy.html?action=detail&ArticleId=10190>.

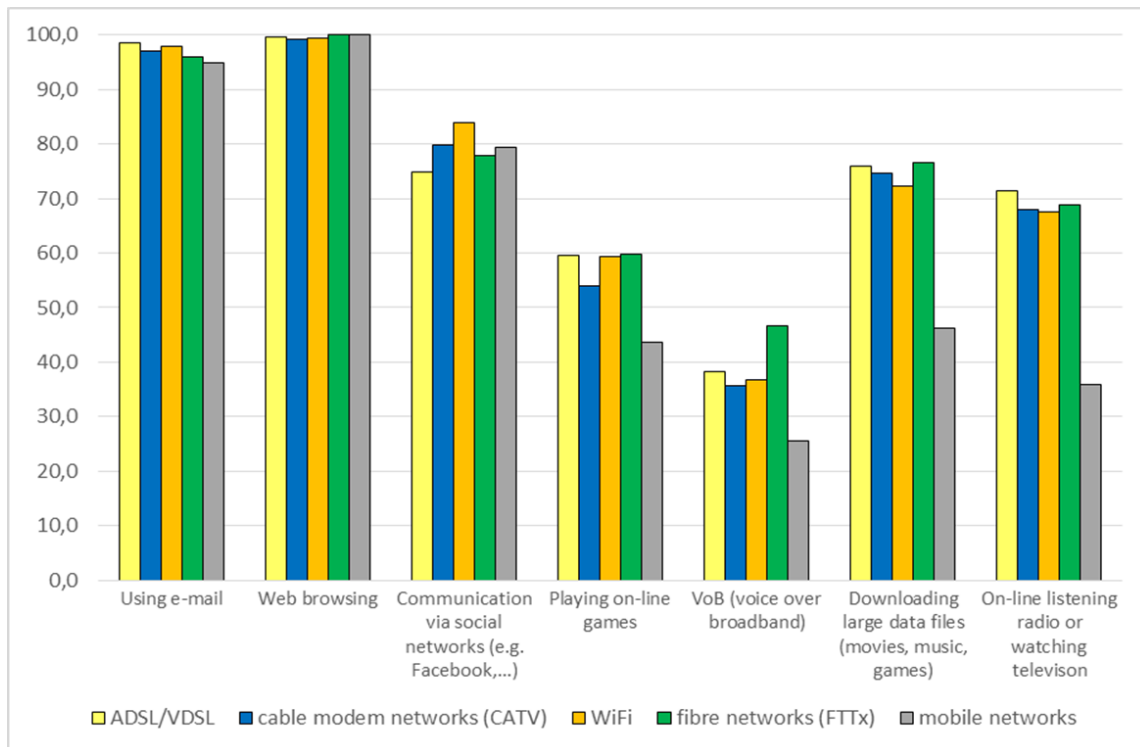
respondents, but also for respondents who have a secondary education without A-level. For respondents with a university education it is more important than for other groups of respondents to use Internet at work; it is important for 41% of respondents. For 37% of the highest income group households work is the most important place for the use of the Internet.

As far as Internet activities of users are concerned, 96% of Internet users used e-mail frequently, of which almost two-thirds daily or almost daily. The second most common activity is looking for information. Information is sought more often via portals (92%) than by full-text search engines (89%). News portals are monitored by 81% of respondents.

Social networking has quickly made its way to the fifth place (used regularly and often). The structure of the answers shows that users either engaged in it quite often or do not use it at all. A large number of respondents are dedicated to shopping, but with less frequency. Less than a quarter of the Internet users do not buy at all. The least common activity is betting online. On social networks, users spend only a small proportion of their time. 15% of the youngest respondents (between 15-29 years old) spend most of their time on the Internet on social networks. 65% of respondents used wired connections to connect to a social network. 21% used mobile phone to connect to a social network and 5% a tablet. Less than ten percent of Internet users were interested in sharing their own videos on social networks via mobile phone. Higher interest of sharing videos on social networks is among young people (22%).

According to the updated results of the survey conducted at the beginning of 2014 by STEM/MARK a.s, the use of individual Internet applications by type of access technology can be seen in Figure 4-48.

Figure 4-48: Use of individual Internet applications by type of access technology, 2014



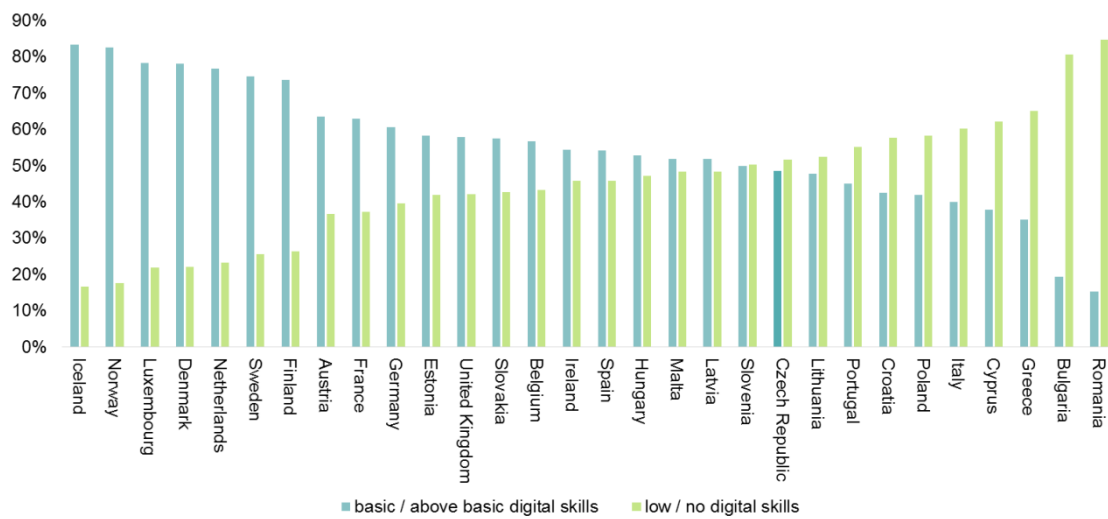
Source: CTU, based on results of market survey carried out by STEM/MARK

4.4.2.4 Digital skills

The DAE Scoreboard provides data on digital skills. As shown in Figure 4-49, the percentage of people with basic digital skills ranges from 83% in Iceland to 15% in Romania, with an average of 54% across BEREC member and observer countries (for which data is available). Furthermore, in 19 countries, the percentage of people with basic or above digital skills is above 50%.

Czech Republic is below the average with the number of individuals with basic or above basic digital skills - 48%. 52% of people in this country have low or no digital skills, which is more than the average of 45%.

Figure 4-49: Individuals with basic or above basic digital skills, 2012



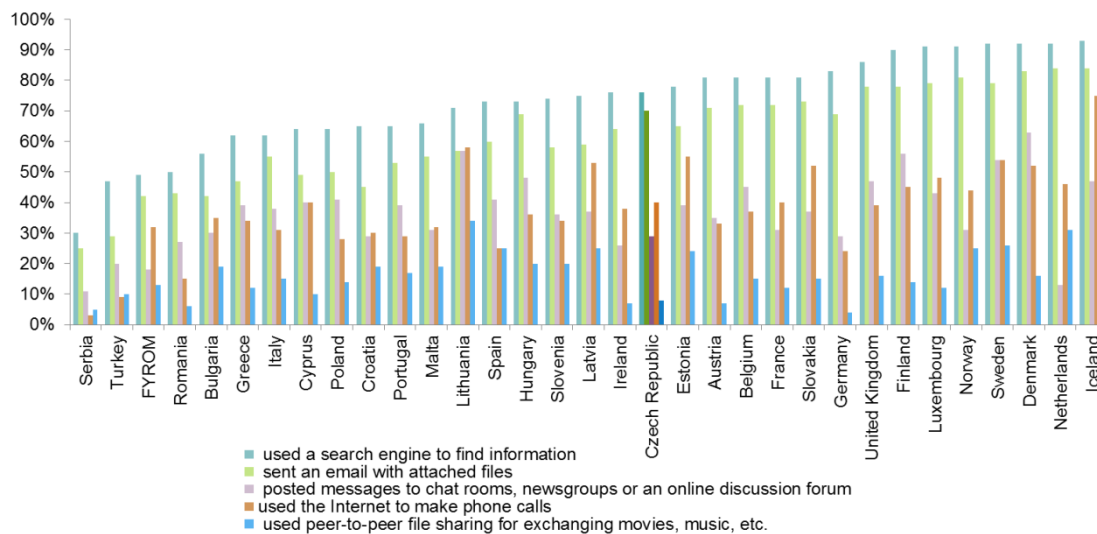
Source: DAE Scoreboard

Level of digital skills can be also described through the use of the Internet by individuals for particular tasks.

According to EUROSTAT and as shown in Figure 4-50, the average number of individuals who have:

- used a search engine to find information is 73%, whereas in Czech Republic this is 76%
- sent an email with attached files is 62% whereas in Czech Republic it is 70%
- posted messages to chat rooms, newsgroups or an online discussion forum is 37%, whereas in Czech Republic it is 29%
- used the Internet to make phone calls is 37%, whereas in Czech Republic it is 40%
- used peer-to-peer file sharing for exchanging movies, music, etc. is 17%, whereas in Czech Republic it is 8%.

Figure 4-50: Individuals' level of Internet skills - Individuals who have used Internet to perform different activities, 2013



Source: EUROSTAT

4.4.2.5 Additional insights

This Section brings together additional insights into Internet consumer behaviour in the Czech Republic gathered from sources that shed light on this test area.

The Gemius (2014)⁹⁷ details some aspects of Internet consumer behaviour in the Czech Republic. Compared to Croatia, the average Czech Internet user spends significantly more time online. In Dec 2012, it was 24:21 hours per month. In Dec 2013, this figure reduced slightly to 24:06 hours per month. Again, this relates to the increasing use of mobile devices to access the Internet. The average number of page views decreased simultaneously from 1,219 per month (2012) to 1,175 per month (2013). Data for the share of mobile traffic is not published in the report on the Czech Republic.

In addition to the top 10 most popular websites (shown below), the report for the Czech Republic also provides a more high-level overview of the most popular categories of websites in the Czech Republic. Table 4-5 reproduces this information. It can be seen that Czech Internet users mostly frequent websites offering practical information such as maps, databases of companies and films etc. as well as public transport schedules. For e-commerce websites on the 4th place of most popular categories of websites, Gemius notes that there is consolidation likely ahead in the Czech market, where currently more than 37,000 different websites falling into the e-commerce category exist. Amazon is not yet officially present in the Czech Republic.

⁹⁷ Gemius (2014): ONLINE LANDSCAPE: Central-Eastern Europe.

Table 4-5: Top 10 most popular categories of websites in the Czech Republic

		Number of Real Users ²	Page views	Average number of page views per visitor	Average time spent per visitor (h:m)	Reach
1	Databases, catalogs	4 669 489	379 372 340	81	1h4min	69%
2	Communication services	4 631 255	1 639 192 789	354	5h38min	69%
3	News	4 505 123	360 628 470	80	1h38min	67%
4	E- commerce	4 242 813	903 642 709	213	2h25min	63%
5	Tabloid magazines	3 960 422	311 573 478	79	1h14min	59%
6	Tv, radio	3 495 751	135 002 991	39	1h23min	52%
7	Women and fashion magazines	3 433 431	145 786 164	42	36min	51%
8	Society magazines	3 287 399	65 183 351	20	23min	49%
9	Economy, finance, law	3 219 164	73 598 548	23	25min	48%
10	IT servers, mobile phones, digital technologies	2 874 704	69 158 942	24	25min	43%

The most popular website in the Czech Republic is seznam.cz, a local website combining a web portal and a search engine. The average Czech Internet user spends a little over 16 hours per months on this website. Second and third places belong to news portals novinky.cz and idnes.cz. The remainder of the top 10 most popular websites is shown in Table 4-6.

Table 4-6: Top 10 most popular websites in the Czech Republic

		Number of Real Users	Page views	Average number of page views per visitor	Average time spent per visitor (h:m)	Reach
1	seznam.cz	5 760 435	3 279 631 109	569	1h4min	85%
2	novinky.cz	4 054 478	260 611 818	64	1h46min	60%
3	idnes.cz	3 656 361	616 441 402	169	1h49min	54%
4	super.cz	3 256 250	200 884 807	62	1h8min	48%
5	heureka.cz	2 777 849	134 603 418	48	41min	41%
6	centrum.cz	2 582 334	432 865 161	168	2h50min	38%
7	mapy.cz	2 380 908	60 120 547	25	23min	35%
8	firmy.cz	2 204 577	29 739 279	13	13min	33%
9	zbozi.cz	2 115 653	95 054 994	45	29min	31%
10	stream.cz	2 081 232	30 314 194	15	17min	31%

In the Czech Republic, the latest figure for the number of Facebook users is 3.8 million (Socialbakers 2012). Again, Socialbakers (2014) provide very recent data on the top pages and brands in the test area. The Czech Facebook users like the pages of The

Simpsons and YouTube most often. The page with the third highest number of fans is you.bo. These numbers indicate that video consumption is an important part of Czech online consumer behaviour. Also the pages Bez přátel nežiju! (4th), Máme rádi psy (8th) and Partička (9th) also revolve more or less around video content. The most popular brand sites on the Czech Facebook are Slevomat (a sort of Groupon website). Places 2, 3 and 4 belong to soft drink companies Coca-Cola, Kofola and Red Bull respectively. Just as in Croatia, Lidl, a drugstore and Samsung feature amongst the top 10 pages.

Data on e-commerce activity is provided by the European Consumer Conditions Scoreboard⁹⁸. In the Czech Republic e-commerce activity grew almost at the same rate as for the EU-average all be it at a lower level. From 2008 to 2012, the share of people, who have bought a product or service online has grown from 23 to 32 percent. For all European countries, the same figure grew from 32 to 45 percent in the same period. It is also interesting to note the Czechs have a relatively high confidence level in online shopping compared to most other countries in the EU. This may indicate high trust in other online activities.

As regards video streaming, there is no direct consumer data available, however, one may take the offer of audio-visual content on demand as proxy for how mature the local market is and how strong the demand for such services is. In Czech Republic, there are 112 on-demand sources for audio-visual content (officially) available. Within that, there are 8 branded YouTube channels, 39 catch-up TV services and 35 VoD services. Almost all of these offers are targeted mainly at the Czech market⁹⁹. The wealth of on-demand content reflects the interest that already echoed in the Facebook likes of the Czech Internet consumers.

⁹⁸ European Commission (2013): The Consumer Conditions Scoreboard – Consumer at home in a single market. 9th edition July 2013.

⁹⁹ MAVISE database <http://mavise.obs.coe.int/welcome>.

4.5 Country profile of Greece

4.5.1 Greece: The electronic communications market environment

4.5.1.1 Specific broadband products with their market shares

Broadband products can be mainly characterised by their availability, speed and technology (e.g. Cable, xDSL, FTTx, etc.). The recent study on 'Broadband Internet access cost (BIAC)'¹⁰⁰ provides country profiles based on a number of indicators that characterise the broadband market. For Greece this study collected a total of 75 broadband Internet offers. These offers are collected from five different operators that represent more than 90% of market share, being OTE (incumbent), Forthnet (new entrant), CYTA (new entrant), Hellas On Line (HOL) (new entrant) and Wind (new entrant). The following characteristics are provided:

- 88% of offers investigated do not require line rental or a cable TV subscription.
- All of these offers (100%) are unmetered, which means that an unlimited volume of data can be downloaded at any time.
- Offers from incumbents accounted for 31% of all the offers, whereas 69% of these were offers from new entrants.

Hellenic National Telecommunications and Posts Commission (EETT), Telecommunications Division provides recent information on existing offers in terms of speed and technology. There are 2 913 000 broadband lines in Greece which are 99,8% xDSL technology based.

In terms of type of service:

- 41,5% are ADSL lines provided by the incumbent.
- 56,5% are ADSL lines provided by the new entrants, the vast majority (>98%) on the basis of LLU (the rest on the basis of incumbent's WBA products).
- VDSL lines represent 1,7% (the majority by the incumbent).
- Broadband lines based on other technologies represent less than 0,2%.

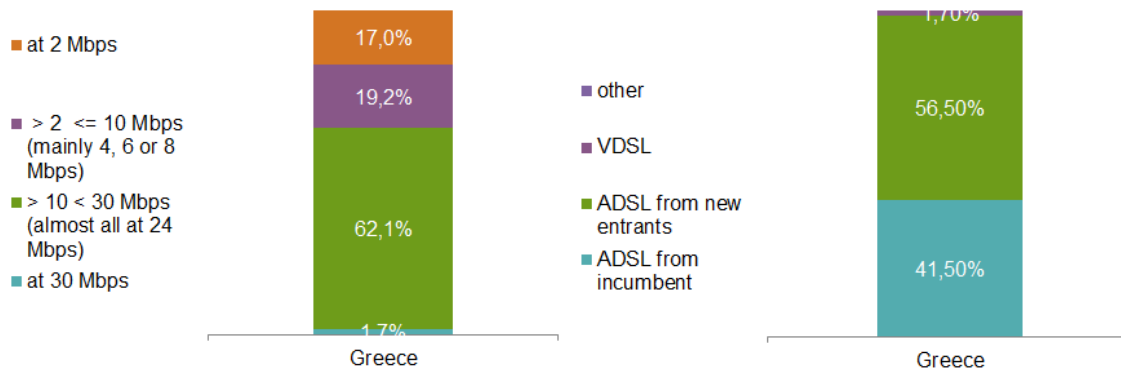
Differentiation in terms of speed is limited in Greece. Most consumers opt for a 24 Mbps connection, while a few opt for 2, 4, 6 or 8Mbps lines. Even fewer opt for a higher speed (VDSL) connection (mostly 30Mbps and much fewer 50Mbps):

- 1,7% are at 30Mbps
- 62,1% are above 10 but below 30Mbps (actually at ADSL speeds, almost all at 24 Mbps)

¹⁰⁰ 2013, Broadband internet access cost (BIAC), see: <http://ec.europa.eu/digital-agenda/en/news/study-retail-broadband-access-prices-2013-smart-20100038>.

- 19,2% are above 2 and up to 10 Mbps (mainly 4, 6 or 8 Mbps) and
- 17% are at 2 Mbps.

Figure 4-51: Offers per speed and technology (Greece), end of 2013



Source: EETT

The following sections provide more information for relevant indicators on:

- Download speed of fixed broadband subscriptions
- Broadband subscriptions per type of technology

4.5.1.2 Download speed of fixed broadband subscriptions

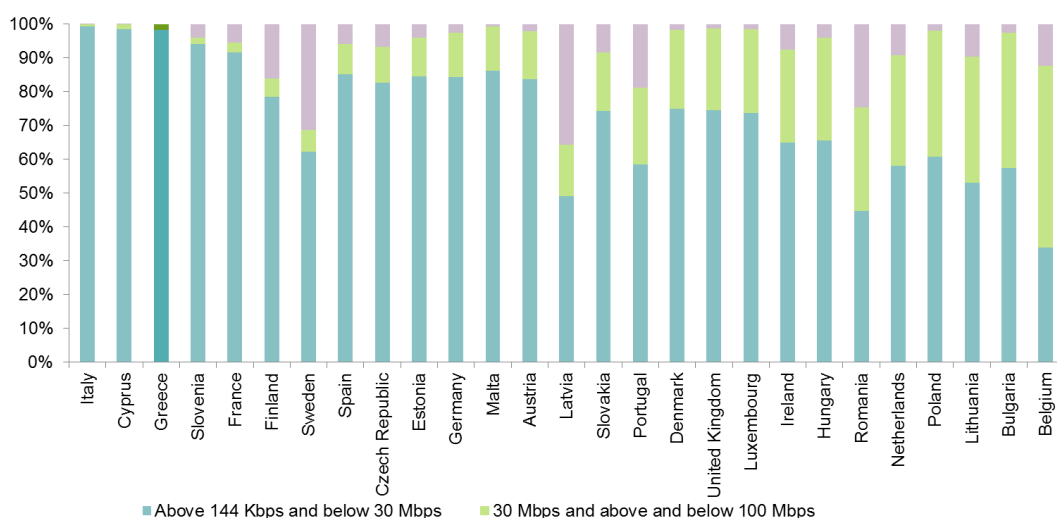
Digital Agenda Scoreboard provides data on fixed broadband subscriptions by speed in 2014.

Greece is much below average (19%) with the share of fixed broadband subscriptions **30Mbps and above and below 100Mbps** amounting only to 2%.

The country does not have any fixed broadband subscriptions **100Mbps and above** - 0% compared to 8% being the average.

73% is the average for fixed broadband subscriptions **above 144 and below 30Mbps** and Greece is much above, with the share of 98%.

Figure 4-52: Fixed broadband subscriptions by speed (Digital Agenda categories), 2014

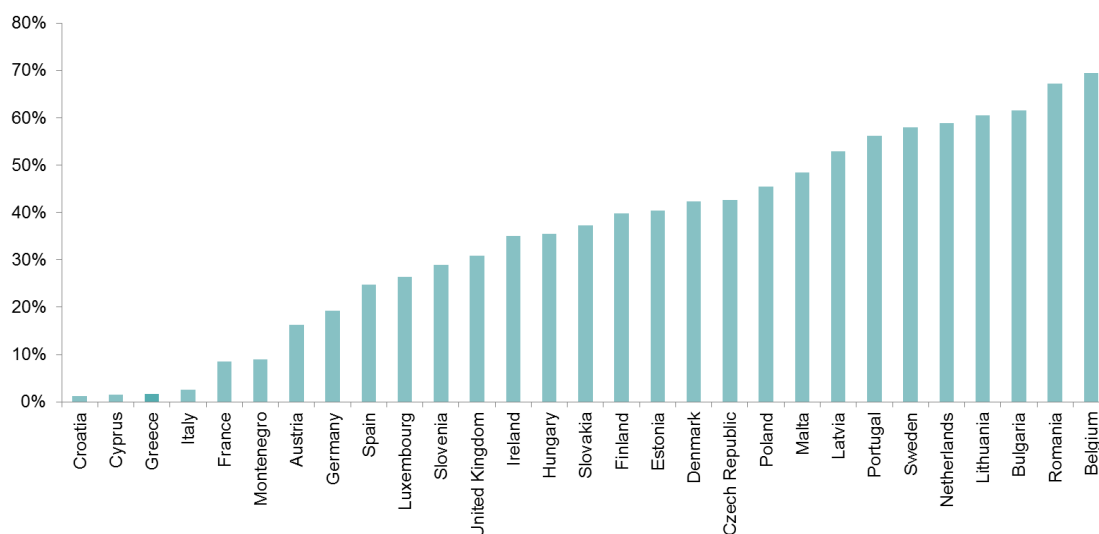


Source: DAE Scoreboard

4.5.1.3 Broadband subscriptions per type of technology

The DAE Scoreboard also provides data on NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions for 2013. As shown in Figure 4-53, NGA share of all broadband connections ranges from 69,5% in Belgium to 1,2% in Croatia. For Greece the NGA share is 1,7%. The average NGA broadband coverage as a percentage of total fixed broadband subscriptions is 35,3%.

Figure 4-53: NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions in 2013

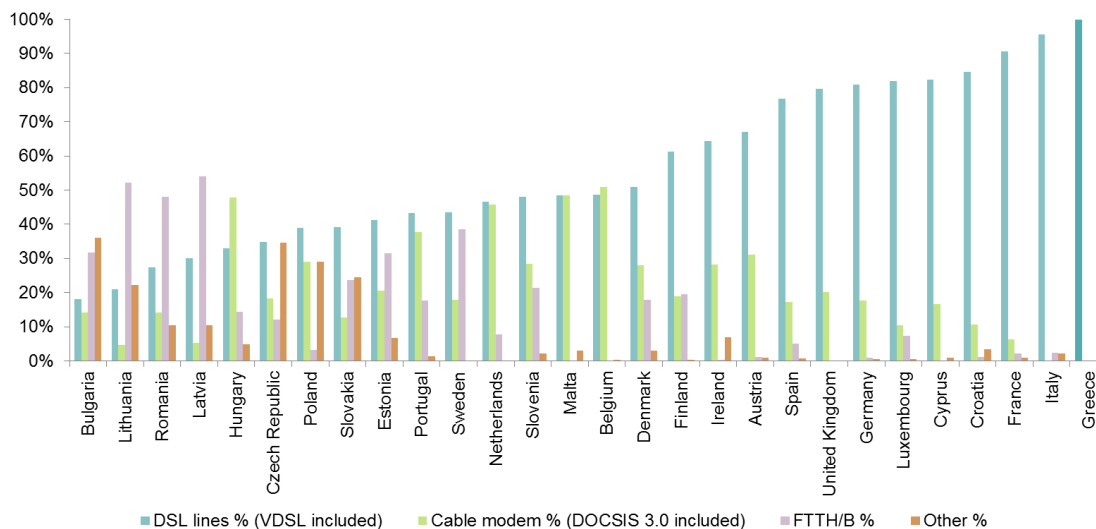


Source: DAE Scoreboard

On the basis of data from the DAE Scoreboard the Figure 4-54 below indicates fixed broadband subscriptions as technology market shares:

- **DSL lines % (VDSL included)** range from 99,79% in Greece to 15% in Bulgaria, whereas the average share is 56%.
- **Cable modem % (DOCSIS 3.0 included)** ranges from 51% in Belgium to 0% in Greece and Italy. The average share is 21%.
- **FTTH/B %** ranges from 54% in Latvia to 0% in Greece and Malta. The average share is 14%.
- **Other %** range from 36% in Bulgaria to 0% in the Netherlands and Sweden, while the average share is 7,4%. For Greece it is 0,21%.

Figure 4-54: Broadband subscriptions per type of technology in 2013



Source: DAE Scoreboard

4.5.1.4 Specific pricing plans for Internet access, including typical promotional offers, major contract terms and conditions

This section presents monthly prices of Internet access (least expensive offer in EUR/PPP) in Greece in comparison to other countries.

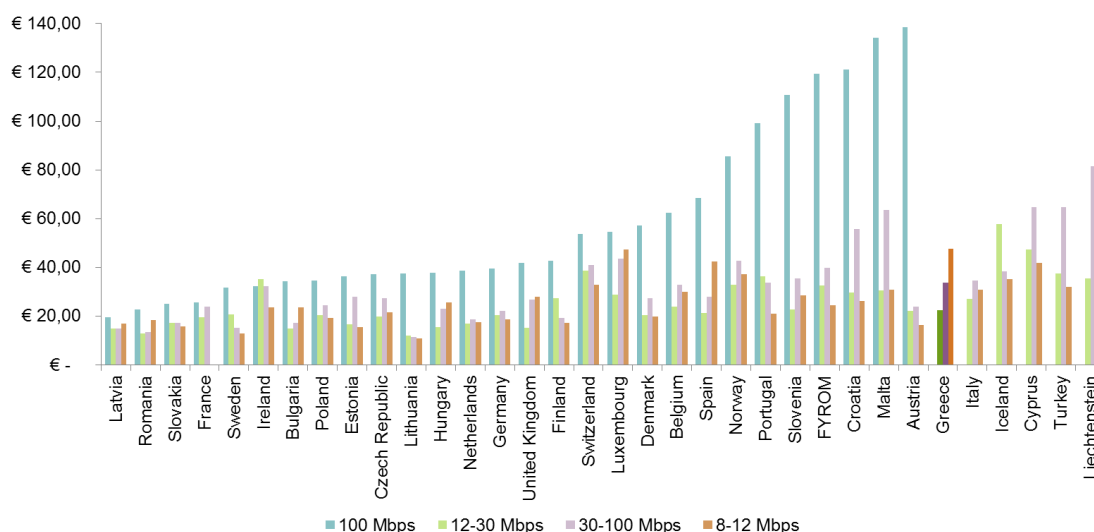
The DAE Scoreboard provides data on the monthly price of standalone Internet access per speed range in 2014.

As shown in Figure 4-55, prices for:

- **Internet access 8-12 Mbps** range from €10,90 in Lithuania to €47.71 in Greece (note that this price is based only on one offer (satellite)). The average price across BEREC member and observer countries (for which data is available) is €26,49.

- **Internet access 12-30 Mbps** range from €12,01 in Lithuania to €57.86 in Iceland; the average price is €25,51. In Greece the price is below average at €22,46.
- **Internet access 30-100 Mbps** range from €11,53 in Lithuania to €81,52 in Liechtenstein with the average price of €32,96. Greece reached the price of €33,66.
- **Internet access 100 Mbps** range from €19,54 in Latvia to €138,45 in Austria, whereas the average price across BEREC member and observer countries (for which data is available) is €58,65. There is no data available for Greece for this offer.

Figure 4-55: Monthly price of Internet access per speed in 2014



Source: DAE Scoreboard

EETT provided further information on pricing practices of different ISPs, which are highlighted in the table below.

ISP	Pricing practices
<u>OTE</u>	<p>15,08 € per month for ADSL at 4 Mbps and 16,97 € per month for ADSL at 24 Mbps. An activation fee of 43,04 € applies.</p> <p>There is at present a promotional offer with commitment for 12 months: 17,56 € per month for ADSL at 4 Mbps and 23,26 € per month for ADSL at 24 Mbps, without activation cost.</p> <p>19,90 € per month for VDSL at 30 Mbps and 29,90 € per month for VDSL at 50 Mbps.</p> <p>Special offers for businesses including value added services (e.g. web- and mail hosting, etc.) are also provided.</p>
<u>CYTA</u>	<p>14 € per month for ADSL at 4 Mbps and 18 € per month for ADSL at 24 Mbps. 26 € per month for VDSL at 35 Mbps and 32 € per month for VDSL at 50 Mbps. Service activation fee (30 €) applies but is at present cancelled, as a promotional offer.</p> <p>The above are combined with voice services (2-play) and TV services (3-play)</p> <p>2 play: 16 € per month (4 Mbps), 19 € per month (8 Mbps), 23 € per month (24 Mbps), 29 € per month (35 Mbp), 35 € per month (50 Mbps). Additional costs apply for free minutes.</p> <p>3 play: 19 € per month (4 Mbps), 22 € per month (8 Mbps), 26 € per month (24 Mbps), 32 € per month (35 Mbp), 38 € per month (50 Mbps). Additional costs apply for free minutes.</p>
<u>Forthnet</u>	<p>20 € per month for ADSL and 30 € per month for VDSL</p> <p>28 € per month for 2-play (including unlimited national calls to fixed).</p> <p>At present Forthnet is offering discounted prices (15 € per month for ADSL and 25 € per month for VDSL).</p> <p>Service activation fee applies.</p>
<u>HOL</u>	<p>Just under 25 € per month for ADSL (24/1 Mbps).</p> <p>26/35/42 € per month for double play ADSL services (24/1 Mbps) with 300/700/1000 free minutes respectively to national (fixed and mobile).</p> <p>43/48/55 € per month for double play VDSL services (50/5 Mbps) with 300/700/1000 free minutes respectively to national (fixed and mobile).</p>
<u>Wind</u>	<p>20 € per month for ADSL / VDSL service.</p> <p>40 € per month for double play service (including unlimited national calls to fixed and 300 minutes national calls to mobile).</p> <p>Service activation fee applies.</p>

Contract duration in Greece is typically 12 months. The provider is, in general, obliged to inform the consumer in advance about any changes within the service, the pricing and the terms. EETT has published the “Code of Practice for electronic communications services” that determines certain obligations in the contractual relations between operators and consumers.

4.5.1.5 Information on bundling practices and pricing of such bundles

This section presents bundle penetration and pricing of such bundles in Greece in comparison to the rest of the countries.

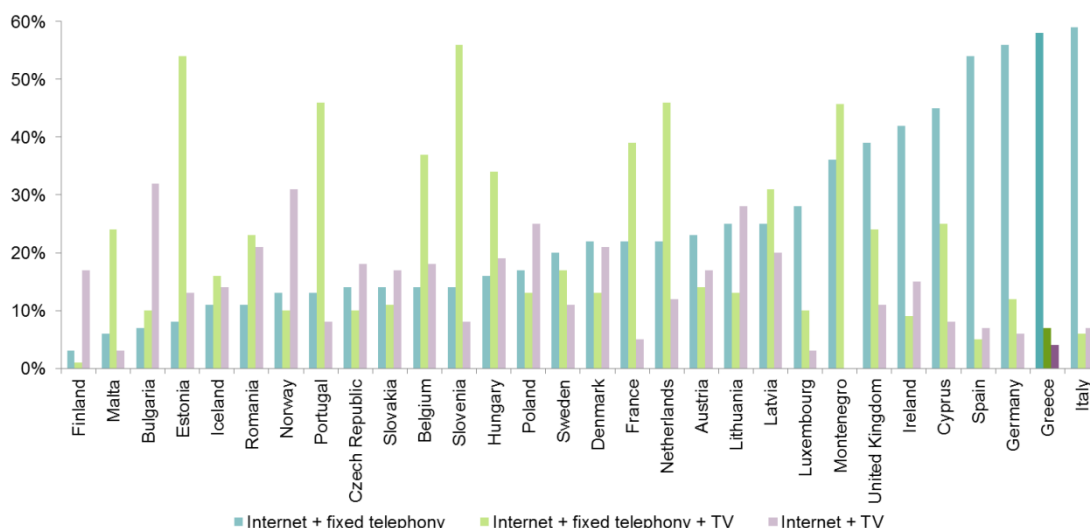
According to the Hellenic National Telecommunications and Posts Commission (EETT), bundling is very popular and a major driver of competition, as it enables operators to differentiate their products and offer a diversity of packages.

In terms of bundling the vast majority of consumers (83%) opt for a 2-play package and only 10% opt for a standalone ADSL service. The remaining 7% opt for a 3-play package.

The Consumers, Health and Food Executive Agency (CHAFEA) provides more detailed data on the penetration of types of bundled offers. As shown in Figure 4-56, the data for:

- **Internet and fixed telephony** ranges from 3% in Finland to 59% in Italy, with an average of 24,6% across BEREC member and observer countries (for which data is available). These types of bundles achieve 58% in Greece.
- **Internet, fixed telephony and TV** ranges from 1% in Finland to 56% in Slovenia, with an average of 22,1%. These types of bundles amount to 7% in Greece.
- **Internet and TV** ranges from 3% in Malta to 32% in Bulgaria; whereas the average is 14,4%. Greece turns out here to be much below the average with 4%.

Figure 4-56: Bundled offer penetration in 2012 (1)



Source: CHAFEA

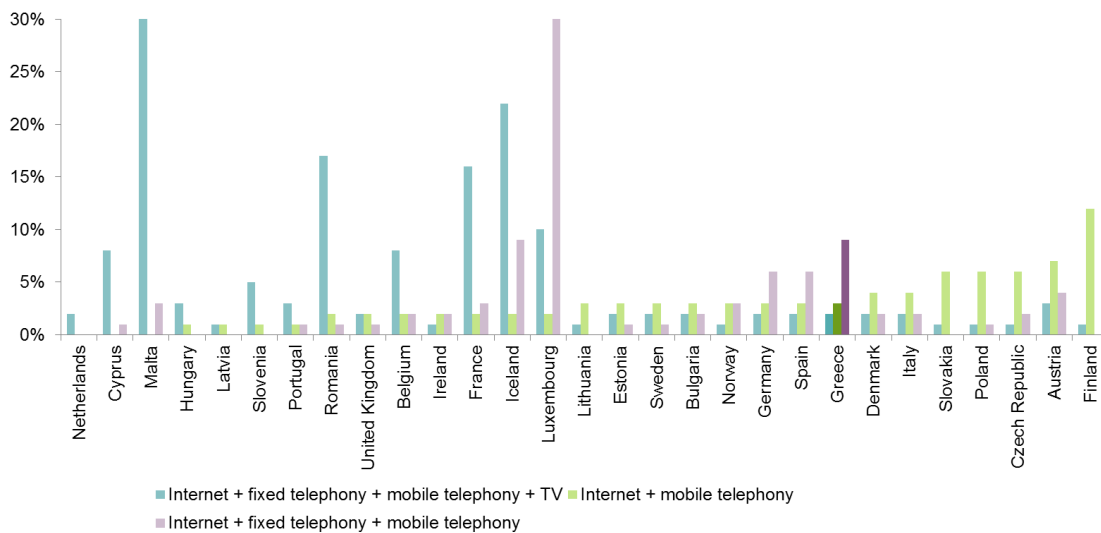
Figure 4-57 below, indicates CHAFEA data for:

- **Internet and fixed telephony and mobile telephony and TV** which ranges from 1% in several countries, such as Finland, Poland, Slovakia, Norway,

Lithuania, Ireland and Czech Republic, up to 31% in Malta. The average amounts to 5,3% (across BEREC member and observer countries for which data is available) and Greece is below it with 2%.

- **Internet and mobile telephony** which ranges from 0% in in several countries, such as the Netherlands, Cyprus, Malta up to 12% in Finland. The average is 3%. Greece is at the average level;
- **Internet and fixed telephony and mobile telephony** which ranges from 0% in several countries (Finland, Slovakia, Latvia, Slovenia, Lithuania, the Netherlands and Hungary) up to 30% in Luxembourg. The average is 3,2%. These types of bundles are above the average in Greece at 9%.

Figure 4-57: Bundled offer penetration in 2012 (2)

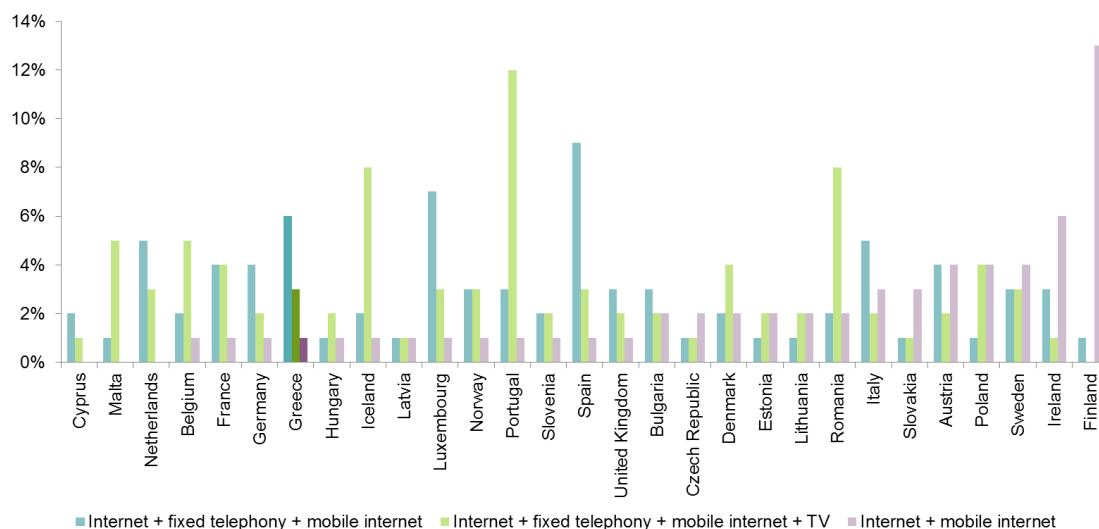


Source: CHAFAA

Analysis on the penetration of other types of bundled offers is presented in Figure 4-58:

- **Internet and fixed telephony and mobile Internet** ranges from 1% in several countries (Finland, Poland, Slovakia, Lithuania, Latvia, Malta, Hungary and Czech Republic) up to 9% in Spain. The average amounts to 2,9% across BEREC member and observer countries (for which data is available). In Greece this offer is at 6%.
- **Internet and fixed telephony and mobile Internet and TV** ranges from 0% in Finland to 12% in Portugal. The average is 3,1%. These types of bundles achieve 3% in Greece.
- **Internet and mobile Internet** ranges from 0% in Cyprus, Malta and the Netherlands up to 13% in Finland. The average is 2,1%. These types of bundles are also below the average in Greece at 1%.

Figure 4-58: Bundled offer penetration in 2012 (3)



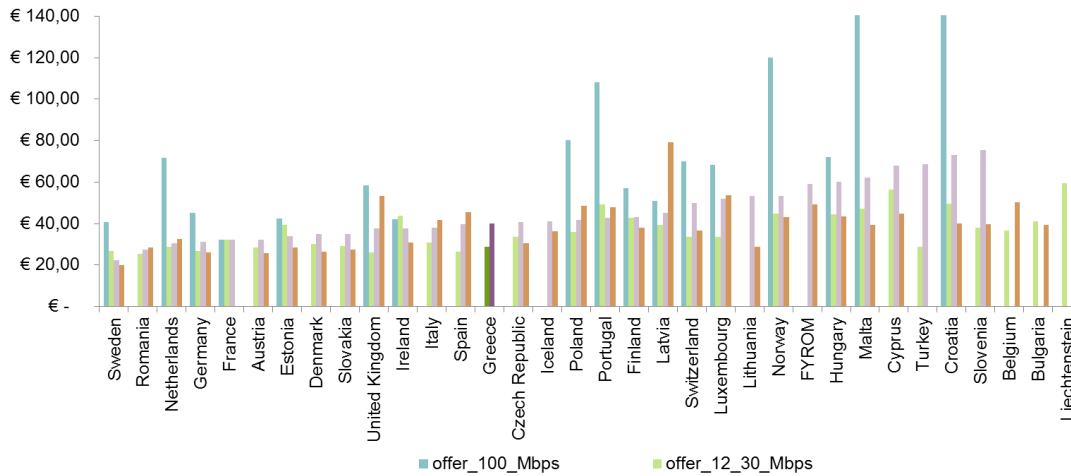
Source: CHAFAA

As far as prices of bundling offers are concerned, the DAE Scoreboard provides data on the monthly price of standalone Internet access, as well as bundles according to different speed (least expensive offer in EUR/PPP).

As shown in Figure 4-59, monthly price of Internet access, together with fixed telephony bundles for:

- **Offer 8-12 Mbps** ranges from €19,95 in Sweden to €79.24 in Latvia; the average price is €39,99. For Greece there is no information available on this type of bundle.
- **Offer 12-30 Mbps** ranges from €25,32 in Romania to €59.25 in Liechtenstein; the average price is €36,63. In Greece the price is lower than the average at €28,80;
- **Offer 30-100 Mbps** ranges from €22,25 in Sweden to €75.25 in Slovenia; the average price is €45,19. This type of bundle costs in Greece is €39,94.
- **Offer 100 Mbps** ranges from €32,13 in France to €147,59 in Malta; the average price is €73,44 across BEREC member and observer countries (for which data is available). For Greece there is no information available on this type of bundle.

Figure 4-59: Monthly price of Internet access + fixed telephony bundles in 2014

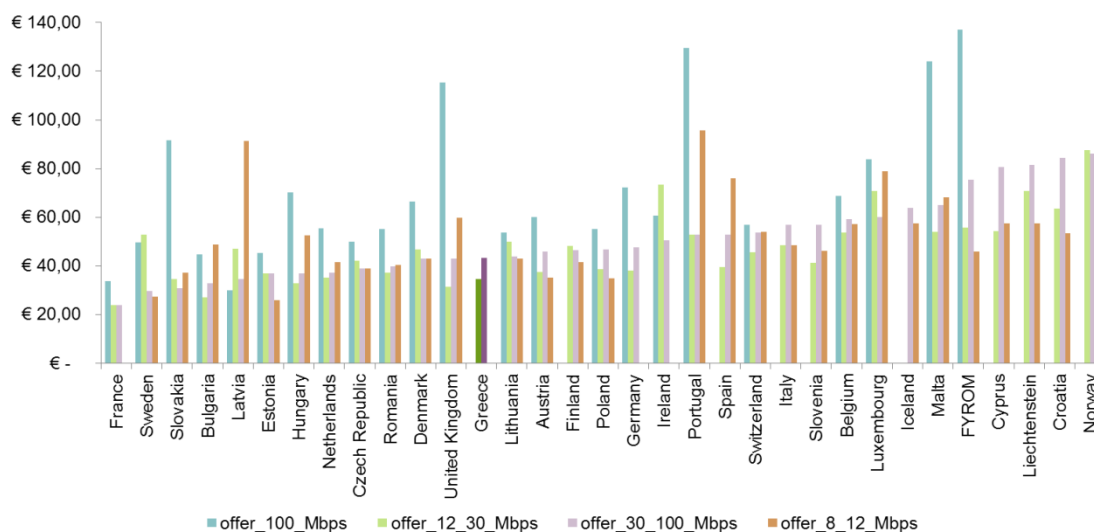


Source: DAE Scoreboard

Figure 4-60 below presents monthly price of Internet access, together with fixed telephony and TV bundles (least expensive offer in EUR/PPP) for:

- **Offer 8-12 Mbps**, which ranges from €25,81 in Estonia to €95,61 in Portugal. The average price across BEREC member and observer countries (for which data is available) is €53,16. For Greece there is no information available on this type of bundle.
- **Offer 12-30 Mbps**, which ranges from €23,77 in France to €87,57 in Norway the average price is €47,05. In Greece the price is lower than the average at €34,48.
- **Offer 30-100 Mbps**, which ranges from €23,77 in France to €86,24 in Norway the average price is €50,96. This type of bundle costs €43,30 in Greece.
- **Offer 100 Mbps**, which ranges from €29,84 in Latvia to €137,02 in FYROM. The average price is €69,93 across BEREC member and observer countries (for which data is available). For Greece there is no information available on this type of bundle.

Figure 4-60: Monthly price of Internet access + fixed telephony + TV bundles in 2014



Source: DAE Scoreboard

4.5.1.6 Information about network neutrality policies of ISPs

According to the Traffic Management Investigation Survey, which was organized by BEREC in 2012 and is solely based on operator responses (operator practices may have changed since then):

Fixed operators:

- In general, do not throttle or block user access (e.g. through data caps).
- In general, do not throttle or block p2p traffic, VoIP traffic, or other types of traffic.
- In general, do not throttle or block specific providers.
- In general, (with a few exceptions), do not give preferential treatment to OTT traffic.
- In many cases offer specialized services that may affect the Internet access service.

Mobile operators:

- In general, apply data caps.
- May block p2p traffic and VoIP traffic.
- In general, do not throttle or block instant messaging traffic or other kind of traffic.
- In general, do not throttle or block specific providers.

- In general, do not give preferential treatment to OTT traffic.
- In general, do not offer specialized services that may affect the Internet access service.

4.5.1.7 Information about how ISPs typically present information to consumers in advertising, own websites

ISPs in Greece present information about network neutrality policies to consumers on their websites and according to the standard commercial practice. The following websites of five major providers of broadband services give an overview of such practices in Greece:

OTE: <https://www.ote.gr/web/guest/consumer/products-services/internet>

Alternative operators:

CYTA (Internet): <http://www.cyta.gr/el/ForHome/1Play>

CYTA (2-play): <http://www.cyta.gr/el/ForHome/2Play>

CYTA (3-play): <http://www.cyta.gr/el/ForHome/3Play>

Forthnet (2-play): http://www.forthnet.gr/ServicesBasketForm.aspx?a_id=7296

Forthnet (Internet): http://www.forthnet.gr/ServicesDefault.aspx?a_id=6694

HOL: <https://www.hol.gr/services/home/hol-double-play>

HOL: <https://www.hol.gr/hol-privileges>

Wind: <http://www.wind.gr/en/for-individual/fixed-ampinternet/wind-broadband/wind-broadband-unlimited/>

4.5.2 Greece: Internet consumer behaviour

This part explains consumer behaviour in Greece with regard to Internet access and network neutrality in particular. The information is presented against the background of other countries.

4.5.2.1 Switching behaviour and choice criteria for Internet access services and actual / perceived breadth of potential choices

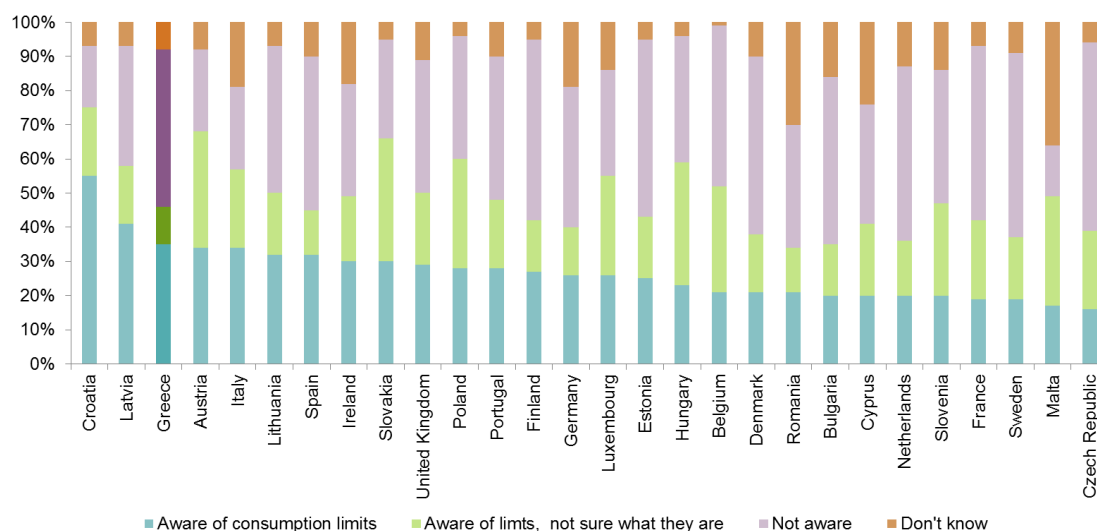
The aim of the study is to look at the value of network neutrality for consumers. The following sections provide available data on network neutrality incidents, as well as consumer behaviour in terms of switching ISPs.

4.5.2.1.1 Network neutrality incidents

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the awareness of data consumption limits of Internet connections for 2014. As shown in Figure 4-61, awareness of data consumption limits ranges from 55% in Croatia to 16% in the Czech Republic, with an average of 27% across BEREC member and observer countries (for which data is available). Greece is above the average here with 35%.

Moreover, 11% of Greek respondents are aware of limits of Internet connections, but they are not sure what they are, which is below the average of 22%. 46% of the surveyed population in Greece seem to be 'not aware' of the data consumption limits, whereas the average for the analysed countries is 40%. 8% of the Greek respondents replied 'I don't know'.

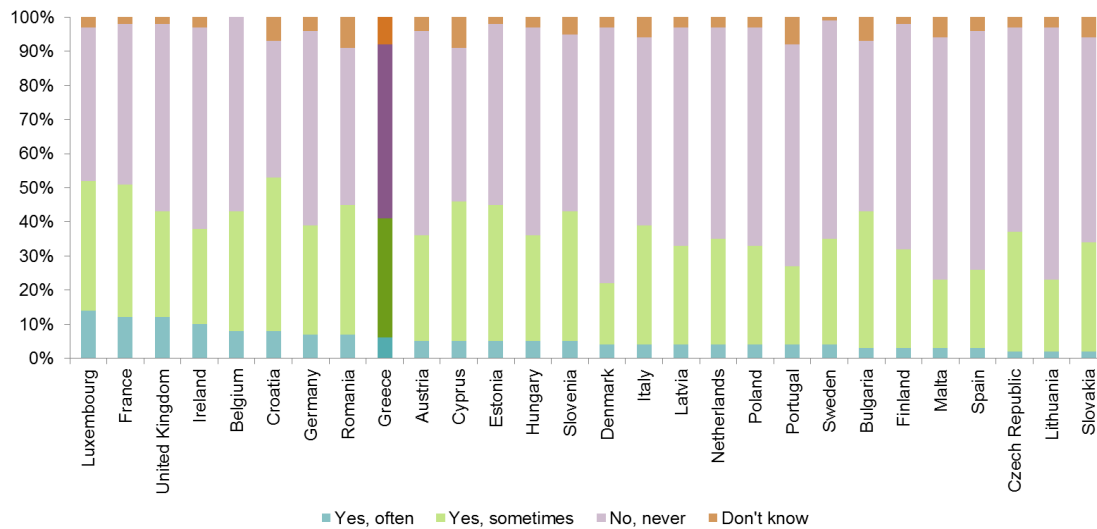
Figure 4-61: Awareness of data consumption limits of Internet connections in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the difficulty of accessing online content and applications due to insufficient speed or downloading capacity for 2014. As shown in the Figure 4-62, respondents 'often' having difficulties' ranges from 14% in Luxembourg to 2% in Lithuania, with an average of 5,5% across BEREC member and observer countries (for which data is available). As for Greece, 6% of respondents admitted having such difficulties 'often'. On the other hand, 35% of the Greek respondents confirm that they 'sometimes' experience difficulties due to insufficient Internet speed, which is above the average of 32%. 51% of the surveyed population in this country claim to 'never' experience such difficulties, whereas the average is 60%. 8% of the Greek respondents replied 'I don't know'.

Figure 4-62: Difficulties experienced due to insufficient speed in 2014

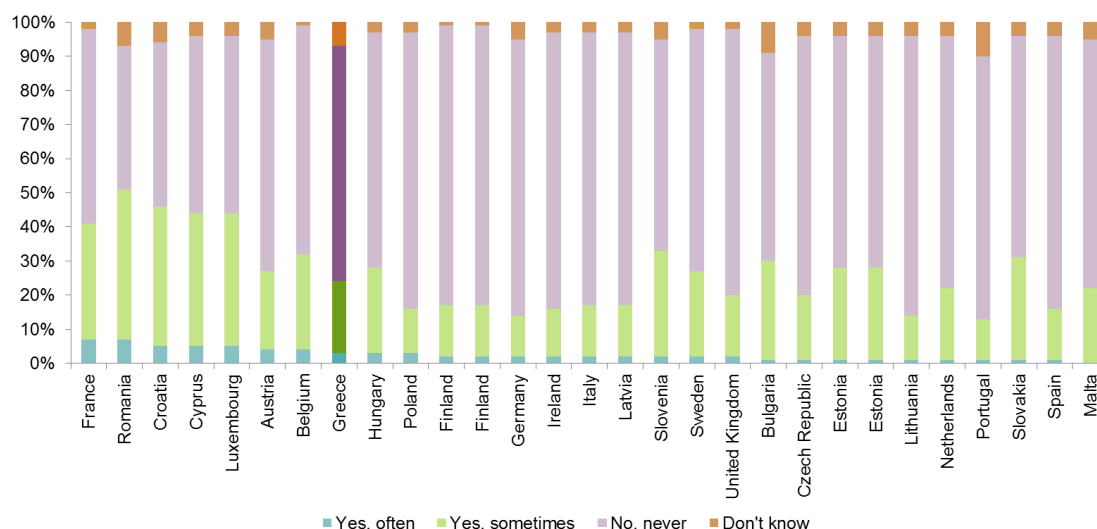


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the number of cases in which users experienced any kind of blocking of online content or applications for 2014. As shown in Figure 4-63, regular blocks ('Yes, often') range from 7% in Romania to 0% in Malta, with an average of 2,6% across BEREC member and observer countries (for which data is available), whereas occasional blocking ("Yes, sometimes") is reported more frequently (23.7% on average).

As for Greece, 3% of the respondents 'often' experience blocking of online content or applications, whereas for 21% it happens 'sometimes'. 69% of the surveyed Greeks 'never' cope with such blockings, which is at the average of the analysed countries. 7% of the Greek respondents replied 'I don't know'.

Figure 4-63: Blocking of online content or applications in 2014

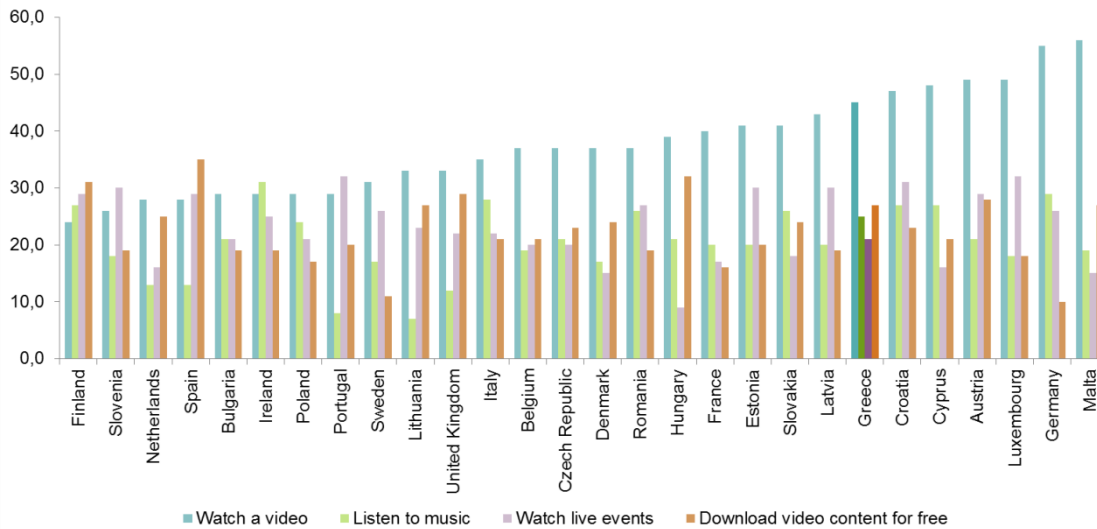


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey also provides data on the types of content and applications for which users experienced Internet blocking for 2014. As shown in Figure 4-64, on average 38% of users experienced online blocking when watching a video, with data ranging from 56% in Malta to 24% in Finland, whereas the average of 23% experienced blocking while watching live events, with data ranging from 32% in Luxembourg to 9% in Hungary (across BEREC member and observer countries for which data is available).

In Greece, 27% of respondents experienced online blocking when watching a video and 25% while watching live events. 45% of the surveyed Greeks claim to have experienced such blocking while listening to music, which is much above the average of 20%. 21% of the respondents in this country coped with online blocking when downloading video content for free; the average is 22%.

Figure 4-64: Experience of Internet blocking in 2014



Source: Eurobarometer

4.5.2.1.2 Switching behaviour

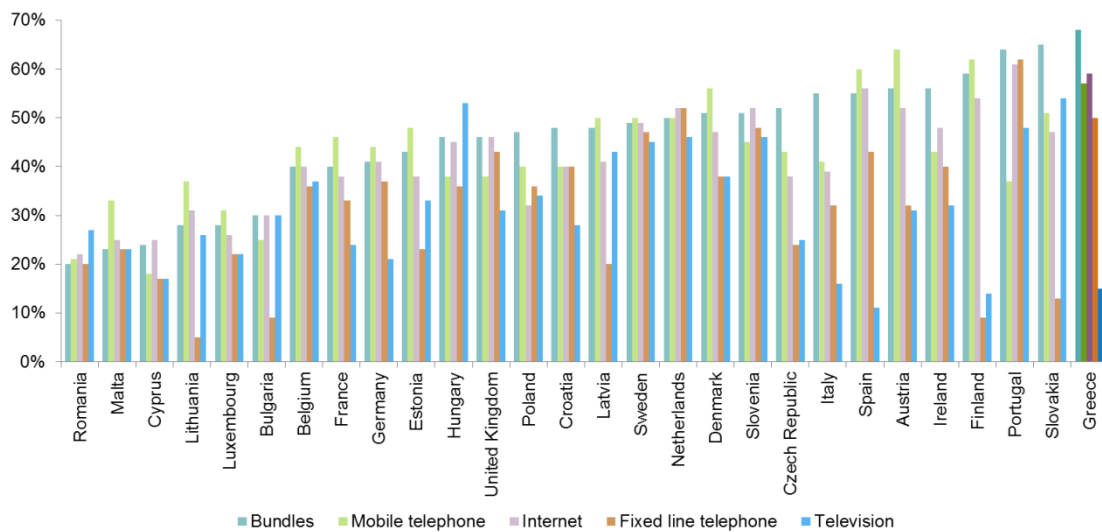
The eCommunications and telecoms single market Eurobarometer provides data on the percentage of households that switched their Internet service provider at least once up to the time of the survey. Eurobarometer data covers the EU28 (see Figure 4-65).

Figures for Greece are as follows:

- **Bundles** range from 20% to 68%; the average is 45%. Greece is quite above the average with 68%.
- **Mobile telephone** ranges from 18% to 64%; the average is 44%. Greece is above the average with 57%.
- **Internet**¹⁰¹ ranges from 22% to 61%, whereas the average amounts to 43%. In Greece it is 59%.
- **Fixed line telephone** ranges from 5% to 62%; the average is 37%. In Greece 50% of households switched their provider for this service.
- **Television** ranges from 11% to 54%, whereas the average amounts to 26%. In Greece 15% of households did such a switch.

¹⁰¹ FYROM (not covered in the Eurobarometer data set) reported a value of 2.2% for this indicator.

Figure 4-65: Percentage of households that switched their Internet service provider

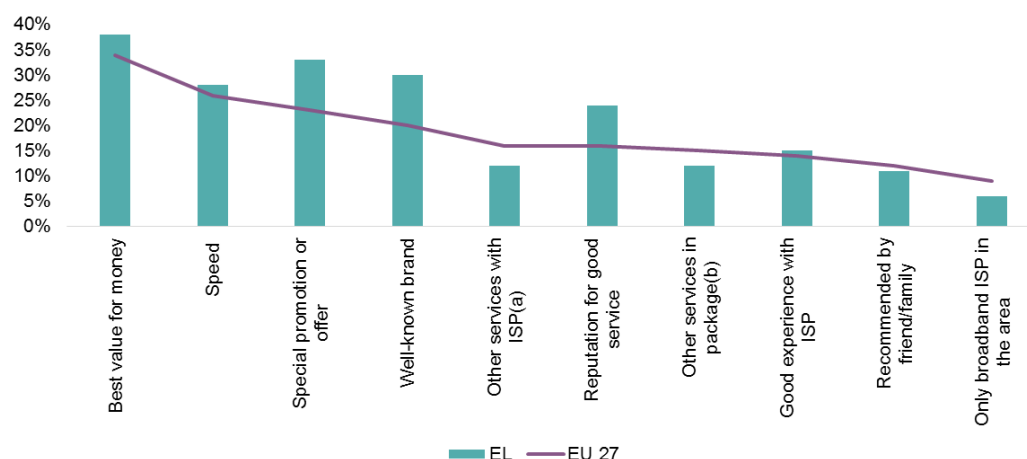


Source: 2014 eCommunications and telecoms single market Eurobarometer

The “Consumer market study on the functioning of the market for Internet access and provision from a consumer perspective” (2012)¹⁰² investigated problems that consumers are experiencing in their arrangements with ISPs, in particular in relation to switching provider.

The main reason for switching provider in Greece was the best value for money, followed by ‘special promotion or offer’ and ‘well-known brand’. Also for the EU 27 the most common reason was the ‘best value for money’.

Figure 4-66: Main reason for choosing current Internet provider in 2012



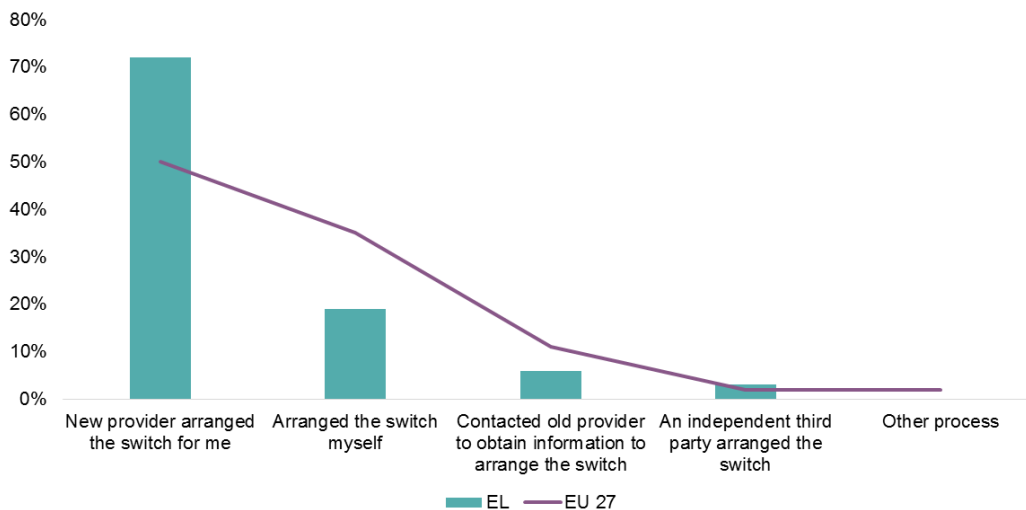
Source: CHAFAEA

¹⁰² See:

http://ec.europa.eu/consumers/archive/consumer_research/market_studies/docs/internet-service-study-full_en.pdf.

Concerning the arrangements for switching provider it is clear that generally the new provider arranged the switch (which was also the most common arrangement in the EU 27) as opposed to the consumer arranging the switch themselves. The national regulator noted possible barriers to switching in relation to equipment granted as part of the contract.

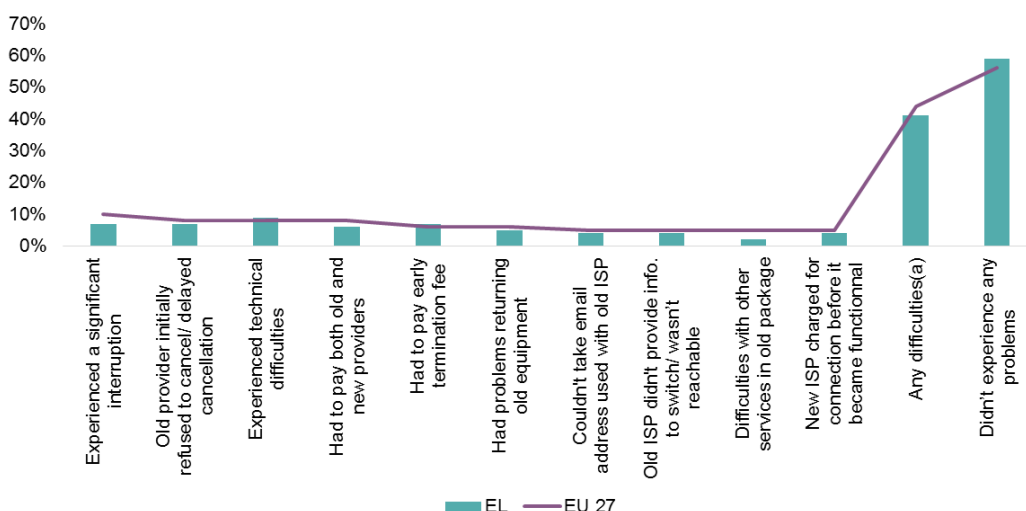
Figure 4-67: Arrangements for switching provider in 2012



Source: CHAFAA

About 40% of consumers experienced problems when switching mainly in relation to technical difficulties (9%), significant interruptions (7%) and refusal to cancel or delayed cancellations by the old provider (7%). Overall 59% of consumers didn't experience any problems (above the EU 27 average (56%)).

Figure 4-68: Problems experienced when switching in 2012



Source: CHAFAA

The average time without Internet as a result of switching provider was 4.4 days (below the EU 27 average of 4.7 days), while only 13% of consumers experienced no interruption (below the EU 27 average of 24%).

The majority of consumers (79%) was satisfied with the switching provider (around EU 27 average (80%)). The remainder of consumers that were not satisfied reported mostly that the 'new provider not as good as thought' (10%) or 'even better deals are available' (5%). The average reported monthly savings were € 15.90 (above EU 27 average (€ 14.70)).

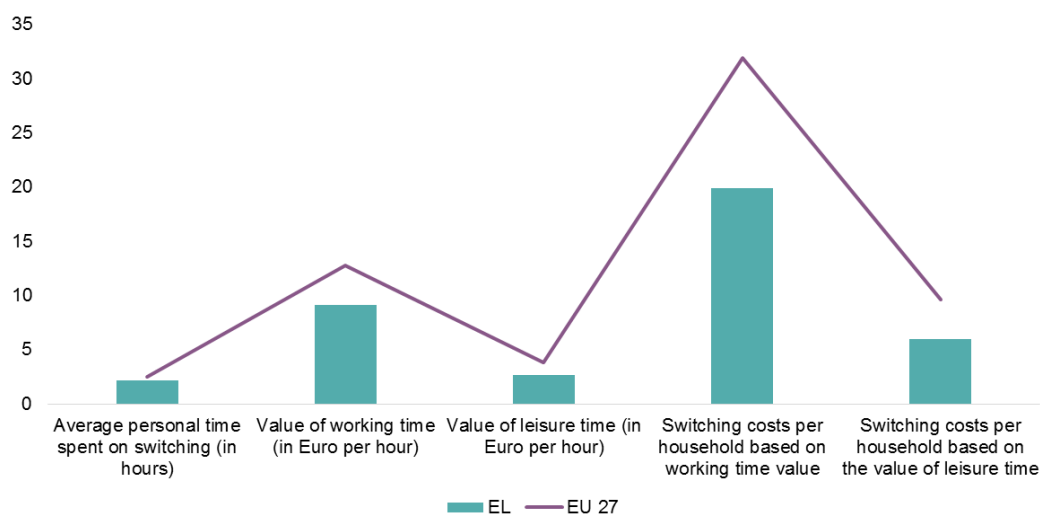
Figure 4-69: Satisfaction with switching provider in 2012



Source: CHAFAEA

The average time spent by the consumer on switching was 2.2 hours (below the EU 27 average of 2.5 hours), while the associated costs expressed in value of working time or leisure time was well below the EU 27 average.

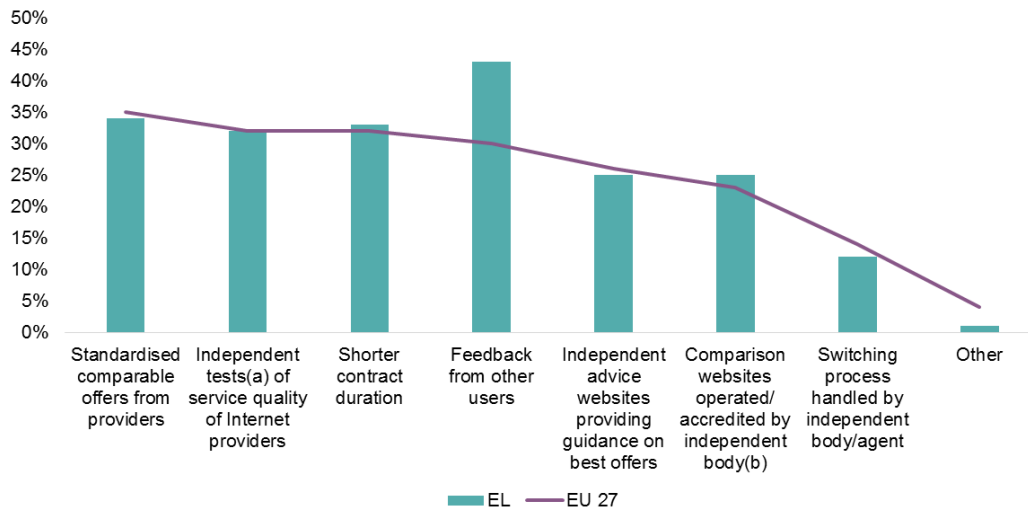
Figure 4-70: Switching costs in 2012



Source: CHAFAEA

The most important factors that facilitate the consumer in switching provider were feedback from other users (43%, above EU 27 average (30%)), standardised comparable offers from providers (34%, below EU 27 average (35%)) and shorter contract duration (33%, above EU 27 average (32%)).

Figure 4-71: Facilitators to switching in 2012



Source: CHAFAEA

4.5.2.2 Consumers' preferences and willingness to pay for Internet access services

This chapter presents an overview of the situation in Greece, as far as consumer's preferences and willingness to pay for Internet Access Services (IAS) are concerned.

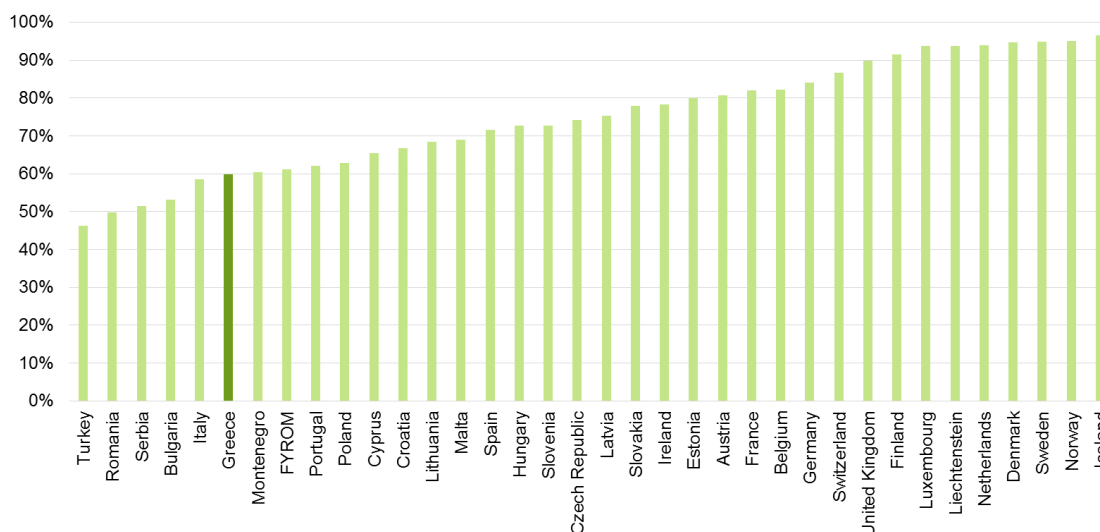
4.5.2.3 Typical patterns of Internet usage

The analysis of typical patterns of Internet usage in Greece concentrates on such aspects as: frequency of the usage, its location, purposes of the use and digital skills.

4.5.2.3.1 Internet use and its frequency

ITU provides data on the percentage of individuals using the Internet, whereas Eurostat provides data on the number of individuals who are frequent users (every day or almost every day) for 2013. As shown in Figure 4-72, the percentage of individuals using the Internet ranges from 96,5% in Iceland to 46,3% in Turkey, with an average of 74,9% across BEREC member and observer countries (for which data is available). Greece is a bit below the average with 60%.

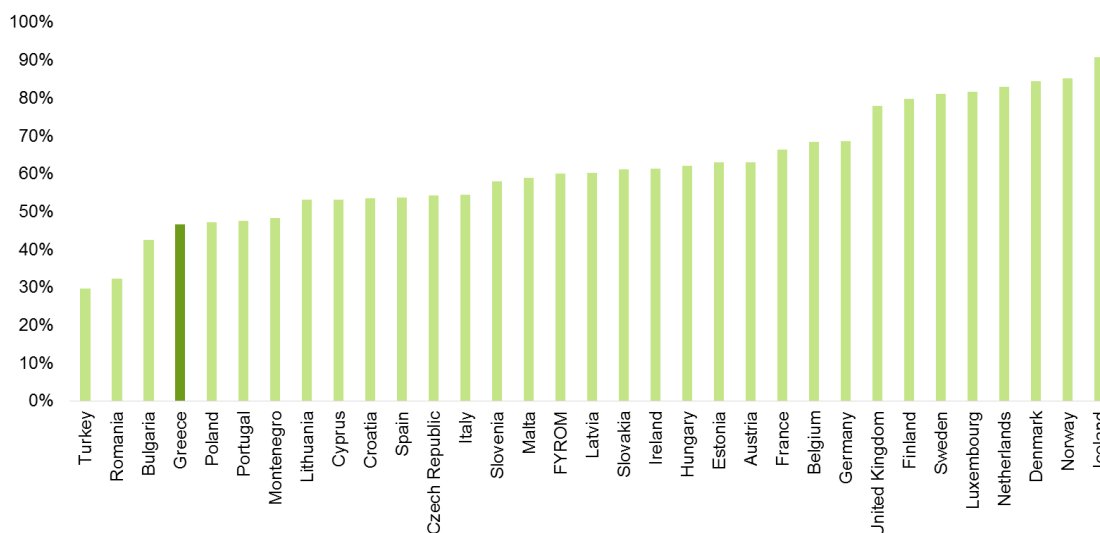
Figure 4-72: Internet use in 2013



Source: ITU - ICT Eye, Eurostat

According to the ICT Households survey (Figure 4-73), the percentage of individuals who are frequent Internet users ranges from 91% in Iceland to 30% in Turkey¹⁰³. In Greece 47% belongs to frequent Internet users, which is below the average of 61% of the surveyed BEREC member and observer countries (for which data is available).

Figure 4-73: Individuals who are frequent Internet users (every day or almost every day), 2013



Source: EUROSTAT, ICT Households survey

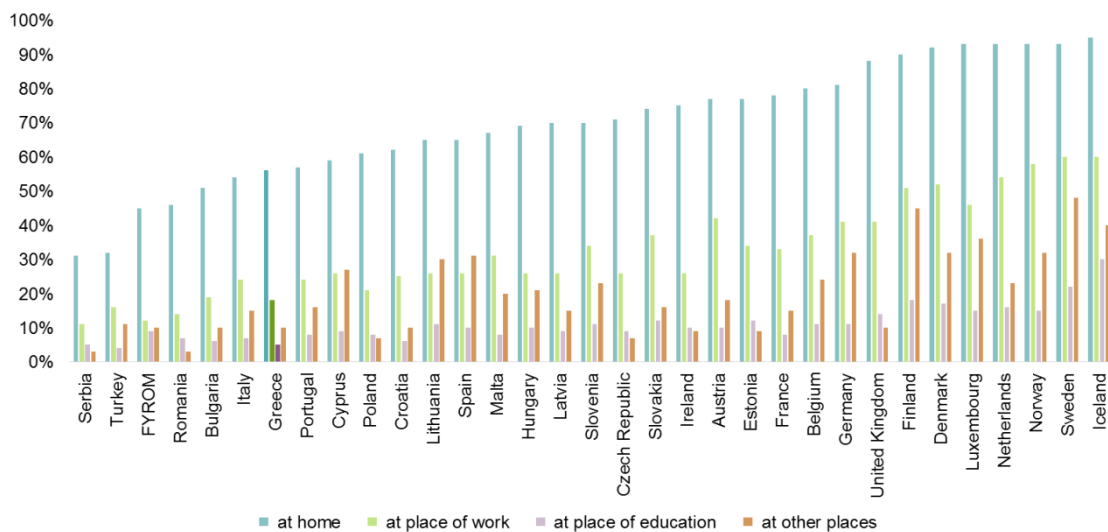
¹⁰³ Note that Eurostat also provides a value for Serbia that is included in this dataset, however this value is for latest available year (2009).

4.5.2.3.2 Location and purpose of using Internet

EUROSTAT provides information on individuals using the Internet, by place of use in 2013 (% of individuals aged 16 to 74). As presented in the Figure 4-74, data on using the Internet:

- **At home** ranges from 31% to 95%; the average is 70% across BEREC member and observer countries (for which data is available). In Greece 56% of individuals use the Internet at home, which is below the average.
- **At place of work** ranges from 11% to 60%; the average is 33%. In Greece 18% of individuals use the Internet at work, which is also below the average.
- **At place of education** ranges from 4% to 30%, whereas the average is 11%. 5% of the Greek individuals use Internet at this place.
- **At other places** ranges from 3% to 48%, whereas the average is 20%. 10% of Greek individuals use Internet at other places.

Figure 4-74: Individuals using the Internet, by place of use (% of individuals aged 16 to 74), 2013



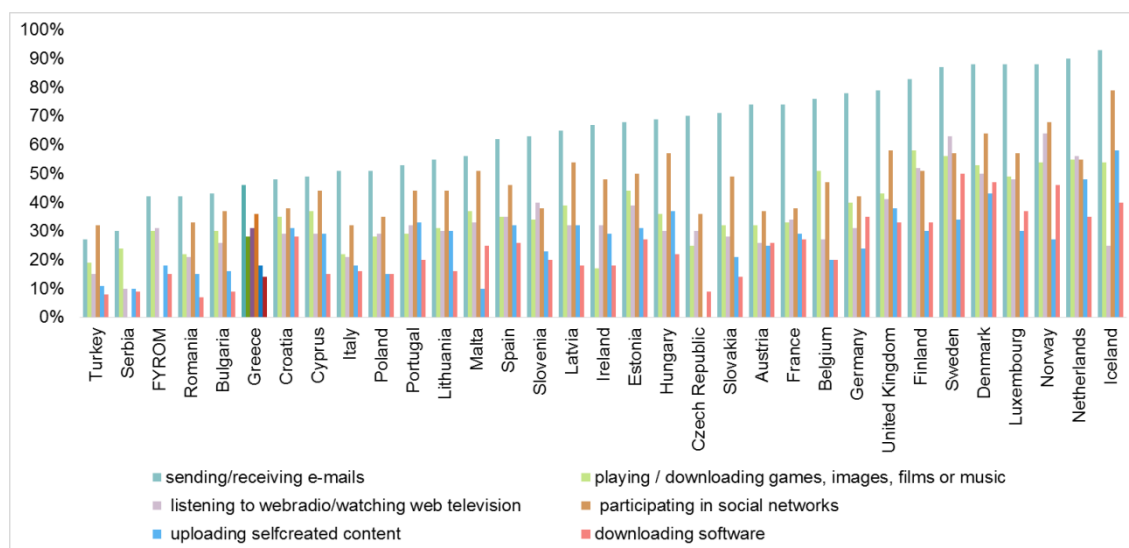
Source: EUROSTAT

EUROSTAT in its' ICT Household Survey also provides data on the type of Internet use for 2012 and 2013. Figure 4-75 reveals that the average number of individuals using the Internet for:

- sending/receiving e-mails is 64%, whereas in Greece it is 46%.
- playing or downloading games, images, films or music is 37% whereas in Greece it is 28%.
- listening to web radio/watching web television is 33%, whereas in Greece it is 31%.

- participating in social networks is 47%, whereas in Greece it is 36%.
- uploading self-created content is 26%. In Greece it is 18%.
- downloading software is 24%, whereas in Greece it is 14%.

Figure 4-75: Internet use: sending/receiving e-mails in 2013, playing or downloading games, images, films or music in 2012, listening to web radio/watching web television in 2012, participating in social networks in 2013, uploading self-created content in 2012, downloading software in 2013



Source: EUROSTAT

In addition to the information presented above, a recent study “New Technologies in Citizens Lives 2014”¹⁰⁴ conducted by the Greek government agency “Information Society S.A.” and published in June 2014 provides the following insight into the Internet usage in Greece:

- 91.5% of Internet users access the Internet through a PC and only 18.7% through a mobile device (mobile phone, PDA, etc.).
- Main reasons of Internet usage include finding information on goods and services (76.7%), sending e-mails (74.6%), accessing electronic journals and newspapers (70.5%), downloading games, movies, pictures, music, etc. (63.9%), uploading content to social media profiles (51.4%), chatting (49.7%) and (video-) telephony over the Internet (48.5%).
- The less popular activities on the Internet are: taking on-line courses (29.4%), online gaming (28.4%), e-banking (21.7%), and teleworking (3.5%).

¹⁰⁴ New Technologies in Citizens Lives 2014, Information Society S.A., http://www.ktpae.gr/index.php?option=com_content&view=article&id=1565:-q-q&catid=6:latest-news&Itemid=18.

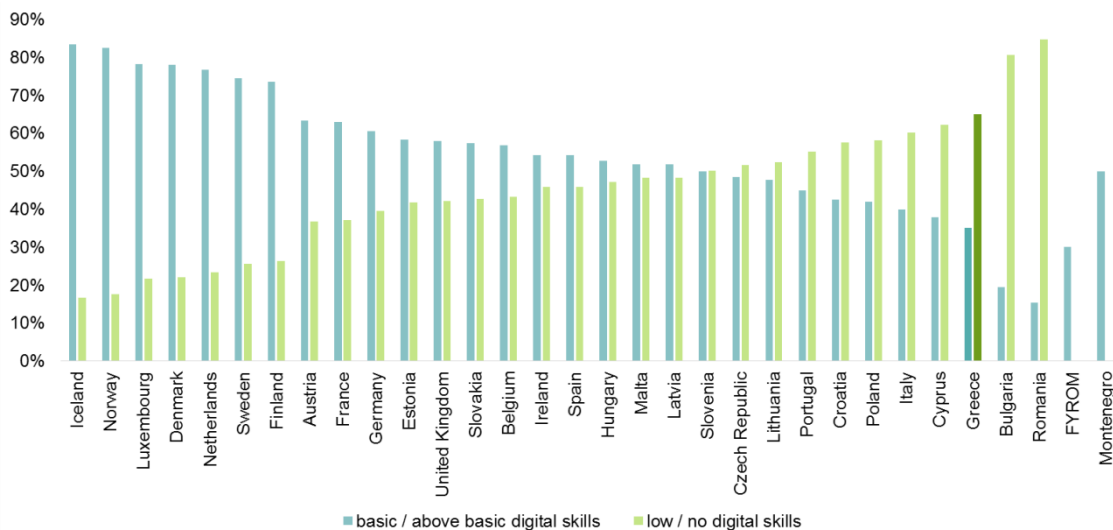
- The use of smart phones and portable PCs in the campus is very common among higher education students (95.7% and 78.7% respectively).
- Approximately 53% of Internet users have ordered goods or services for private purposes over the Internet. The majority (76.1%) opts for such approach for economic reasons.

4.5.2.4 Digital skills

The DAE Scoreboard provides data on digital skills. As shown in Figure 4-76, the percentage of people with basic digital skills ranges from 83% in Iceland to 15% in Romania, with an average of 54% across BEREC member and observer countries (for which data is available). Furthermore, in 19 countries, the percentage of people with basic or above digital skills is above 50%.

Greece is quite below the average with the number of individuals with basic or above basic digital skills at 35%. 65% of people in this country have low or no digital skills, which is more than the average of 45%.

Figure 4-76: Individuals with basic or above basic digital skills, 2012



Source: DAE Scoreboard

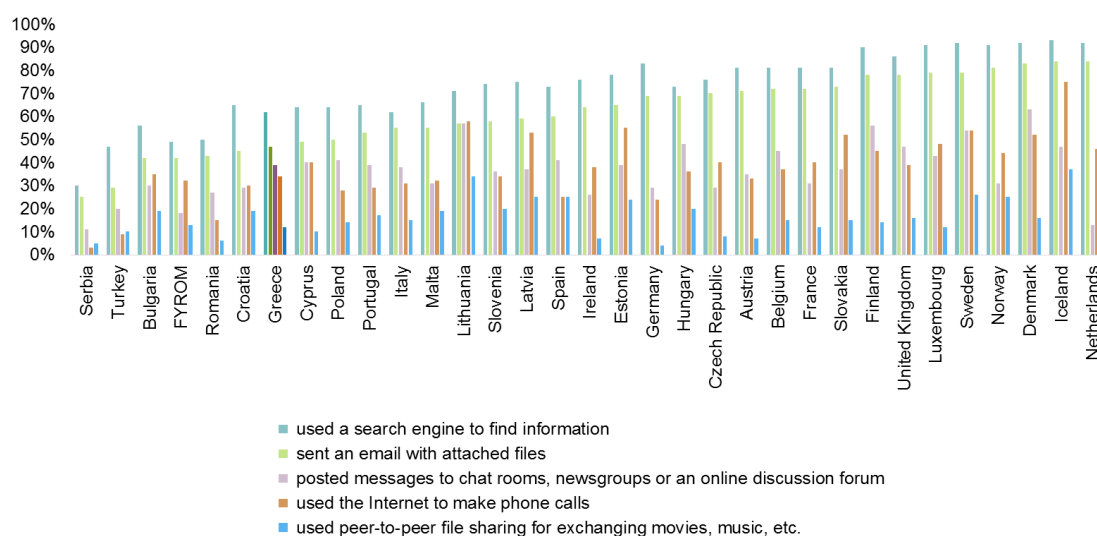
Level of digital skills can be also described through the use of the Internet by individuals for particular tasks.

According to EUROSTAT, and as shown in Figure 4-77, the average number of individuals who have:

- Used a search engine to find information is 73%, whereas in Greece it is 62%.
- Sent an email with attached files is 62%, whereas in Greece it is 47%.

- Posted messages to chat rooms, newsgroups or an online discussion forum is 37%, whereas in Greece it is 39%.
- Used the Internet to make phone calls is 37%, whereas in Greece it is 34%.
- Used peer-to-peer file sharing for exchanging movies, music, etc. is 17%, whereas in Greece it is 12%.

Figure 4-77: Individuals' level of Internet skills - Individuals who have used Internet to perform different activities, 2013



Source: EUROSTAT

4.5.2.5 Additional insights

In Greece, there were 3.8 million Facebook users in 2012 (Socialbakers 2012). The pages with the highest number of fans on the Greek Facebook are Texas Holdem Poker, ΠΛΑΙΣΙΟ – PLAISIO (a shopping site) and Lacta (a chocolate firm). Otherwise, there appear to be no obvious trends in the top 10 websites on the Greek Facebook. However, on rank 8, there is a community page that apparently offers some sort of deletion service to Facebook members. This may indicate a higher tendency to privacy amongst the Greek Internet consumers. The three brands with the highest number of Facebook fans are all amongst the top pages: (1) ΠΛΑΙΣΙΟ – PLAISIO (a shopping site), (2) Lacta (a chocolate firm) and (3) Public (a shopping site). There is no apparent other pattern amongst the top ten brands on the Greek Facebook.

Data on e-commerce activity is provided by the European Consumer Conditions Scoreboard¹⁰⁵. Greece has seen a strong growth rate in e-commerce activity compared to most other European countries. From 2008 to 2012, the share of people, who have bought a product or service online has grown from 9 to 20 percent. Compared to the

¹⁰⁵ European Commission (2013): The Consumer Conditions Scoreboard – Consumer at home in a single market. 9th edition July 2013.

average of the EU 27, this is, however, still a relatively small share. For all European countries, the same figure grew from 32 to 45 percent in the same period. It is also interesting to note the Greeks have one of the lowest confidence levels in online shopping across the EU, in particular, when buying products and service from a national retailer online. This may indicate also a lack of trust in other online activities.

As regards video streaming there is no direct consumer data available, however, one may take the offer of audio-visual content on demand as proxy for how mature the local market is and how strong the demand for such services is. In Greece, there are 91 on-demand sources for audio-visual content (officially) available. Within that, there are 17 branded YouTube channels, 19 catch-up TV services and 44 VoD services. Only around half of these offers are targeted primarily at the Greek market¹⁰⁶.

4.6 Country profile of Sweden

4.6.1 Sweden: The electronic communications market environment

4.6.1.1 Specific broadband products with their market shares

Broadband products can be mainly characterised by their availability, speed and technology (e.g. Cable, xDSL, FTTx, etc.). The recent study on 'Broadband Internet access cost (BIAC)'¹⁰⁷ provides country profiles based on a number of indicators that characterise the broadband market. For Sweden this study collected a total of 293 broadband Internet offers. These offers are collected from eight different operators that represent more than 90% of market share, being TeliaSonera (incumbent), AllTele Allmänna Svenska (new entrant), Bahnhof (new entrant), Bredband 2 (new entrant), ComHem (new entrant), Tele2 Sverige (new entrant), Telenor (new entrant), and T3 (new entrant). The following characteristics are provided:

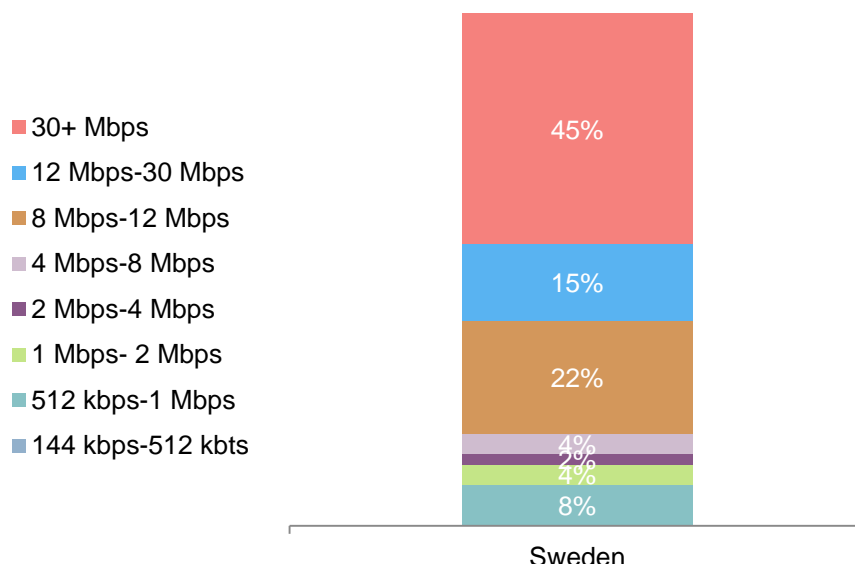
- Most investigated offers (98%) do not require line rental or a cable TV subscription.
- All of these offers (100%) are unmetered, which means that an unlimited volume of data can be downloaded at any time.
- Offers from incumbents accounted for 9% of all the offers, whereas 91% of these were offers from new entrants.
- In terms of types of offers in relation to bundling: 44% were Internet access only, 37% Internet access and fixed telephony, 8% Internet access and TV and 12% Internet access, fixed telephony and TV.

¹⁰⁶ MAVISE database <http://mavise.obs.coe.int/welcome>.

¹⁰⁷ 2013, Broadband internet access cost (BIAC), see: <http://ec.europa.eu/digital-agenda/en/news/study-retail-broadband-access-prices-2013-smart-20100038>.

In terms of speed offers per basket: most offers are in the 30+ Mbps speed range (45%), followed by 8Mbps-12Mbps (22%), 12Mbps – 30Mbps (15%), 512kbps-1Mbps (8%) and 4Mbps – 8 Mbps (4%) and 1Mbps-2Mbps (4%) (covering 98% of offers, see also Figure 4-78;

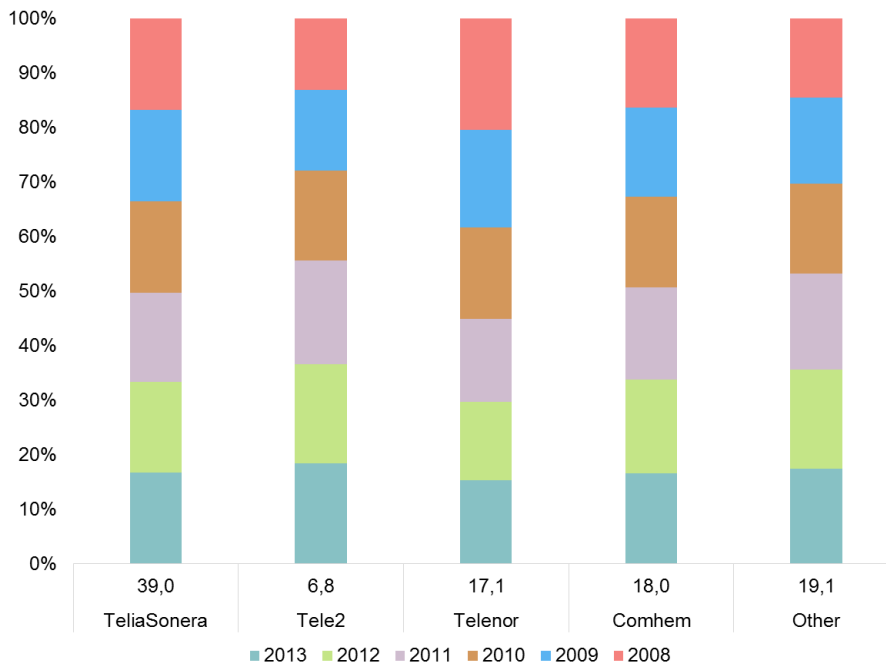
Figure 4-78: Offers per basket (speed) for Sweden



According to the 'The Swedish Telecommunications Market' report from 2013, in terms of the number of subscriptions, the four largest operators, TeliaSonera, Tele2, Telenor and Com Hem, held a combined 80,9% of the total market for fixed broadband by the end of 2013 (see Figure 4-79 below). Com Hem's market share increased from 17,7% to 18%, making Com Hem the second largest operator in the market. TeliaSonera's market share also increased, from 38,5% in 2012, to 39% in 2013, while Tele2 and Telenor's market shares decreased over the same period. The combined market share of the other operators increased and amounted to one fifth of subscriptions by 31 December 2013. Of these companies, Bredband2 was the largest with 3,8% of subscriptions¹⁰⁸.

¹⁰⁸ For more information please see The Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

Figure 4-79: Market shares – fixed broadband subscriptions, 2013



Source: The Swedish Post and Telecom Authority

The following sections provide more information for relevant indicators on:

- Download speed of fixed broadband subscriptions
- Transmission capacity for broadband subscriptions
- Broadband subscriptions per type of technology

4.6.1.2 Download speed of fixed broadband subscriptions

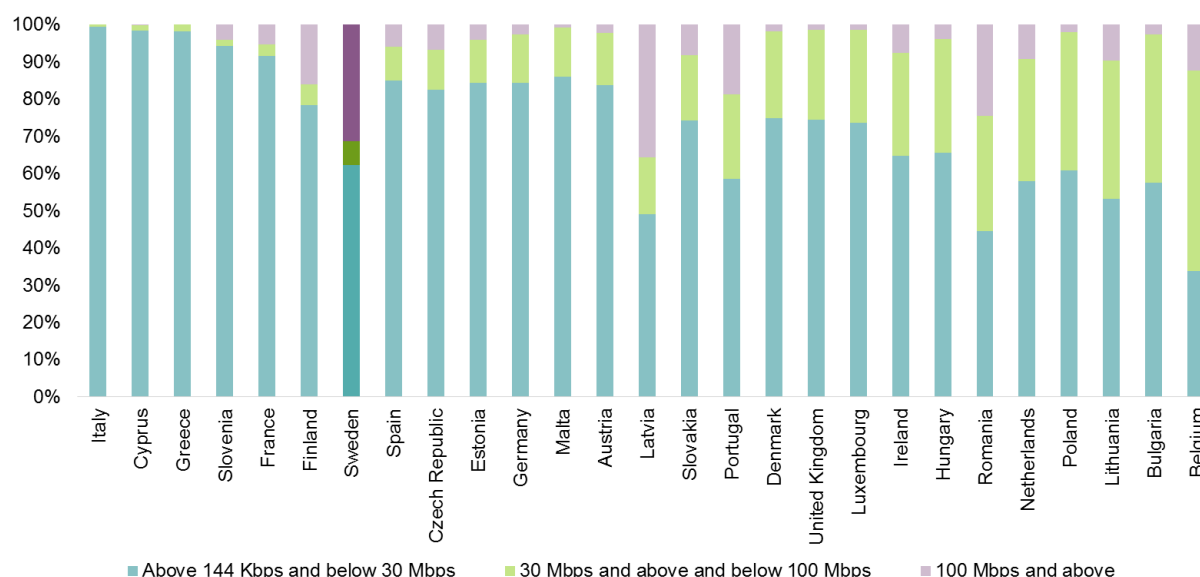
Digital Agenda Scoreboard provides data on fixed broadband subscriptions by speed in 2014.

Sweden is below average (19%) with the share of fixed broadband subscriptions **30Mbps and above and below 100Mbps** amounting to 6,4%.

The country is much above the average as far as fixed broadband subscriptions **100 Mbps and above** are concerned with 31% compared to 8% being the average.

The average for fixed broadband subscriptions **above 144 and below 30Mbps** is 73% and Sweden is below, with the share of 62%.

Figure 4-80: Fixed broadband subscriptions by speed (Digital Agenda categories), 2014



Source: DAE Scoreboard

4.6.1.3 Transmission capacity for broadband subscriptions

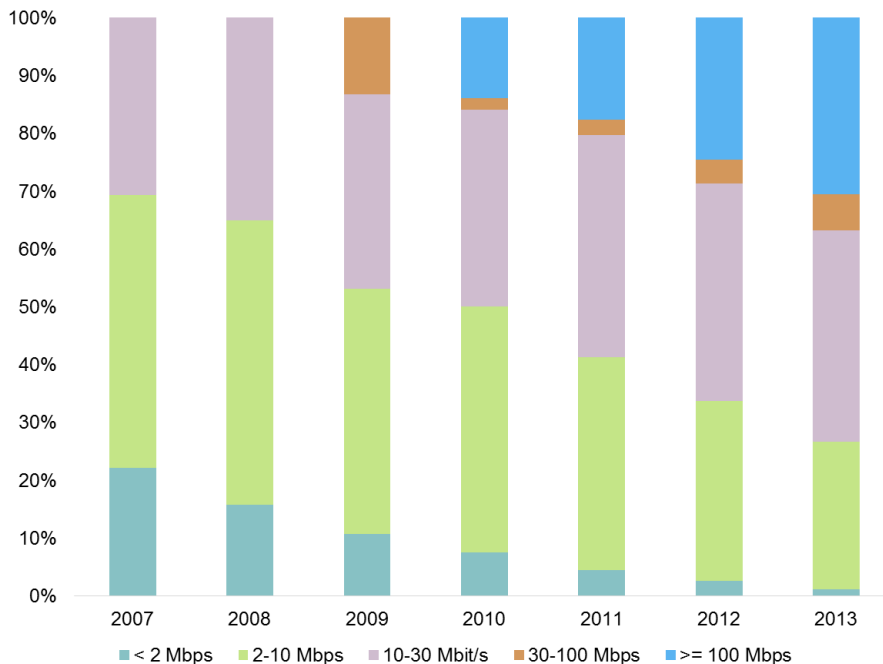
Internet and broadband services are often asymmetrical, i.e. they do not have the same transmission speed for downloaded data (received data) as for uploaded data (sent data). Operators most often offer a higher speed for downloaded data than for uploaded data.

The Swedish Post and Telecom Authority provides recent information on transmission speeds for fixed broadband subscriptions, both upstream and downstream (see Figure 4-81 and Figure 4-82).

The number of subscriptions for fixed broadband with high transmission capacities continued to grow in 2013. At the end of 2013 there were 950,000 subscriptions with a speed of 100 Mbps or more, a year-on-year increase of 26%, or 195,000 subscriptions. Of these, almost 14,000 had a speed of 1 Gbps or more. At the same time, there were 198,000 subscriptions with speeds of 30 to 100 Mbps, which is an increase of 60%. Just over 1,1 million subscriptions had speeds of 10 to 30 Mbps, which is a reduction by 1% from the previous year. Subscriptions with speeds of between 2 and 10 Mbps decreased by 16%. Subscriptions with the lowest speeds, i.e. under 2 Mbps, saw the greatest decrease. There were 34,000 of these subscriptions at the end of 2013, which is less than half the number at the same time in 2012, when there were 81,000 subscriptions¹⁰⁹.

¹⁰⁹ For more information please see The Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

Figure 4-81: Distribution of download speed of data - fixed broadband (number of subscriptions, thousands), 2013

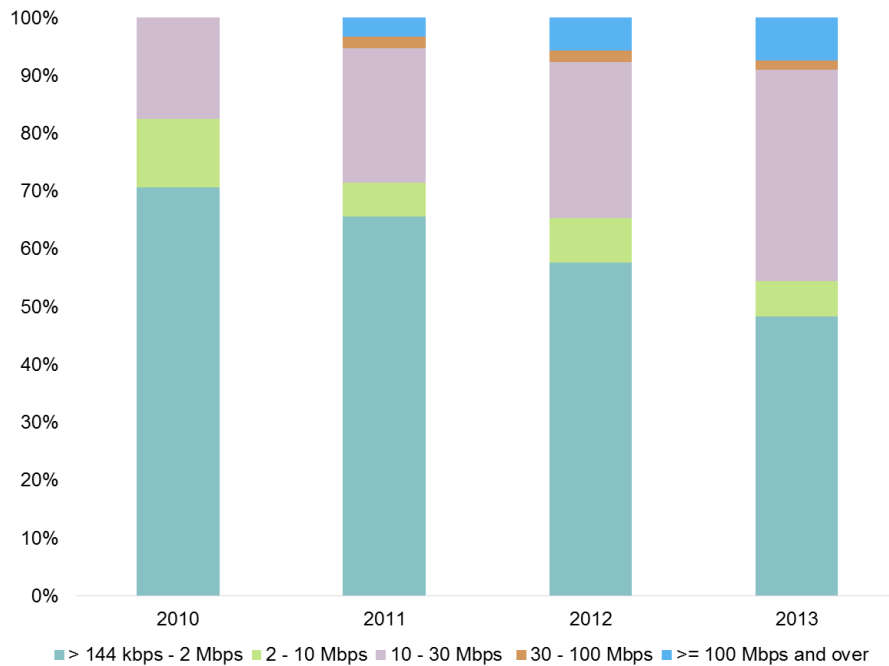


Source: The Swedish Post and Telecom Authority

Subscriptions with a marketed upload speed of between 144 kbps and 2 Mbps made up the largest proportion, 44%, of all fixed broadband subscriptions. There were approximately 1,4 million subscriptions in this speed interval at the end of 2013, which was a decrease of 12% compared to one year previously. The number of fixed broadband subscriptions with upload speeds of between 10 and 30 Mbps increased by 42% to almost 1,1 million, as of 31 December 2013. These subscriptions thereby made up a third of the totality of fixed broadband subscriptions. The number of fixed broadband subscriptions with upload speeds of between 30 and 100 Mbit/s amounted to 46,000, a decrease by 18% compared to the end of 2012. Fixed broadband subscriptions with upload speeds of 100 Mbit/s and above made up just under 7% of the total. It is notable that 30% of the total number of fixed broadband subscriptions had the same speed interval (100 Mbps and above) for downloading¹¹⁰.

¹¹⁰ For more information please see The Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

Figure 4-82: Distribution of upload speed of data - fixed broadband (number of subscriptions, thousands), 2013

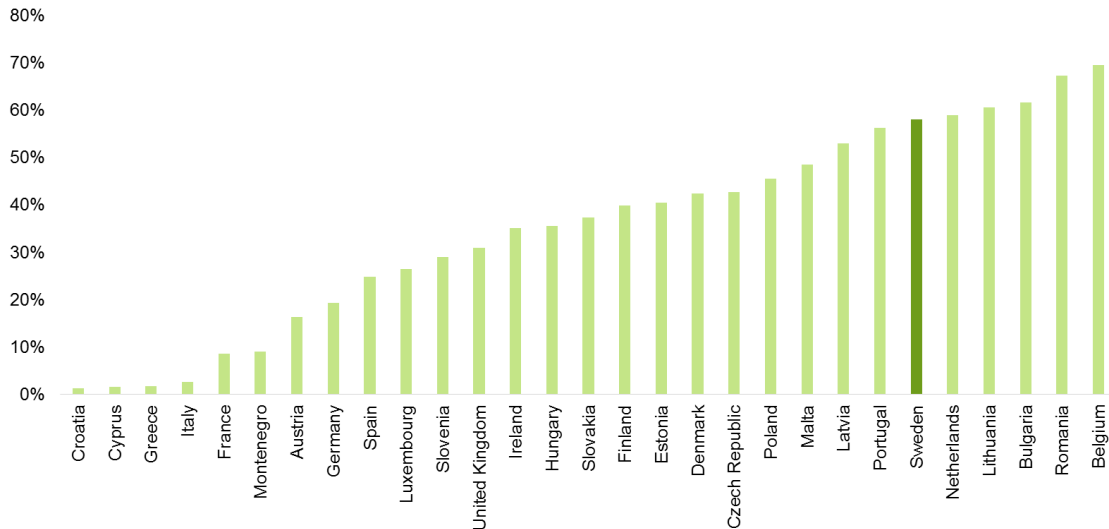


Source: The Swedish Post and Telecom Authority

4.6.1.4 Broadband subscriptions per type of technology

The DAE Scoreboard also provides data on NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions for 2013. As shown in Figure 4-83, NGA share of all broadband connections ranges from 69,5% in Belgium to 1,2% in Croatia. For Sweden the NGA share is 58%. The average NGA broadband coverage as a percentage of total fixed broadband subscriptions is 35,3%.

Figure 4-83: NGA (FTTH, FTTB, VDSL, Cable DOCSIS 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions in 2013

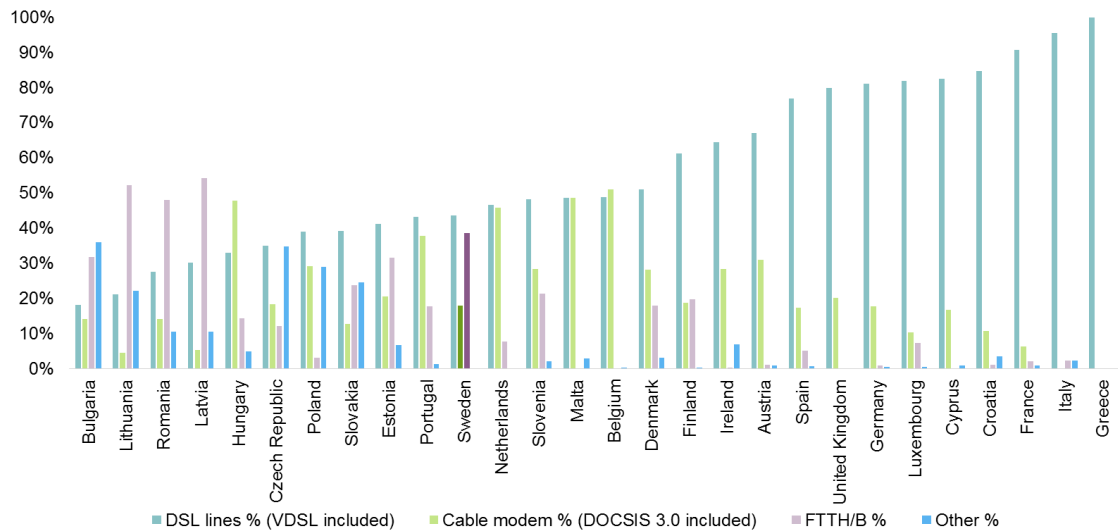


Source: DAE Scoreboard

On the basis of data from the DAE Scoreboard the Figure 4-84 below indicates fixed broadband subscriptions as technology market shares:

- **DSL lines % (VDSL included)** range from 99,79% in Greece to 15% in Bulgaria. In Sweden they are 44%; whereas the average share is 56%.
- **Cable modem % (DOCSIS 3.0 included)** ranges from 51% in Belgium to 0% in Greece and Italy. In Sweden it amounts to 18%, whereas the average share is 21%.
- **FTTH/B %** ranges from 54% in Latvia to 0% Greece and Malta. In Sweden it is 39%, whereas the average share is 14%.
- **Other %** range from 36% in Bulgaria to 0% in the Netherlands and Sweden, while the average share is 7,4%.

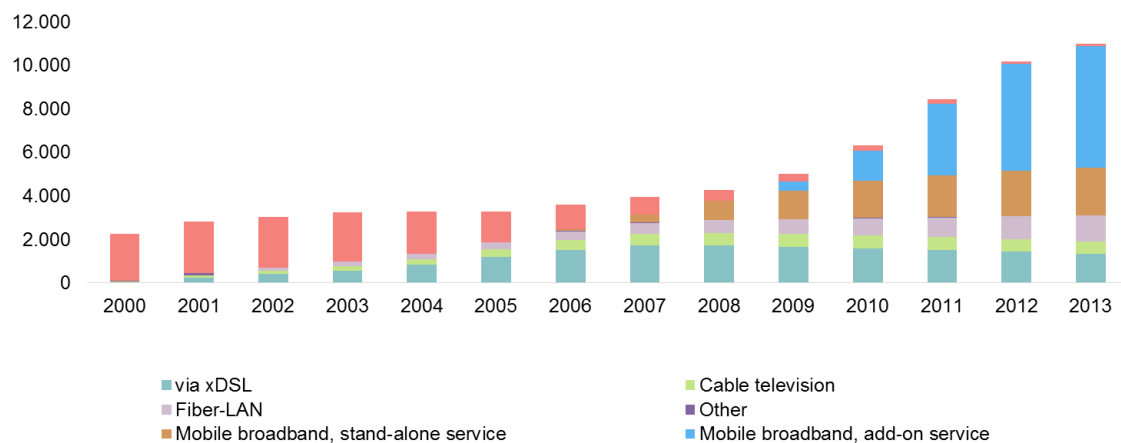
Figure 4-84: Broadband subscriptions per type of technology in 2013



Source: DAE Scoreboard

As indicated by the Swedish Post and Telecom Authority, at the end of 2013, the total number of Internet subscriptions was almost 11 million. This is an increase of 801,000 subscriptions, or 8%, since the end of 2012. Of the almost 11 million Internet service subscriptions in December 2013, just below 10,9 million were subscriptions for broadband. The remainder covered subscriptions for dial-up Internet, which does not fall under the definition of broadband (see Figure 4-85).

Figure 4-85: Number of subscriptions on broadband and Internet services (thousands), 2013



Source: The Swedish Post and Telecom Authority

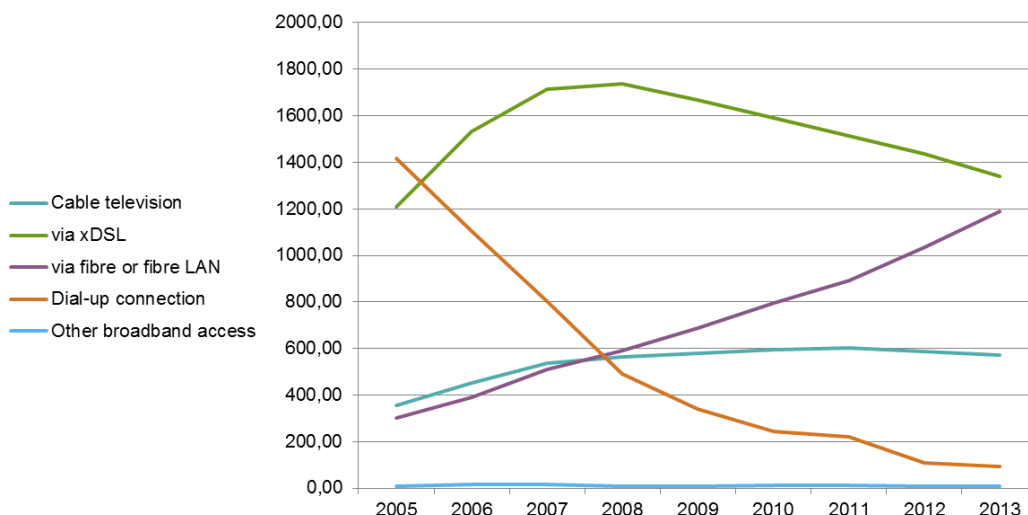
There were just over 3.1 million subscriptions for fixed Internet on 31 December 2013, which was 47,000 more than at the same time the previous year.

As indicated in Figure 4-86, the number of subscriptions for broadband via:

- **Fibre and fibre LAN** increased 15% in 2013 compared to the year before. As in the previous year, they accounted for the entire increase in the number of broadband subscriptions.
- **xDSL** decreased 7% since the end of 2012.
- **Cable television** decreased compared to the previous year.
- **Dial-up Internet** decreased, continuing a trend which has lasted for more than ten years. At the end of 2013, there a decrease of 15% in one year.

Until 2008, xDSL subscriptions accounted for a large portion of the growth in the Swedish market for fixed broadband. However, since the first half of 2008, fibre and fibre LAN have been responsible for the continued growth, as is evident in the figure below.

Figure 4-86: Development of subscriptions on fixed Internet services (thousands), 2013



Source: The Swedish Post and Telecom Authority

4.6.1.5 Specific pricing plans for Internet access, including typical promotional offers, major contract terms and conditions

This section presents monthly prices of Internet access (least expensive offer in EUR/PPP) in Sweden in comparison to other countries.

The DAE Scoreboard provides data on the monthly price of standalone Internet access per speed range in 2014.

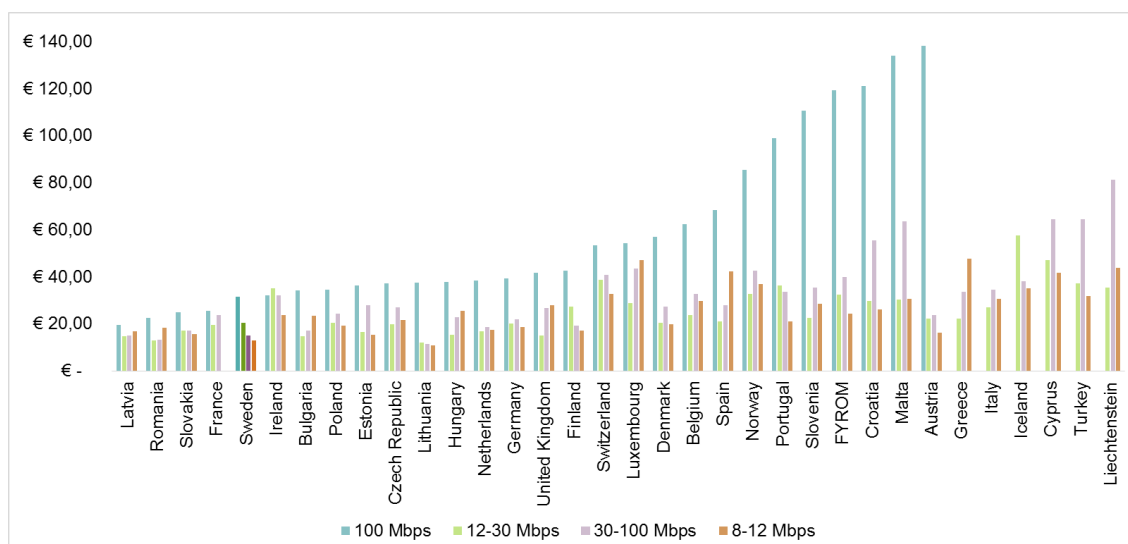
As shown in Figure 4-87, prices for:

- **Internet access 8-12 Mbps** range from €10,90 in Lithuania to €47.71 in Greece (note that this price is based only on one offer (satellite)); the average price

across BEREC member and observer countries (for which data is available) is €26,49. Sweden is again below the average, with the price at €12,97.

- **Internet access 12-30 Mbps** range from €12,01 in Lithuania to €57,86 in Iceland; the average price is €25,51. In Sweden the price is below average at €20,66.
- **Internet access 30-100 Mbps** range from €11,53 in Lithuania to €81,52 in Liechtenstein with the average price of €32,96. Sweden reached the price of €15,27.
- **Internet access 100 Mbps** range from €19,54 in Latvia to €138,45 in Austria, whereas the average price is €58,65 across BEREC member and observer countries (for which data is available). Sweden is below average with the price at €31,57.

Figure 4-87: Monthly price of Internet access per speed in 2014



Source: DAE Scoreboard

4.6.1.6 Information on bundling practices and pricing of such bundles

This section presents bundle penetration and pricing of such bundles in Sweden in comparison to the rest of the countries.

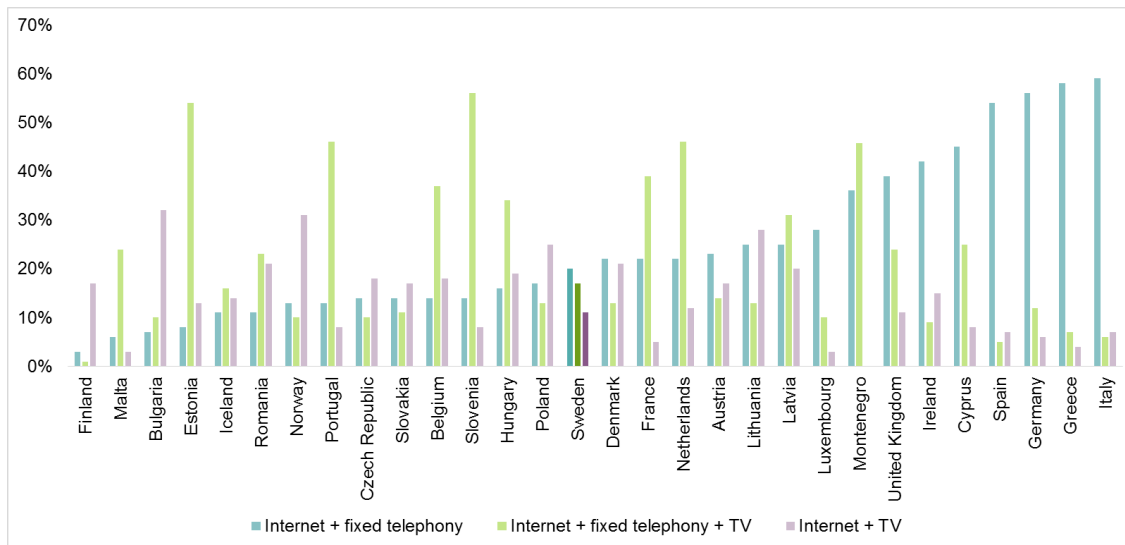
As presented in chapter 1.1 according to BIAC Study, the following types of offers in relation to bundling are available in Sweden: 44% Internet access only, 37% Internet access and fixed telephony, 8% Internet access and TV and 12% Internet access, fixed telephony and TV.

The Consumers, Health and Food Executive Agency (CHAFEA) provides more detailed data on the penetration of types of bundled offers. As shown in Figure 4-88, the data for:

- **Internet and fixed telephony** ranges from 3% in Finland to 59% in Italy, with an average of 24,6%. These types of bundles achieve 20% in Sweden.

- **Internet, fixed telephony and TV** ranges from 1% in Finland to 56% in Slovenia, with an average of 22,1%. These types of bundles amount to 17% in Sweden.
- **Internet and TV** ranges from 3% in Malta to 32% in Bulgaria; whereas the average is 14,4%. Sweden turns out here to be below the average - with 11%.

Figure 4-88: Bundled offer penetration in 2012 (1)

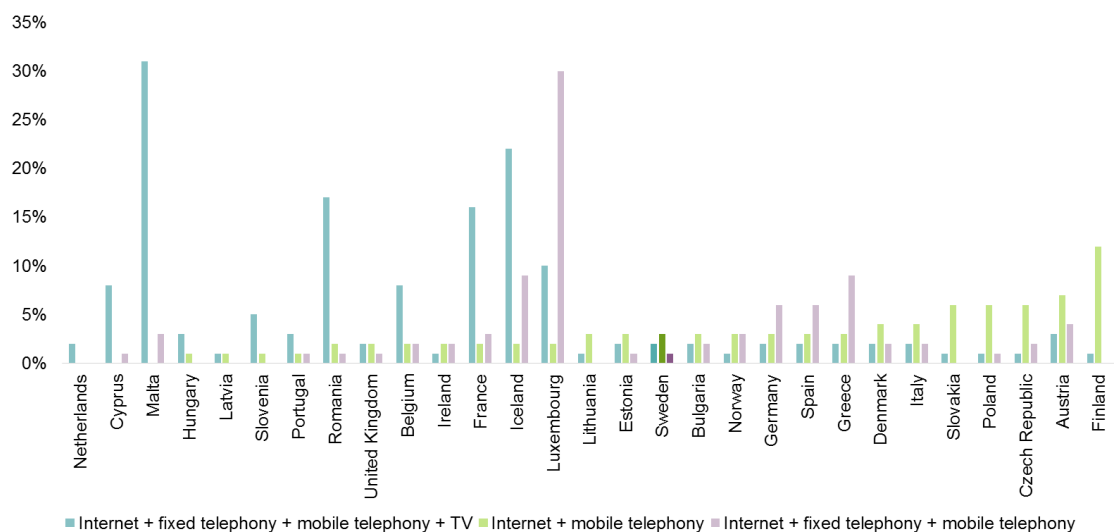


Source: CHAFAEA

Figure 4-89 below, indicates CHAFAEA data for:

- **Internet and fixed telephony and mobile telephony and TV** which ranges from 1% in several countries, such as Finland, Poland, Slovakia, Norway, Lithuania, Ireland and Czech Republic, up to 31% in Malta. The average amounts to 5,3%. In Sweden it is 2%.
- **Internet and mobile telephony** which ranges from 0% in in several countries, such as the Netherlands, Cyprus, Malta up to 12% in Finland. The average is 3%. Sweden is at the same level at the average.
- **Internet and fixed telephony and mobile telephony** which ranges from 0% in several countries (Finland, Slovakia, Latvia, Slovenia, Lithuania, the Netherlands and Hungary) up to 30% in Luxembourg. The average is 3,2%. These types of bundles are below the average in Sweden at 1%.

Figure 4-89: Bundled offer penetration in 2012 (2)

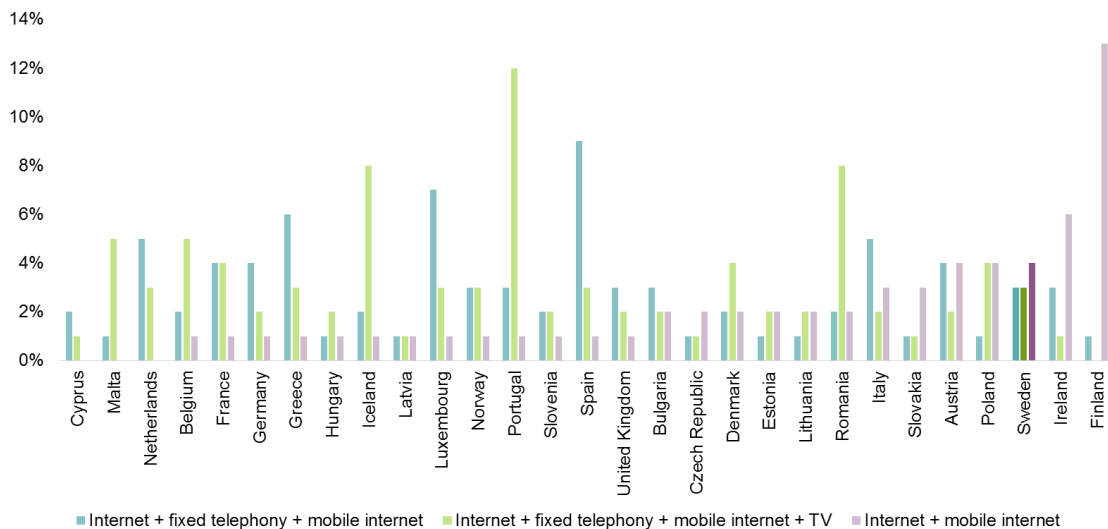


Source: CHAFAEA

Analysis on the penetration of other types of bundled offers is presented in Figure 4-90:

- **Internet and fixed telephony and mobile Internet** ranges from 1% in several countries (Finland, Poland, Slovakia, Lithuania, Latvia, Malta, Hungary and Czech Republic) up to 9% in Spain. The average amounts to 2,9%. In Sweden it is 3%.
- **Internet and fixed telephony and mobile Internet and TV** ranges from 0% in Finland to 12% in Portugal. The average is 3,1%. These types of bundles achieve 3% in Sweden.
- **Internet and mobile Internet** ranges from 0% in Cyprus, Malta and the Netherlands up to 13% in Finland. The average is 2,1%. These types of bundles are above the average in Sweden at 4%.

Figure 4-90: Bundled offer penetration in 2012 (3)



Source: CHAFAE

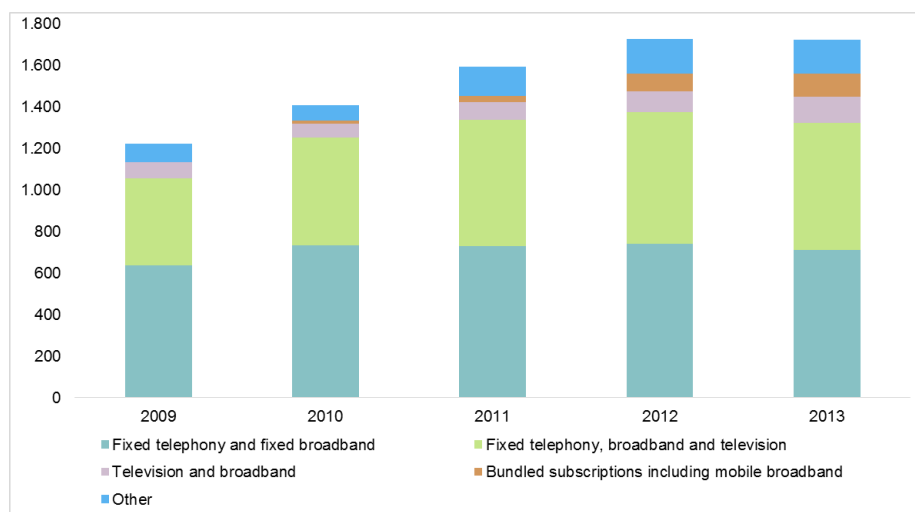
The Swedish Post and Telecom Authority is a provider of another source of information on bundling practices in Sweden (see Figure 4-91 below). At the end of 2013, the number of bundled subscriptions was 1,722,000, which corresponds to approximately the same as the year before. The most common form of bundling was fixed telephony and fixed broadband, which is the same as the previous year, representing 41% of all bundled subscriptions. The second most common bundled subscription, with 37% of all bundled subscriptions, was for fixed telephony, fixed broadband and television. The third most common form of bundling was television and fixed broadband, representing 7% of all bundled subscriptions.

While the two most common forms of bundling decreased, compared to the previous year, television and fixed broadband bundles increased by 21%. Different forms of bundling with mobile broadband increased in 2013.

Fixed broadband was included in 1,487,000 of the bundled subscriptions, corresponding to 47% of all subscriptions for fixed broadband. On the other hand, bundles that included mobile broadband corresponded to only around 2% of all subscriptions for mobile broadband¹¹¹.

¹¹¹ For more information please see The Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

Figure 4-91: Bundled subscriptions (thousands), 2013

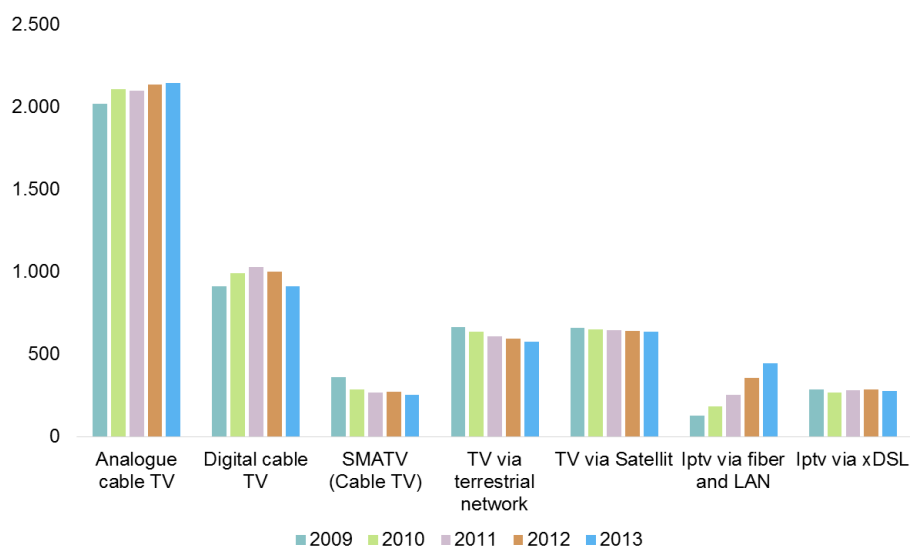


Source: The Swedish Post and Telecom Authority

Figure 4-92 shows the number of subscriptions for television services by distribution method; all subscriptions are included. Only subscriptions via fibre and fibre LAN increase, with all other distribution platforms at the same level as previous year or decreasing.

More than half (54%) of the television subscriptions are distributed via digital technologies, such as the terrestrial network, digital cable television, satellite and IPTV (fibre, fibre LAN or xDSL), and the remainder (46%) via analogue cable television. This distribution has remained relatively constant since 2009.

Figure 4-92: Number of subscriptions on television services, per distribution platform (thousands), 2013



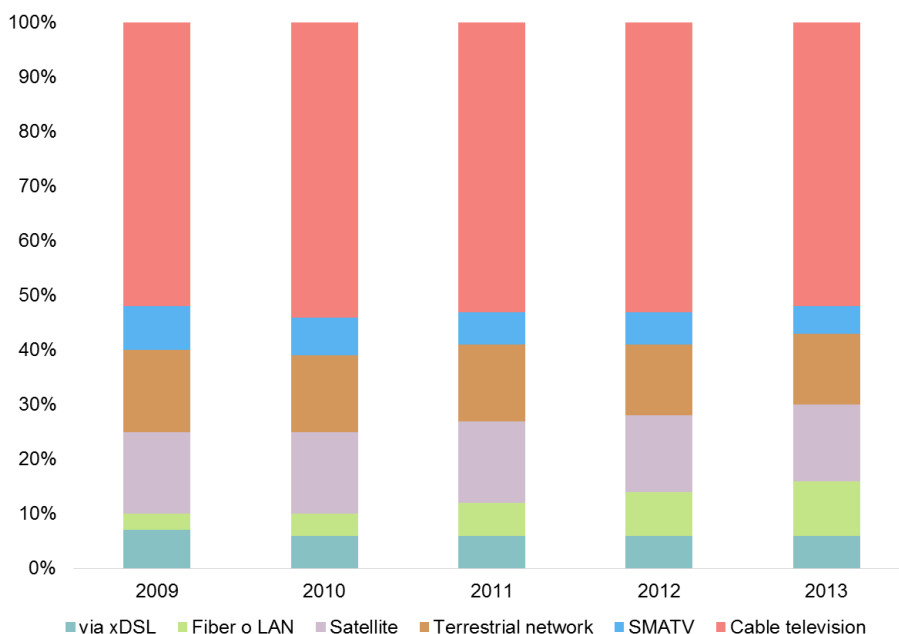
Source: The Swedish Post and Telecom Authority

Figure 4-93 shows the proportion of subscriptions by distribution method, with households with two or more subscriptions for television services only counted once.

Cable television is the most common television distribution method in Sweden. The number of digital cable television subscriptions has now decreased for three periods in a row and digital cable is now the platform that has declined the most both in percentage terms and in the number of subscriptions. The analogue cable television platform is not increasing, as there is hardly any expansion of the cable television network taking place.

The increase in the number of analogue cable television subscriptions is due to SMATV networks being taken over by cable television operators, as this means they are then reported as analogue cable television rather than SMATV¹¹².

Figure 4-93: Subscriptions on television per distribution platform (unique users), 2013



Source: The Swedish Post and Telecom Authority

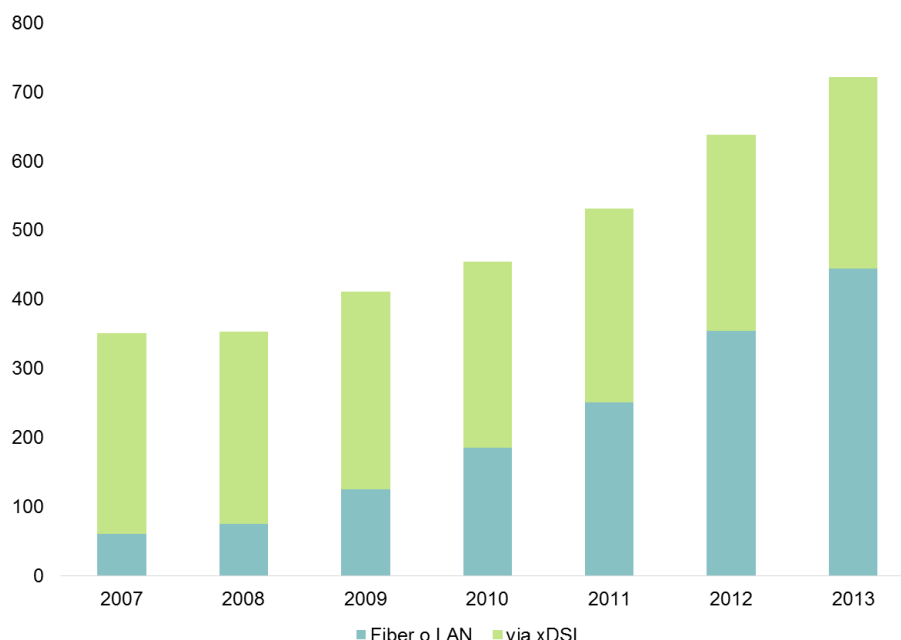
Figure 4-94 provides information on the number of subscriptions for television via broadband, known as IPTV, which continued to increase in 2013, and this was the only platform that saw growth between the end of December 2012 and the end of December 2013.

At the end of 2013 there was an increase of 13% compared with the same time one year before. The increase in the number of subscriptions via IPTV is as a result of a greater number of subscriptions via fibre and fibre LAN. The number of subscriptions for television via fibre at the end of 2013 represents an increase of 26%, compared with

¹¹² For more information please see the Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

one year earlier. The number of subscriptions for television via xDSL decreased by 3%¹¹³.

Figure 4-94: Number of subscriptions for television via broadband - IPTV (thousands), 2013



Source: The Swedish Post and Telecom Authority

The Swedish Post and Telecom Authority also provides data on the number of fixed call services subscriptions (see Figure 4-95). In December 2013 there were 3.9 million fixed telephony subscriptions in Sweden, which can be compared to December 2012, when there were just under 4.2 million. This corresponds to a decrease of 6%. As in previous years, the number of PSTN and ISDN subscriptions declined, while the number of IP subscriptions increased. The increase took place through the access technologies xDSL and fibre LAN. Of all subscriptions for IP telephony, 38% were for xDSL and 29% were for subscriptions via fibre LAN. Subscriptions for IP telephony made up 40% of the fixed telephony subscriptions at the end of 2013. The number of subscriptions via WLR continued to decline in 2013¹¹⁴.

¹¹³ For more information please see the Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

¹¹⁴ For more information please see the Swedish Telecommunications Market 2013 report, The Swedish Post and Telecom Agency, <http://statistik.pts.se/pts2013e/>.

Figure 4-95: Number of subscriptions on fixed telephone services (thousands), 2013



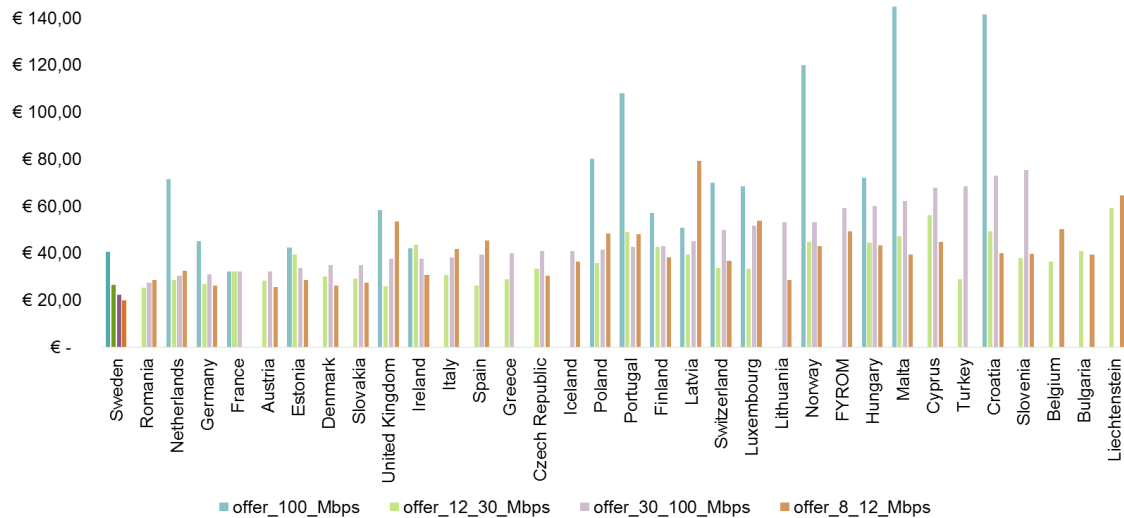
Source: The Swedish Post and Telecom Authority

As far as prices of bundling offers are concerned, the DAE Scoreboard provides data on the monthly price of standalone Internet access, as well as bundles according to different speed (least expensive offer in EUR/PPP).

As shown in Figure 4-96, monthly price of Internet access, together with fixed telephony bundles for:

- **Offer 8-12 Mbps** ranges from €19,95 in Sweden to €79.24 in Latvia; the average price is €39,99.
- **Offer 12-30 Mbps** ranges from €25,32 in Romania to €59.25 in Liechtenstein; the average price is €36,63. In Sweden the price is lower than the average at €26,66.
- **Offer 30-100 Mbps** ranges from €22,25 in Sweden to €75.25 in Slovenia; the average price is €45,19.
- **Offer 100 Mbps** ranges from €32,13 in France to €147,59 in Malta; the average price is €73,44. In Sweden the price is much lower than the average at €40,57.

Figure 4-96: Monthly price of Internet access + fixed telephony bundles in 2014

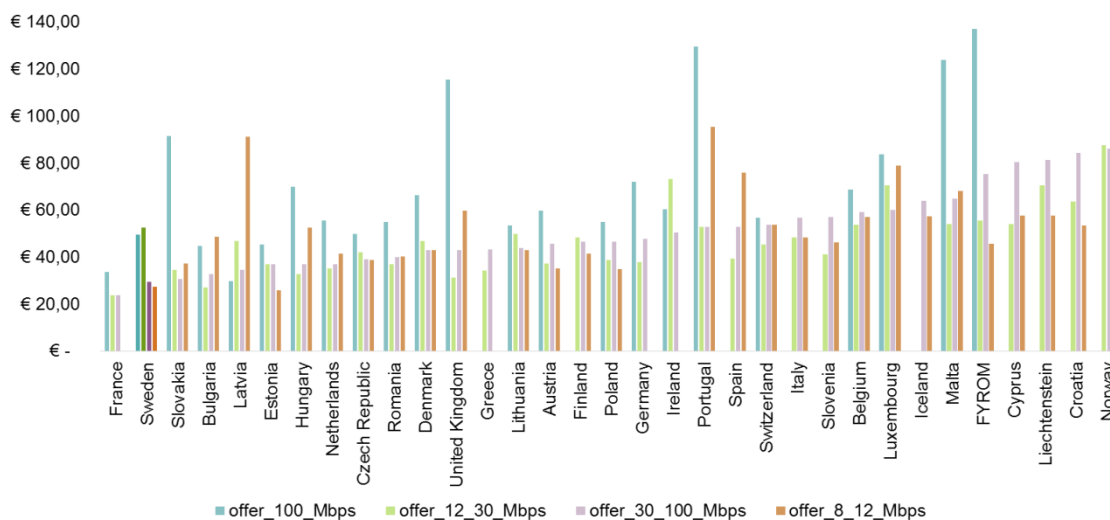


Source: DAE Scoreboard

Figure 4-97 below presents monthly price of Internet access, together with fixed telephony and TV bundles (least expensive offer in EUR/PPP) for:

- **Offer 8-12 Mbps**, which ranges from €25,81 in Estonia to €95,61 in Portugal; the average price is €53,16. This type of bundle costs €27,38 in Sweden.
- **Offer 12-30 Mbps**, which ranges from €23,77 in France to €87,57 in Norway; the average price is €47,05. In Sweden the price is a bit higher than the average at €52,68.
- **Offer 30-100 Mbps**, which ranges from €23,77 in France to €86,24 in Norway; the average price is €50,96. This type of bundle costs in Sweden is €29,68.
- **Offer 100 Mbps**, which ranges from €29,84 in Latvia to €137,02 in FYROM; the average price is €69,93. In Sweden it is less than average at €49,60.

Figure 4-97: Monthly price of Internet access + fixed telephony + TV bundles in 2014



Source: DAE Scoreboard

4.6.1.7 Information about network neutrality policies of ISPs

In Sweden most of the largest ISPs state at their respective websites that they use traffic management for technical purposes. Measures include, for example, prioritization of traffic in the network in question. The ISPs take measures to maintain or enhance the stability of networks and to ensure that the customer's connection remains strong even when overloaded. It also helps them deliver certain services, for instance IPTV services.

No distinction is made between various services and applications. In fixed broadband networks where the capacity will be shared in the access network, the extensive use of peer to peer application give similar but less clear effects, because the bandwidth is higher and there are fewer people who potentially will share the capacity.

Most ISPs inform their costumers that they continuously take measures to protect customers and networks and users from spam, viruses, and attacks on IT systems (DoS attacks). Most of the larger ISPs at the Swedish market are also actively involved in efforts to combat sexual abuse images of children by working together with the police to block websites where such material exists¹¹⁵.

4.6.1.8 Information about how ISPs typically present information to consumers in advertising, own websites

ISPs at the Swedish market rarely use information about network neutrality for their marketing or advertising activities. Typically, Swedish ISPs present information on

¹¹⁵ Source of the information: Swedish Post and Telecom Agency, Consumer Markets Department, Section for Consumer Rights.

traffic management on their websites categorized under “about” and “terms”¹¹⁶. The description of these ISPs’ policies regarding traffic management at the website gives consumers an overall summary of what measures are taken in terms of priorities and blockings, etc. For instance, the Swedish ISP TeliaSoneras website provides the following information:

Limited amounts of bandwidth capacity have to be shared by all users in a given cell, and therefore users who consume a lot of data can affect the experience for other users. To maximize the availability of services for all active users in a given cell, it is necessary to maintain the network operators' ability to handle the traffic. Mobile services that are time-critical in the sense that they must be delivered in a sequence that voice, has priority over data on the network becomes overloaded. It does not mean that the data link is disconnected completely, but rather that the speed decreases. For mobile data, there are also some defined parameters for allocating the capacity of different types of data traffic. For example, this means that general limitations on capacity and / or speed, regardless of subscription or offer, valid for mobile data regarding file sharing.

More detailed information about potential blocking and other measures are usually found in the agreement with the consumer, in its general terms and conditions.

In 2013 the Swedish Post and Telecom Agency (PTS) implemented secondary legislation indicating which information must at least be contained in the general terms and conditions.

4.6.2 Sweden: Internet consumer behaviour

This part explains consumer behaviour in Sweden with regard to Internet access and network neutrality in particular. The information is presented against the background of other countries.

4.6.2.1 Switching behaviour and choice criteria for Internet access services and actual / perceived breadth of potential choices

The aim of the study is to look at the value of network neutrality for consumers. The following sections provide available data on network neutrality incidents, as well as consumer behaviour in terms of switching ISPs.

4.6.2.1.1 Network neutrality incidents

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the awareness of data consumption limits of Internet connections for 2014. As shown in Figure 4-98, awareness of data consumption limits ranges from 55%

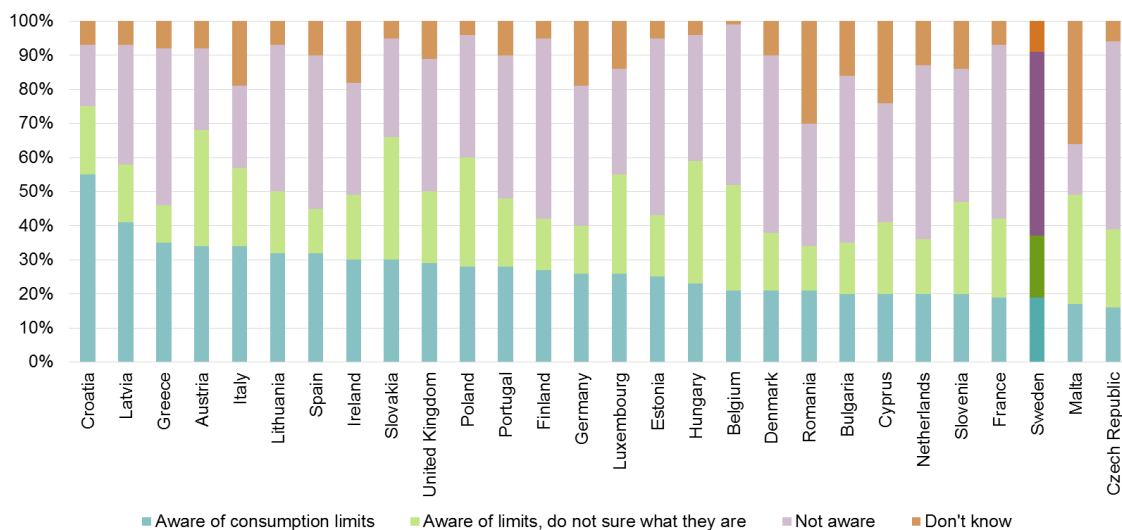
¹¹⁶ For more information, please see:

<http://www.telia.se/privat/om/villkor/trafikhantering>
<http://www.tele2.se/kundservice/bredband/etiska-riktlinjer.aspx>
http://www.telenor.se/published_images/Trafikhanteringstext%20till%20webben%20121122.pdf.

in Croatia to 16% in the Czech Republic, with an average of 27%. In Sweden the level of the awareness is below the average at 19%.

18% of Swedish respondents are aware of limits of Internet connections, but they are not sure what they are, which is below the average of 22%. 54% of the surveyed population in Sweden seems to be 'not aware' of the data consumption limits, whereas the average for the analysed countries is 40%. 9% of the Swedish respondents replied 'I don't know'.

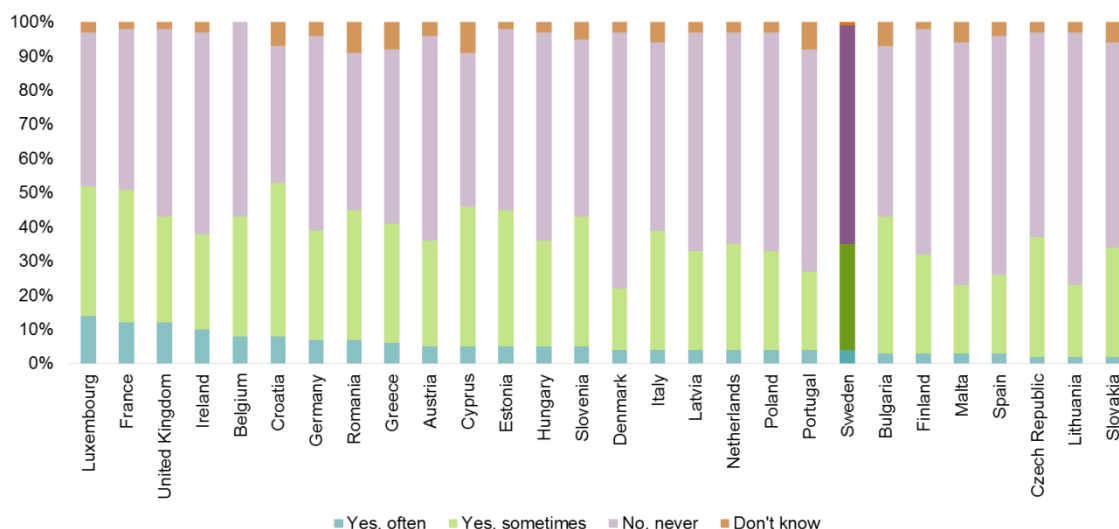
Figure 4-98: Awareness of data consumption limits of Internet connections in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the difficulty of accessing online content and applications due to insufficient speed or downloading capacity for 2014. As shown in the Figure 4-99, respondents 'often' having difficulties ranges from 14% in Luxembourg to 2% in Lithuania, with an average of 5,5%. As for Sweden, only 4% of respondents admitted having 'often' such difficulties. On the other hand, 31% of Swedish respondents confirm that they 'sometimes' experience difficulties due to insufficient Internet speed, which is slightly below the average of 32%. 64% of the surveyed population in this country claim to 'never' experience such difficulties, whereas the average is 60%. 1% of the Swedish respondents replied 'I don't know'.

Figure 4-99: Difficulties experienced due to insufficient speed in 2014

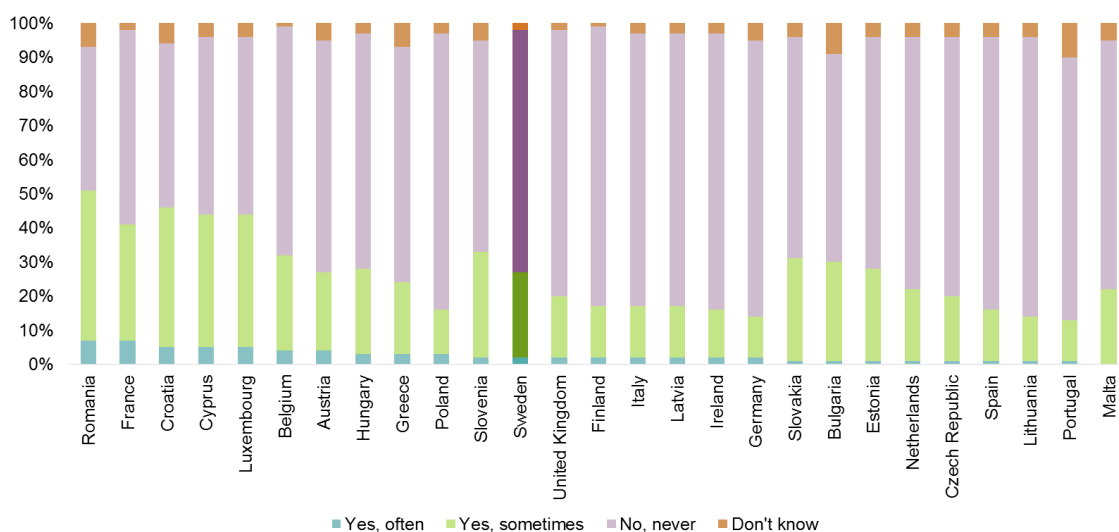


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the number of cases in which users experienced any kind of blocking of online content or applications for 2014. As shown in Figure 4-100, regular blocks ('Yes, often') range from 7% in Romania to 0% in Malta, with an average of 2,6%, whereas occasional blocking ("Yes, sometimes") is reported more frequently (23.7% on average).

With regard to Sweden, 2% of the respondents 'often' experience blocking of online content or applications, whereas for 25% it happens 'sometimes'. 71% of the surveyed Swedes 'never' cope with such blockings, which is above the average of the analysed countries of 69%. 2% of the Swedish respondents replied 'I don't know'.

Figure 4-100: Blocking of online content or applications in 2014

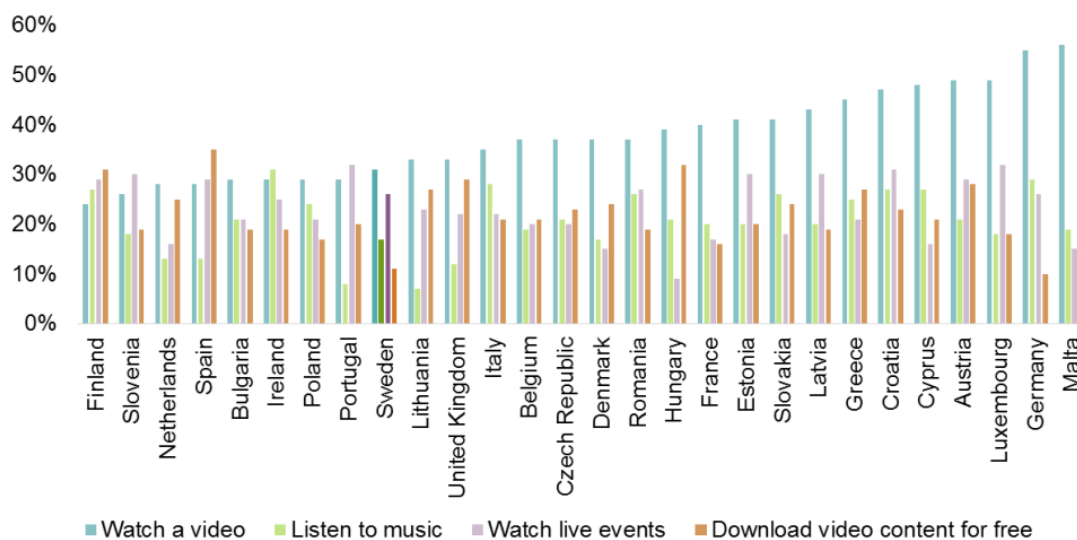


Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey also provides data on the types of content and applications for which users experienced Internet blocking for 2014. As shown in Figure 4-101, on average, 38% of users experienced online blocking when watching a video, with data ranging from 56% in Malta to 24% in Finland, whereas an average of 23% experienced blocking while watching live events, with data ranging from 32% in Luxembourg to 9% in Hungary.

In Sweden, 31% of respondents experienced online blocking when watching a video and 26% while watching live events. 17% of the surveyed Swedes claim to have experienced such blocking while listening to music, which is a bit below the average of 20%. 11% of the respondents in this country coped with online blocking when downloading video content for free; the average is 22%.

Figure 4-101: Experience of Internet blocking in 2014



Source: Eurobarometer

4.6.2.1.2 Switching behaviour

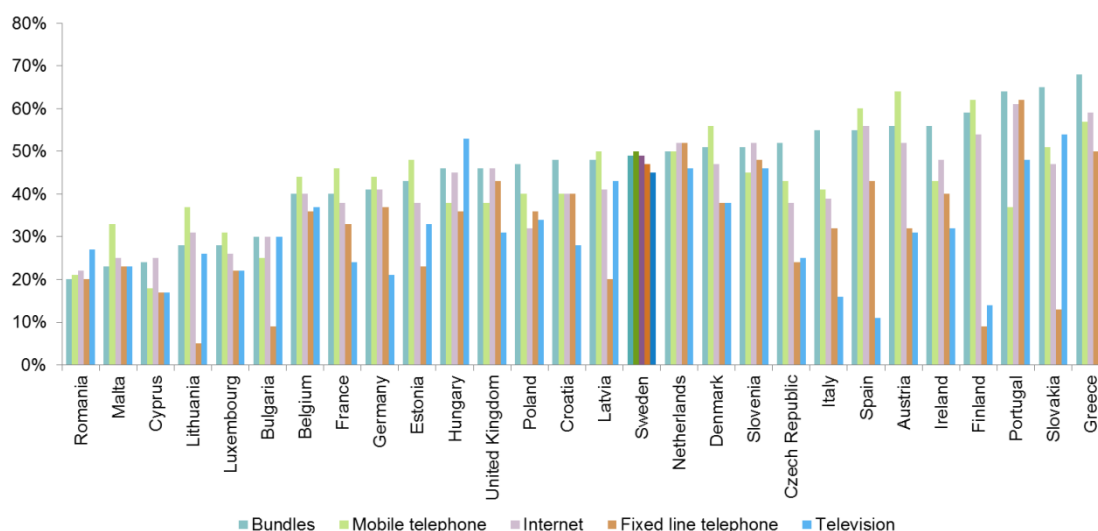
The eCommunications and telecoms single market Eurobarometer provides data on the percentage of households that switched their Internet service provider at least once up to the time of the survey. Eurobarometer data covers the EU28 (see Figure 4-102).

Figures for Sweden are as follows:

- **Bundles** ranges from 20% to 68%; the average is 45%. Sweden is above the average with 49%.
- **Mobile telephone** ranges from 18% to 64%; the average is 44%. Sweden is above the average with 50%.

- **Internet**¹¹⁷ ranges from 22% to 61%, whereas the average amounts to 43%. In Sweden it is 49%.
- **Fixed line telephone** ranges from 5% to 62%; the average is 37%. In Sweden 47% of households switched their provider for this service.
- **Television** ranges from 11% to 54%, whereas the average amounts to 26%. In Sweden 45% of households did such a switch.

Figure 4-102: Percentage of households that switched their Internet service provider



Source: 2014 eCommunications and telecoms single market Eurobarometer

The “Consumer market study on the functioning of the market for Internet access and provision from a consumer perspective” (2012)¹¹⁸ investigated problems that consumers are experiencing in their arrangements with ISPs, in particular in relation to switching provider.

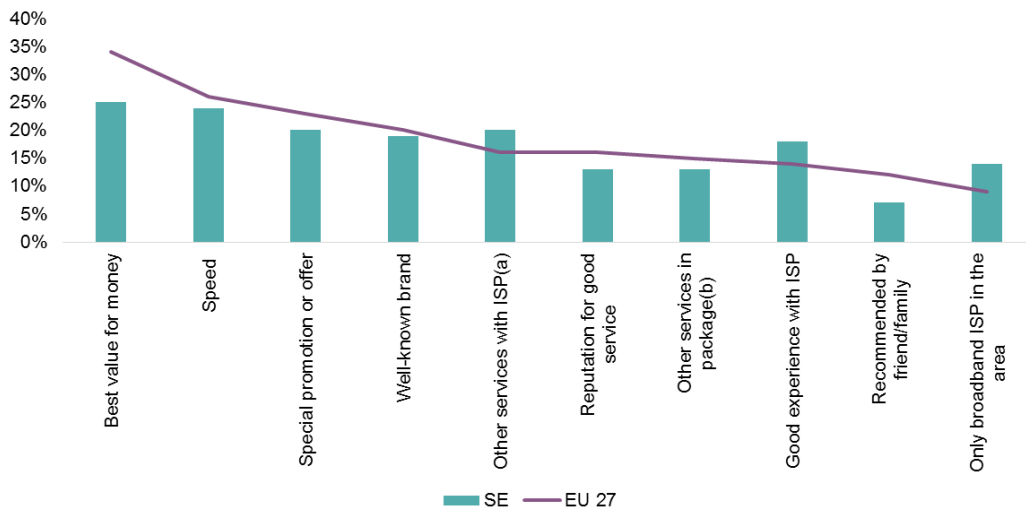
The main reason for switching provider in Sweden was the best value for money, followed by ‘speed’ and ‘special promotion or offer’/ ‘other services with ISP’. Also for the EU 27 the most common reason was the ‘best value for money’.

¹¹⁷ FYROM (not covered in the Eurobarometer data set) reported a value of 2.2% for this indicator.

¹¹⁸ See:

http://ec.europa.eu/consumers/archive/consumer_research/market_studies/docs/internet-service-study-full_en.pdf.

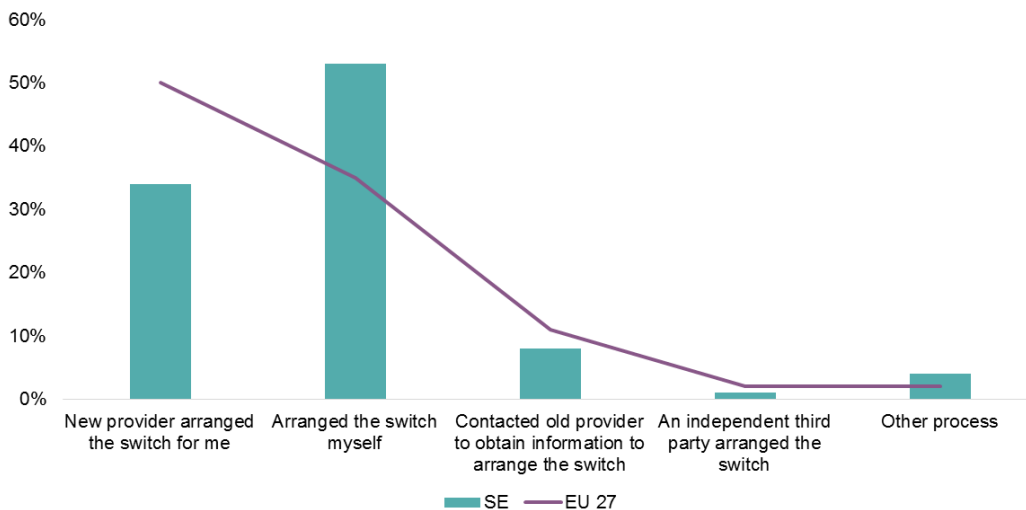
Figure 4-103: Main reason for choosing current Internet provider in 2012



Source: CHAFAEA

Concerning the arrangements for switching provider, most consumers arranged the switch themselves while for about 1/3 of consumers the switch was arranged by the new provider (which was the most common arrangement in the EU 27). The national regulator noted barriers to switching in relation to the contractual barriers, long notice period combined with bundling and internal rebates resulting in costs for the consumer or other issues.

Figure 4-104: Arrangements for switching provider in 2012

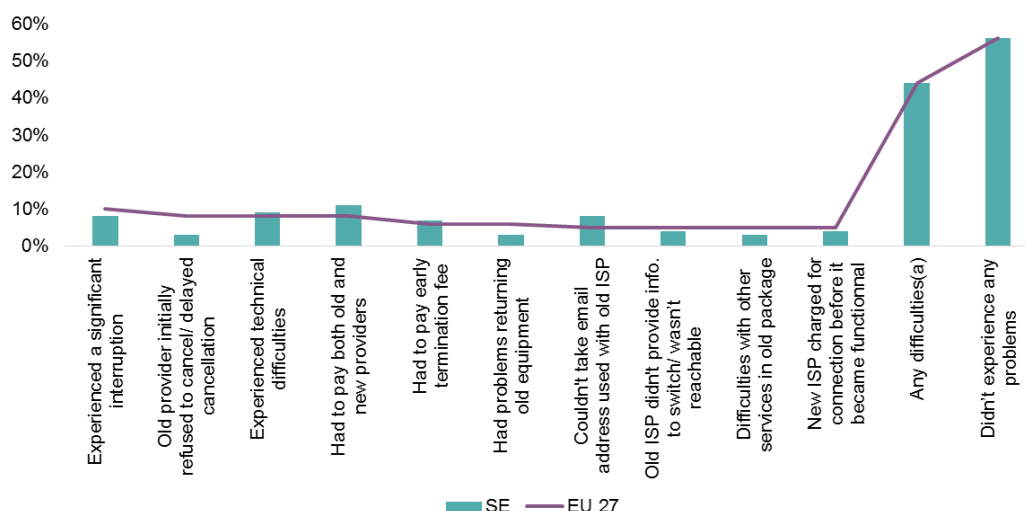


Source: CHAFAEA

About 44% of consumers experienced problems when switching, mainly in relation to having to pay both the old and new providers (11%), technical difficulties (9%), significant interruptions (8%) and not having the possibility to take the email address

used with the old ISP (8%). Overall 56% of consumers didn't experience any problems (same as the EU 27 average (56%)).

Figure 4-105: Problems experienced when switching in 2012

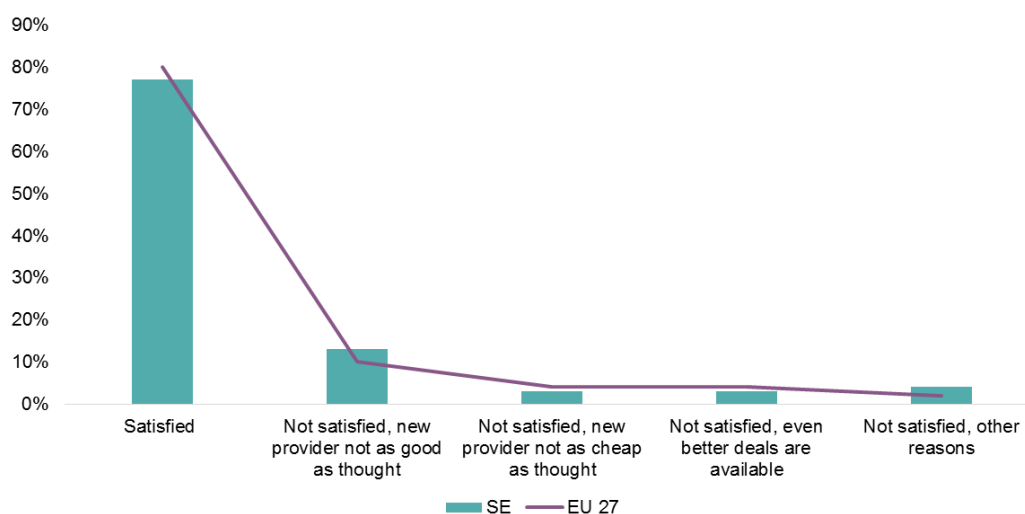


Source: CHAFAEA

The average time without Internet as a result of switching provider was 3.8 days (below the EU 27 average of 4.7 days), while 42% of consumers experienced no interruption (well above the EU 27 average of 24%).

The majority of consumers (77%) was satisfied with the switching provider (below the EU 27 average (80%)). The remainder of consumers that were not satisfied reported mostly that the 'new provider not as good as thought' (13%), other reasons (4%) or 'even better deals are available' (3%). The average reported monthly savings were € 14.30 (below EU 27 average (€ 14.70)).

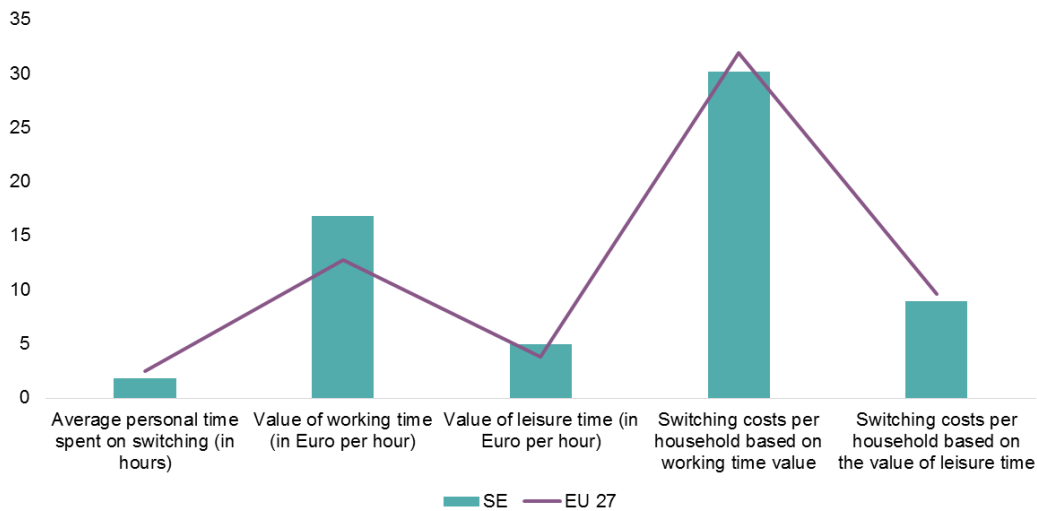
Figure 4-106: Satisfaction with switching provider in 2012



Source: CHAFAEA

The average time spent by the consumer on switching was 1.8 hours (below the EU 27 average of 2.5 hours), while the associated costs expressed in value of working time or leisure time was around the EU 27 average.

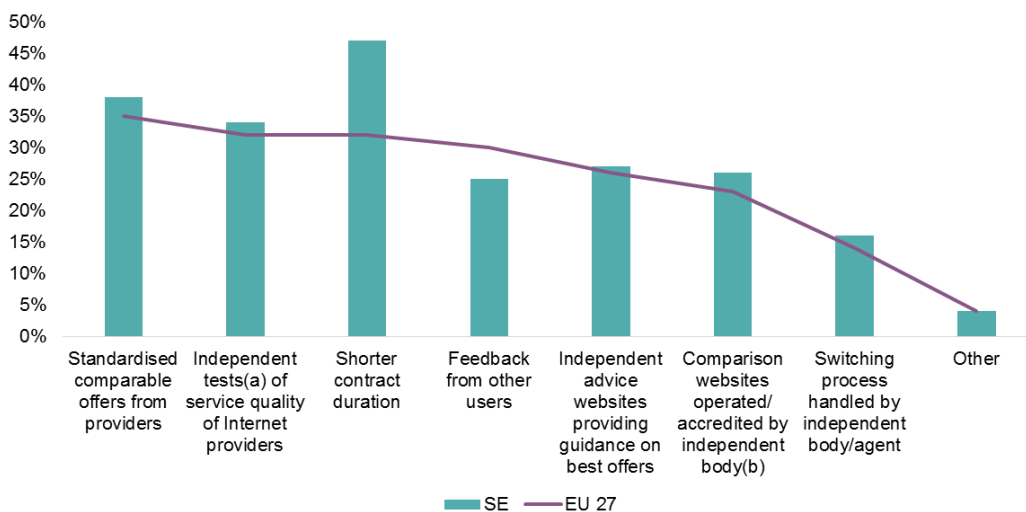
Figure 4-107: Switching costs in 2012



Source: CHAFAEA

The most important factors that facilitate the consumer in switching provider were shorter contract duration (47%, above EU 27 average (32%)), standardised comparable offers from providers (38%, above EU 27 average (35%)) and independent tests of service quality of Internet providers (34%, above EU 27 average (32%)).

Figure 4-108 Facilitators to switching in 2012



Source: CHAFAEA

4.6.2.2 Consumers' preferences and willingness to pay for Internet access services

This chapter presents an overview of the situation in Sweden, as far as consumer's preferences and willingness to pay for Internet Access Services (IAS) are concerned.

4.6.2.3 Typical patterns of Internet usage

The analysis of typical patterns of Internet usage in Sweden concentrates on such aspects as: frequency of the usage, its location, purposes of the use and digital skills.

4.6.2.3.1 Internet use and its frequency

ITU provides data on the percentage of individuals using the Internet, whereas Eurostat provides data on the number of individuals who are frequent users (every day or almost every day) for 2013. As shown in Figure 4-109, the percentage of individuals using the Internet ranges from 96,5% in Iceland to 46,3% in Turkey, with an average of 74,9%. Sweden is much above the level of the average and nearly as high as Iceland with 95%.

Figure 4-109: Internet use in 2013



Source: ITU - ICT Eye, Eurostat

According to the ICT Households survey (Figure 4-110), the percentage of individuals who are frequent Internet users ranges from 91% in Iceland to 30% in Turkey¹¹⁹. In Sweden 81% belongs to frequent Internet users, which is above the average of 61% of the surveyed countries.

¹¹⁹ Note that Eurostat also provides a value for Serbia that is included in this dataset, however this value is for latest available year (2009).

Figure 4-110: Individuals who are frequent Internet users (every day or almost every day), 2013



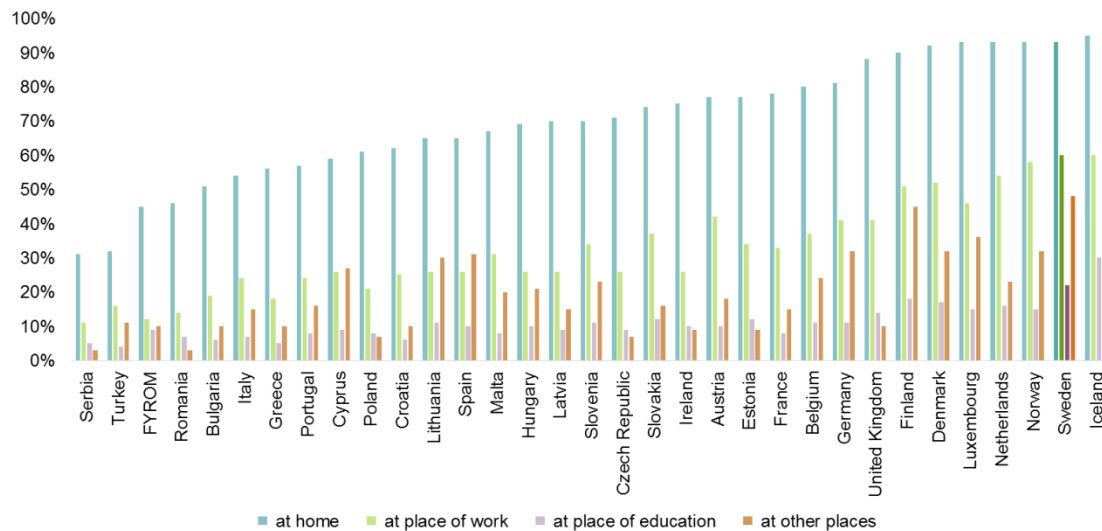
Source: EUROSTAT, ICT Households survey

4.6.2.3.2 Location and purpose of using the Internet

EUROSTAT provides information on individuals using the Internet, by place of use in 2013 (% of individuals aged 16 to 74). As presented in the Figure 4-111, data on using the Internet:

- **At home** ranges from 31% to 95%; the average is 70%. In Sweden 93% of individuals use the Internet at home, which is above the average.
- **At place of work** ranges from 11% to 60%; the average is 33%. In Sweden 60% of individuals use the Internet at work.
- **At place of education** ranges from 4% to 30%, whereas the average is 11%. 22% of the Swedish individuals use Internet at this place.
- **At other places** ranges from 3% to 48%, whereas the average is 20%. 48% of the Swedish individuals use Internet at other places.

Figure 4-111: Individuals using the Internet, by place of use (% of individuals aged 16 to 74), 2013

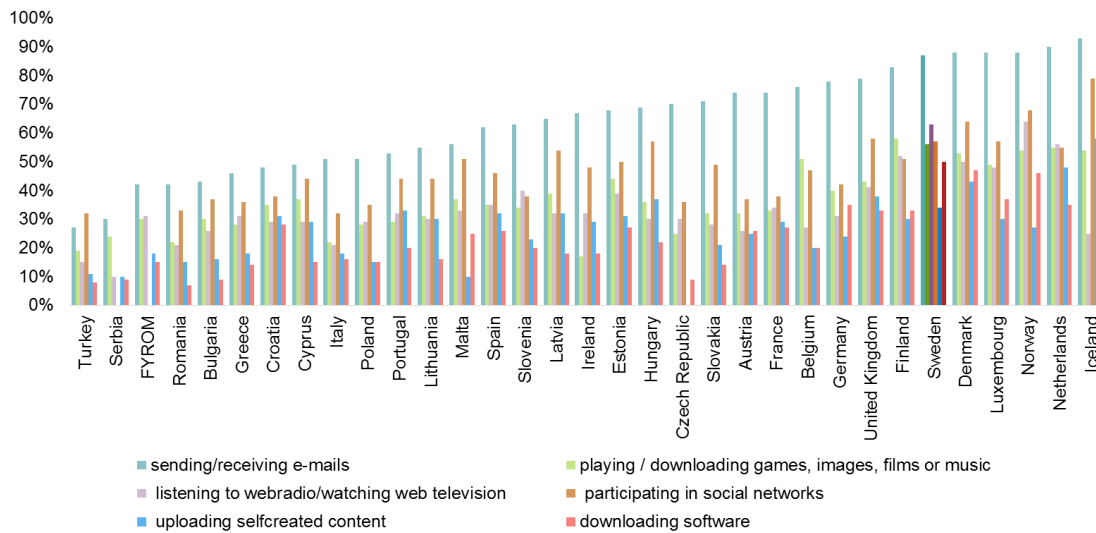


Source: EUROSTAT

EUROSTAT in its ICT Household Survey also provides data on the type of Internet use for 2012 and 2013. Figure 4-112 reveals that the average number of individuals using the Internet for:

- sending/receiving e-mails is 64%, whereas in Sweden it is 87%.
- playing or downloading games, images, films or music is 37% whereas in Sweden it is 56%.
- listening to web radio/watching web television is 33%, whereas in Sweden it is 63%.
- participating in social networks is 47%, whereas in Sweden it is 57%.
- uploading self-created content is 26%. In Sweden it is 34%.
- downloading software 24%, whereas in Sweden it is 50%.

Figure 4-112: Internet use: sending/receiving e-mails in 2013, playing or downloading games, images, films or music in 2012, listening to web radio/watching web television in 2012, participating in social networks in 2013, uploading self-created content in 2012, downloading software in 2013



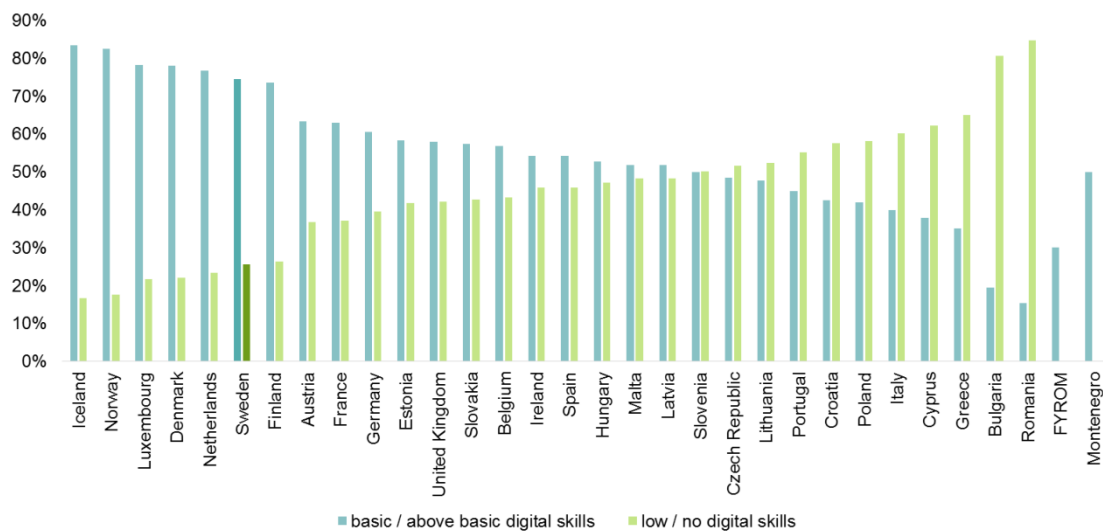
Source: EUROSTAT

4.6.2.4 Digital skills

The DAE Scoreboard provides data on digital skills. As shown in Figure 4-113, the percentage of people with basic digital skills ranges from 83% in Iceland to 15% in Romania, with an average of 54%. Furthermore, in 19 countries, the percentage of people with basic or above digital skills is above 50%.

Sweden is above the average with the number of individuals with basic or above basic digital skills at 75%. 25% of people in this country have low or no digital skills, which is much below the average of 45%.

Figure 4-113: Individuals with basic or above basic digital skills, 2012



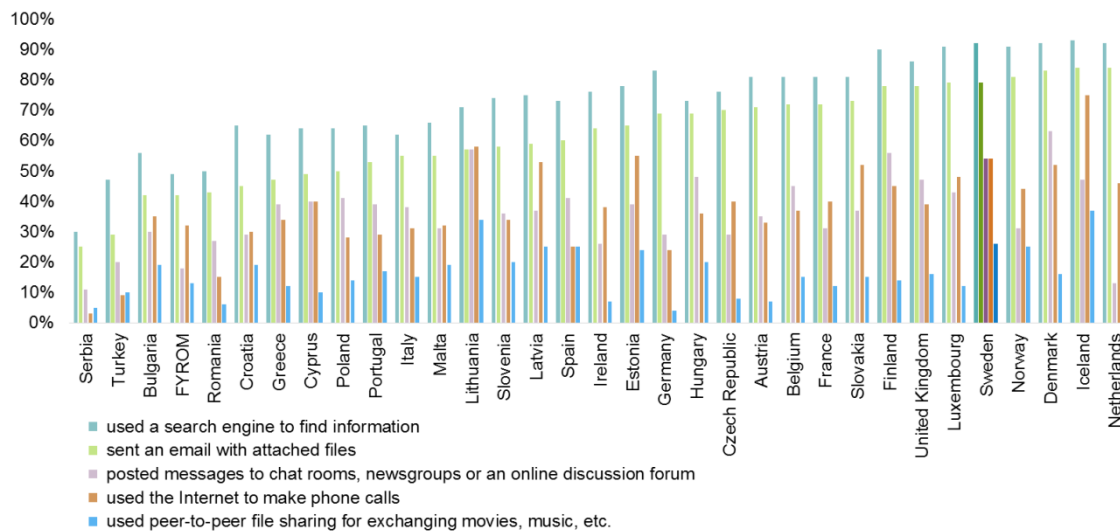
Source: DAE Scoreboard

Level of digital skills can be also described through the use of the Internet by individuals for particular tasks.

According to EUROSTAT and as shown in Figure 4-114, the average number of individuals who have:

- Used a search engine to find information is 73%, whereas in Sweden it is 92%.
- Sent an email with attached files is 62% whereas in Sweden it is 79%.
- Posted messages to chat rooms, newsgroups or an online discussion forum is 37%, whereas in Sweden – 54%;
- Used the Internet to make phone calls is 37%, whereas in Sweden it is 54%.
- Used peer-to-peer file sharing for exchanging movies, music, etc. is 17%, whereas in Sweden it is 26%.

Figure 4-114: Individuals' level of Internet skills - Individuals who have used Internet to perform different activities, 2013



Source: EUROSTAT

4.6.2.5 Additional insights

According to Socialbakers (2012), there were just under 5 million Facebook users in Sweden at the end of 2012. At the moment, the top three pages on the Swedish Facebook consist of a TV series Solsidan and Spotify (rank 2 and 3). Rank 4 is occupied by Vi gillar olika, a news site. Interestingly, three of the top 10 pages on the Swedish Facebook follow societal concerns: WWF on rank 8, a non-smoking campaign on rank 9 and Sweden's missing people site on rank 10. The top 10 brands on the Swedish feature on the first ranks Spotify followed by a website for selling and buying property. The remainder of the top 10 features largely well-known international brands such as Coca-Cola (rank 4), IKEA (5), McDonald's (7), Samsung (8) and Ben & Jerry's (ranks 9 and 10).

Data on e-commerce activity is provided by the European Consumer Conditions Scoreboard¹²⁰. Sweden holds the lead in this indicator. From 2008 to 2012, the share of people, who have bought a product or service online has grown from 33 to 74 percent. The growth rate of this indicator is slightly higher than in Greece despite the actual share of people, who shop online being much higher. For all European countries, the same figure grew from 32 to 45 percent in the same period. It is also interesting to note the Swedes have one of the highest confidence levels in online shopping across the EU, in particular when buying products and service from a national retailer online. This may indicate also a high level of trust in other online activities.

As regards video streaming there is no direct consumer data available, however, one may take the offer of audio-visual content on demand as proxy for how well-developed

¹²⁰ European Commission (2013): The Consumer Conditions Scoreboard – Consumer at home in a single market. 9th edition July 2013.

the local market is and how strong the demand for such services is. In Sweden, there are 175 on-demand sources for audio-visual content (officially) available. Within that, there are 10 branded YouTube channels, 95 catch-up TV services and 52 VoD services. Around two thirds of them are targeted mainly at the Swedish market¹²¹.

4.7 Summary: reflection on test area selection from a consumer research point of view

The selection of test areas was built on a cluster analysis of a set of demand- and supply-side indicators for the “at home” usage situation across all countries, for which sufficient data could be identified. The objective of this exercise was to identify test areas that are as representative as possible for the electronic communication markets. Some of the indicators already shed light on aspects of consumer behaviour in the (potential) test areas. In particular, these were the following demand-side indicators:

- Individuals using the Internet for listening to web radio//watching web television (% of population)
- Individuals who have used the Internet to make phone calls (% of population)
- Individuals with basic or above basic digital skills
- Percentage of households that switched their ISP

In this report, more data relating to consumer behaviour was presented. This section briefly reflects on how well the selected test areas represent the breadth of the (consumer-oriented) situation across the BEREC countries, on which data were available.

The first set of consumer behaviour related indicators presented in this report revolves around network neutrality incidents from a consumer perspective. As regards the awareness of data consumption limits on the main household Internet connection the selected test areas present two countries with relatively high awareness (Croatia and Greece) and two with low awareness of such limitations (Sweden and Czech Republic). This indicates that we can assume expectations about data limitations to differ strongly across focus groups. If, however, these are always echoed by actual contract terms and conditions there may be a question for further investigation. For instance, the BIAC study suggests that there are no metered offers i.e. offers with data limitation in Greece. It may well be that the perception of data limitations stems from other factors. For the other indicators referring to network neutrality aspects of consumer behaviour, the test areas also represent a good spread across the breadth of values for each of the indicators. On average, two test areas tend to be positioned towards the extreme values of each indicator, whilst the two other test areas are positioned towards the middle. Thus, one would expect a good mix of perceived difficulties across test areas. Interestingly, despite the highest penetration of high-speed broadband in Sweden, there

121 MAVISE database <http://mavise.obs.coe.int/welcome>.

is a relatively high number of perceived incidents when there have been difficulties due to insufficient speed. This may be explained by the substantially higher expectations that the average Swedish Internet user holds as well as by the much more intense usage of data-heavy applications in Sweden. Again, the focus group discussions are likely to shed more light on this issue.

As regards switching behaviour, the four test areas are either close to the average or above the average of countries represented for this indicator. Whilst this may indicate a slight drawback in terms of representativeness, for purpose of this research study it might actually be an advantage. With a higher incident rate of people having recently switched their ISP, participants in both the qualitative and the quantitative research phase are more likely to have a fresh memory of how they selected the offer they chose thus providing more (externally) reliable data.

As regards the usage of the Internet, the data shows an overall similar picture as the data on network neutrality aspects of consumer behaviour i.e. a good spread across the breadth of values for each indicator. The distribution of actual tasks performed on the Internet by consumers in the test areas shows that for most of the tasks three out of the four test areas are close to average of all countries for which data is available. In line with expectations, Sweden's consumers show a much more intensive use of Internet applications overall. It should be noted, that Croatia and Greece lag behind as regards sending emails, however, this task has relatively little relation to the perception and evaluation of network neutrality and thus is also less decisive for the representativeness of test areas from a consumer research perspective.

There are minor shortcomings noticeable in representativeness as regards the level of ICT-skills across the test areas. However, we expect that this effect is compensated to a large extent by the screener (i.e. selection criteria) for the focus group discussions that include specific selection criteria referring to the expertise of participants. This ensures that we have a good mix of levels of ICT-expertise throughout the groups in each country. Consequently, the average level of ICT-skills in each country is less of a concern to the fieldwork of the qualitative research.

In sum, the test areas are deemed representative from a consumer research point of view and are in line with the objective of the study.

5 Methodology

5.1 Cluster analysis methodology

In order to select representative test areas, we employed a cluster analysis. The basic premise of a cluster analysis is to identify groupings of similar entities to produce a classification. The reason for classifying is often to make a large and complex set of data more easily understandable. In addition, the identification of groupings or clusters also allows for a segmentation, based upon which representative samples can be drawn from a larger population.

An immense volume of data is available to characterise Europe's Internet ecosystem by an exploration using cluster analysis and other statistical multivariate analysis methods in order to identify sensible groupings. Doing so, in essence, is a data mining exercise. Whereas the identification of clusters based on two variables can often be as easy as using simple visualisation techniques (e.g. histograms, scatter plots), larger and more complex datasets require numerical methods of classification or cluster analysis.

Essentially, performing a cluster analysis is the measurement of proximity (i.e. based on small dissimilarity or distance and large similarity) of different entities based on their characteristics as described by the related data points in a dataset. There are many different techniques to perform such a measurement, in general the choice of technique is based on the nature of the data (being categorical, continuous, structured) as well as the scale and types of variables being investigated. Unfortunately, although "it would be extremely useful to know which particular measures are 'optimal' in some sense [...] the choice of measure will be guided largely by the type of variables being used and the intuition of the investigator".¹²²

Hierarchical clustering is often used to provide insight into which entities are 'close' in similarity (for example through the use of dendrograms or trees) as well as optimization clustering techniques. The central aim here is to identify the 'optimal' number of clusters in a given dataset. For large datasets this may also involve methods that apply a pre-clustering and a subsequent hierarchical 'clustering of (pre)clusters'. Optimization algorithms are used to calculate the means (a.k.a. centroids) of each cluster, also referred to as k-means algorithms. Virtually all statistical software packages provide k-means algorithm functionality, as this is a very commonly used technique to identify optimal clusters.

5.1.1 Indicators for the cluster analysis

The study team reviewed a large number of data sources in order to analyse the characteristics of the supply and demand for Internet access services in the BEREC

¹²² Everitt, B. S., Landau, S., Leese, M., Stahl, D. (2011): Cluster Analysis, 5th Edition, John Wiley & Sons, Ltd.

member and observer countries. The team identified more than 280 relevant indicators from EUROSTAT, ITU, OECD, World Economic Forum, Consumers, Health and Food Executive Agency (CHAFEA), the Eurobarometer and the DAE Scoreboard.

Out of the total set of indicators a number of indicators have been selected that represent both more generic characteristics and characteristics that link with the scope of the study on network neutrality. First and foremost, the selection of indicators covers a number of generic characteristics concerning the supply and demand of Internet access (e.g. supply indicators on coverage, speed, prices, operators and market shares; and demand indicators concerning Internet penetration, speeds, types of subscriptions, Internet use, and devices). Second, in view of the focus of this study on network neutrality, we have selected indicators that focus on elements such as Next Generation Access (NGA), technologies (such as Cable, FTTx, xdsl), higher speed, choice of bundled offers, and switching behaviour as well as Internet use concerning applications/content that is relevant to network neutrality (such as listening to web radio/watching web television, making phone calls, peer-to-peer file sharing, etc.) as well as data on network neutrality incidents and specific policy indicators concerning network neutrality.

Out of the total set of indicators a number of indicators were selected that represent characteristics that link with the scope of the study which is focussed on the “at home”¹²³ usage situation, whereby typically one contract covers the connection of all devices used at home. This situation reflects the fact that the main stationary Internet access at home is the most important form of Internet access in Europe and the vast majority of Internet traffic is generated at home and represents most forms of Internet applications. For the cluster analysis this means that we focused on characteristics concerning Internet access relating to fixed Internet.

The following additional criteria were used to identify the most relevant indicators:

- Identify to the maximum extent possible indicators that are exhaustive and mutually exclusive.
- Time of measurement: most recent indicator.
- Variance and standard deviation of each of the indicators: those with the highest variance and standard deviation were privileged, as they would be more explanatory for the cluster analysis.

In a second step of the data collection, the relevant indicators have been categorised as ‘must have’ indicators or ‘nice to have’ indicators. The first group is considered highly relevant for the cluster analysis, while the second group gathers indicators useful as secondary criteria for the cluster analysis. Based on this set of indicators, the NRAs for

123 “At home” includes all devices (PCs, laptops, smartphones, iPads, TVs, Stereo, smart home devices, etc.) connected wired and wirelessly to the Internet through the main (stationary) Internet access of the household, which also includes mobile access technologies as substitutes for fixed access e.g. LTE at home or USB dongles for private usage. “Out of home” includes all wireless devices (smartphones, iPads, laptops, cars, etc.) used on networks outside the home including mobile networks, commercial and open WiFi hotspots.

the countries where data points were missing were asked to provide input in order to gain the maximum amount of values for the indicators.

The following indicators for each of the key areas were considered as most relevant:

Fixed Internet supply indicators:

- Internet supply: structural indicators on Internet supply concern:
 - Basic supply indicators:
 - Broadband coverage:
 - **NGA broadband coverage (DAE Scoreboard) ('must have' indicator);**
 - Speed:
 - **Actual download speed of fixed broadband subscriptions (Cable, FTTx, xdsl) (DAE Scoreboard) ('must have' indicator);**
 - Prices:
 - **Monthly price of standalone Internet access for offer from 30 to 100 Mbps (DAE Scoreboard) ('must have' indicator);**
 - **Monthly price of Internet Access + Fixed Telephony bundles for offer from 30 to 100 Mbps (DAE Scoreboard) ('nice to have' indicator);**
 - **Monthly price of Internet Access + Fixed Telephony + TV bundles for offer from 30 to 100 Mbps (DAE Scoreboard) ('nice to have' indicator);**
 - Market indicators:
 - Telecommunication operators:
 - **Number of ISPs covering at least 90% of the market (BIAC study) ('must have' indicator);**
 - **New entrants' share in fixed broadband subscriptions (DEA Scoreboard) ('must have' indicator);**
 - Internet & telephony competition, 0–2 (best) (World Economic Forum) ('nice to have' indicator);
 - Electronic communications sector investment, 2012 (Mobile, Fixed, Other, Total) (DAE Scoreboard, EUROSTAT) ('nice to have' indicator).
 - Network neutrality incidents
 - Difficulties experienced due to insufficient speed or downloading capacity (Eurobarometer) ('nice to have' indicator);
 - Blocking of online content or applications (Eurobarometer) ('nice to have' indicator);
 - Experience of Internet blocking (Eurobarometer) ('nice to have' indicator).

Fixed Internet demand indicators:

- Internet penetration:
 - **Fixed (wired)-broadband subscriptions per 100 inhabitants (ITU - ICT Eye) ('must have' indicator);**
- Internet Speed:
 - **Fast broadband (at least 30Mbps) penetration (subscriptions as a % of population) (DAE Scoreboard) ('must have' indicator);**
 - **Share of fixed broadband subscriptions \geq 10 Mbps - Advertised download speed (DAE Scoreboard) ('must have' indicator).**
 - Internet bandwidth, kb/s per user (ITU (World Economic Forum)) ('nice to have' indicator);
- Types of subscription:
 - **Two play penetration (subscriptions/population) (DAE Scoreboard) ('must have' indicator);**
 - Internet + fixed telephony (CHAPEA) ('nice to have' indicator);
 - Internet + fixed telephony + TV (CHAPEA) ('nice to have' indicator);
 - Stand-alone Internet access (CHAPEA) ('nice to have' indicator).
- Internet use:
 - **Percentage of Individuals using the Internet (ITU - ICT Eye) ('must have' indicator);**
 - **Individuals who are frequent Internet users (every day or almost every day) (DAE Scoreboard) ('must have' indicator);**
 - **Individuals using the Internet for listening to web radio/watching web television (EUROSTAT) ('must have' indicator);**
 - **Individuals who have used the Internet to make phone calls (EUROSTAT) ('must have' indicator);**
 - Individuals who have used peer-to-peer file sharing for exchanging movies, music, etc. (EUROSTAT) ('nice to have' indicator);
 - Household penetration of different broadcasting services, IPTV (DAE Scoreboard) ('nice to have' indicator);
- Digital skills:
 - **Individuals with basic or above basic digital skills (DAE Scoreboard) ('must have' indicator);**
- Devices:
 - Devices used to connect to the Internet: Laptop/netbook, Desktop, Smartphone, Tablet/touchscreen, TV (Eurobarometer) ('nice to have' indicator);
- Switching behaviour and awareness:
 - **Time needed to terminate a contract\get connected in at major fixed broadband operators (DAE Scoreboard) ('must have' indicator);**
 - **Time needed to terminate a contract\get connected in at major fixed broadband operators (DAE Scoreboard) ('must have' indicator);**
 - **Percentage of households that switched their ISP (Eurobarometer) ('must have' indicator);**

- Number of providers offering Internet access in respondents' area (CHAFEA) ('nice to have' indicator);

Policy indicators:

- Structural indicators on policy concern:
 - Network neutrality:
 - **Has the Member State disclosed an official position on regulating Network neutrality? (Open Forum Academy) ('must have' indicator);**
 - **Has the Member State envisaged Network neutrality in a form different than a law? (Open Forum Academy) ('must have' indicator);**
 - **Has the Member State included Network neutrality in a law or in a legislative proposal? (Open Forum Academy) ('must have' indicator);**
 - **Has the Member State announced any future measures on Network neutrality? (Open Forum Academy) ('must have' indicator).**

This set of fixed Internet and supply indicators has been further refined in order to select only the most relevant indicators for the cluster analysis. A sequential approach was followed for selecting the final set of indicators to be used for the cluster analysis. The selection process consisted in funnelling the largest list of indicators presented in the previous chapter to the final set used for the cluster analysis. This process was based on three selection steps.

First, overlaps among indicators were checked in order to select those indicators that are exhaustive and mutually exclusive. The step used the list of the 'must have' indicators (for the demand side and for the supply side) as a starting point. During this step, some of the indicators identified as 'must have' are discarded as partially overlapping with others and/or substituted with others which appeared more relevant for the analysis at a closer look.

Second, the explanatory power of each indicator was checked in light of the cluster analysis. The study team calculated the average, variance and standard deviation of each indicator and identified the most relevant ones. Better coverage was another criterion determining the choice of indicators in this step. Indicators with data for a larger number of countries were thus preferred to others.

It is important to note that in order to gain a robust outcome from the cluster analysis it was imperative to stick as much as possible with the data as presented in the original data source. In order to reduce noise introduced by manipulation of the data as much as possible, the values of the indicators cannot be interchanged for example, as definitions, measurements and units (as well as timing) vary from one source to the next. Therefore, maximum coverage within one dataset was preferred.

The third and last step consisted in a final sanity check of the indicators selected via the previous two steps. We checked for further redundancies and overlaps in the selected indicators.

The following sections provide the results for the selected Internet supply and demand indicators used for the cluster analysis through optimization algorithms.

5.1.1.1 Internet supply indicators

For the broadband coverage indicators the focus has been chosen on NGA coverage for which two indicators were identified from the DAE Scoreboard. The selected indicator was NGA broadband coverage/availability (as a % of households) from 2013, as this indicator has the most observations (33 countries).

Concerning Internet speed, the indicators on actual download speeds of fixed broadband subscriptions from the DAE Scoreboard was available for Cable FTTx and xdsl. The indicator on download speed for FTTx connections was more consistent with the selected indicator on NGA and therefore ensures more robust results.

For the monthly price of Internet access indicators were identified from the DAE Scoreboard for different speed ranges (in minimum EUR/PPP). The most relevant speed range considered here was that of 30 to 100 Mbps. Internet offers with higher bandwidth would have reflected better the technological (and commercial) trends, which see a progressive increase of the bandwidth to cope with heavier Internet content (also consistent with the focus on NGA, etc.). The monthly prices of standalone Internet access were selected (covering 34 countries) as well as the monthly prices of the bundle for Internet, telephone (fixed) and TV. The latter was selected given that it covers 33 countries (instead of 31 for the monthly price indicator on Internet and telephone (fixed)).

For the market structure in terms of the operators the number of ISP covering 90% of the market as well as the new entrant's market share are selected. As noted in the previous chapter, the indicators on competition (from the World Economic Forum) and investments were discarded.

The indicators on network neutrality incidents from the Eurobarometer are highly interesting for this study as they address directly related issues in terms of prevalence of blocking of online content/applications and speed and capacity limits. However, the dataset only covers 28 countries and given the nature of the data (stemming from a consumer survey) it is difficult to substitute values for these indicators. These indicators are therefore not selected for the cluster analysis as such but were taken into account for the final selection of countries.

Therefore, six indicators are selected for the supply side. The table below presents the indicators selected, together with basic descriptive statistics, and an indication of the countries covered.

Table 5-1: Selected indicators for supply side

Source	Year	Indicator	Average	Variance	Standard Deviation	Coverage
DAE Scoreboard	2013	NGA broadband coverage/availability (as a % of households)	64.73	647.61	25.45	33 (92%)
DAE Scoreboard	2012	Actual download speed of fixed broadband subscriptions (FTTx)	66.72	531.87	23.06	25 (71%)
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony bundles (30 to 100 Mbps)	50.96	264.18	16.25	33 (92%)
DAE Scoreboard	2014	Monthly price of standalone Internet access (30 to 100 Mbps)	32.96	269.14	16.40	34 (94%)
BIAC study	2012	Number of ISPs covering at least 90% of the market	5.46	4.99	2.23	35 (97%)
DAE Scoreboard	2013	New entrants' share in fixed broadband subscriptions	51.22	219.59	14.82	31 (86%)

5.1.1.2 Internet demand indicators

As explained in the previous chapter, the ITU indicators on broadband subscriptions are preferred for Internet penetration, as they cover all 36 countries. The indicator on subscriptions as a percentage of the population is selected (it is comparable across countries and has good scaling and variance for the cluster analysis). The data provided by the DAE Scoreboard on fixed broadband penetration (subscriptions as a % of population) is more recent but does not cover as many countries.

For the indicators on Internet speed, the penetration of fast broadband (at least 30Mbps) and broadband subscriptions above 10 Mbps (advertised download speed) were identified as relevant. The latter was selected as a higher coverage was available for this indicator. The indicator from ITU on International Internet bandwidth (kb/s per user) was discarded.

Concerning the types of subscriptions of Internet access services the most recent data is from the DAE Scoreboard on two play and 3/4/5 play and an overall indicator. As explained in the previous section the two play indicator is selected as most suitable for this study. This selection was done due to concerns about the values and inconsistencies in the other indicators raised by some NRAs in the commenting process on the draft version of this report.

For the indicators on Internet use and Digital skills the ITU indicator is chosen as it covers all 36 countries and a higher variance and standard deviation than the similar indicators from other data sources. The Eurostat data provides more detail on the type of use whereby listening to web radio/watching web television and using the Internet to make phone calls are selected with a view to network neutrality. The indicator from the DAE Scoreboard on digital skills (basic or above basic) is also maintained.

The indicators on devices are not further considered, as this characteristic is not that relevant to the scope of the study, whereas the subscription and bundles are clearly

linked to potential switching behaviour, the devices used to access the Internet do not necessarily reflect this. Switching behaviour is however taken into account by selecting the indicator on the Percentage of households that switched their ISP from the Eurobarometer. The indicators on time needed to terminate a contract/get connected provide interesting information in relation to the switching of ISPs in national markets, however, it (at least) partially overlaps with the indicator on the percentage of households that switched their ISP. The latter is selected instead as more synthetic.

Table 5-2: Selected indicators for demand side

Source	Year	Indicator	Average	Variance	Standard Deviation	Coverage
ITU - ICT Eye	2013	Fixed (wired)-broadband subscriptions per 100 inhabitants	26.47	72.04	8.49	36 (100%)
DAE Scoreboard	2013	Share of fixed broadband subscriptions \geq 10 Mbps - Advertised download speed	58.11	584.35	24.17	32 (89%)
DAE Scoreboard	2013	Double play penetration (subscriptions/population), July 2013	18.97	270.21	16.44	27 (75%)
ITU - ICT Eye	2013	Percentage of Individuals using the Internet	74.90	210.45	14.50	36 (100%)
EUROSTAT	2012	Individuals using the Internet for listening to web radio/watching web television (% of population)	33.25	158.22	12.58	34 (94%)
EUROSTAT	2013	Individuals who have used the Internet to make phone calls (% of population)	37.39	198.17	14.08	34 (94%)
DAE Scoreboard	2013	Individuals with basic or above basic digital skills	54.10	280.93	16.76	32 (89%)
Eurobarometer	2014	Percentage of households that switched their ISP	41.08	157.87	12.57	28 (78%)

5.1.2 View on selected indicators

The selected indicators are considered sufficient to obtain a meaningful description and the demand and supply structure of the fixed Internet market in the countries included in the study. The set of 14 indicators selected provides a static picture (a 'snapshot') of the demand and supply of Internet in the countries, based on available secondary sources and focussing on the 'at home' scenario. The objective of this step is to provide a picture as accurate as possible of the landscape based on available data. This is in order to support the overall objective of the Cluster Analysis, i.e. providing a basis for the selection of countries for further investigation and analysis of Network neutrality.

The selected indicators provide a manageable set of indicators to perform the Cluster Analysis and obtain clusters with a high level of inner homogeneity and a high level of outer heterogeneity¹²⁴. As explained in the previous section, the selection process was based on criteria and considerations aimed at maximising the descriptive power of each

¹²⁴ These terms are further explained in the annex on cluster analysis methodology.

of them, while ensuring the best possible geographical coverage and most recent information.

The analysis and selection of indicators is focused on the Internet demand and supply characteristics, depicting different aspects of the landscape in the countries. As for the demand side, the indicators selected represent the following aspects:

- Penetration of fixed broadband subscriptions among the population.
- Speed of fixed broadband subscriptions (≥ 10 Mbps (advertised download speed)).
- Prevalence of bundled subscriptions among the population (Double play penetration (subscriptions/population)).
- Use of the Internet among the population in general (percentage of Individuals using the Internet) and for purposes more relevant to Network neutrality (Individuals using the Internet for listening to web radio/watching web television (% of population) and Individuals who have used the Internet to make phone calls (% of population)).
- Level of Internet skills among the population (Individuals with basic or above basic digital skills).
- Behaviour of the population with regard to the choice and change of their ISP (Percentage of households that switched their ISP).

Therefore, the demand side is characterised by more generic consumer characteristics (Internet use and skills, broadband penetration) as well as selected indicators that can be considered relevant in view of network neutrality (take-up of bundled offers, use of the Internet for data intensive applications and switching behaviour). Note that these indicators do not presuppose anything with regard to how network neutrality is viewed in a certain situation or country based on the combination of these indicators, not do they make any assumptions in terms of their meaning or effect on consumer behaviour and network neutrality in particular. For example, one could suppose that people using the Internet for data intensive applications could be more prone to or aware of possible network neutrality issues. This kind of impact however is not assumed here, it is not the aim of the exercise to pre-judge any research outcomes from this study based on these characteristics. Rather, these characteristics are seen as relevant to consider in view of this study.

With regard to the supply side, the indicators selected provide a snapshot of the following dimensions:

- Coverage/availability of advanced Internet access (NGA broadband coverage/availability (as a % of households);
- Performance of advanced Internet access (Actual download speed of fixed broadband subscriptions (FTTx);

- Prices for high speed Internet access, both for bundled (Monthly price of Internet Access + Fixed Telephony bundles (> 30 to 100 Mbps)) and standalone access (Monthly price of standalone Internet access (> 30 to 100 Mbps));
- Market structure in terms of number of ISPs available for consumers to choose from (Number of ISPs covering at least 90% of the market) and relevance of new entrants (New entrants' share in fixed broadband subscriptions).

In sum, this set of indicators provides a view on the supply of more 'advanced' Internet access (such as NGA coverage, prices for 'high speed' Internet) as well as more generic parts concerning market structure. Note that this combination of indicators should be taken at face value and do not necessarily lead to interpretation of, for example, overall levels of competition. It is not the aim of this exercise to make judgements about any individual position or country, apart from the ability to generate groups or clusters that are similar in terms of these characteristics.

5.1.3 Missing data and estimation

Data were missing for some indicators (both for the demand and the supply side) for a number of countries. In order to fill those gaps, requests for additional information were sent to the NRAs of the relevant countries. As a result, a number of countries provided further data, which allowed the study team to fill in the gaps for 29 data points.

Notwithstanding the additional efforts in data gathering, relevant gaps remained for some indicators. Whenever possible, the study team filled in the data gap with data from other editions of the same source survey. This approach was adopted in order to reduce the data gathering burden for countries and to maximise comparability. The details of the countries for which data are missing are listed below for each indicator.

Missing data points for the demand side:

- Share of fixed broadband subscriptions ≥ 10 Mbps - Advertised download speed:
 - Missing countries: Iceland, Liechtenstein, Serbia and Turkey.
- Double play and triple play penetration (subscriptions/population):
 - Missing countries: Finland, FYROM, Iceland, Liechtenstein, Montenegro, Norway, Serbia, Switzerland and Turkey.
- Individuals using the Internet for listening to web radio/watching web television (% of population):
 - Missing countries: Liechtenstein, Serbia, Switzerland;
 - Notes: the data gap was filled with data from 2013 for Turkey.
- Individuals who have used the Internet to make phone calls (% of population):
 - Missing countries: Liechtenstein, Switzerland.
 - Notes: the data gap was filled with data from 2012 for FYROM.

- Individuals with basic or above basic digital skills:
 - Missing countries: Liechtenstein, Serbia, Switzerland and Turkey.
- Percentage of households that switched their ISP:
 - Missing countries: Iceland, Liechtenstein, Luxembourg, Montenegro, Norway, Serbia, Switzerland and Turkey.

Missing data points for the supply side.

- NGA broadband coverage/availability (as a % of households)
 - Missing countries: Liechtenstein, Serbia and Turkey.
- Actual download speed of fixed broadband subscriptions (FTTx):
 - Missing countries: Croatia, FYROM, Iceland, Italy, Liechtenstein, Montenegro, Norway, Serbia, Switzerland, and Turkey.
- Monthly price of Internet Access + Fixed Telephony bundles (> 30 Mbps):
 - Missing countries: Montenegro, Turkey Serbia.
- Monthly price of standalone Internet access (> 30 Mbps):
 - Missing countries: Montenegro, Serbia.
- Number of ISPs covering at least 90% of the market:
 - Missing countries: Serbia.
- New entrants' share in fixed broadband subscriptions:
 - Missing countries: Iceland, Liechtenstein, Norway, Serbia and Turkey.

The study team used estimation techniques to fill in the remaining data gaps to be able to carry out the cluster analysis. Among the different possible methodologies, it was decided to fill in the gaps with the median value for each indicator, i.e. the numerical value separating the higher and lower half of the data population. This solution was adopted as the median is the most resistant statistic, supporting the robustness of the results of the cluster analysis.

The resulting dataset was then used for the cluster analysis, the results of which are presented in the next chapter.

5.1.4 Cluster analysis

The data set of eight indicators for the demand side and of six indicators for the supply side was used to perform the cluster analysis. The cluster analysis was performed for the demand and the supply side separately, at first. In a second step, the two sets of clusters were scored and plotted, in order to link the demand and supply side, and to identify clusters of countries for the selection of four countries for the qualitative and quantitative research.

The cluster analysis is based on statistical analysis and on k-means clustering. Different algorithms were used, in order to identify the optimal number of clusters.

Given the lack of data availability for some countries, it was decided not to include them in the cluster analysis for either the demand or the supply side. After some attempts, it became clear to the study team that the use of estimations for all or almost all the indicators for those counties would create artificial 'median' countries and lead to internally heterogeneous clusters. It was thus decided to leave out of the cluster analysis Liechtenstein, Serbia, Switzerland and Turkey.

Figure 5-1 shows the dendrogram for this dataset, the heatmap, the Minimum Sum-of-Squares Clustering (MSSC), and the silhouette plot, all for fixed Internet demand. Based on the Minimum Sum-of-Squares Clustering (MSSC) method the optimal amount of clusters for this dataset is eight.

Figure 5-1: Clusters for fixed Internet demand

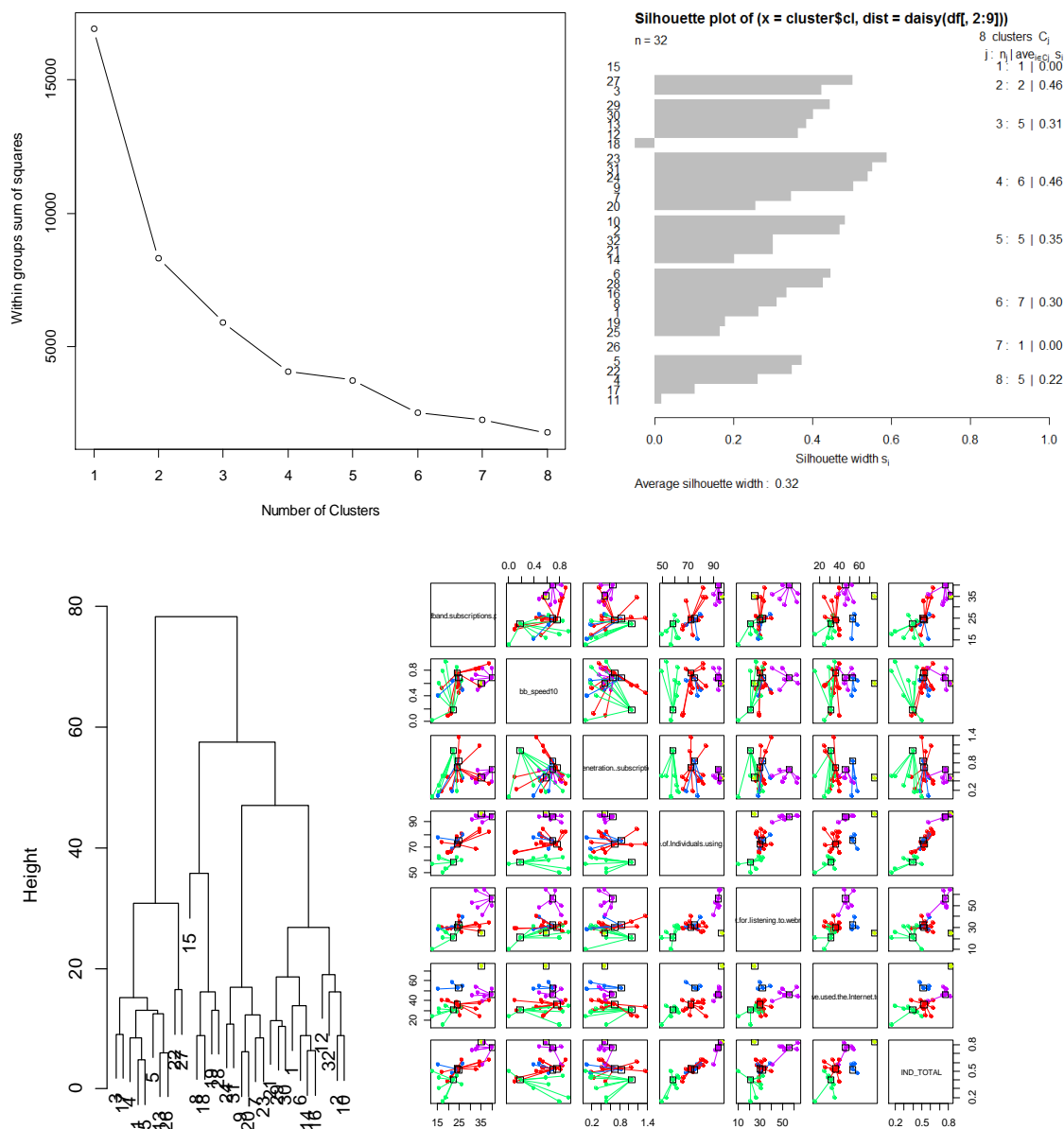
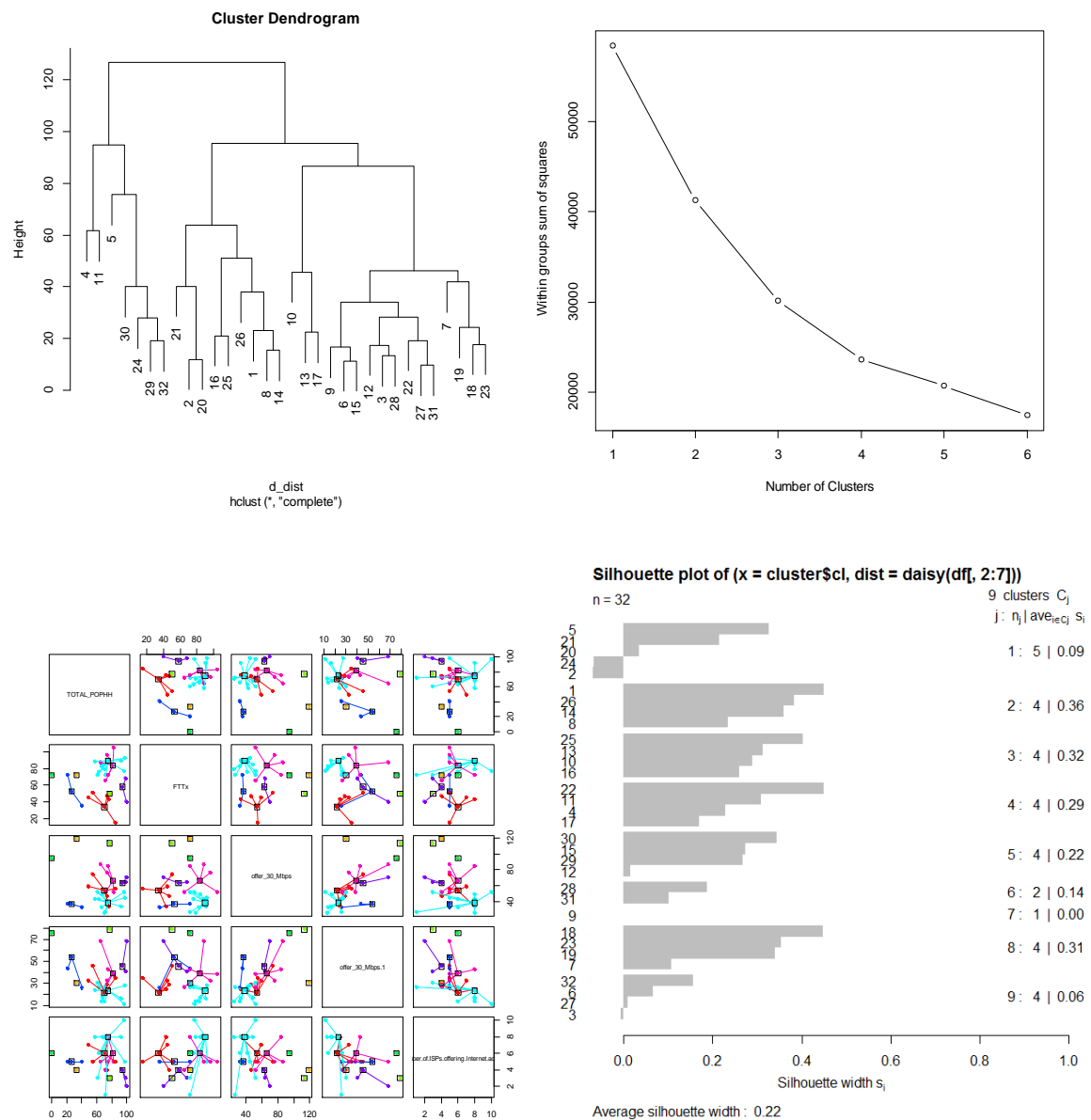


Figure 5-2 shows the dendrogram for this dataset, the heatmap, the Minimum Sum-of-Squares Clustering (MSSC), and the silhouette plot, all for fixed Internet demand. Based on the Affinity Propagation (AP) method the optimal amount of clusters for this dataset is nine.

Figure 5-2: Clusters for fixed Internet supply



In order to be able to compare the results from the cluster analysis of the demand and the supply side, the study team attributed a score to the average values of each indicator in each of the clusters. A ranking from very high to very low was created, as shown in the table below.

Table 5-3: Cluster scoring¹²⁵

Percentile	Label	Score
1: 0 -..%	Very Low	1
2: .. -..%	Low	2
3: .. -..%	Low to Medium	3
4: .. -..%	Medium	4
5: .. -..%	Medium to High	5
6: .. -..%	High	6
7: .. - 100%	Very High	7

Scores were attributed to each cluster for both demand and supply on the basis of the percentile distribution of the average values of each indicator across the clusters. Seven percentile categories were used. In practice, a score (and the corresponding label) was assigned to each indicator of each cluster based on the position of the cluster's average value of the indicator within the percentile distribution across all countries.

The tables below show the percentile distribution, the average per indicator and the corresponding scores and labels used for the demand and supply clusters.

¹²⁵ Note that an inverse scoring was used for the two price indicators for the supply side (i.e. monthly price of standalone internet access and bundles), whereby a high price leads to a lowered score and a low price to a higher score.

Table 5-4: Percentile distribution and scoring used for the demand clusters

Percentile		Demand indicators							Scores and labels	
Distribution	Fixed (wired)-broadband subscriptions per 100 inhabitants	Share of fixed broadband subscriptions >= 10 Mbps	Double play and triple play penetration	Percentage of Individuals using the Internet	Individuals using the Internet for listening to web radio/watching web television	Individuals using the Internet to make phone calls	Individuals with basic or above basic digital skills	Percentage of households that switched their ISP	Score	Category
14.29%	17.2	40.0	6.5	60.7	26.0	28.4	38.7	30.4	1	Very Low
28.57%	21.9	50.5	10.0	66.6	29.0	32.0	47.3	38.0	2	Low
42.86%	24.4	57.2	13.3	72.7	30.3	35.3	51.7	41.0	3	Low to Medium
57.14%	26.1	64.0	13.3	78.1	32.0	39.7	56.0	47.0	4	Medium
71.43%	32.9	74.1	16.2	82.4	35.6	45.1	60.8	52.0	5	Medium to High
85.71%	35.5	83.2	39.7	93.9	49.1	52.6	75.8	53.5	6	High
100.00%	40.2	94.6	55.1	96.5	64.0	75.0	83.4	61.0	7	Very High

Table 5-5: Percentile distribution and scoring used for the supply clusters

Percentile	Supply indicators						Scores and labels			
Distribution	NGA broadband coverage/availability (as a % of households)	Actual download speed of fixed broadband subscriptions, FTTx	Monthly price of Internet Access + Fixed Telephony bundles, offer_30_Mbps	Monthly price of standalone Internet access, offer_30_Mbps	Number of ISPs offering Internet access	New entrants' share in fixed broadband subscriptions	Score	Category	Inverted score	Category
14.29%	36.6	43.9	35.7	17.3	3.4	36.8	1	Very Low	7	Very Low
28.57%	60.2	52.5	39.8	23.0	4.9	43.7	2	Low	6	Low
42.86%	68.4	71.9	44.5	26.9	5.0	52.0	3	Low to Medium	5	Low to Medium
57.14%	73.9	71.9	47.4	28.0	5.7	56.5	4	Medium	4	Medium
71.43%	77.7	82.6	56.9	33.9	7.1	60.2	5	Medium to High	3	Medium to High
85.71%	93.3	89.0	64.5	41.5	8.0	66.0	6	High	2	High
100.00%	100.0	105.0	86.2	64.7	10.0	76.5	7	Very High	1	Very High

The results obtained allowed the study team to assign an overall score to each cluster and to order the clusters (and the countries) on the two axes of demand and supply and thus to plot the categories. The resulting chart reveals the final four clusters that combine the two dimensions of demand and supply.

The study team decided to attribute the scores and the corresponding labels based on the clusters' average distributions rather than on the distributions of the countries' actual values for representativeness reasons. The basic assumption (and the rationale for performing a cluster analysis in the first place) is that each country is more similar to the others belonging to the same clusters than to any other one in the set. Therefore, comparing the average values per cluster allows *de facto* comparing each cluster with the others on the basis of the same framework. The scoring exercise was performed attributing the same weight to all indicators (i.e. no weighting system was adopted). This was decided in order to minimise the 'processing' of data, sticking to the original data set and avoiding introducing 'noise' in the exercise that would make the results less meaningful.

The upper right quadrant is characterised by high scores for both demand and supply. The countries in this quadrant can be considered as 'early adopters'.

The lower left quadrant is characterised by low scores for both demand and supply. The countries in this quadrant can be considered as 'late adopters'.

The remaining two quadrants are mixed in terms of demand and supply. On the upper left of the plot is the cluster of countries with higher scores on supply but low scores on demand.

Finally, the lower right quadrant represents countries with higher demand scores and supply values lower than average or close to the overall average.

5.2 Focus group methodology

5.2.1 Definition

"Focus groups collect qualitative data from homogeneous people in a group situation through a focused discussion." (Krueger & Casey, 2009: 15)¹²⁶. Similar to individual in-depth interviews, focus groups offer the opportunity to explore participants' opinions and attitudes within their concrete social situation. However, they show some specific advantages as compared to individual in-depth interviews. In particular, the interaction of participants leads to (1) the stimulation of ideas and concepts, (2) opportunities to observe interaction directly, (3) potentially new ideas on the dynamics of attitudes and opinions such as how they are formed and influenced within a group setting, (4) more spontaneity and candour and (5) more emotions. Furthermore, focus group discussions are more economical as they generate a larger number of insights more effectively than

¹²⁶ Krueger, R. A. & Casey, M. A. (2009). Focus Groups: A Practical Guide for Applied Research (4th ed.). London: Sage.

individual in-depth interviews. All these points render them well suited to providing a closer understanding of choice processes (Wynberg & O'Brien, 1993)¹²⁷.

More concretely, these characteristics of focus group discussions echo the specific aims set for the qualitative research. The stimulation of ideas and concepts through interaction supported us in exploring significant cultural and social differences between test areas and generate insights into consumers' conceptualisation of and attitudes to different aspects of network neutrality (e.g. performance guarantees, limited data volume). The search for the drivers of these attitudes has been aided by the candour, spontaneity and potential to retrieve new ideas from focus group discussions. Equally, we were likely to learn more about the most decisive attributes of ISP choice and in less time, which using constant comparison¹²⁸ yielded useful insights for further policy analysis, but also helped considerably to keep the tight schedule of the project.

5.2.2 Focus group composition and sampling

The research outcomes of focus group discussions depend to a large extent on the sampling and recruitment processes. As samples should reflect studies' purposes, participants should be selected in correspondence with the research objectives (Krueger & Casey 2009). Therefore, the recruitment procedure for focus group discussions is not aiming for representativeness, and in fact ought to reflect the purpose of the study and enable the researcher to explore behaviour and thoughts as well as to compare scientific with everyday explanations (Calder 1977)¹²⁹. However, it's important to pay attention to the composition of each individual focus group, as intra-group homogeneity is crucial for the success of the discussion (Krueger & Casey 2009).

It is commonly agreed that between 8 and 12 participants per group work best in a focus group setting in order for it to be productive (e.g. Krueger & Casey 2009). It should be noted though that for particularly complex tasks or topics, a smaller number of participants appears recommendable. The literature also agrees that theoretical saturation rather than a pre-set, finite number of discussions should dictate how many groups are conducted as part of the research (Krueger & Casey 2009).

¹²⁷ Wynberg, R., & O'Brien, S. (1993): Adding Quality to Quantity - An Integrated Approach to Research. In ESOMAR (Ed.), Seminar on Qualitative Research: A Critical Review of Methods and Applications, 109-116, Rome.

¹²⁸ Constant comparison is a qualitative data analysis technique used in grounded theory-based research efforts. It implies that the data is searched for any concept identified in the analysis of a text chunk, e.g. a part of a focus group transcript. The process of constantly searching and comparing similar/contrasting concepts, and of grouping similar concepts, allows a researcher to integrate data analysis with theory building. Groups of similar concepts constitute the basis for generating theories. This procedure is therefore drastically different from research approaches that first state hypotheses (a theory) and then assess available data whether a hypothesis may be verified or falsified. Onwuegbuzie et al. discuss constant comparison as a suited technique for the analysis of focus groups "[...] especially when there are multiple focus groups within the same study, which, as noted previously, allows the focus group researcher to assess saturation in general and across-group saturation in particular." (Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009): A Qualitative Framework for Collecting and Analysing Data in Focus Group Research. International Journal of Qualitative Methods, 8(3)).

¹²⁹ Calder, B. J. (1977): Focus Groups and the Nature of Qualitative Marketing Research. Journal of Marketing Research (JMR), 14(3), 353-364.

In correspondence with the research objectives, we sampled the participants for the planned focus group from the parts of the population of each test area that have Internet access at their homes. The evidence reviewed for the focus groups showed clearly that participants – even if they saw themselves as Internet-savvy and interested in Internet policy issues – had very limited actual knowledge of how the Internet works, nor of network neutrality. Thus it is reasonable to assume that people who have no Internet access at home or otherwise are unlikely to be able contribute much to the research questions at hand. Furthermore, the subject matter would bear little importance to them from their perspective.

Therefore, all participants have to have Internet access at home and use it at least twice a month, and they must have been involved in the decision regarding the choice of their Internet service provider. In addition to this we ensured that none of the participants are related to journalism the telecommunications market or market research. To achieve this we used test area specific screeners for their recruitment.

5.2.3 Focus group delivery and discussion guide development

The duration of a focus group discussion depends to some extent on the complexity of the topic and the level of engagement of the participants. However one would normally expect a length ranging between 90 and 150 minutes (Krueger & Casey 2009).

A discussion guide usually steers the conversation, and they need to strike a balance between guidance to retrieve data with relevance to the research objectives and keeping the discussions as open as possible to be potentially “surprised” by new themes or concepts that the participants come up with. Such “surprises” would be very unlikely using a fully standardised set of questions.

Nevertheless, some degree of standardisation is also necessary in order to compare the results across the groups. Consequently, a discussion guide usually consists of broad themes and defines their sequence in each discussion, but this has to be reflected upon and potentially adapted over the course of the focus group research in order to accommodate emergent themes.

Although developed for in-depth interviews, McCracken’s (1988)¹³⁰ recommendations might assist with the design of discussion guides for focus groups. He recommends initiating each discussion with a set of questions relating to the participants’ backgrounds. The researcher should proceed with “grand tour” questions, defining broad and open questions and prompting the participants to draw on a wide range of personal experiences. Naturally, these questions should already address the research objective at hand, providing initial and non-leading guidance to the discussion. Following this open part of the discussion, McCracken recommends asking more specific questions relating to the issues that emerge that have a direct bearing on the research objectives or relate to specific prompts. Such a “funnel” approach from general, open questions to specific ones - possibly responding to a particular prompt - is

¹³⁰ McCracken, G. (1988): *The Long Interview*. London: Sage.

able to yield sufficient data while providing participants with a “natural” conversation experience (Krueger & Casey 2009).

5.2.4 Our approach to the focus groups

In order to compose the focus groups we recruited participants largely based on their Internet usage patterns, which reflects the study’s purpose and should ensure that none of the participants feels either misrepresented or overwhelmed by the knowledge of the other participants, and can therefore express himself/herself more freely. So that we are able to gain a broad understanding of the motives, terminology and tone of the language, we strived for a good mixture of gender, age groups and educational background within each of the groups.

We held focus group discussions with 7 to 10 participants in each group, as in our view this number reflected a good trade-off between generating a large number of insights in the limited time available and the complexity of the topic at hand. For each group, we recruited 10 participants. Originally, we had foreseen a maximum no-show rate of 20 percent, however it turned out that for two of the groups in Sweden only 7 participants showed up. The average number of participants across the twelve focus groups in the four test areas was 8.5, with 102 participants in total. On average, the smallest groups were in Sweden and the largest in the Czech Republic. No differences in the quality of the results were noticeable as a result of the minor differences in group size. A full list of participants partaking in the focus groups in the test areas is featured in the annex to this report. It shows the mix of genders, income and education levels as well as further background information about the participants. As intended, the first group in each test area was composed solely of ‘expert’ consumers, whilst the following two groups featured a mix across all levels of Internet expertise with the majority of participants having little or medium levels of expertise. In line with expectations, the ‘experts’ tended to be somewhat more capable of describing how the Internet works, and tended to have more knowledge about the specifics of their Internet access contracts. Some of the experts also showed a relatively good comprehension of the concept of network neutrality and of deviations from this principle. However, as was the case in the results of the other qualitative studies discussed in the above, even they often seemed overwhelmed by the subject and were only rarely familiar with it prior to the focus group discussion. Otherwise, differences between the two kinds of groups were largely negligible and were not analysed further unless they were relevant to the research objectives of the study. Whenever this was the case, we have highlighted that our results relate to a specific group or even a specific participant, who was in some way exceptional.

As recommended in the literature, we originally planned for each focus group to last approximately 120 minutes. We deemed this sufficient to yield various insights into each research objective, but short enough to avoid participant fatigue. We already elaborated in Section 2.2.3 that we followed a “funnel” approach for the discussion guide, moving from general and open questions to specific ones discussing network neutrality. The full discussion guide in English as approved by BEREC as well as all translations are reproduced in the annex to this report.

It should be noted that after some internal discussion amongst the project team and the moderators in the test areas, we decided to extend the length of each group to 150 minutes, which is still within the recommended timeframe, and gave participants more time to elaborate on the difficult subject of network neutrality. Consequently the majority of the extension was given to this subject in the discussion guide.

All moderators were briefed extensively by the project team members Dr. Anna Schneider and Dr. René Arnold. First, there was telephone briefing that lasted for around 90 minutes, and each moderator was also briefed before the first focus group for about an hour. Before the two subsequent groups, there was a debriefing on the first group, which provided further input and clarification for the following two groups. In all four test areas the same moderator conducted all three focus groups, and only slight amendments were made to the discussion guide between the first, second and third group. All these changes are documented in this report in the results of the test areas. It should be mentioned here that in Sweden the handouts were rephrased slightly with the support of PTS for the second and third groups due to the translation being somewhat difficult to understand¹³¹. All other handouts were sent to the local NRAs prior to conducting the focus groups in the remaining three test areas, and the translations were accepted with only very minor changes. We have not identified that the change of handouts in Sweden after the first discussion group had any impact other than that the participants no longer mentioned that the use of language and terminology seemed unusual to them. Nevertheless, we wanted to document the issue here, so in the annex we have presented the Swedish handouts for the first group and then the ones used in the following two groups.

Overall, it is our impression that the focus groups conducted as part of this project have yielded much more in-depth results about consumers' understanding and conceptualisation of network neutrality and how the Internet works. We also achieved a good coverage of all the other themes intended for these focus groups in the discussion guide. In particular the topic of the role of the Internet in consumers' lives provides additional insights to those in the existing literature.

As expected, three groups were sufficient to reach theoretical saturation in each of the test areas.

In sum, the approach used for the focus group discussions in the study followed the recommendation commonly found in the literature regarding composition and sampling of the focus groups, length of the focus group discussions and the development of the discussion guide. All methodological aims were met apart from two groups that featured on 7 instead of the intended 8 to 10 participants. However an analysis of the results of these two groups did not yield any differences compared to the other groups. Furthermore, it should be noted that due to the complexity of the subject, we decided to extend the length of each group from 120 minutes to 150 minutes in order to give significantly more room to the major theme of network neutrality. All moderators were

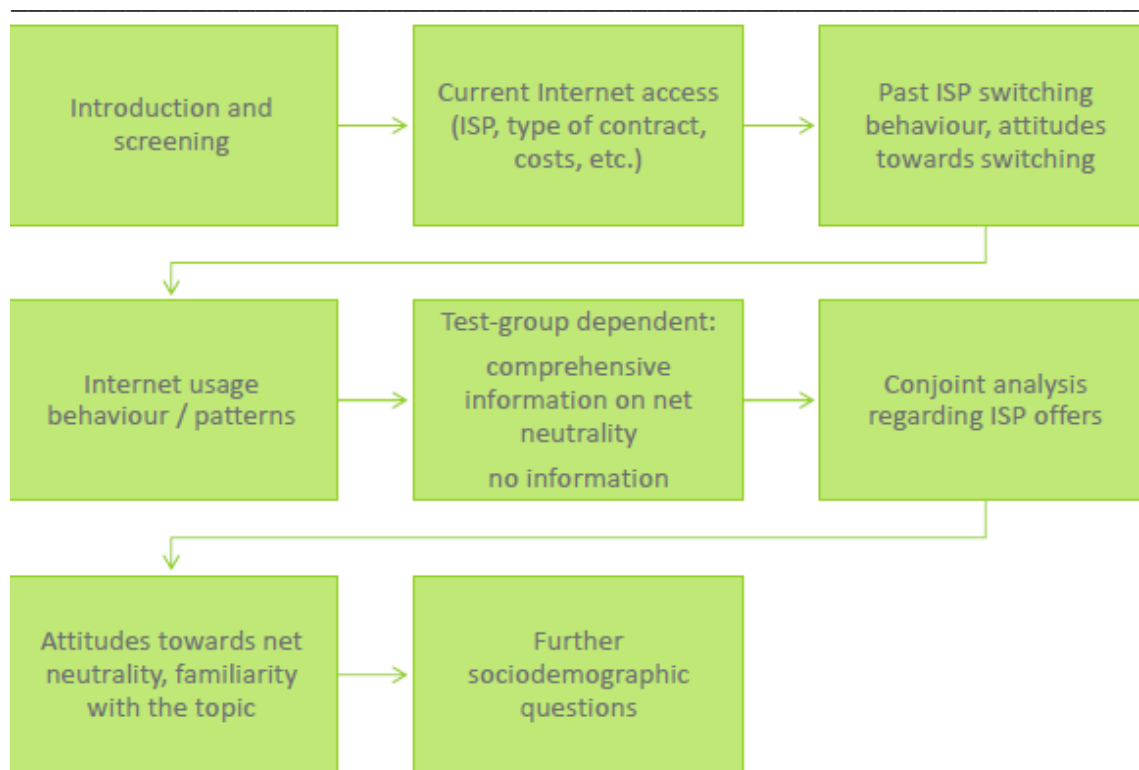
131 A full explanation and both handouts are reproduced in the Annex.

briefed and debriefed extensively, and theoretical saturation was achieved in all test areas.

5.3 Survey and conjoint choice methodology

For the quantitative research, we conducted a survey representative for the population with Internet access at home in each of the selected test areas. Respondents should be familiar with, and informed about, the product of interest (stationary Internet access at home) to give valid information about usage experience, product preferences, and product-related attitudes. Thus, the population of consumers having Internet access at home rather than the normal population was subject to this survey. The sections of the survey concurred with the research objectives defined in Section 2.3. Figure 5-3 illustrates the overall layout of the survey questionnaire and how individual sections map onto the relevant research objectives. The following sections describe the contents of the survey questionnaire in more depth (the complete questionnaire can be found in the annex). The main part of the discussion of quantitative methods focusses on the conjoint analysis explaining the differences between ACA and CBC analysis. Based on the evidence presented in the above, we recommended to employ an ACA approach. In the following discussion, we elaborate on the specific advantages of this approach in light of the overarching research objective. Despite some convincing advantages, an ACA approach also shows some limited shortcomings as compared to a CBC approach in particular as regards the identification of respondents' willingness-to-pay.

Figure 5-3: Preliminary outline of the survey questionnaire



Source: YouGov

The first sections of the questionnaire investigated the respondents' individual characteristics and Internet usage patterns. The final two sections asked questions about network neutrality and relevant socio-demographic data. The most important section of the questionnaire was the choice experiment employing a conjoint approach. Conjoint analysis was the method of choice to answer the overarching research objective of the study. We used it to quantify the impact of network neutrality on consumers' ISP choices taking into account various other Internet Access Service attributes that can influence these.

In Section 2.3.4, we have elaborated on how we intend to approach the question of market efficiency described in the Tender Specs. We aim to gain a full understanding of (1) whether ISP's offerings meet the "ideal" demands of consumers in the specific test areas, (2) whether ISP's offerings meet the (un)informed choices of consumers in the specific test areas and (3) how rational consumers' (un)informed choices are in the test areas. This reflects in the layout of the questionnaire as outlined in Figure 5-3 as well as in the planned set-up of the conjoint choice experiment as such. To capture the influence that our information package may have and also to control for potential framing effects, we ran a between-subjects design two group comparison i.e. one group of respondents went through the choice exercise with prior information using our information package, a second group of respondents in each test area went through the choice task without an information package.

The results of the analysis were used to identify key differences in decision behaviour and choice criteria between categories of consumers in each test area as well as across test areas. In combination with the results of respondents' stated usage patterns, we were able to identify an "ideal" choice for each respondent based on the options offered in each test area. Based on this information, we were able to quantify the gap between this "ideal" Internet Access Service offering and respondents' actual choices. The analysis was supplemented by describing Internet users in terms of current Internet access, Internet usage patterns and attitude towards ISP switching.

5.3.1 Sampling frame and representativeness of the sample

To ensure an efficient sampling, the quantitative interviews were conducted as online surveys, employing online access panels in the test areas. For all test areas, surveys were programmed using the same software system and hosted on the same server to prevent influences due to technical differences in the surveys.

We saw the requirement to describe respondents along demographic attributes to allow the profiling of subgroups that differ with respect to their preferences. Extending this thought, samples were supposed to be representative for the intended target group (population with Internet access at their homes) along criteria that are comparable across test areas and are independent of local market conditions. Therefore, the recruited samples were representative for Internet users in the test areas as regards age, gender and region/location. Representativeness was achieved by defining quotas for these criteria that reflect the respective distributions in the test areas. Efficiency of

respondent recruitment was enhanced by utilising the fact that this information has been queried from any participant in online access panels upon registration. Further demographic information has been queried in the surveys as well, but not be used for quotas.

With respect to the feasibility of online surveys across all possible test areas, some limitations exist. The following table shows, in which countries surveys were feasible, and with which sample size. To allow for the study design and analysis in this study, we drew a sample of $n=1,000$ per test area.

Table 5-6: Feasibility of online interviews

Country		Online interviews feasible	Maximum sample size (capped at n=1,000)
AT	AUSTRIA	feasible	n=1,000
BE	BELGIUM	feasible	n=1,000
BUL	BULGARIA	feasible	n=1,000
CH	SWITZERLAND	feasible	n=1,000
CYP	CYPRUS	not feasible	n.a.
CZ	CZECH REPUBLIC	feasible	n=1,000
DK	DENMARK	feasible	n=1,000
ES	SPAIN	feasible	n=1,000
EST	ESTONIA	feasible	n=1,000
FIN	FINLAND	feasible	n=1,000
FR	FRANCE	feasible	n=1,000
GER	GERMANY	feasible	n=1,000
GRE	GREECE	feasible	n=1,000
HR	CROATIA	feasible	n=1,000
HU	HUNGARY	feasible	n=1,000
IRL	IRELAND	feasible	n=1,000
ISL	ICELAND	feasible	n=1,000
IT	ITALY	feasible	n=1,000
LAT	LATVIA	feasible	n=1,000
LIE	LIECHTENSTEIN	not feasible	n.a.
LTU	LITHUANIA	feasible	n=1,000
LUX	LUXEMBOURG	not feasible	n.a.
MKD	MACEDONIA	not feasible	n.a.
MLT	MALTA	feasible	n=500
MNE	MONTENEGRO	not feasible	n.a.
NL	THE NETHERLANDS	feasible	n=1,000
NOR	NORWAY	feasible	n=1,000
PL	POLAND	feasible	n=1,000
POR	PORTUGAL	feasible	n=1,000
RO	ROMANIA	feasible	n=1,000
SK	SLOVAK REPUBLIC	feasible	n=1,000
SLO	SLOVENIA	feasible	n=1,000
SRB	SERBIA	feasible	n=1,000
SWE	SWEDEN	feasible	n=1,000
TR	TURKEY	feasible	n=1,000
UK	UNITED KINGDOM	feasible	n=1,000

5.3.2 Methodological background to conjoint analysis

The key characteristic of conjoint analysis is that respondents choose between product concepts in “trade-off” situations. Thus, at the core of the method stand respondents’ answers to choice questions between different potential concepts. Product concepts are defined as bundles of product attributes (e.g. price, brand and access speed) which respondents need to consider as a whole instead of evaluating characteristics one at a time. This requires respondents to evaluate the benefits and drawbacks of each concept and decide which one offers the best trade-off (e.g. in terms of value for money). Because this kind of trade-off consideration also takes place in the real marketplace, conjoint analysis mirrors real decision behaviour more closely than research approaches, which require the evaluation of characteristics one at a time. Each respondent answers a number of choice questions sufficient for indirect inference of his / her preferences. The result of a conjoint analysis is expressed in the weight each respondent puts on each product attributes and the “value” or “utility” of each attribute level (e.g. each brand) within that product attribute.

In studies addressing pricing, conjoint analysis has additional advantages over a direct measurement of price preference. Direct questions often lead to an unrealistically high price awareness. Indirect inquiry using conjoint analysis ensures that the value of a product concept is considered in conjunction with price when making a decision. Additionally, direct questions are limited to one product at a time. Interactions between several products in a portfolio (e.g. cannibalisation effects) as well as the influence of competitor offers cannot be estimated.

The advantages compared to direct questioning apply equally to the influence of network neutrality. Whilst asking direct questions regarding network neutrality issues is likely to create strong awareness of the issue as the evidence gathered in the literature review indicates, combining network neutrality with other attributes that are known to affect ISP choice provides a much more realistic impression of network neutrality’s actual influence on consumers’ choices.

When talking about conjoint analysis, some specific terminology is used. *Product attributes* are characteristics of a product (e.g. brand, price, access speed). Each attribute is comprised of different *levels* the attribute can take (e.g. price levels €10 / €25 / €42; brand France Telecom / Vodafone / BT; access speed 5Mbit/s / 20Mbit/s / 50Mbit/s). Typically, a product concept is defined as a random combination of levels, one of each attribute. Depending on the product category, and the specific research design, derivations from this principle are possible e.g. some combinations may be impossible such as maximum speed above 100 Mbit/s and mobile access or an IPTV bundle with less than 6 Mbit/s. Furthermore, we considered which product attributes and levels were actually available in each test area based on the results of the analysis of the electronic communications market environment in the qualitative research.

In the field of conjoint analysis, several methodological approaches exist. They differ as regards two key characteristics, namely the form of the choice question and the utilisation of additional questions to derive preferences. With respect to the form of the

choice question, one can distinguish between *discrete choice questions* and *rating-based questions*. In discrete choice questions respondents choose between two or more possible offers to determine their preferences. Rating-based questions require respondents to rate product concepts on a scale. With respect to the utilisation of additional questions, some methods derive preferences from choices or ratings alone, while others take answers to further questions into account as well.

Taking into account commonly used conjoint analysis methods, three options appear to be useful to fulfil the third and fourth research objective of the quantitative research:

- **Choice Based Conjoint Analysis (CBC):** This method is based on discrete choices and does not utilise additional questions to derive preferences. From a selection of two or more offers, respondents choose the most appealing one / the one they would choose in reality. Concepts are usually shown as *full profile* random concepts, i.e. each concept includes a level from each attribute. CBC can also include a *non-option*, which allows a respondent to answer that they would choose neither of the product offers shown. It is also possible to use partial profile concepts in CBC, where each choice between concepts only includes a subset of the attributes being researched.
- **Adaptive Conjoint Analysis (ACA):** This method is based on rating questions and utilises additional questions to derive preferences. Respondents are shown two concepts per question and indicate on a rating scale which they would prefer and to which degree. Concepts are only shown in partial profile, unless the total number of attributes does not exceed five. Before being shown rating questions, respondents answer direct questions regarding attribute importance and attractiveness of attribute levels. Those are used to *adapt* the concepts shown in the ratings. Instead of showing two random concepts, levels are combined in a way that forces respondents to *think thoroughly* about trade-offs by focusing on levels that base on the results of the preceding questions and therefore omit obviously unattractive levels within attributes.
- **Adaptive Choice Based Conjoint Analysis (ACBC):** This method is based on discrete choices and utilises additional questions to derive preferences. Choice questions in an ACBC are CBC-like. Beforehand, respondents answer a question in which they build their own optimal product (also called *build-your-own*, *BYO*) from available attributes and levels. The method also employs several questions in which they indicate whether they would at all consider a certain attribute level to identify “must-have” levels and “unacceptable” levels. Similar to ACA, this information is used to adapt choice tasks to force respondents to make more difficult trade-offs.

Of the methods outlined above, CBC is the most commonly used. ACA is a predecessor of CBC, while ACBC is a relatively new derivate of CBC. We recommended to use either an ACA or a CBC for the study at hand. While, in theory, ACBC appears to be compelling by combining features from both methods, in practice, results do not differ substantially from CBC. Furthermore, ACBC considerably increases interview length. As we used the other sections of the survey questionnaire to establish respondents'

personal characteristics and Internet usage patterns as well as other questions to supplement the conjoint part, an unnecessary lengthening of the questionnaire was likely to exhaust respondents. Consequently, although generally applicable, for the purpose of the study we dismissed ACBC and discussed the following specific advantages and disadvantages of CBC as compared to ACA in light of the research objective to be achieved in the study.

First and foremost, CBC's popularity stems from its ability to capture realistic choice decisions, in particular with respect to FMCG products where respondents are commonly faced with a number of products of the same category next to each other on the supermarket shelf. In theory, consumers may be able to do the same with Internet Access Service offerings, in practice, however, such a choice situation appears somehow unrealistic for ISP choice. Another advantage of this method relates to the relatively small space it requires in the questionnaire leaving more space to ask additional questions e.g. on personal characteristics or Internet usage patterns. Recent methodological advancements also allow more complex designs than ACA. It should be noted that both CBC and ACA allow to estimate respondents' specific willingness-to-pay for products as well as individual attributes/levels, which is a strongly desired research outcome. However, estimates stemming from CBC tend to be more reliable as regards this research outcome of the conjoint analysis. Therefore, its results can also be used to predict market scenarios. However, CBC cannot analyse as many attributes as ACA due to the risk of overwhelming respondents as each choice task commonly includes all attributes. Thus, in sum, CBC is well-suited to predict prices, actual consumer choices and market shares, but has significant shortcomings as regards estimating the relative attractiveness of attributes that in the specific choice decision appears to bear little relevance, but that can have subtle influence on consumers' choice.

ACA is particularly strong in identifying these product attributes and their actual impact on consumers' choices. The evidence presented as regards consumers' existing knowledge about and comprehension of the issues revolving around network neutrality so far in this project indicate that network neutrality could be exactly such an attribute. Whilst the existing conjoint analysis research tentatively indicates a minor relevance of network neutrality in consumers ISP choices, the qualitative research on the issue points to the fact that consumers take this subject very seriously as soon as they understand what it may mean to them. The latter papers also indicate that consumers may use network neutrality more as a general precursor for their decision-making than an attribute to consider in the following choice of a specific Internet Access Service offering. The comparisons of attractiveness of different offerings, an ACA forces the respondent to perform, in conjunction with the information at prior stages of the questionnaire provide reliable insights regardless of whether an attribute is a primary decision driver or not. Furthermore, more attributes can be analysed in an ACA than is feasible in a CBC. Given the complex structure of Internet Access Service offering, this may also be considered an important advantage for the planned study. Furthermore, ACA surveys are more engaging for respondents as the method „adapts“ to the answers a respondent gives and forces increasingly difficult trade-offs. Those advantages come at the cost that ACA requires more space in the questionnaire as it combines decision tasks between possible offers with additional questions regarding

attractiveness and decision importance. Decision tasks are less realistic than CBC tasks as only a selection of all possible attributes is shown in each task and decisions are not choices but instead scaled statements of preference. Price effects are underestimated, limiting the applicability to pricing research and predicting market shares. An analysis of respondents' willingness-to-pay appears still possible in ACA.

A compromise between a full profile CBC and an ACA would be a partial profile CBC. Partial profiles in CBC come with the advantage of being able to cover more attributes than full profile CBCs as processing of the information presented in each task is easier for respondents. As such, it would allow looking at a broader range of attributes relating to network neutrality than full profile CBC while still preventing respondent exhaustion due to survey length. However, pricing analyses are less feasible than with full profile CBC and the inclusion of a none-option is not recommended. Compared to ACA, partial profile CBC requires less room in the questionnaire but individual respondent data is less reliable, requiring a higher degree of data aggregation. Still, analyses of distinct segments of respondents would be feasible.

In sum, if the research objective of identifying the actual role of net in consumers' ISP choice is weighted heavier than identifying consumers' specific willingness-to-pay, and high reliability of data on the level of individual respondents is required, we recommend ACA. If high reliability of data on the level of distinct consumer segments is sufficient, we recommend partial profile CBC. Weighted vice versa, if willingness-to-pay is weighted heavier, CBC would have been the only valid option.

From the consultants' perspective, the cluster analysis and the focus groups have shown that network neutrality should be covered in a series of detailed attributes in the conjoint design. Section 5.3.3 provides information on specific attributes and levels considered. Covering these attributes, in addition to those stated as being generally important in ISP offers during the qualitative research, rules out the conduction of a full profile CBC due to complexity.

The choice between ACA and partial profile CBC was discussed in a workshop and decided in the inception meeting for the quantitative research. Agreement was found to go forth with an ACA approach. The following figures show the reasoning behind this.

Figure 5-4: Comparison of CBC and ACA

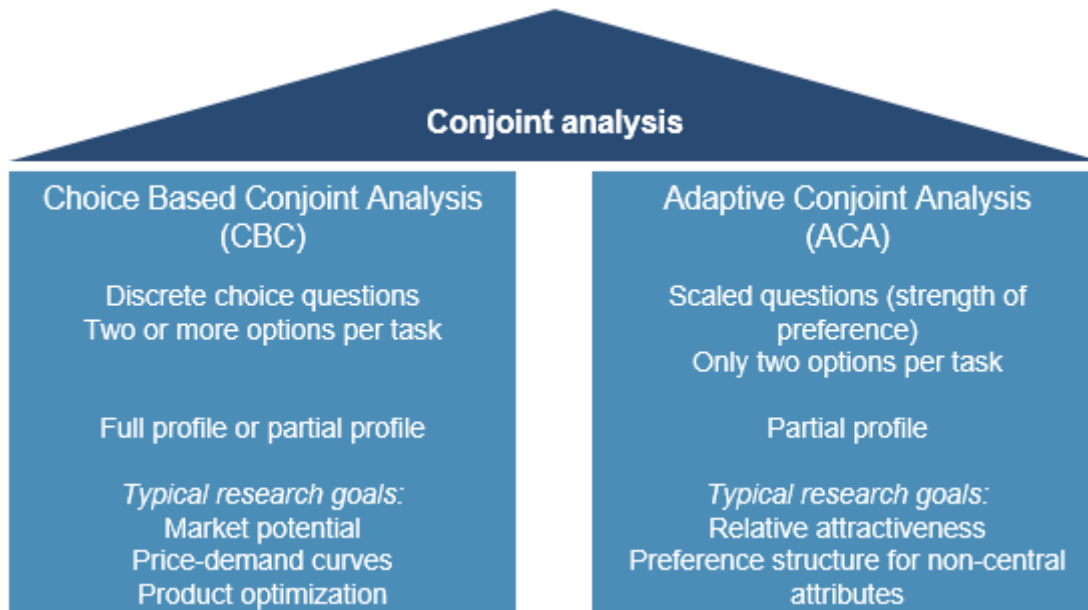


Figure 5-5: Advantages and drawbacks of different methodological approaches

Full profile CBC	Partial profile CBC	ACA
<ul style="list-style-type: none"> Strong insight into market potential and pricing effects 	<ul style="list-style-type: none"> Stronger insight into NN preferences than full profile CBC Can generate more information per task than ACA, thus requiring less time 	<ul style="list-style-type: none"> Strongest insight into NN preferences Highly reliable on individual level, allowing for smaller segments to be analysed
<ul style="list-style-type: none"> Not feasible due to number of attributes, would require significant reduction of number of NN attributes Low insight into NN preferences 	<ul style="list-style-type: none"> Lower reliability on individual level, limiting the analyses of small segments Not suited for accurate pricing analyses 	<ul style="list-style-type: none"> Generates less information per task than partial profile CBC, thus requiring more time Not suited for accurate pricing analyses

5.3.3 Conjoint attributes and comparability of test areas

In this section, we would like to discuss the methodological trade-offs especially concerning comparability of data across test areas. The Tender Specifications envision that the quantitative research performed in the quantitative research “produce[s] detailed figures allowing meaningful comparisons between test areas and between categories of respondents within each test area”, while they imply that on the other hand product attributes and levels in the conjoint tasks are to be individualised for each

of the test areas based on the work performed in the qualitative research. These two objectives constitute an obvious trade-off.

Full comparability of results across countries can only be ensured if attributes and levels are exactly identical in each of the test areas. However, certain country-related aspects can necessitate differences in the conjoint designs between test areas (e.g. brand, price levels and access speed). Otherwise, a realistic estimate of consumers' preference in each test area is hardly possible. We therefore recommend a methodology that accounts for this trade-off and enables some comparison across test areas whilst still using product attributes and levels to echo the individual characteristics of each test area:

- The number of attributes and the number of levels within each attribute need to be identical.
- Each attribute needs to represent the same aspect in each test area, e.g. the attribute *brand* needs to reflect different brands in each test area.
- Differences shall be accounted for only when current market structures require this. This applies primarily to price levels (different currencies) and brand (different ISPs per country).
- When differences are necessary, caution needs to be taken to not influence the study outcome, as the weight of an attribute depends on the range of levels it includes. When including a large range of levels (e.g. price levels) in test area A, but a much smaller range in test area B, the respective attribute will carry a much larger weight in test area A than in test area B. Therefore, levels need to be chosen carefully, based on previous insight in preference structures in the test areas.

Ensuring this kind of similarity allows a direct comparison of attribute importance across test areas as well as a comparison of the effect of different network neutrality-related attributes. However, an aggregated reporting that combines all test areas would not be statistically feasible unless attributes that have different levels across test areas are excluded from this overarching analysis.

As regards the attributes to be tested in addition to network neutrality, we took advantage of the knowledge gathered in the studies reviewed for this project. Thus, we considered ISP brand, price and access speed essential product attributes to be included in the conjoint analysis. As regards network neutrality, prime candidates for relevant attributes are data cap (with several amounts of data as levels) and speed reductions (with different reduced speeds as levels) and access restrictions (e.g. by time or day, regarding specific websites).

5.3.4 Impact of prior information on ISP choices

In this section we show how we intend to approach the question of electronic communication markets' efficiency in the research project by providing information

packages to one part of the sample of respondents in each test area. In particular, how prior unbiased information may impact consumers' choice or, validate some further methodological elaboration as before in selecting the conjoint approach and the product attributes / levels within it. There are two noteworthy options:

- **Within-subjects design:** A respondent answers the conjoint part once (pre-measurement), is then given information on network neutrality, and afterwards answers the conjoint part again (post-measurement).
- **Between-subjects design:** One group of respondents answers the conjoint part without receiving information on network neutrality, another group is given that information before answering the conjoint questions.

We intend to follow a **between-subjects design**. In a within-subjects design, several problems can cause differences between the results of pre- and post-measurement. These are likely to override the information package's effect on consumer choice. Furthermore, it has to be noted that conjoint analysis is subject to order effects. Even without receiving additional information between two conjoint survey parts, respondents are more informed and trained in the decisions tasks in the second part. In order to be statistically comparable, the two conjoint parts would have to be identical. Consequently, it seems likely that respondents would become suspicious that the information package had a specific purpose. This may render the results useless. Finally, integrating two conjoint parts in one interview increases interview length. This can trigger fatigue among respondents since conjoint questions can be perceived as repetitive if too many are asked.

5.3.5 Results of conjoint analysis

Primary results of conjoint analysis are (part-worth) utilities for attribute levels. These are calculated on respondent level and thus can be used for analyses of subgroups. Based on utilities it is possible to determine which levels of a single attribute are preferred to others, how important attributes are for purchase decisions (compared to each other), and how far the shortcomings of a product on one attribute can be compensated by improvements on other attributes. Moreover, conjoint analysis results allow us to calculate total utilities for any desired product concepts that consist of the investigated product attributes and characteristics. Furthermore, part-worth utilities allow us to derive a weight for each attribute, which reflects its importance in decision-making. Lastly, comparing different utilities enables us to predict choice-based behaviour in various decision-making situations.

Utilities themselves yield a measurement on a quite conceptional level and determine the primary output from an ACA approach.

A CBC approach would have reported results as simulations of choice behaviour. As the decision was taken to follow an ACA approach, the following explanations on simulations should be seen as an excursus.

By assessing the overall utility of different products it is possible to predict the proportion of respondents, who would actually choose a specific product (=preference share). The effect of other products that are available on the market on this share can be taken into account. For that purpose, available products are defined by using the attributes tested in the conjoint analysis. Thus, market simulations reflect the decision behaviour in a specific market situation (=market scenario). By comparing different scenarios it is possible to compare different propositions and market situations. Effects of decisions regarding product management on sales potential can be estimated. Compared to other survey methods market simulations are of high validity to predict real-world behaviour. Nevertheless there are restrictions due to variables that have effects on real-world decision behaviour but cannot be taken into account when using survey methods. Particularly the following variables cannot be reflected:

- Customers are not informed completely; not a transparent market.
- (Non-) availability of products with respect to different regions; dissimilar distribution.
- Awareness of brands and products, product life of products in the market.
- Effects of communication and distribution activities.

Due to this, market simulations do not estimate precise market shares. Above all, the value added by the analysis comes from comparing different market scenarios.

5.3.6 Utility estimation process

Part-worth utilities resulting from a conjoint analysis reflect the strength of preference for attribute levels and are statistically estimated from the answers respondents give. Estimation is based on the idea that every possible product concept carries an inherent utility or value to the respondent which can be calculated in numerical terms. This total utility allows us to compare any product concepts, made up from the attribute levels included in the analysis, in terms of relative attractiveness.

Each attribute level that is present in a concept contributes to the total utility of that concept. This contribution is reflected in the estimated part-worth utilities. Two analysis steps take place to arrive at part-worth utilities.

1. Each answer given by a respondent in a conjoint task is used to estimate a total utility for the product concepts shown in that task.
2. This total utility is used as a dependent variable in a statistical model that computes the relative influence of the attribute levels that made up these concepts.

The statistical model behind this is an additive function which assumes that the total utility of a product concept is the sum of the part-worth utilities of its attribute levels. In general form the model looks as follows:

$$y_k = \sum_{j=1}^J \sum_{m=1}^M b_{jm} \times x_{jm}$$

Where:

y_k : estimated total utility of product concept k

b_{jm} : part-worth utility for level m of attribute J

x_{jm} : 1 if product concept k attribute j is present as level m ; else 0

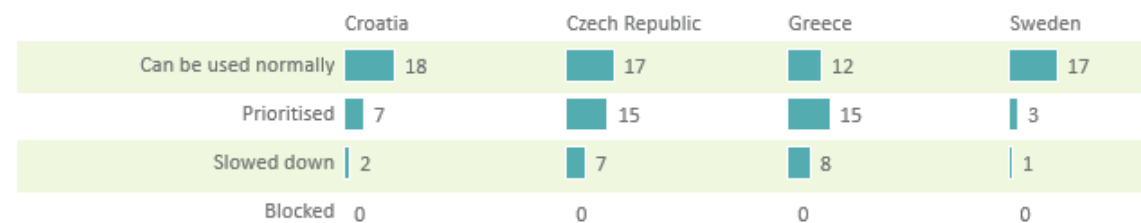
Part-worth utilities are calculated on the level of individual respondents. Following the additive rule, it is possible to compute the total utility of every imaginable product concept for each respondent, regardless of the specific combinations of attribute levels that were shown to a respondent throughout the survey, as long as each attribute level was shown sufficiently often to allow the above estimation to be computed reliably.

Regarding interpretation, it is important to keep in mind that part-worth utilities are arbitrary and their values do not carry an inherent meaning. Instead, they are to be interpreted in a relative fashion (e.g. level A is twice as attractive as level B). The baseline of this relative interpretation is the least attractive level per attribute. The following figures show an exemplary reporting of utilities.

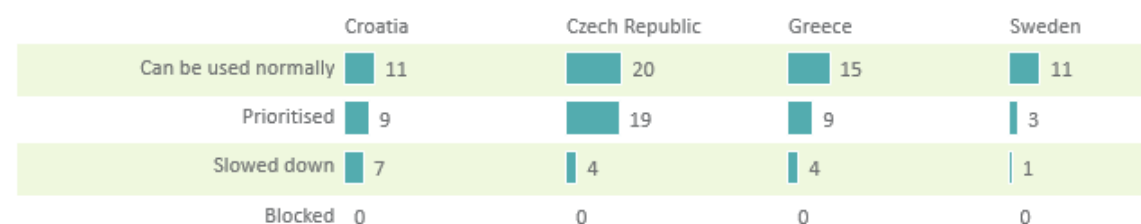
Figure 5-6: Exemplary part-worth utilities

Part-worth utilities of attribute levels

Access to video streaming



Access to VoIP services



Reading example: Using video streaming normally is more than twice as attractive to Croatian consumers as getting prioritised access when compared to the least attractive level which is blocked access. Overall, access to video streaming is more important to Croatian consumers than access to VoIP. Czech consumers, on the other hand, do not see much of a difference between normal and prioritised access to video streaming. In contrast to Croatians, they put slightly more importance on access to VoIP than to video streaming.

By comparing the part-worth utilities of attribute levels related to network neutrality to part-worth utilities of price levels it is possible to assess if and how far a deviation from network neutrality could be compensated by a change in price. If a deviation results in a lower utility, price would have to be lowered by an amount that equals the utility lost due to the deviation.

6 Focus Groups Results

6.1 Introduction

This chapter details the results of the focus groups in each of the test areas. The chapter is structured alphabetically starting with Croatia and ending with the report of the results from Sweden. Please note that at this stage we do not draw any comparisons between the four test areas; this is done in the following chapter. Each country is structured along the themes in the discussion guide reproduced in the annex to this report. A summary of key insights is provided at the end of the report of each country.

6.2 Results of the focus groups: Croatia

6.2.1 Ideas associated with the word Internet

For Croatian participants, the Internet is a source of information, communication and entertainment. It is perceived as playing an important role in their lives and they are always connected to it. It is also thought of as a virtual place that serves as an escape from the daily routine. Participants conveyed the sense that it enabled them to unwind and forget about petty daily problems.

The spontaneous word associations that had to start with one of the letters of the letters of the word “Internet” are shown in the graphical representation below (the figure contains English translations). Frequently mentioned associations (those that featured in two of the three groups) are shown in slightly larger font size. Accordingly, the largest font size applies to associations that were made by all groups.



6.2.2 The role of the Internet

Consumers in Croatia use the Internet constantly throughout the day. Younger participants in particular described their Internet usage as being like a kind of routine as they go online at the start of the day and spend the rest of it connected.

"We connect when we wake up, and disconnect when we go to sleep."

"From morning to evening"

"It's just habit, it's just automatic, like you drink coffee, you go online."

"News, my cell phone wakes me up, this is my alarm, I take my cell phone and, and check the news, before I have the chance to fully open my eyes."

As well as using the Internet in the morning to find out about things that happened during the night, they are online throughout the entire day as part of their jobs or for educational purposes while at school. They reported to use the Internet in the afternoon and evening mainly for entertainment.

"My routine is, I wake up, I read the news, check my emails, then I slowly turn on Facebook, and see if I need to pay my bills, read the news again, and it goes in circles. I go on Wikipedia to check something for school and then when I come home, I listen to music, watch a movie."

"I drink my coffee at home, I go to work at 8.30, I check my emails, I sort them, if I have to respond to something, then I check what's next, if I have to do something today, and that usually takes a lot of time. Then I go to a meeting, but I always come back and check some information, look at pages online. I look for information online so I check different pages. And at home, I like YouTube. I start cleaning, then I listen to Mišo Kovač for at least an hour, at the moment I'm looking for something, about raw food because I'm interested in it at the moment, so I search for recipes of raw food. If I have something extra to do from work, I do it at home."

Some older participants had the feeling that the Internet takes up too much of their time. Consequently, they strive for a more conscious or even reduced usage of it and its applications.

"It's a little weird, but I occupy myself with other things. It's better, it's like a holiday from the Internet. Sometimes it's too much. On Saturday or Sunday, I try to minimize the Internet. I use the computer too much over the week, and sometimes I manage to go a day without turning on the computer."

"It's crazy too. I used to be at home alone for weeks, I go for work and I play games. You become addicted. I don't use a cell phone, only at work because it would get out of control. When I see people in the morning, people sit in their cars and type on their cell phone. Some people don't even get out of the car, but type on cell phone."

Nevertheless, most participants in fact enjoy the feeling of being online, as it allows them to escape from the 'real world' and their everyday lives, and to relax. The time that they invest is not perceived as 'lost', rather they feel that it is invested in their own comfort and that this cannot be affected by others.

"It's great, very liberating. My child is the priority, but it makes me feel free, it's my space where I can do whatever I like."

"It's a space without time, where you realize you spend too much time. You surf, you lose yourself."

"I'm a little bit different, I like to go out in the evening, so when I come home, then I turn on my computer. No one calls, everybody is asleep, my Zen. It's a fantastic feeling, it can last until the morning. I see it is 11, and next time when I look at the clock, it is morning. You think you need to go to the toilet, but just wait a bit longer."

At the same time participants appreciated that the Internet helps them to save time with to the organisation of their daily lives, especially when searching for information.

"But to get all kind of information is very useful. I see it as something very useful. Our lives are so fast that it makes thing easier and faster to get information and to spend less time of finding something. From shopping to searching deals I could get."

"Yes, with Internet, your life is much simpler. You can access anything you want and you spend less time searching for information, and you have more time left for doing some other things."

Although some Croatian participants stated that they would be able to live without the Internet, their facial expressions and reactions showed that the opposite is true. Some emphasised that life just would slow down a bit but apart from that there would be no substantial differences, whereas others admitted that they would miss the Internet, as it has become a very natural part of their lives.

"Maybe things would be better, because we can't do too much, we live too fast. It's good that we have all this information but if we didn't have it, we wouldn't have it."

"I can imagine life without Internet. Somebody said before, the way we lived before. We would live like that again. But, I think I would miss it."

"I am capable to make my own food, or find it."

Surprisingly, even young participants felt that they were able to cope better than their even younger counterparts with having no access to the Internet anymore. These statements were followed by a very emotional discussion in one of the groups in which the Internet was blamed for disabling young people's interpersonal as well as practical skills.

“Generations which didn't have Internet are not the problem, but those generations which are born in the Internet era. This is my 12 year old sister's generations because they don't know how to communicate. My sister couldn't call her friend to ask her about her homework, until I forced her. She waited for an answer on Facebook. She was embarrassed to call. She didn't know how to pick up the phone and call. “

While the evaluations above were almost consistently linked to consumers' private use of the Internet, the consequences for the international business market were rated as damaging and almost apocalyptic.

“World War 3 would start, because everything would fall, all the stock markets, there would be anarchy.”

“Also, if the electricity went down, we would be in the Stone Age. We say: I will draw flowers and stuff, but we couldn't sell or buy anything. We can't go back.”

“This is not about personal usage, but the thing that everything works online. You have to pay the bills and the banks aren't working. Everything would collapse, it wouldn't be good.”

Overall, the Internet was rated as being something fairly positive, and there were rarely discussions about the threats that it poses other than the potential risks that occur when children use it without supervision or too much.

“My children sometimes watch before they go to bed, they use cell phone to watch a cartoon. The cartoon hasn't started, and there is already a commercial, and you can skip it after 5 seconds. And we had a friend over, they were choosing the cartoon and they wanted 'A je. They were watching the cartoon but it was actually a parody and lot of swear words. So it can be really dangerous. Thought I was playing the cartoon for my child, and I didn't know what it was, this is not that awful but there are much worse examples.”

“Last year I was at FER (Croatian Faculty of Electrical Engineering), there was this Congress 'Brain to mind' and it is proven that Internet damages children's brains and that makes them less creative. There are books that research it.”

Additionally, some participants felt uncomfortable with the thought that they are exposed online and are not able to control what sort of private information can be potentially used by others, nor how much.

“The way we are exposed to some information, we are aware of different social networks, but lots of web pages, ask for your email and then you share this information with everybody.”

“You feel overexposed. I googled my name, the other day, and I found an article about some competition from 7th grade in primary school, we are too exposed online.”

Croatian consumers appreciate the Internet being a source of abundant and tailored information. It allows them not only to inform themselves about topics that they are interested in, but also to compare information from different sources so that they feel well-informed whenever and wherever they want.

"I like new technologies, so I like to visit pages where you have a preview of a new device, forums, then I visit YouTube, where you can see how this device works."

"There are a lot of pages I use, so I look at different pages to check information, to see if it's true."

"I can't divide the use of my Internet in time. I have a small child, and I use gaps in time to use the Internet. For example when my child sleeps in the morning."

Where consumers go online and the devices that they use depends not only on their needs and emotional state at that moment, but also on the availability of the devices.

Based on the focus group discussions, the choice of device depends on two factors: The first factor is perceived levels of control and self-protection that they feel is necessary when using certain applications, and the second factor is the convenience of access.

- **Mobile phone:** low control/self-protection, high level of convenience (searching for short information, email access, news, social networks)
- **Tablet:** fairly low control/self-protection, high level of convenience (searching for information, news, watching films, reading books)
- **Laptop:** high control/self-protection, fairly high level of convenience (online-banking, booking travel/holidays, Skype, online shopping, watching films, work, emails)
- **PC:** high control/self-protection, low level of convenience (online-banking, work, searching for detailed information)
- **TV:** high level of convenience (solely watching films and IPTV)

6.2.3 Experience of disruptions

When asked if they experienced any disruptions in the past, Croatian consumers immediately started talking about extended disconnections from the Internet that they had experienced.

"Nothing worked recently. Last week there was no connection for 3 days, no TV, phone or Internet."

Such disruptions, which last for several days, leave participants feeling helpless and alienated by the lack of communication and entertainment.

"Alienated, you can't do anything, but I have an old cell phone and can't view my e-mails, so I went to my neighbour to check for news, mail. TV wasn't working,

and for my child there were no cartoons. Well, you get by, e.g. I can read newspaper, but at least to check my mails."

"You can make it through, but since you can't check anything and it's really important, there are problems. You can't send messages to people, when I don't have any Internet. You feel a little helpless. But you can't say that you were panicking."

"We felt useless at that point, you lose a lot of time."

Despite the feeling of helplessness, some participants reported inventive ways that they found to gain access to the Internet when their own access at home was not working. They used mobile devices or dongles, or asked their neighbours if they could connect via their WiFi signal.

"I live with my parents and brother, and all of us stopped, so we asked our neighbour for a WiFi code so we could connect at least with something."

"In those kind of situations, I have a stick, and it's 10 Kuna for 24 hours. I plug it in and can surf using the mobile Internet."

"We remembered that you could turn on the Hotspot on your cell phone, so we connected. That was good."

Participants commonly attributed such persistent technical issues to bad infrastructure or broken routers. Consequently they expected ISPs to solve the problem.

"Something with the router, and they brought me a different router, and we changed it. But it takes 3 days until they even react."

"I think it's the problem with the infrastructure. They tried to sell too much of it."

Given the role that the Internet plays in their lives, it is not surprising that Croatian consumers are very likely to become angry when the Internet connection they pay for is slower than expected, or does not work at all. They find it equally annoying when their ISPs don't take them or their problems seriously. Also, ISPs are generally perceived to be slow and/or incompetent when it comes to solving these problems.

"Sometimes the providers slow the connection, they don't inform you of this. Or they call you and say that they've tried everything but they can't fix it. And you are paying for everything. Or you call somebody and they say they reported your problem and somebody else will deal with it, but all this time you're paying for this service that you are not getting."

"I was angry. It wasn't that I couldn't go online, I wasn't angry because of that, I was angry because I was paying for that, and I expect it to work. And 4 or 5 days later, when they've arrived, they took the router which was the problem."

"Routers are 10 Kuna in China, and they are not good. I wanted a Motorola router, a good one. And I wasn't happy again, they could have given me this

router from the beginning, and I wouldn't have any problems. And then you have all sorts of problems, that it was my fault, because of the storm."

"We called them and told them that the Internet stopped working 2 hours ago, and they say: 'Yes, I see'. So they know what happened, they know there is a problem, but they don't fix it on their own."

"(Moderator: You would ask customer service?) No, you can't get any help there, I would ask a friend who maybe understands the issue, and I'll go to the shop, buy a cable and everything, plug-ins."

"The provider, they can do anything, and you have to do anything. When you call them, they can reset everything. T-Com¹³² or any provider can reset your router; you don't have to do anything. At home, sometimes we change settings from T-Com but they got it back."

While most consumers cope with these problems, some threaten their ISPs and get themselves a bargain by saying that they will call HAKOM or switch to a different ISP.

"I wrote to them, if they don't take my inquiry into account, I will contact HAKOM."

"My friend has a coffee place and her router stopped working, and it's a problem because she has a coffee place and a fiscal cash office, you have to call and report this, it's a procedure, and she wrote them an e-mail, she wrote to them, if they won't do this, I will report you. They've reduced her bill to 20 Kuna."

When asked specifically to report some shorter problems that they had experienced, participants stated that they had had some issues with certain pages that took longer to load than usual. These problems were attributed to several reasons: some attributed it to a high number of people using specific applications simultaneously.

"It must have been overloaded. Facebook on Friday night also has disruptions, YouTube sometimes."

Others blamed the specific browser with which they had tried to access applications and services at that time.

"I am doing something, watching YouTube, and Firefox sends a message – uf, this is shame, and it won't load the page, and then 5 minutes later I can open the page. I don't know what's so shameful, I don't know what happened."

"I don't know, well with Firefox I often had problems with YouTube. If I wasn't touching the mouse, then the screen would lock up. And then I switch to Internet Explorer, I'm a bit ashamed to say that, but then it works normally."

132 The factually correct name is HT (Hrvatski Telekom). As our objective is to reflect participants' language as well as their understanding of the subject area, we keep this terminology throughout the present chapter of the report. Other chapters in the report, for instance Chapter 7 on the survey results, use the factually correct name Hrvatski Telekom.

Meanwhile others traced back such problems to certain webpages containing too much content.

"You look for something, web page is loading slow, it is not up to the Internet but the one that made the web page, there is too much content."

Other smaller distortions that participants noticed were linked to applications such as Skype. They complained that connections to countries on the far side of the globe are particularly susceptible to interferences that affect the performance of these applications. These problems were attributed to the speed or even the type of connection. Due to the fact that Skype is used mainly for private (i.e. not for business) purposes such problems were not rated as too irritating.

"We've had some problems but it was probably because of the connection, because I'm connecting to America and Sweden. We didn't have a picture, if I were talking to somebody in America, I would log out then log in again, sometimes it would be our problem, and sometimes it would be on their side. Sometimes it's because of the weather. And with Sweden, Germany and France, no, never had any problems, mostly with America."

"My uncle was in Africa and they had problems there with their connection. For our conversation that would take a minute or 3, takes half an hour, because of bad connection, it makes no sense."

"Internet speed, on their side from the person I'm talking to."

"Maybe satellite, America, Africa, it all goes over the satellites, storms...etc."

"Maybe if Skype is using satellite connection for America, or maybe underground cables, that's another story. "

Participants described advertisements that pop up on the screen when using certain pages or that are shown right before videos that they watch on YouTube and comparable sites as fairly minor disruptions.

"Those commercials used to lock up.", "Pop-up windows".

"Commercials that you can skip after 5 seconds, it never stops, it's usually on YouTube, so you have to watch them at least for 5 seconds. It is the problem, it is annoying."

Whether problems with the Internet connection or specific services and applications were rated as major or minor problems was related to two factors. First: private usage versus business usage; problems that occur while using the Internet for business were rated as major, while problems that occur while using it for private purposes were rated as minor, as long as they do not last for too long and do not lead to a complete lack of usability.

"It would be a bigger problem, if it would have to do something with my work, I would be more irritated, because of your job, but privately, no."

"It depends on what we need. If test results are available, and web site crashed, it is a major problem I would go crazy, and if music video takes time to load, I would go make some coffee and try later. Depends on what do we need and how soon do we need it. If I need important information, then I go crazy, but if it's something for entertainment, like new H & M collection, it would not upset me. Depends on how important is it to us."

"Major would be when there is no connection, and minor when the connection slows down. Three hours ago it took me seconds to load a page, and now it takes two minutes."

6.2.4 How the Internet works

The participants' understanding of how the Internet works was raised in several steps. First they were asked to explain this to a child, using very figurative and symbolic language. Some of the participants stated that children would laugh at them if they tried to explain them how the Internet works, so the question was changed to 'please explain how the Internet works to your grandma or a friend that has never heard about it before'. With this formulation the participants felt more comfortable about responding.

In general it seems that Croatian consumers are not very interested in how exactly the Internet works because they attach a much greater importance to whether it works without disruptions and gives them a good user experience. *"It's the same with me - I don't care how it works, as long as I get my information."* In this context, it is not surprising that only a few participants felt able to explain how it works. The discussions in two of three groups were clearly dominated by two participants with a technical background (one IT teacher, one a local network administrator). The discussion in the third group in comparison was rather short and superficial. As a result of this, it should be kept in mind that the following examples are mainly based on just two of the three groups.

The Internet was described in a rather technical way by the two experts. The first one compared the organisation of data traffic with the sending of information via letters.

"The story starts with a mailman. If every house has an address, and you want to send a letter to your friend. What do you have to do to send that letter? You need an address, you need a person you are sending it to, and the mailman travels to that house. And he has a big bag for all the information."

"He sends everything where it's supposed to go. He decides what goes where, he is a mail dispatcher. He gets guidelines."

"He forwards and controls."

The other one compared the exchange of data with whispering amongst computers. He also took into account that there are smaller and bigger networks that are interconnected and compared this to infrastructural connections.

“There are two computers connected and they whisper to each other. Then, another computer connects to those two, and many small computers connect to that one and you get local network. It is communication between computers. And it spreads and its global network. Google converts server address, on which we can connect, it turns words into numbers. Even if I connect with someone from Korea or with my neighbour it works the same way. It's computer network. My child could understand it. ... Ok, we can use roads, and small ways between houses, and there are highways that connect cities, and plane that flies from one to another.”

After these initial explanations of how the Internet works, the participants were prompted by further questions, which led to discussions in which everybody was involved again.

Participants in Croatia immediately agreed that consumers pay their providers to be able to use the Internet. Interestingly, the Internet itself was conceptualised as a sort of common good, for which nobody actually pays anything.

“Internet is free, but the providers charge for it. So, ideal world, in 100 years, the Internet will be free. That could be one day. There are islands and cities where Internet is free.”

“We pay the provider, but nobody pays the Internet itself. We pay the electricity.”

Some users also stated that companies that use the Internet for advertising as well as any user that has their own webpage pay for it.

“All the commercials, somebody wants a commercial to be online and he pays the provider, and they use this money to finance building of networks.”

“So we have domains. Every domain is one big pile of servers, where you can have your webpages and then you pay for this webpages, people pay for this space, on a yearly basis. In that way you keep the Internet going.”

Participants in Croatia had the strong feeling that they are the ones that create the Internet because they are responsible for the continuously growing amount of information and data.

“We, users. We constantly make it bigger. You write a message on the message board, somebody answers it, it grows. From one message board to another, it expands every day.”

Additionally journalists were suggested as the ones who create the Internet.

“And journalists, the way they write news, and put it online, and maybe on some official pages.”

The discussions about rules that apply to the Internet started with participants questioning if there were any rules at all. After these initial doubts, they established amongst themselves that there ought to be some rules, and linked these to various

aspects of the Internet. The following examples are sorted according to the respective ideas and concepts that emerged in the discussions.

"No rules."

"Maybe there are, maybe there aren't."

"If there are, they are minimal, there are no rules, virtually."

Just one of the participants mentioned rules related to how the Internet works:

"There are global technical rules which give IP addresses to different regions."

"There is a lot of them. All kinds of protocols which must exist for communication to exist, and are given by the ones who govern the servers. And those who govern, they are not in Croatia. Croatia has less computers than Berlin itself. There is an agency in Europe which deals with that, everything must work through the addresses."

The rules that consumers thought exist were mainly related to netiquette and thus 'how to behave properly'.

"There are also rules on how you should behave."

"There are laws that regulate that, e.g. we have Law of rules for accessing information, which says that we cannot use that information just like that, without someone approving it."

"This lady doesn't put her picture, but she uses another person's picture on her profile and she breaks the law. It is just an example. That's also a violation of copyright laws, and protection of personal data."

"Moral rules. I was talking about availability. In past, we had to be polite and knock on someone's door, and now, if your cell phone rings you are available, but maybe I don't feel well. We became more available so rules of behaviour changed."

Finally it was mentioned that some companies that offer services on the Internet made their own rules that everybody who uses their services has to follow:

"There are many rules only for eBay shopping, which you have to follow to participate."

"Also, when we log on this page, they tell us these rules."

After the initial discussion about how the Internet works, a definition was given to the participants. They were asked to not only read it but also to mark those words or sentences that were easy as well as hard to understand. All definitions in the individual languages are shown in annex. While participants in the test areas were given definitions in their native language, the definitions in this report are presented in English to improve readability and allow comparisons between the different test areas.

As is shown, most difficulties were caused by the phrase 'arbitrary digital data'. Not only those who use the Internet rarely and average users of the Internet, but also consumers with high self-ascribed expertise, stated that they had difficulties understanding it.

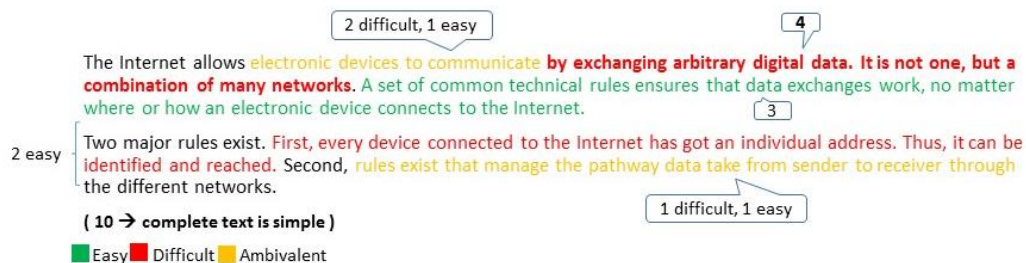
The definition as a whole was perceived as quite understandable but too technical compared to the descriptions that were made by the consumers before, and also as uninteresting and too abstract.

"There are people who don't know what Internet is. And a lot of this information and terms are completely abstract to them."

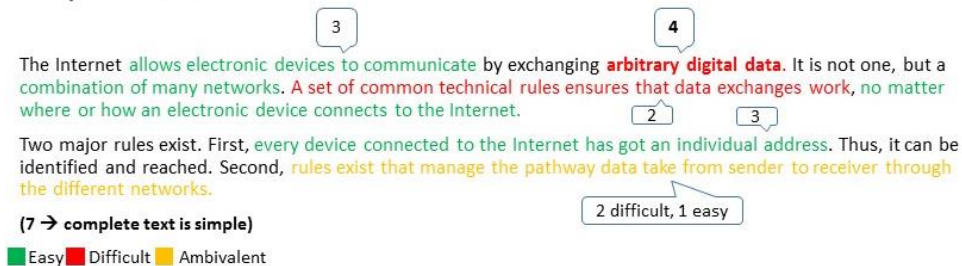
"I drive a car but I don't care if something stops working, there are mechanics for that. It's the same way with the Internet, I just want it to work."

"It's just that we were talking using everyday language. This is more technical definition. (Moderator: So, which one is better? This everyday language or technical?) This everyday language is easier, it's easier to explain and imagine. And this is just a bunch of words that mean something. But it's quite complicated to understand and imagine what this would mean? This is a real definition, where every word has its place and you need to read it more carefully to understand it. It's little bit more complicated."

Croatia: Experts



Croatia: Participants with little and medium expertise



It would clearly be preferable for the participants if the explanation was less technical but instead took into account what the Internet could be used for:

“For example, my grandfather, he could never understand what the Internet was, and when I was installing cables, I said it's a TV where you can read the newspaper and you can communicate with your cousin in London. And few days later he got a laptop and learned everything. And up to then, he had no idea about the Internet or anything. He doesn't know IP address but in his own way.”

“Two neighbors' gossip, exchange of the information what somebody saw.”

“Everybody has their address, and what you want to share with other people, you put it online, and other people can access it.”

6.2.5 Provider choice criteria

6.2.5.1 Currently used Internet providers, duration and details of contract

The current Internet providers used by many of the participants from Croatia are T-com, Iskon und B.Net, Metronet, Optima and Vip.

T-com is the incumbent in the Croatian market and consequently holds a relatively strong position. Many participants have been T-com customers for a while, but several have recently changed to Iskon¹³³. Iskon, they reported, uses the T-com network but offers better value deals and has better customer service.

Participants who live in areas with little or no provider choice have been with their current provider (mostly T-com) for a long time, often around 10-12 years. Others have been with their current providers for around 4 to 6 years, and some of them have changed providers in the recent past.

With regard to contract details, it seems common to start with 24-month contracts. The majority of participants subscribe to package deals including Internet, TV and telephony, although there was also a distinct group that only subscribe to the Internet. Many of the latter had a bad experience with package deals as there were often technical problems with the Internet when watching television at the same time.

The monthly cost of the 'Internet only' contracts is around 150 to 180 Kuna (19 to 24 Euros). Bundle costs vary from 200 to 300 Kuna (26 to 40 Euros) per month depending on the provider and the offer.

6.2.5.2 General satisfaction with Internet providers

The general level of satisfaction of Croatian participants with Internet providers and the infrastructure of Internet provision is medium to low – mostly rated their experience 3-4 on a scale where 1 is very satisfied and 6 is very dissatisfied.

¹³³ This operator is owned by HT.

Participants from regions with a perceived monopoly of a single provider reported predominantly negative experiences with their Internet provision. They complained about bad service, long waiting times for technical support or repairs and unfriendly customer service:

“There is no technical possibility of having any other provider but T-com...”

“When the technician finally came we stood at the door and did not let him go before the problem was fixed because we knew he would not come back soon.”

“We have to bargain with them to get good service... They could try harder, they have the monopoly and they do as they want.”

“I don’t think we have a lot of choice. We chose the better of two evils. I am starting to avoid T-com because they started with all this infrastructure and have the most expensive service. They also are rude. The others are much cheaper.”

Experiences with providers that were chosen recently were generally more positive:

“I have recently changed to Iskon – now I am very happy, they are fast and when I call them they answer quickly.”

“It is not perfect. The customer service hasn’t got competent people but it works and the speed is ok. I won’t complain.”

General reasons for a low level of satisfaction were technical problems, slow connections and disruptions – these cause dissatisfaction and result in the wish to change to a different provider when they are not handled well by a competent and friendly customer service department.

The discussion in Croatia showed a considerable level of mistrust towards and disappointment with Internet providers in general. The predominant feeling was that the companies offer overpriced products due to too little competition, particularly in the area of home Internet access products.

“They try to make money out of older people who are still using landline Internet. It is cheaper on a mobile because everybody uses them.”

“You cannot trust these companies, they are all the same: expensive and only interested in your money.”

“I do not trust them because they do not stick to agreed contracts. First, they guarantee you certain services, then they change them.”

6.2.5.3 Switching Internet providers

Switching Internet providers was mostly triggered by dissatisfaction with the current provider. In many cases technical problems with modems or routers, or the instability of connections were the reasons for the change. In some cases, those subscribing to a

bundle of services experienced technical problems when people in the house were simultaneously watching television and using the Internet.

The step to switch the provider was mostly made when in addition to these problems the customer service was unfriendly, unhelpful or too slow.

The generally low level of satisfaction with their providers makes users in Croatia open to switching providers.

When informing themselves about alternative providers, seeking advice from family and friends is most important:

“If somebody tells you that he is happy with his provider that is the best information.”

Participants who have been thinking of switching their provider used the following sources of information: people they know such as friends, family and colleagues, providers' websites, Internet chat groups and consultations in the providers' local branches.

6.2.5.4 Relevant criteria for the choice of an Internet provider

The most important criteria for the choice of an Internet provider are the speed and the stability of the connection, as a slow connection and lots of disruptions were perceived as major causes for dissatisfaction. The necessary level of speed, however, varies greatly depending on the individual usage of the Internet, in other words whether it is used for emailing and browsing, or playing games and streaming videos.

“Most important is the Internet speed.”

“And that it does not interrupt all the time.”

“Price and unlimited access.”

Based on bad experiences with their first providers, such as T-com, a good customer service is also of great importance. Croatian participants reported that they appreciate a friendly and easy to reach customer service with fast technical support. As they often felt badly treated in the past, they particularly like to ask friends, neighbours or colleagues about their satisfaction with certain providers and are likely to follow their recommendations if a provider has a good reputation with regard to their service-mindedness in customer service.

“Good service is when they are fast in reacting to your problems. Only when you have a problem you really get to see how good they are.”

Other relevant criteria are the length of the contract, the additional benefits and a high quality technical set-up such as optical fibre cables. Although it is accepted that contracts mostly last for 24-months when they include new equipment, the option of short-term contracts would be appreciated.

Special promotions offering additional benefits, such as free tablets, specific apps or certain services, were judged ambivalently. One group of participants was attracted by these offers and would be happy to make use of them, whereas the other group saw them as a marketing trick, which customers are paying for anyway.

“If I get a tablet and better contract conditions a longer contract duration is fine.”

“I was happy, they gave me headphones and a keyboard all for free.”

“It is just a marketing trick, you still pay for this.”

“I am not interested in any of these promotions.”

When choosing a provider, many participants appreciate bundle deals. Typical bundles are the provision of Internet, TV and telephony. Getting an all-inclusive deal with only one bill per month is seen as convenient and attractive.

In addition to these criteria, all participants emphasised that they are sensitive to the price of the package, and therefore interested in the best value deals. They use Internet websites to compare providers in this respect.

6.2.5.5 Future outlook regarding Internet provision

When asked which criteria will become more important in the future regarding the choice of Internet provider, the following criteria were mentioned:

- faster connections
- better coverage
- better prices due to greater competition

There were also participants who had the vision of a “free Internet” for all Croatians, and who think that the state should provide this as some other countries already do:

“There are countries where Internet access is free – that would be right but we are far from that.”

6.2.6 Network neutrality

The term “network neutrality” was discussed in a series of steps that matched the one used for earlier topic of how the Internet works. First, participants were invited to state what they immediately associated with this term. After that, they were given a very short definition of “network neutrality” and discussed examples, analogies and explanations based on this term. Additionally they were asked to describe network neutrality in their own words. Finally they received a longer definition of deviations from network neutrality and their possible effects, and they discussed freely and elaborated on their own experiences. This procedure was chosen to generate deeper insights regarding consumers’ conceptualisations of network neutrality, and great care was taken in every discussion to prevent a direct influence on them that could bias the discussion.

When confronted with the term network neutrality, participants were initially completely unaware of it and its meaning. Hence, they were invited to share with each other whatever came to mind upon hearing the term, and they tended to relate it more to political discussions than to the Internet's technical rules and functions.

Some thought of a network that does not belong to any specific ISP but instead is owned by 'no one', or alternatively by the government, and then financed through taxes consumers would pay for it.

"That it's free, the network is free and doesn't belong to anyone."

"It's like we pay tolls for roads. So you have a provider who has free Internet, but we pay taxes to the government, which covers this. Yes, and we pay it through taxes, it's so cheap, you don't feel it."

Some Croatian consumers immediately thought of T-Com as being the monopolist that controls the network in Croatia and some even blamed T-Com for being responsible that network neutrality does not exist at the moment.

"I think the same would go with electrical power, the electricity, everybody uses their infrastructure everything goes through them, through HEP (main Croatian power supply company). So, T-com is the problem for this network neutrality. I think it's their fault."

"If somebody wants a new provider, T-com is the complication. If I want to have another number, I have to go to T-com, that's monopoly."

*"Maybe that means that the new provider *wouldn't* be connected to some other provider. That he would use his own wires, not from T-Com."*

Others thought of a global Internet, in which institutions or governments no longer censor content. Consumers that had this idea did not believe that network neutrality could exist as long as countries like China and the United States are able to control the content that is sent and shared via the Internet.

"Censorship, that there is no censorship."

"No borders for information, not in EU or wider."

"It's enough to google certain terms and they will put you on a list. You can start mentioning something that's used in explosives and somebody will come knocking at your door. There is no such thing as neutral network, everything is controlled. From CIA, FBI, and so on."

After this short and unprompted discussion, the moderator read out the short definition as reproduced in the discussion guide in the annex.

Network neutrality means that all data in a network are treated on equal terms. Equal treatment refers to the standard behaviour of how data are forwarded in a network towards its destination. The standard behaviour for equal treatment is that all data are forwarded according to the same rules.

Some participants' reactions to this definition differed significantly to others'. While some immediately understood that network neutrality refers to data that is forwarded by equal rules within a network, the majority of them did not believe that network neutrality exists at the moment. Their explanations for this conviction were manifold and are described in the following passages.

Once they had heard the definition of network neutrality, some consumers immediately thought of advertisements and the rankings of search engine results and used these as examples to explain why they didn't think it currently exists. Their doubts are based on their experiences that some data are prioritised above other data.

"(Moderator: Do you think we have that at the moment?) No. Because of ads and commercials. The first link, when you google something, is an ad. I'm not sure if that is possible. And what criteria are used at the moment. To put the pages in specific order. I know that right under the search engine, the first thing shown is paid adds. I'm not sure how much you pay for it but I always skip it. When something is more popular, it's more important. When I buy something on EBay, the first thing you see is what's relevant, what people buy more. If it's 100% relevant, then it's first."

Participants more commonly linked equality of treatment to content rather than to specific applications. This is why some consumers mentioned censorship of specific content as a reason for not believing that network neutrality exists on a global level.

"So no censorship, no control. It's good, but it's not possible, and unreal, because we have both, censorship and control. Because of some higher purpose. (Moderator: Whose?) Obamas. It was in all media, the whole world is being spied by the Americans, so automatically we don't have network neutrality."

"If you want to look at Google Maps, you want to look at something in America, you can't. But, you can do it in Europe, for example, planes that fly over Croatia. So it means that there is no neutrality, somebody is always in control. But in Croatia you can see all the planes: where are they flying, from where, what is their weight, everything. America, they have a ban. Somebody can forbid something, and somebody can't. We cannot. But Americans can. In Croatia you can crash a plane."

Participants in general did not blame their ISP for being somehow responsible for any deviations from network neutrality. This is not based on them having a high level of trust in their providers, but rather on the fact that they were not able to imagine how ISPs would be able to control the data traffic. On the one hand, they had the strong feeling that some regulations are introduced behind the providers' backs, but on the other

hand, they connected regulations on data traffic only to the speed and the quality of the services they use, so they stated that providers would not be able to increase the quality as the amount of traffic is sometimes too high.

“This is not the definition of network neutrality. You just read how network works. When you send the information, it determines through network interface, how will that information flow, you cannot influence it. None of the providers can affect, it is technical matter. It chooses the shortest route to send the information. Provider doesn't affect it.”

“One provider doesn't have to be aware of the control of another provider. So one provider doesn't have to know about traffic control, because some XY can control the traffic at any point, on a satellite, or a cable under sea, which doesn't have to be connected with any provider.”

“When I thought about it a bit, I think it has something to do with the quality of the Internet network. So it should be the same everywhere, the same speed and connection everywhere.”

“Imagine you're watching YouTube video, and 2 million people are watching at the same time. In this logic everyone would have the same quality, but servers are full and somebody will get blocked, the connection would break, and then when somebody is finished watching, somebody else will be able to watch it again.”

“It's great if they offer it, but, if you take 20 showers, and not the same amount of water will go to every shower if you turn on the water at the same time. I think that's basically it.”

After this discussion, participants received the definition of ‘deviations from network neutrality’.

Croatia: Experts

1 difficult, 2 easy

A deviation from network neutrality **consequently** means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. **Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.**

3

2 easy

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.

1 difficult, 2 easy

2 easy

- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.

- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.

- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(8 → complete text is simple, 1 → complete text is difficult)

Easy Difficult Ambivalent

Croatia: Participants with little and medium expertise

1 difficult

A deviation from network neutrality **consequently** means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. **Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.**

2

1 difficult, 1 easy

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.

- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.

- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.

- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(6 → complete text is simple)

Easy Difficult Ambivalent

The definition was complicated as only a small number of the participants understood the full meaning of the concept and the discussions about deviations became confusing for them.

While some consumers thought that network neutrality is like a 'guarantee' that all data are treated equally and would thus lead to the better performance of applications like Skype, others disagreed and understood that some applications and services would work better if deviations occurred.

(Moderator: What do you think of the idea that if we have neutrality, that data is transferred by the same rules, and all the data is equal?): "We wouldn't have problems with Skype." "It functions better".

"Providers would have to give priority for some data, e.g. depending on the content, so if you watch YouTube they will give importance to video data."

Once consumers understood that deviations from network neutrality could create a better user-experience by prioritisation, some were strongly interested in this concept in general, and in further information that would enable them to decide whether they would have any chance to influence which services would then be of higher importance, as well as if there were different ways of prioritising.

"Can the buyer determine its own priorities? So that Skype is number 2 and plan it like that. Yes, that would be ok, so with kids it's more about texting than calling somebody."

"If I could choose what's important, and it doesn't influence anyone else, then it's a good thing."

"Yes, if it's an option, it means we can choose what's more important for us, and that's ok."

In general, consumers were not able to imagine how individualised content prioritisation could be guaranteed technically. As a result of these doubts these consumers saw network neutrality as preferable because in their understanding it would guarantee that they were not controlled by anyone but themselves.

"Skype wouldn't function as YouTube, but this way I would have to list all the things I want. I don't think the provider can provide this."

"No. Who can say what a priority is for me and for you? It is something we have to choose by ourselves. So, I want to play games, but some woman wants to watch a clip on YouTube, and the provider would stop my game because of her. And then, later he would stop her movie so I can play my game a little? The attraction of the Internet is that we are all equal, I feel free online, and any other way would disturb me. Like we didn't have right to be on the Internet."

"Neutrality would be better, because everything would be equal then. Neutrality would be that all of this is transferred equally, so the provider can't affect it. So you have the application for saving battery energy on your cell phone, I don't want a program that would tell me what to turn off or turn on. I don't want that, I will decide."

Skype, YouTube and online games are applications and services that people would prefer to be prioritised for them. Concerns that one's own prioritisation might lead to a reduction in the quality of other users' experiences registered with some participants, however, most of these comments appear to be strongly influenced by the social desirability common for focus group discussions.

"It seems okay for applications I use more often."

"So, most of us have the same Skype but for you to have better quality."

"But if my choice interferes with somebody else getting certain information, then it's negative."

"So priority for one person, and neutrality for another. It doesn't matter. It would be great if they offer it, but it's not important. I don't think it would influence my decision. With priority, that they offered neutrality, for me it's just important to have priority."

The prioritisation of content seems more important for business purposes than for private purposes:

"Yes, I think that for people who use Internet for their work, that's important. But I think Internet speed is the most important thing. If somebody is using Skype, it's extremely important for them for it to work properly, and doesn't have any problems."

"Or to have a conference call and the connection starts breaking. And if you have conference call or anything, companies don't care about YouTube."

Some want to test how well prioritisation would work for them:

"I would take it for 6 months to try it out, to see if it would be better. If I see it's better than before I would be willing to pay. If I wouldn't have to wait, if every page would work."

The idea of content being blocked was completely rejected, as it was perceived as censorship. People want to make their own decisions not only about what is important, but also about what they would like to see and what they would like to be blocked:

"These are criminal acts, no provider can decide which application gets priority from any other. Or, he can pursue this provider for blocking his web page."

"All of this is something else, human's right for information. That is what Internet is all about."

"So when specific application, specific content is permanently or sometimes inaccessible, and others are accessible. When it's permanently unavailable if you try to access the page. I would prefer that it was equally available."

"We could consider it any time the Internet wouldn't work. And if I load 3 pages in one, I could think that is sabotage or forbidden. But how could we know? It is like having 3G cell phone; I don't to think about this. I could think that someone is stalking me. I don't want to think about it, I could become paranoid. If they said: 'this content was blocked by Optima, or T-com, then I would say that they blocked it."

"Who can guarantee that provider will let me see what I want any time I want?"

"We would feel like Chinese people. But in China, Chinese people here are enlightened."

For some, blocking would sometimes be acceptable depending on who decides on what is blocked and on the reason. Some even thought about how positive it would be if they were able to decide what content should be blocked by their providers for them personally.

"I think that would be a positive thing. That my provider could filter what I get. Not just filter but block certain things that I don't want coming. If I go to their web page and try to log off I would probably have 300 more steps and questions and then I still wouldn't succeed. So maybe it's easier if you can just contact your provider to take care of this problem. You just tell them you don't want anything to come from this website, please block it."

"It would be good if you could choose what you want to get and what you don't want to get. I wanted to cancel newsletters and even went to that page and I could not make it stop. They keep sending messages."

They had a similar attitude towards content related control, which they favour over a lack of control when it helps to protect children or personal rights.

"So that video clip of inappropriate content for children is not available to them. For example, politician makes some mistake, and it's on YouTube, and after an hour, it's not available anymore. Why shouldn't it be? There are a lot of examples of this."

None of the participants related their experiences of some applications and services not working very well to deviations from network neutrality but instead blamed the companies that are responsible for providing them. YouTube problems for example were not linked to traffic management, but instead to its content being filtered.

"More times, it was unavailable. Somebody was on YouTube, you could watch it but an hour later you couldn't anymore. It's the way the content is filtered. So if some people put in weird clips, it's removed."

Whilst some participants stated that they would prefer network neutrality, others preferred deviations from it, in other words having some prioritised services. Interestingly, both groups of participants were after the same thing: the best user experience possible. However, the one group associated this with network neutrality and the other group with managed services enabled by deviations from network neutrality. Therefore some stated that they would pay more to have that optimised experience, while some stated they would not as the Internet already works well for them, so everything should stay as it is.

"So why would we need priority if in network neutrality there is priority for everything? What does priority give us that network neutrality doesn't?"

Additionally Croatian consumers feared that the choice of an ISP would be much more complicated than it is right now.

"It doesn't make sense, it is too complicated. Now, when we talk, we go into deeper and deeper. It is already hard to think what providers offer, I don't need to choose which web page they will offer. It's pointless. Here, I'm nervous now."

6.2.7 Summary

Croatian consumers use the Internet throughout the whole day. They use it almost unconsciously and are always connected to it. It is strongly linked to positive emotions, which results in it playing a much more important role in consumers' lives than simply facilitating the organisation of menial tasks during the day. Instead it is a means of entering one's own virtual world and escaping from the hassle of the 'real world'. Participants commonly reported 'getting into a flow' and losing track of time when they are online. Generally they are neither interested in controlling their own Internet usage, nor do they have a very high awareness of leaving virtual traces online. The only exception to this is their awareness of potential dangers for children when they use the Internet without supervision.

Croatian consumers are not able to imagine a world where the Internet no longer existed, because it enables them to not only save time and be entertained, but also to have the feeling of being well-informed consumers with access to information at any time and in any place. Furthermore they are convinced that the economy would implode without it.

Whilst consumers feel very competent in using the Internet, they were mostly not aware of how it works and stated that this does not matter to them. What does matter to them, however, is that it works properly. It is seen as a medium that is mainly paid for and created by consumers. They doubted that there are any particular rules that apply to it and those that they did know of were predominantly behavioural rules such as netiquette. They were only rarely aware of the technical rules that are necessary to guarantee that it functions.

When asked which disruptions they had perceived in the past, consumers immediately thought of extended periods of being disconnected. Disruptions are described as 'major' if they last for several days in a row and thus hinder the consumer's ability to use the Internet as a source of information and entertainment. They described the state of being disconnected from the Internet as helpless and alienating. However, they also reported that they are able find quick fixes for the situation such as using mobile Internet or connecting through a neighbour's connection. The providers were blamed for these issues and it is seen as their responsibility to fix them, as problems are attributed either to broken routers or to bad infrastructure. However, more often than not the handling of such issues by providers is not perceived as helpful at all. Some Croatian participants concluded that providers were actually completely unable to solve any problems related to disruptions. When disruptions last longer than a day, they complain that they are

paying for a service that is not being provided. They showed high awareness of the NRA (HAKOM) as a supporter of their concerns and do not hesitate to turn to them.

Smaller disruptions were mentioned only after a while in the focus group discussions and were related to the personal use of applications such as Skype or YouTube. Those disruptions were attributed to bad connections, specific browsers or a slow connection. Additionally, advertisements interrupting the flow of their Internet usage were perceived as 'minor distortions'.

In Croatia, consumer's satisfaction with Internet providers is only medium to low. In rural areas, numerous participants have the perception that only one Internet provider is available and thus assume that it holds a monopoly position, and this is often accompanied by bad customer service. Participants complained about long waiting times for technical support or repairs and a generally unfriendly customer service. This history of negative experiences has led to a general disappointment in and mistrust of Internet providers. Many participants believe that providers offer overpriced products and take advantage of having little competition. The generally high level of dissatisfaction has caused more willingness to switch Internet providers. In the process of searching for new providers participants appreciate word-of-mouth recommendations from neighbours, friends and family.

Current experiences with new providers have been mostly positive. The most important criteria for the choice of an Internet provider are the speed and the stability of the connection. As a result of past negative experiences, a good customer service and technical support from future providers is also seen as very important, as well as competitive prices.

The discussion about the term and concept of network neutrality was a demanding task and sometimes overwhelmed participants. While the definitions were rated overall as comprehensible, they were at the same time described as too technical as well as uninteresting or not engaging for normal consumers. In particular, the term "arbitrary digital data" was criticised for being too abstract. The term 'neutrality' as part of 'network neutrality' misled participants' discussions towards themes of democracy, freedom of speech and so forth. A good Internet usage experience is of the utmost importance to Croatian consumers. Those who understood that deviations from network neutrality could be helpful in reaching this goal were inclined to such deviations, but described it in their own words as 'prioritisation', whereas those who equated network neutrality with having a good Internet usage experience expressed a negative attitude towards deviations from it. In sum, consumers accept the prioritisation of certain applications, while they disapprove of any type of blocking. However, they were not able to understand how providers could have the technical capability to regulate the data traffic. It would be important to them to be able to make their own individual choices regarding the applications and services that are prioritised.

6.3 Results of the focus groups: Czech Republic

6.3.1 Ideas associated with the word “Internet”

Participants initially described the Internet as a functional tool that is used to gain access to “information”, “news” and “instructions”. They immediately thought of problems with it, such as it not working, not having any coverage and not being quick. Comments made later showed that it is of great importance to consumers so that they can communicate, especially via email or VoIP-telephony. Interestingly, social networks and applications like Skype were not mentioned at all as part of this exercise.

The spontaneous word associations that had to start with one of the letters of the word “Internet” are listed fully below; frequently mentioned associations (those that featured in at least in two out of the three groups) are shown in a slightly larger font size. Accordingly, the largest font size applies to associations made consistently in all three groups.



When asked to think of further word associations not related to the letters of the word “Internet”, participants again often referred to it as an instrument to gain access to information: “*Seznam*” “*Search engines in general*” and similar sites were mentioned. Participants also touched upon the theme of entertainment more broadly than before. “Games”, “videos” and “music”, as well as “social networks” and “messenger” were all mentioned.

In this unprompted phase of the discussion, participants already showed an awareness of the potentially dangerous sides of the Internet. They described it as addictive in some instances and pointed to concrete menacing aspects such as cyber bullying and the Internet's perceived uncontrollable character: *"Dangerous, uncontrollable in great extent."*

6.3.2 The role of the Internet

Participants in the Czech Republic feel that the Internet is essential to their lives. Interestingly, this is most evident from their description of others, who do not have access to it. Those who are connected to the web and use popular social networks or are aware of current online trends, feel a certain sense of belonging and that they are modern.

“When somebody says they don’t have the Internet at home, what is that, for god’s sake? I’ve experienced that as well.”

“In the Stone Age.”

“Well, entertainment, but also necessity, because today, when somebody says they don’t have the Internet or they don’t have Facebook, everybody looks at them like, oh my god, what kind of person is this.”

On the other hand, some individual participants stated that they deliberately do not partake in such networks and other online-centred activities:

“I don’t have Facebook.”

“I have deleted my Facebook already, it’s useless.”

Whilst being connected appears to be almost self-evident to many participants looking down at those who are unconnected as backwards and asocial, most participants still make use only of a limited set of functionalities the Internet offers, mostly relating to organising their lives. They often described going online or connecting to the Internet as a conscious process. This contradicts the earlier notion of self-evident usage of the Internet. Participants are mostly very target-oriented when searching for information, and are generally able to specify at exactly what time of day, for how many hours and for what purposes they use the Internet. They use it as an instrument to organise, plan and simplify their lives instead of getting into a flow while surfing in the virtual world.

“I’m usually there for an hour or two at night, as otherwise I have no time due to work. Rather at home, or now that I’ve been on vacation, I sat there, well not the whole day, but let’s say from 9 pm some two-three hours a day. (MOD.: What do you look up, what sites do you visit?) I’m actually looking up lots of information, news that I’m interested in, about animals or nature in general. When I need to, I also plan some trips, or look up some connection times.”

“I use Internet for information. Sometimes I need timetable, sometimes some recipe.”

This role of the Internet is further illustrated by participants’ anecdotes about young people who in their perception cannot exist without it anymore. In these they referred in particular to children and grandchildren who they feel are addicted to the Internet and have transferred their lives into the online sphere. This, participants felt, leads to

helplessness and inability to function in a world without the Internet as they have a lack of basic competences.

"Young son goes to the toilet and he takes it with him, you know."

"And my daughter lives in the flat next door, and when I want to talk to her, I have to use Skype, because she's constantly playing WoW, so she has no time. That's about it."

"When I arrive at my daughter's household which is like my son-in-law, daughter and 15-year-old granddaughter and 8-year-old granddaughter. They are all hidden up in their rooms, they have laptops, son-in-law is in the living room, my daughter is with one of the laptops, she has the small one, I don't know, some laptop, granddaughter is on the laptop as well, and they just go."

"But I really do think that for this generation it is a super source of information, perfect thing, no doubt, but on the other hand the other thing is it deforms people and brainwashes them and a continuous speech, communication, reading, sports, group of people...."

"Maybe the young people are baffled, no Internet, the end up and they have no idea how to help themselves, that it is possible to find out, though in a more complicated way, but somehow else."

"I was totally shocked when my son, he studies at chemistry school, not now, in September he will start the chemistry school, he will continue. I was absolutely shocked that this person, his brain is entirely different from mine, it's just maths, physics, chemistry, he has in it his head, so he does not know how to look up things in the dictionary of foreign expressions. I say how is this possible? You have never had a head injury. I have convinced myself that these people are completely lost without the Internet. They don't know what to do. This Internet makes fools of many people indeed, although they are actually clever."

"In the government office we were sometimes shocked, the young people who were taking the jobs or after the maturity exams, so we have a central registry where the mail is sent collectively and each department has its own mailbox and we go and pick it up. And the young girls didn't know how to sign their name. Because everything is done over the keyboard. They have a university degree and they don't know how to sign their names."

Consumers from the Czech Republic separate their private use from their work-related use of the Internet very strictly. This is due to the fact that private use of the Internet at work is generally not accepted by their employees:

"Well, I do not use it at work because it is forbidden, we used it too much and went to websites they did not like, so we have it all blocked."

"My things are strictly separated into work and my personal stuff."

This leads consumers to use the Internet for private purposes almost solely in their leisure time. As mentioned, they consciously connect to it and when they are finished they disconnect again.

“I’m usually there for an hour or two at night, as otherwise I have no time due to work.”

There is almost no use of the Internet on a second screen. In fact, it is used in an active and conscious manner especially for information seeking purposes, reading the news or simplifying consumers’ daily lives with services such as online banking, e-shopping or applications which make communication with family and friends easier and allows them to share moments of their lives via Skype, Facebook, Email and Viber.

“Well, I may only turn on the TV, as you can’t really do other stuff at the same time.”

“Of course email, social network and I also check and I use Skype a lot to communicate with people from abroad and so on.”

The Internet is also used as a source of entertainment. Consumers in the Czech Republic reported to play online games more than watching TV or listening to the radio.

“Entertainment, we can play games.”

Consumers mainly use laptops and PCs to connect to the Internet at home, and almost nobody stated that they connect via mobile phone or with tablets. While tablets seem to have of a lower importance in the Czech Republic, mobile phones are mainly used when consumers are out of the house. They serve as a fast connection to news, emails and search engines and allow easy access to information, especially applications that allow them to plan routes from one place to another. For this maps, traffic information and public transport websites are used.

“And mostly when I go somewhere on the tram, as my colleague said here, so then it beeps that I have a message, well not the message, email, so I read it, or when I get lost somewhere, I do not drive, how I get from one place to the other, or on train, and I also follow the website Seznam.cz and iDnes.cz (news portal).”

Youtube is used a lot for instructions, such as how to repair things and recipes, as well as for sports and for news. So it is used more for seeking information than for entertainment as nobody stated to use it primarily for entertainment, for example watching funny clips.

The devices that consumers use depends mainly on whether they have access to them.

- **Mobile phone:** used when out and about (for example searching for information about weather or public transport, maps and occasional email access)
- **Tablet:** almost no usage, when they are used it reflects mobile phone usage

- **Laptop & PC:** access at home (searching for information such weather and public transport, maps, online-banking, Facebook, email, Skype, booking travel/holiday, online shopping, playing games, occasionally watching films)
- **TV:** not used for Internet access

In essence, Czech participants' descriptions of their Internet use point to a rather practical use of it. Even when they use Facebook or other social networking sites, they explained that this is done mainly to stay in contact with friends, but not to share details of their personal lives with all of their contacts. Whilst these statements may be attributed at least partly to social desirability within the group, they generally fit the overall picture of Internet usage in the Czech Republic. Therefore it is not surprising that participants also reported to keep their social network profiles as private as possible.

Something that consumers particularly appreciate is the availability of information whenever it is needed.

"The fast availability of the information. Because for both the bachelor and now the diploma thesis I have to be sitting at my computer and I don't have to go to any library, so this is what I would miss, and the time would probably change to myself, because at the time when the news is on, I usually go out and do some sports activities, like running or skating, so to have information on what's going on in the world, I watch it some other time on the Internet, so if I wanted to know what's going on, I would have to sit at home at seven, right."

The possibility of saving time and managing their daily activities from home is another thing that participants would miss most if the Internet no longer existed.

"Making life better, like that one doesn't need to go to the bank and you can have coffee with it home."

Particularly in comparison to their children, who they think would go crazy without the Internet, the consumers are in no way emotionally connected to the Internet but instead would be fine without it. Although it would mean spending more time organising their lives, they do not fear that the world would be unable to function without the Internet. This is closely related to the way that they use it.

The Internet is mainly used in the afternoon and evening after work has finished. They check emails and Facebook, read the news and look up information. They also use it for online shopping and to communicate with their families and friends via Skype. After a while the majority of participants across all groups switch off the device that they are using, although sometimes they don't as they are playing online games or watching TV, but this seems to happen rarely. Regarding the organisation of their daily lives the Internet therefore plays a very important role. Diverse applications are used to make every days life easier and to save time and money, for example when shopping, banking and booking holidays.

6.3.3 Experience of disruptions

Disruptions to Internet connections are not seen to be particularly annoying, and are actually perceived as almost normal. In fact, disruptions were already mentioned unprompted in the word association exercise at the beginning of each focus group discussion (see above). Consumers in the Czech Republic immediately reported disconnections that last hours, several days or in some cases weeks. When connected through a WiFi ISP¹³⁴, they attribute these disconnections mainly to bad weather. Those that have a fixed connection think these problems are a result of broken cables or broken routers. Consumers stated that they do not mind waiting for a few minutes, hours or even days and that they are used to having bad or non-functioning connections. In such cases, they get around the problem by using their mobile connection (tethering) or by using the Internet at the library or at their friends' homes. Nobody blames their ISPs for these interruptions, and in fact they are perceived as being a result of a force majeure so are therefore accepted without any complaints.

Shorter disruptions were also reported, especially in the afternoon and evening hours when Internet connections are perceived as slow and unstable. Participants explain these disruptions as being the result of a large number of people using the Internet at the same time.

In essence, participants stated that they are at ease with unstable or slow Internet connections. This is the case not only when their private use is affected, but also their work use.

"When this happened at work to us, we just took a holiday. You can't work without a computer."

"Quite a relief. When mom came, I mean grandma, she didn't come to play cards online but to have a chat. That was quite nice."

"I don't mind going to have a coffee before something has been downloaded."

While missing the services that Internet access provides does not bother the participants much emotionally, paying for a service they could not use does; they frequently expressed their annoyance about this aspect of disruptions. Furthermore, they expressed annoyance about being left in dark by their providers about when the connection would be functioning again. This was particularly true for those who have children at home because they panic and are in a bad mood when cut off from the Internet.

"[...] at home I am fine, when it does not work at home, then the mobile connection works, but nothing is really in such a hurry so that couldn't wait for another hour, in my case at least. [...] It bothers me, these things, I have just

134 The Czech Republic is the European market with the highest market share of such WiFi-ISPs / wireless ISPs (wisp). Currently they hold around a third of the market. There are several hundred mostly local providers in the Czech Republic. A substantial number of these networks is organised as a community wireless network.

received a higher phone bill, despite the fact that I pay a monthly fee. [...] So this upsets me, because automatically it is to the customer's loss."

"I don't know, but it was at the company maybe, like some cable or whatever, but it was out for a week and I was like when it will be finally repaired, I need it. And mainly I didn't know when they are going to repair it."

"For me nothing much but the children, they were completely crazy about it."

Problems like throttling did not register with participants during the during the entire section on disruptions in the focus groups. They define disruptions as major, if there is no connection at all, while anything else is perceived as a minor disruption.

6.3.4 How the Internet works

As illustrated in the discussion guide that is reproduced in the annex to this report, the first task in this part of the discussion was to explain how the Internet works to a child. In the Czech Republic this task had to be changed slightly by the moderator of the focus groups in accordance with the members of the project team¹³⁵ present at the groups. The original question did not lead to the intended outcome of descriptions of how it works in figurative and symbolic language. Instead participants adamantly pointed out that the Internet was not appropriate for children to use. To prevent this question from remaining unanswered, it was changed to 'please explain how the Internet works to somebody that has never heard of it before'. With this formulation, the participants immediately started to describe how they think it works.

The Internet was described technically as a network or connection between many devices, servers and networks that allows data to be shared and searched for. In a rather figurative sense it was described as a connection to the world, an encyclopaedia or a library, and as something that everyone has got access to.

The participants explained that the Internet's main function is to connect devices, and that without such a connection computers would be useless. For something to be able to be connected,, data have to be translated into a special language that enables computers and other devices to communicate, in other words to exchange data. The connection is established either through cables, optical fibres, satellites or WiFi that are made available by providers. The technology that provides connectivity strongly impacts its stability in the eyes of the participants. This is not surprising considering their experiences of disruptions described in the above.

"Mutually connected and communicate with each other using a code, composed of zeros and ones."

"It's actually the network of a few computers, where servers let's say provide information based on requests, provide the response. Which happens via the protocol, the network."

¹³⁵ Dr Anna Schneider and Dr René Arnold.

Consumers stated that Internet providers are telecommunications companies that operate the Internet and thus the networks in specific regions, but they were not aware of how higher level providers allow interconnection between these smaller networks, in other words how worldwide connection works.

"I reckon there is a state supervision, the key one is CTO (Český telekomunikační úřad, Czech Telecommunication Office) which has some foundation, a domain, there are state rules and they provide to other dealers connections to the domains, it's ruled and organized by the governments, states, as they further sell the rights, similar to O2 which also gives licenses to the Internet."

"Network of networks"

"There is every single state, every town, every place has some shared network, under some provider and it is further connected to other networks and other networks and they are interconnected like that. This way we get somewhere else."

Consumers agreed that everybody who uses the Internet pays for having access, and that it is mainly consumers who pay for it, but also to some extent the ISPs.

"In fact the end-user, and also the provider in a way."

"The users. Us."

Participants also consider the creation of content as a major building block to the Internet as they know it. It is worth noting that they described this as a conscious activity (in comparison to incidental generation of content) for example by creating websites. They showed awareness that some people and companies use websites to present themselves or their businesses online. Programmers, specialists and companies that provide the servers act in the background to provide the technical foundation of the Internet.

"So as to the technical, that technical development, it is about the programmers and specialists, specialists of that kind. But further I think that from a general perspective we make the Internet, who uses it."

Participants discussed the matter of whether there are any rules governing the Internet in a similarly unemotional manner to the way they expressed their general perception of the Internet being a functional tool. Initially, they were doubtful whether there were any rules at all. However, in the process of discussing this topic amongst themselves, they quickly arrived at the conclusion that there had to be some rules, but were unable to explain these in greater detail.

"Are there even any rules?"

"Definitely the law. It is certainly limited by some legislation."

Rules that came to mind immediately most commonly revolved around child protection issues such as restricted access to sites that are not available for people under 18 years of age to view, or certain sites that are blocked due to their illegal contents. At the same time, they had serious doubts that the implementation of these rules is necessarily successful.

“I think that rather there are some rules applied, because there is then the problem that the Internet is free, free medium, probably too free. So I think that if any rules apply, then those given at the end, simply applications and individual sites and these have own rules, rather than the whole of the Internet.”

“But some years ago, something like that happened, the hackers attacked the White House... and they did it, so I think these hackers are quite skilful”

Furthermore, participants in the Czech focus groups believe that some governments create their very own rules. They commonly linked these rules to filtering or censoring certain bits of information or sites.

“I think it’s also regional, it depends on the particular states that may promote the Internet somewhere, or use a larger filter to block some sites.”

“In the Czech Republic, there is, and if there isn’t, we don’t know about it. And in China, there isn’t. (absence of censorship)”

In addition to rules governing the Internet, participants also referred to rules closer to their sphere of interaction with it. In particular, they described how the general terms and conditions of some specific services providers or providers of specific applications are not really meant to be read actively by the normal consumer. In fact, they suspect companies make these texts deliberately cumbersome, long and difficult to read, so that no one really bothers to look at them even though consumers may be lured into giving away rights that they would not want to give away had they been presented with understandable information.

“Or there may be like hidden rules and such, very few people read them. You have it on Facebook for example.”

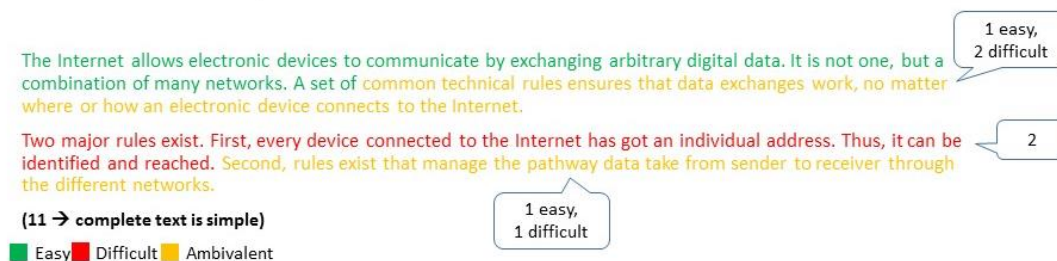
After the initial discussion about how the Internet works, a definition was given to the participants. They were asked to not only read it, but also to mark those words or sentences that were easy as well as hard to understand. All definitions in the individual languages are shown in the annex. Whilst participants in the test areas were given definitions in their native language, the definitions in this report are presented in English to improve readability and comparisons between the different test areas.

As it is shown, most consumers rated the definition as a whole as rather technical but easy to understand. The terms “digital data” as well as ‘A set of common technical rules’ and ‘major rules’ were the most difficult terms for them. All participants, even those with high self-ascribed Internet expertise, had difficulties understanding these terms.

Czech Republic: Experts



Czech Republic: Participants with little and medium expertise



6.3.5 Provider choice criteria

6.3.5.1 Currently used Internet providers, duration and details of contract

Current Internet providers in the Czech Republic used by the participants in the focus group discussions are: O2 which is used by most of the respondents, UPC which comes second along with several others such as Petriny.net, Centrio, Wifcom, Trinet and T-Mobil.

Many participants stated to have access to both wired Internet connections at home as well as mobile Internet for different devices.

Regarding Internet access at home, most participants have been with their current providers for 5 to 7 years, some even for 10 to 13 years.

The monthly payment lies between 300 and 1200 CZK depending mostly on the bundle that they are subscribed to. Bundles ranged from 'Internet only contracts' to package deals including Internet, TV and telephony.

Many participants were unable to recall their contract specifications, particularly with regard to the Internet speed, with more than half of the respondents being uncertain of this:

"I have no idea anymore."

"It is something I don't bother with."

"My son does all of this, he knows about speed and such."

"My husband deals with this."

Participants who remembered their Internet speed said they have 100 Mbit/s, 50 Mbit/s, 256 Mb/s or 10Mbit/s.

The combination of Internet, TV and telephony appeared to be attractive and representative for the majority of participants.

Many of the them are or were initially on a 24-month contract. This seemed to be accepted as normal, although there was also the wish to stay more flexible through short notice times when ending the contract early.

6.3.5.2 General satisfaction with Internet providers

Mostly, the level of satisfaction with Internet providers is high with participants rating their satisfaction as 1 or 2 on a scale 1-6 where 1 is very satisfied and 6 is very unsatisfied.

"We have no disruptions, it all functions fine."

"We are completely happy."

This positive user experience is based on a reliable and fast connection, technical support when needed and the feeling of paying a fair price.

Participants who have a negative user experience complained about slow connections or disruptions, or a slow customer service with long periods of waiting on hold.

"Sometimes I'm annoyed when I want to play online games, it keeps dropping out and I'm left without connection for about two hours."

"I don't like the occasional outages. It's because whenever there are more people connected, it lags, they are not able to handle this."

"It is difficult to reach their customer service and that's really horrible."

There was also some criticism that in some residential areas in the Czech Republic there is no choice of providers as only one is available.

Overall, participants generally have a positive image of Internet providers in the Czech Republic. There were no signs of mistrust or general dissatisfaction, and their attitude towards them appeared to be positive and confident.

6.3.5.3 Switching Internet providers

Only a couple of participants had changed their Internet provider in the recent past. In one case the change was triggered by the dissatisfaction with the stability of their connection:

"We changed as we were very unhappy with O2, we had disruptions all the time, the signal was weak and it almost did not work in the evenings so we switched the provider!"

In another case continuous wrong billing and the need for claiming money back induced dissatisfaction.

Apart from continuous technical problems or great dissatisfaction with the customer service of the providers, cheaper and more attractive deals that would save a considerable amount of money were consistently seen as possible triggers for swapping Internet provider.

"I would consider to change if I see something much cheaper."

However, participants are not very interested in proactively seeking alternative, cheaper deals. They might consider switching when they come across an attractive offer by accident or if personal circumstances change and new Internet set-ups are unavoidable such as when moving house or flat:

"Not interested to change as I am happy."

"No interest to change – I have a good contract."

"I looked at other providers when I moved to a new flat."

For the majority, a change of the Internet provider is associated with inconveniences and unwanted tasks. The whole process of gathering information, comparing offers and accommodating possible technical set-up changes in their houses seems troublesome.

"Well, I would not like to change and go through all these set-up problems, like with O2, again. It works somehow now ... and I would not want to start all over again even if it would be for a lower price. I do not want to complicate things."

Also, there are residential areas that are only covered by one Internet provider. The question of change is then irrelevant.

When asked how they would go about changing the provider if they wanted to, the most important source of information would be friends, relatives or colleagues. Their individual experiences with providers are seen as a far more reliable source of information than the published information or professional recommendations.

"I would always ask friends for recommendations, there is nothing better. More trustworthy than advertising."

Other additional sources of information that would be used are websites, online chat rooms, provider support lines or the providers' local branches.

Before committing to a contract it also appeared normal and acceptable to negotiate with the potential provider about the contract details.

6.3.5.4 Relevant criteria for the choice of an Internet provider

The stability of the connection is the most important criterion for the choice of provider. For a fixed line this implies a good stable connection without disruptions or cut offs and for mobile Internet providers it implies good coverage and connectivity. To ensure a good and reliable connection, the first choice for getting information is neighbours. With their specific local experience they seem particularly good judges of the quality of the coverage in their local area.

Other very important criteria are the speed of the connection and the feeling of paying a fair price. The demands for speed are individually very different and depend on specific usage. Participants who stream videos and music and play online games have the need for fast connections and fast download speeds. On this basis, younger participants seem to have a higher demand for fast connections than older ones. Prices naturally vary a lot depending upon contract details and many participants seemed interested in subscribing to bundles or packages that offer Internet, TV and telephony.

Good customer service and technical support are also an important criterion. Helplines that are easy to reach and don't have long waiting times or additional costs are expected. The providers' local branches seem less relevant for the choice of provider.

Less important, but also mentioned as a relevant criterion for provider choice, are the reputation or image of the provider and the offer of attractive add-ons, such as free apps, programs (for example Spotify) or specific TV channels.

6.3.5.5 Future outlook regarding Internet provision

When asked about Internet provision in the future, speed is seen as the major criterion. Participants assume that online TV and therefore the streaming of large volumes of data will become more common in many households, so fast connections will be essential.

Good Internet coverage in all regions of the Czech Republic is seen as another future aspiration. Monopoly positions of providers should be eliminated and a choice of providers should be made available.

Other, personally relevant, aspects seem to be better packages deals (Internet, TV and telephony), shorter binding times within contracts and competitive prices.

It was also discussed how far the government should offer free Internet access in public spaces or on public transport in the future.

6.3.6 Network neutrality

The term “network neutrality” was discussed in a series of steps that matched the one used for the earlier topic of how the Internet works¹³⁶. First, participants were invited to state what they immediately associated with this term. After that, they were given a very short definition of “network neutrality” and discussed examples, analogies and explanations based on this term. Additionally they were asked to describe network neutrality in their own words. Finally they received a longer definition of deviations from network neutrality and their possible effects, and they discussed freely and elaborated on their own experiences. This procedure was chosen to generate deeper insights regarding consumers’ conceptualisations of network neutrality, and great care was taken in every discussion to prevent a direct influence on them that could bias the discussion.

When confronted with the term network neutrality, consumers were initially completely unaware of the it and its meaning. With some probing by the moderator however, they started to come up with some ideas in relation to the it. These ideas are portrayed in the following paragraphs.

Some consumers associated network neutrality with accessibility, in terms of having full and uncensored access and authorisation to all kinds of content and websites, without anyspecific websites being blocked.

“I’m not restricted, not blocked from getting somewhere or that they would tell me I don’t have access rights.”

In a similar line of thought, some other participants guessed that the term might refer to a network that is not following any of the rules that other networks are bound to by terms of legislation or governmental decisions.

“Perhaps some sort of network that is not bound by certain rules that the others must follow, when there is the work ‘neutrality’.”

Other suggestions were of a situation where ISP-monopolies are prevented. Network neutrality was thus understood as customers being enabled to having the freedom of choice between providers, as there would no longer be places where just one ISP was available. Strongly related to this concept was the idea that all providers should offer equal conditions for consumers and equal opportunities to provide their services.

“It’s also related to the monopoly, that in some place, like here, I have an option to connect to various networks, so everybody who creates these networks, everybody should have the same conditions for creating the networks in that place and I can make a choice which network to connect to, not that somebody says, no, only I can set up a network here and nobody else, so it’s like that.”

¹³⁶ For a detailed description please refer to the discussion guide reproduced in the annex to this report.

There were also ideas related to content. Some participants were under the impression that neutrality describes gender neutrality in terms of male and female formulations such as *“Uncle Google and Aunt Wikipedia”*, while some thought it could somehow be related to skipping or censoring uninteresting or “stupid” content and discussions *“that the idiots contribute to these sorts of websites.”*

After this short and unprompted discussion, the moderator read out aloud the short definition of network neutrality as planned in the discussion guide¹³⁷:

Network neutrality means that all data in a network is treated in equal terms. Equal treatment refers to the standard behaviour of how data is forwarded in a network towards its destination. The standard behaviour for equal treatment is that all data is forwarded according to the same rules.

Participants understood this definition in very different ways. While some understood it and the underlying principles quite well, others did not grasp the meaning of this definition at all. In order to understand this definition, it was useful to have a technical understanding of how the Internet works, especially how data are forwarded. Participants aware of such underlying technical principles understood that the definition is about equal treatment of data.

“The link to the first article, the technical rules, that the zeros and ones will transfer music and correspondence, that it’s nothing superior, it all goes the same way.”

Practically all participants in the focus groups in the Czech Republic expressed serious doubts as to whether network neutrality exists at the moment. These doubts were of very different origins.

Some doubted that the Internet is neutral because they have experienced advertisements, such as banner advertisements and search engine results, being somehow tracked and then prioritised.

“As I already mentioned, the link to the first rule where the packets, either music or something, have the same technical foundation. The music is downloaded with the same speed as the film, on the same principle, as Tomáš said here, whatever is being searched. However, it appears a little confusing to me, I mean it’s mysterious how the banners are prioritised.”

Others believe that should network neutrality exist they would be able to get access to all kinds of data, which includes information and websites. The examples they gave were not solely related to the perceived censorship of information, but also related to websites and services that do need a certain authentication which they do not have.

“I think that it is known issue for all of us through twisting information and filtering data coming from Ukraine.”

¹³⁷ See Annex.

"I am afraid that some institutions and some positions take absolutely different priority or all different variants of priorities to access data on the Internet, than a normal user does."

Some participants rated network neutrality as uninteresting and impossible, because it would eradicate all the differences between competitors and therefore be a limitation to free market competition.

"I don't understand that, but as the fellow explained it here, it seems to me that it's a restriction of a free competition."

"The end customer doesn't care if there is some network neutrality, it's more important to the companies and analysts, IT specialists. For instance I would like to find a sirloin recipe, so I don't care which way I get it, whether it is with some sort of neutrality or somehow limited. I just receive the recipe and don't think of it anymore. It will arrive in three seconds or thirty seconds. The neighbour would cook it on Sunday anyway, so it doesn't matter whether she waits three or thirty seconds."

Czech Republic: Experts

2 easy, 2 difficult

6

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. Specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

3

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.

- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.

- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.

2

- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(8 → complete text is simple, 1 complete text is difficult)

Easy Difficult Ambivalent

2

2easy
2difficult

Czech Republic: Participants with little and medium expertise

easy, 1 difficult

2

2

3

2 difficult, 1 easy

2 easy

1 difficult, 1 easy

4

2

(4 → complete text is simple)

■ Easy ■ Difficult ■ Ambivalent

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. Implementing specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.
- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.
- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.
- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

The discussion on network neutrality generally failed to engage participants emotionally, and some of them even stated that they were not really interested in how long information takes to arrive. Others stated that they were aware of premium services and that those who want faster Internet will have to pay for it.

Problems with the connection were attributed to programmers' mistakes, random malfunctions, lack of coverage, server attributes, the specific device being used or low speed, but at no point, even after a broad discussion on deviations from network neutrality, were they attributed to ISPs managing data traffic. This is especially interesting as consumers made it clear at the same time that they do not believe that network neutrality exists at this time. Few were arguing that some data need to be prioritised somehow, as this should be a fact for how important information is treated in the case of serious disasters. Others just did not believe that the Internet could be a space in which all players are willing to follow such rules.

"I didn't blame the Internet but the imperfection of the programmer that he made a mistake, that he programmed the application wrong."

"I think the network neutrality doesn't exist, because when I send photos or songs to somebody, it cannot be prioritized over working with money. The money must be always the most important, that's how the system works. Money over the data and photos. (MOD.: If the governments are sending something...) ... then it should be preferred."

"I have a kind of practical experience. I have a sister, who lives in Austria she has some local provider and she knows that she doesn't have everything available, that she cannot access her data because she is not able to log in to her seznam.cz mailbox here in the Czech Republic through that Austrian

provider. I don't understand it, what is the reason in it, but when she has a mailbox at Seznam here, she cannot log in from Austria."

"I would compare it to the telecommunication connection or the mobile phone, where the system of the immediate warning is, that there might be some preference, of some state institutes in case of disaster, so that the packets are more passable to them compared to the man in the street. "

Participants think that deviations from network neutrality lie in the hands of governments, as they are perceived to be more powerful than the providers. Accordingly, they did not believe that network neutrality is a service that could somehow be delivered to normal consumers.

"I spoke about this before. I think that there are differences between access and priorities in general for regular users and for state administration."

They would wish for some kind of regulation that helps to prevent misuse and treachery on the Internet and is therefore more content related.

"Maybe just some websites that are breaking the law. "

"Access sites to nuclear weapons, for instance."

"I think, I don't know if any regulation is needed, but I think that it is necessary to watch websites from some fields and groups, like to watch cybercrime sites. That it is needed to watch them closely."

At the same time only a few participants found the idea of regulation to be contradictory to the original concept of the Internet being a free medium, and to be totalitarian because someone would dictate which data are transmitted and how. These consumers would clearly prefer no regulation at all because it would be a threat to democratic principles of the Internet.

"And it's kind of undemocratic, or it seems to me."

"I think that if there was a situation like that that it would deny itself, that basic idea and spirit of the Internet, which is that independent or would-be-independent sharing of information."

6.3.7 Summary

Consumers in the Czech Republic use the Internet for practical reasons and for helping to organise their daily lives. It is rated as a 'must have' that enables people to be a full part of modern society and is used predominantly for seeking information and other organisational tasks rather than for entertainment. This results in Czechs having little or no emotional attachment to the Internet, so even though they report longer than average disruptions to their access, these do not leave them angry or disproportionately annoyed. This is not only true for their private use, but also for their work-related use of the Internet. Consequently, consumers in the Czech Republic feel they would be able to

live without the Internet if it no longer existed. Their awareness of their own Internet usage also leads to the perception that they are less vulnerable to its looming threats, which the participants in the focus groups showed some awareness of nonetheless. Equally, they have little fear of getting addicted to the Internet as they claimed that they have a high degree of control over their time spent online as well as their online behaviour.

Not surprisingly Czech consumers were able to specify at what time of day and for what purposes they use the Internet as they do not use it as a 'background noise' during the whole day. Private and work-related Internet usage is strictly separated as employers in general do not accept private usage of the Internet during work hours.

If the Internet is used as a source of entertainment it is more commonly used for active than for passive interaction. Thus online games are used more often than listening to online radio or podcasts, or watching videos.

Generally, consumers in the Czech Republic were well aware of how the Internet works. They were not only aware of the application-related or in other words figurative functioning of the Internet, but were also able to describe some of the technical components required for it to work. In a figurative sense, the Internet is described as a library or encyclopaedia that everyone has access to. Their descriptions and explanations of the technical functioning included various aspects: network, network of many networks, devices, servers, communication via binary code (zeros and ones).

Whilst consumers were aware that providers operate the Internet and are somehow paying for it, they were convinced that the bulk of the payment necessary to keep it functioning is made by the users themselves. Consumers were aware of the fact that 'at least some' rules apply to the Internet. The first rules that came to mind for them were linked to access-barriers or content blocking e.g. related to child protection issues or a result of governmental legislation. Additionally, they mentioned company specific rules that users of these services have to accept to be able to use them.

The definition of how the Internet functions was rated as rather technical but easy to understand. The terms 'arbitrary digital data' as well as 'rules' were the least understandable and transparent to the consumers.

When talking about disruptions, consumers immediately thought of disconnections that persisted several hours and could last days or even weeks. Especially with regard to WiFi connections, distortions were often mentioned and attributed to the technology's higher vulnerability to weather conditions. However, even participants on fixed (wired) connections rarely blamed their providers as being responsible. Rather, they attributed such issues to a force majeure and are very used to unstable Internet connections. Besides these fundamental issues with Internet access, it also registered with participants that their Internet connection might be unstable due to high data traffic (expressed as many users on the Internet simultaneously) during peak hours in the afternoon or the evening. Whilst such disruptions (even longer ones) do not seem to bother consumers in the Czech Republic emotionally as they are perceived as 'given', they bother their wallets as participants commonly complain about paying for services

that do not function. Disruptions are defined as 'major' by the consumers only if there is no connection for several days in a row, all the rest are perceived as 'minor'.

With regard to fixed-line Internet provision, participants in rural areas of the Czech Republic have the perception that there is only one Internet provider that has a monopoly position. Participants from these areas felt that they had no provider choice for fixed lines, but some reported using mobile or local WiFi Internet connections instead.

Meanwhile mobile Internet access also has its problems as there are regions where reliable coverage is lacking. On this backdrop, word-of-mouth recommendations are valued most when looking for new Internet providers. In particular neighbours' experiences were seen as the most reliable source of information on the quality of the connection in one's own locality. Hence, the most important criterion for the choice of an Internet provider was the stability of the connection followed by its speed – and in the case of mobile connections the stability and coverage followed by the speed. Furthermore, Czech participants were also strongly driven by price. Some reported that they were unsatisfied with their WiFi access to the Internet, but still were not willing to switch to a fixed-line due to the higher price.

Despite these issues, Czech participants showed a generally high level of satisfaction with their providers and their attitude towards Internet providers appeared to be positive. Switching providers would be considered if more attractive deals came up; however consumers do not often proactively search for these. Many participants associated switching Internet providers with inconvenience and extra work so it is not surprising that many of them have held contracts with their current providers for a long time – often several years.

Consumers in the Czech Republic were completely unaware of the term network neutrality and its meaning. Spontaneous associations related to the term seemed to be guided mostly by the idea of 'neutrality', which led participants to themes related to policy, democracy and censorship instead of any technical issues. Participants predominantly linked the term to the absence of censorship on the Internet and the possibility of free access to all of its contents. Related to this understanding of freedom, other associations linked to network neutrality referred to the freedom of choice for consumers that would result from higher competition amongst ISPs.

After the definition of network neutrality, consumers that were aware of the technical functioning of the Internet and its principles were able to understand that the definition is about equal treatment of data within a network. With only minor exceptions, consumers in the Czech Republic doubted that network neutrality exists at the moment. Arguments that are related to deviations as had been defined to them occurred rarely in the discussions (e.g. censorship). Most consumers referred to problems unrelated to network neutrality, for example access barriers to certain websites (https), advertisements or search engine results that are shown in a certain way.

Interestingly, some consumers considered network neutrality as a threat to free market competition as it would flatten all differences between competitors.

Whilst consumers were generally able to report disruptions to their Internet connections, at no point did they attribute these experiences to network neutrality issues, but instead to several other reasons such as random malfunctions, slow connections or their own devices, as well as the reasons mentioned earlier such as whether or not they have a wired connection.

Deviations from network neutrality were rated as acceptable by consumers in the Czech Republic as long as it helps to give priority to important contents, especially those that would help governmental institutions to react in the case of disaster. Content blocking is desired when it leads to the protection of users, especially children.

While consumers were convinced that deviations from network neutrality already occur, they doubted that services with ensured quality are offered to 'normal' consumers. If such services were available, some would accept that users receive better service as long as they paid more for it. Others described any traffic management as undemocratic and contradictory to the original idea of the Internet as a free medium that everyone should have unrestricted access to.

6.4 Results of the focus groups: Greece

6.4.1 Ideas associated with the word "Internet"

Greek consumers use the Internet as a source of entertainment, communication and information as well as for the organisation of their daily lives. It is perceived as being absolutely essential to most people as it enables them to be a part of modern society. At the same time, it allows people to follow their own personal interests, giving them the individual freedom they desire.. Although participants stated that they would be able to live without the Internet, their facial expressions clearly showed that they were not able to imagine how that would be done.

The spontaneous word associations that had to start with one of the letters of the word "Internet" are shown in the graphical representation below (the figure shows English translations). Frequently mentioned associations (those that featured in two of the three groups) are shown in slightly larger font size. Accordingly, the largest font size applies to associations that were made by all groups.



After that, participants were asked to come up with more related words that did not begin with the letters of the word “Internet”. These highlighted the importance of the Internet for keeping contact with friends and family as well as for work purposes and the organisation of their daily private lives.

6.4.2 The role of the Internet

The Internet plays an important role in consumers’ daily lives. Working would not be possible for them without the it and the devices that they use during their leisure time are “always on and connected” to guarantee continuous access so that they can use it immediately whenever and wherever they want. In particular, those consumers that have medium or high expertise reported that they are constantly connected to it so that it is available if needed, or because it serves as a source of entertainment, for example listening to music or watching TV. Those with less expertise are more conscious of their Internet use.

The Internet was described as a tool that does everything, as it keeps not only their work, but also their private lives running. As well as being used for organisational purposes, it gives consumers the sensation of freedom and safety in terms of being able to follow their own interests and find all the information that they need. It is a gateway to the world, and it allows them to stay in touch with friends and family with whom they would not be able to communicate easily without it.

“For me it is an absolute necessity. For instance at the office if we do not have Internet, everything stops.”

“It is also a necessity, it is like the mobile phone which is difficult to live without, the same is the case with Internet, and if you need to find something so you have to go on the Internet.”

“For me it is a feeling of security. I cannot imagine myself without it, without the safety it provides, you have access to everything.”

“For me it means freedom, you can do things you could never have imagined a few years ago. You can create your own environment. In the past everything was given, you had the 3 TV channels and overall you were confined to your immediate surroundings. Now you can do whatever you want, talk with someone in the States, read the news you want to read, find whatever music you want, can access whatever movies you want whenever you want. Also information travels at an unbelievable speed, anything that happens, you find out about it immediately. Also you can now be in touch with everyone you want and you can choose who you want to socialize with based on their characteristics, based on what kind of people you like, while in the past you were limited to the people around you, relatives, people from your neighbourhood, school or work.”

For some participants, this sensation of safety and freedom stretches even further. To them, the Internet represents a retreat from the real world.

“For me it is company. When I get rid of everyone around me, I go on the Internet to see what is going on. That’s what I did during the holidays, I liked it. I did not want to go out, just sat there, checked who had sent me a message, decided who to chat with, looked at different things, it was great.”

It is perceived as normal for participants to be online both at work and during their free time. While some stated that they start their day by going online in the morning to find out about the latest news and to check their emails, others go online while they are on their way to work or at the very latest when they are at work. Here, Internet use is not strictly separated from private use; if people have some free time it is used for shopping as well as for short private communication such as emails or Facebook.

“Then at work I mostly look up info about medical news and if there is time, may look at my emails, Facebook etc., but mostly it is work related usage.”

“At work I deal mostly with work related things, but may also do some personal things, such as buying something online.”

In the afternoon and evening the Internet is used at home for information seeking as well as for entertainment. Participants reported the use of applications such as radio podcasts and Youtube. These may serve as “lean back” as well as “lean forward” forms of entertainment, which is to say that participants reported to use them as a main activity as well as a kind of backdrop to other things that are done simultaneously. Within that the latter usage appears to be much more common, so when at home, participants tend to use the Internet in a second screen manner.

“Our computer is in my bedroom, so I use it a lot to watch TV. I also use it to listen to the radio a lot.”

“(Moderator: What do you like about the Internet?) The combination idea, for instance you can listen to music and work at the same time.”

Mobile devices are mainly used when out of the house, either when travelling for leisure or on the way to or from work. Additionally, participants use them at home whenever they require direct and convenient access to information or Internet applications.

“I use either the laptop or the mobile phone, so if I do not want to get up yet, I use the mobile phone in bed, if I am up I open the laptop.”

“On my way to work I go on the Internet through mobile, again to check emails or twitter, i.e. shorter things, that don't take long.”

Desktop computers are used in nearly every household and are used in the living room as well as in the bedroom especially when content or applications are used that require big data volumes (such as streaming videos), a high screen resolution (for example gaming) or a high degree of concentration (such as work-related applications). In households with smaller children, desktops are used to make sure that the Internet usage is controlled and therefore safe for the children that are using it.

“The desktop I use mostly for YouTube and other things that the kids, to the extent they are allowed to, want to see.”

“PC for downloading movies, music, or even doing a little bit of work.”

While laptops are only rarely used, tablets are used more frequently by consumers in Greece, mainly for entertainment, communication and information seeking.

“Tablet for information, reading articles, entertainment, playing games.”

Based on the focus group discussions, the choice of device depends mainly on two underlying factors: the perceived control/self-protection that participants stated as necessary when using certain applications, and the convenience of access.

- **Mobile phone:** low control/self-protection, high level of convenience (searching for short information, e-mail access, news, social networks)
- **Tablet:** fairly low control/self-protection, high level of convenience (searching for information, news, watching films, playing games)
- **Laptop (rarely used):** high control/self-protection, fairly high level of convenience (online-banking, booking travel/holiday, Skype, online-shopping, e-mails)
- **PC:** high control/self-protection, medium level of convenience (online banking, work, searching for detailed information, Skype, online shopping, used with children, booking holidays)
- **TV:** high level of convenience (watching films)

Aspects of the Internet that consumers particularly like highlight the importance of the individualised entertainment and relaxation, as well as communication and searching for information:

"That I can watch football matches that are not shown on TV"

"Communication with friends, a tool for work, entertainment. Everything, a part of our daily lives."

"Also it is a means to relax. In the afternoon, while the baby is asleep, I use it as a break to relax, look at Facebook, YouTube etc. For me it is mostly entertainment."

"I particularly like having access to music and also to endless recipes."

"For me it is a window to the world, to everything I might be interested in, and access to what people in other countries deal with, their videos, their culture, etc."

"You can do absolutely everything on the Internet, with the exception of going to the movies or for a beer with a friend, everything else you may want is there."

Whilst consumers on the one hand enjoy the advantages of the Internet, they fear its imponderables and dangers at the same time. They see children as particularly vulnerable to such menace. However, they also appreciate that being the breeding place of criminal intent that they perceive it to be, the Internet can be dangerous for any user.

"What happens with children, strangers approaching children and even if you try to block what children can see, the strangers still find a way."

"People trying to do harm in general, those spreading viruses, etc. and the fact that they cannot be identified and found."

"I am bothered by the fact that there is so much spam among the emails. To the extent that it discourages me from using email, in fact I had stopped completely for a while and said 'whoever wants to communicate with me, they can call me on the mobile'."

Besides obvious threats, the Internet is dangerous in a more subtle way that is strongly related to a lack of control of private data, which results in the feeling of being at somebody's mercy:

"I do not like the fact that my girls spend so much time on the Internet, hours on end. I understand that it is a part of their communication, but sometimes it seems that personal contact is completely lost. Also their group of friends constantly knows where they are, what they are doing – I think that too much personal information is being shared."

Although the Internet plays an important role in participants' communication with others, they also reported that they miss the personal contact. Furthermore, they find that some of the common rules in interpersonal communication appear to be lacking when it is transferred into the online sphere.

"I find it negative that we close up to ourselves and no longer talk to people, you no longer have personal contact with people."

"It bothers me that people talk to each other in a bad way on e.g. on Facebook, they have arguments that would not happen if it was not for Internet. They hide behind the anonymity of the Internet and say things they otherwise would not. They are like 'keyboard bullies'."

In line with the idea of the Internet being a retreat from the real world, participants reported that they feel like they get into a flow online. Whilst it registered clearly with them that such experiences can be very time consuming, any disturbances are considered very annoying. Participants mentioned advertisements, such as pop-ups or pop-unders, as a particularly prominent example of such disturbances.

"You can end up spending ages surfing around, looking at photos, Facebook etc. and suddenly think what have I been doing for 2 hours."

"I am annoyed by all the advertising that you cannot avoid, particularly if you want to watch a video."

Faced with the question as to what they would do without the Internet, participants explained that they would be able to survive without it. For instance, they thought of going back to doing things like they used to, like buying newspapers and shopping offline. Despite these explanations, it transpires already from some of their responses that actually a life without the Internet is not really imaginable to them anymore. Their body language and facial expressions underlined this impression during the focus group discussions.

"But we would miss it. A lot."

"I would feel like the rug had been pulled from under my feet."

"And it would cost us. In terms of time and money!"

"And we would miss out on lots of entertainment, would end up just watching TV again."

"It would be restrictive, you could no longer do whatever you want, would not have access to all the news you want."

"And I want to read news from different sources."

"I would miss the communication, now that there is the possibility to communicate anyone, after so many years of having that I take it for granted. Some of my friends have moved to the States, to the UK, and suddenly I would lose communication with them."

"I would be very upset for a while, but would be able to find substitutes. In fact after a while I might even feel relieved, as I would no longer be dependent on the Internet. Then I would be able to evaluate what the Internet really meant for me. Like you do when you break up with a person, it is afterwards that you

understand what they really meant to you, what was the essence of the relationship. It would be the same with Internet, I would understand what it essentially meant for me.”

6.4.3 Experience of disruptions

Greek participants were immediately able to remember disruptions to their Internet connection. They perceived them as annoying, especially if they hindered their work or interrupted them doing things of high importance or things that needed to be done quickly. Children being interrupted when playing online games was also reported as a situation when Internet disruptions could become particularly annoying.

“Connection being lost is a problem. My son plays online games and gets really angry when suddenly the connection goes. It does not happen very often, maybe once every couple of months, but he gets really annoyed. With games immediate reactions are important and a lost connection is a nuisance.”

Problems with the connection are generally perceived to be “major problems” if they last a relatively long time or if they interrupt consumers while doing things of high importance or high urgency. Consumers rate problems as being “minor” when they affect their own private use that is meant solely for entertainment. Nevertheless, they often felt not only disturbed, but actually angry and some even describe themselves as very angry when such disruptions occur:

“I go crazy, not just upset. Seeing this uploading circle going round and round without the page getting there is one of the things that make me go out of control, even for the few minutes that it gets stuck.”

“I go totally crazy, bananas, irritated!”

“How you evaluate the seriousness of the disruption depends on what you are doing at the time. For instance, if it is an email which absolutely must get sent there and then, even a temporary problem can be major, because it has to do with your work.”

“It is worse if you are working, if you are doing something for entertainment, it is not as serious.”

“And if that happens over the weekend it is a real problem, because they may not fix it until Monday.”

Problems with Internet connections were attributed to several origins, with ISPs in particular being blamed for perceived problems and interruptions. Some participants reported that they think a frequent cause is a lack of speed caused by high data traffic during peak times, but also more generally because in their view providers do not keep their promises regarding the speeds that will be provided.

“He uses a computer connected by wire, so it is not a WiFi problem or a router problem. It is clearly the provider who is at fault.”

“According to the provider the problem is the router, i.e. I should get a new router, but I think that is just an excuse. I believe their lines are old and bad, and they have too many customers being served from the particular hub, and that is the problem, not the router.”

“Sometimes a device that is a little further from the router loses its connection and I have to close it, turn it back on, fix its settings etc. in order to get it connected again. I assume this is a problem of the provider. This should not happen, as we are paying for a high speed connection, theoretically at least...”

“Most likely they have not given me the speed they told me, i.e. 24. So it is a provider issue, I checked the speed once and it was not 24.”

Some participants viewed their problems to be browser-related, whereas others attributed them to the type of device that they use, or the number that they have connected. Only few blame their own router for being responsible for disruptions.

“The other problem I personally I have is that Internet on my mobile is slow. But I know that this is due to the specific mobile I have, so I have accepted it.”

“OK, I've had some problems with an old laptop but this wasn't related to the provider. Or some damages created by the kids when they quarrel. Sometimes it goes slower, but it's because of the device. My tablet that's new goes faster.”

“But the kids being online at the same time may also play a role.”

“Primarily on Facebook. On Facebook I have to exit Google and go on Firefox in order to get it to work, I don't know why. Also I cannot get some games to open on Google, but they are ok on Firefox.”

6.4.4 How the Internet works

Participants' understanding of how the Internet works was raised in several steps. First they were asked to explain it to 'a person that has never heard about the Internet before' for example to a child or their own grandmother. The participants immediately started to describe it in a fairly technical way as a network of computers or networks that exchange data and communicate with each other. This interconnection allows the users to find any data and information that is accessible.

“It is communication between 2 computers, yours and a server. The people in charge of the server have some information that they are willing to share and it interests you. The communication happens through a telephone line. You go on their page and you can see what they have shared.”

“Interconnection of many computers, this is the basis. Each computer gives and takes information to and from another computer.”

One participant was able to explain how the Internet works in a very detailed and elaborate way. It should be kept in mind that the following citation is an exceptional case:

"It is like a fishing net or like a spider net where, in order to go from one place to another, you have to pass through the intermediary knots (or crossroads) according to the protocol that you have selected. There are major arteries and side roads, and the protocol finds you the shortest and fastest way to get to where you want. Essentially it provides everyone with the same level of immediacy and equal rights to immediate access according to the same rules. There are rules set by those who own the information depending on what information they want to share; for instance the Army or a bank will have 'closed rules' to protect their information, they add security doors so that not everyone can get in. It is like you are walking in a city, you can go almost anywhere, but at times you encounter a section that has a security guard and cannot get in just like that. Like on banking websites, they need verification of who you are. In addition, in reference to a variety of applications, there are regular international conferences where the objective is to upgrade the rightful and equal access to everyone. There are some companies that participate, I do not remember now which they are, but they are the companies that construct the networks plus the people who first came up with the philosophy behind how the Internet will work, and their successors, like Bill Gates, who have gotten into that philosophy and used it partly to their own advantage. So people like Bill Gates participate in an assembly, where they discuss how and for what purposes subscribers around the world can use Internet and what they want to give to them."

In a more figurative way, the Internet was compared to the television or telephone, because information and pictures are transported in a comparable way by cable or radio waves. Additionally it was compared to a passkey that allows access to certain kinds of information, although it was clear to the consumers that some information is restricted.

"I would make a parallel with the television and say it works in a similar way, someone sends radio waves which you can receive the images on your computer."

"I would say that it is like the telephone, but also contains pictures and information. It is like a telephone that we use in a different way."

"Like you have a pass key, like in a hotel, a key that opens all the doors. All the doors that have given an OK to be opened."

Greek consumers agreed that businesses operate the Internet as they provide the technical foundations for websites, they deal with information by storing and providing it, and are responsible for the organisation of data. Additionally some consumers mentioned that part of 'making the Internet' also resides with users, who produce content.

"Everyone and no one."

"We do"

"Companies dealing with information systems, which put things on the Internet. For instance Google"

"And anyone can make a site, but I assume somebody first has to fix the foundations for it, perhaps companies like Google"

"Companies that have information, like information banks, and provide that information to the public"

The expert group moved on to a lively discussion about the rules that apply to the Internet. While some stated that big companies are the ones that define who have access to certain sites, others attribute this role to ISPs.

"Companies that make the communication platforms, protocols. For instance Google. They are like a traffic police, they make the protocol and determine how it works. So they let the ones who pay (subscribe) through and not anyone else"

"I see the providers as the traffic police, so those who pay the provider get through. So the provider equals traffic cop."

Furthermore, the discussion was also about how data and users are prioritised if necessary and it was also discussed what rules apply when it comes to this.

"It is not exactly like that, perhaps the two of us want the same information at the same time and we are both paying, but we may not be able to get through simultaneously, one has priority."

"So does the one who pays more get through first?"

"The provider that has allowed us to use the specific communication protocol have assigned priorities. I do not know if this is mentioned in my contract, but I do know that it happens, i.e. when I was assigned an IP number I was probably also assigned either high, low or medium priority. It is like a combination of priority and speed of access, maybe it is like the cars on the road, the one coming from the right always goes first."

While participants were not exactly sure how such prioritisations might be organised and what affects those decisions, they agreed that some users or information is more important than others and thus displayed a generally positive attitude to the idea of it.

"So should there not be a differentiation in the costs if there are different priorities?"

"But I do not know whether I get through 1st, 2nd or 100th."

"It is not to do with how much you pay, but the type of data or who you are. If for instance the Polytechnic is trying to get in at the same time as me, they will go

first. So the role of the traffic cop is to decide who gets through to where and when."

"So presumably also hospitals would have priority. If that is the case, it seems logical to me."

In addition to rules on data management, consumers believe that there are at least some rules referring to data protection. However, they were often unsure as to who might be in charge of coordinating and enforcing such rules.

"I do not know if the rules are written anywhere, but they do exist."

"Rules about privacy, protection of private information."

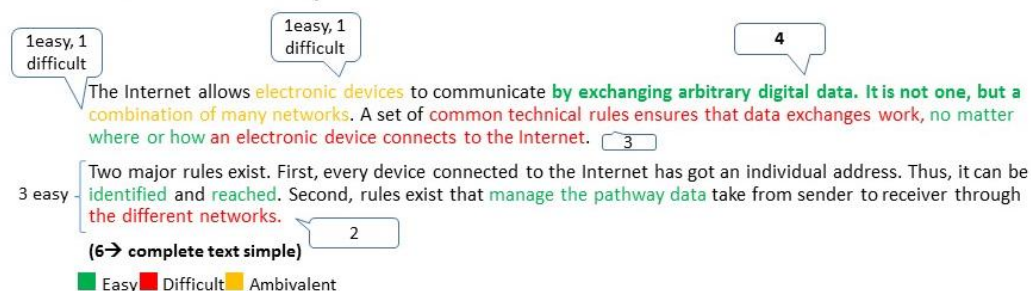
"I believe there are some rules, both in Greece and internationally, but I do not know what they are."

Consumers across all focus group discussions agreed that the Internet is financed by everybody that uses it. This includes normal users as well as companies, advertisers and the state.

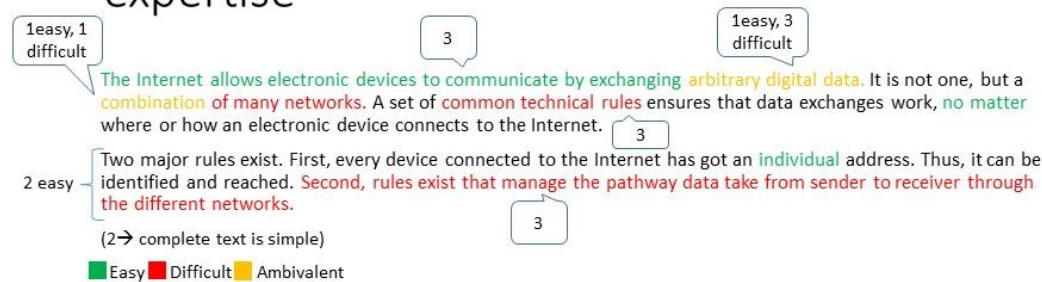
"Everyone who uses it", "Consumers", "Also companies that use it", "Advertisers", "Those with sites", "The state"

After the initial discussion about how the Internet works, a definition was given to the participants. They were asked not only to read it but also to mark those words or sentences that were easy as well as hard to understand. All definitions in the individual language versions are shown in the annex. Whilst participants in the test areas were given definitions in their native language, the definitions in this report are presented in English to improve readability and comparisons between the different test areas.

Greece: Experts



Greece: Participants with little and medium expertise



As is shown, most difficulties arrived due to the Greek translation of the phrase 'exchanging arbitrary digital data' because the formulation itself is ambiguous and was therefore often understood as "exchanging digital data in a random way".

"It's all easy to understand, but I don't agree with the phrase 'in a random way' because this is wrong."

"I disagree, what it says here is true, the way we receive data is random if for example you download a music song, you actually receive it the data from random users who at that moment upload the song the data is random. What we download from Torrent is uploaded by random users."

"This is correct of course, it's what I explained earlier: when you ask for something, e.g. a video on You-Tube, the video is too big a file and it isn't sent in one piece but it leaves the sender in pieces which are sent to you randomly (well not exactly, according to some rules) and not serially. All these parts reach our computer and are recomposed into the original video. If the pieces left the sender in a serial order it would take them years to get to us."

"When I go in Naftemporiki to read news, is this random? So what is the meaning of 'random'?"

A second problem was caused by the phrase "a set of common technical rules". Not only beginners and average users of the Internet, but also consumers with high self-ascribed expertise, had difficulty understanding this.

"I have also put 'common technical rules' in red. Right now I don't understand what it means exactly, but maybe if I think of it later I will."

In their own words, consumers explained 'a set of common technical rules' as follows:

"This means the following: let's say that you ask a site e.g. a news site for a piece of information. This information will not get to you in one piece all at once, but it breaks into smaller parts and each part arrives to you through a different path. There are rules which break the information called protocols, other rules which send the pieces and when all the pieces get to you there are protocols which put them together again to give it to you."

"Also, what does 'common' means in reference to rules? Instead of 'a set of common technical rules' I would use 'a set of protocols'."

"The technical rules it mentions are the communication protocols, it would be clearer if they just said so, of course depending on who this is addressed to!"

"I have underlined in red the phrase 'arbitrary digital data'. It is not arbitrary, there are rules and protocols that determine the route the data takes. It makes it sound like the communication is up to chance. It would make more sense if it said 'randomized', as that means that there is a specific way, it is not totally arbitrary. It is also contradictory to the reference to the 'manage the pathway data take...' which states that there is a method."

The term "electronic devices" emerged as being equally difficult to understand. Participants frequently described it as being too vague.

"I would say 'it allows computing devices to communicate by exchanging digital data. It is better than 'electronic devices', because a coffee makes is an electronic device also."

"It is still confusing, because not all electronic devices can connect to Internet."

Although some of the consumers already described the Internet as a network of networks, this description was rated as potentially confusing.

"The fact that it is a combination of networks is correct, but I don't think that people understand what 'combination of networks' means, so I would say 'it's a network', because if this phrase is addressed to a person who doesn't know much it is unnecessary and rather confusing than explanatory."

"Also in the last phrase I would get rid of the part 'through the different networks'."

"No, that is ok, it is like if we were all connected to this company's server, meaning we are in their network and there was another company further up the road with its own server and network. If we were communicating with them, it would be communication between two networks. The same happens on the Internet."

6.4.5 Provider choice criteria

6.4.5.1 Currently used Internet providers, duration and details of contract

Internet providers currently used by most participants from Greece were Forthnet and Wind, followed by OTE. Some participants used Vivodi and ON Telecoms/CYTA.

A typical length of time to be with a provider seemed to be between 6 and 7 years, some have been with their provider for 10 or more years, some around 2-5 years and a few have recently changed to a new provider.

The monthly cost of an Internet connection varies between 20 euros and 90 euros depending on the type of contract and bundle of services. The lower-priced contracts mostly include Internet and landline telephony, while those at a higher price include Internet, landline and mobile telephony, and TV.

OTE was seen as a more expensive, but very reliable provider in this field and Wind had the image of being particularly competitive with regard to their pricing.

With regard to their contract details, many participants started with the standard 24-month-contract, which afterwards was transformed into a contract with a shorter notice period. The majority of participants reported having changed their contract with the same provider several times in order to get the best offer for their evolving needs. In particular, the need for a good rate for calls to mobile networks has increased; therefore including free minutes to mobile networks has become more important over recent years, which has resulted in consumers changing their contracts, or switching to providers with more attractive offers in this regard.

The most common connection speed is 24Mbit/s. Only very few participants have faster connections than this, while some have slower ones and some were unable to recall the speed.

6.4.5.2 General satisfaction with Internet providers

The general level of satisfaction with current Internet providers in Greece is good to medium, with most participants giving them a mark between 2 and 3 on a scale of 1-6 where 1 is very satisfied and 6 is very unsatisfied. They are generally satisfied with their providers apart from some minor problems or the feeling that they are paying too much:

“Only medium satisfaction as the line is sometimes interrupted and this is very tiring. I would give a mark of 3.”

“Technically, I am completely satisfied, but I am not at all satisfied with the price.”

“They are expensive but trustworthy.”

Satisfied participants often reported that in addition to being satisfied with all technical aspects, it was the feeling of having a competitive deal, that is to say good services for a good price, and an efficient and competent customer service that caused their happiness with their provider:

“I would rate them with 1 as I have exactly what I asked for and have never had a problem.”

“I have been very impressed by their service, particularly with the emphasis they place on my specific needs. It seems that their staff, at least their call-centre staff, are very knowledgeable.”

Strong dissatisfaction with the provider is mostly caused by a series of problems. Often technical problems caused initial frustration. Most commonly these were disruptions or very slow connections. These initial frustrations build up into actual dissatisfaction and annoyance when they are not appropriately dealt with through the provider's customer or technical support service.

"I had a lot of problems, often the connection is bad and the Internet gets stuck and the customer service is not helpful at all. I will look into other options."

Other reasons for unhappiness with the provider are too little flexibility with regard to contract specifications or high additional charges:

"I was so unhappy because they advertised a special deal for calling mobiles but they were unwilling to include this into my existing contract. I said I would leave and then they offered to reduce my monthly fee by 5 euros."

"I never just pay my basic monthly charge there are always high additional costs for having used more minutes... I feel I cannot trust them."

6.4.5.3 Switching Internet providers

Switching Internet providers is considered when there is a high level of dissatisfaction with the current provider, when interesting offers are seen or when contracts run out and stimulate the interest or need to check alternative offers. The latter is often driven by the motivation of finding better value deals – often with the intention to save money.

"I had OTE before but was not satisfied so I went to CYTA."

"Maybe I am going to change to a different provider as OTE seems too expensive and offers no deals on calls to mobiles."

"I have no serious issues but find I pay too much in my current contract."

"I renew my contract every 12 to 18 months. For the last 4 years I stayed with Forthnet but I always look at other providers to see what they offer."

Generally, the willingness to switch providers is high when the offer seems attractive regarding both contract specifications and price.

Information channels used when comparing or searching for offers are the providers' websites, the providers' local branches, advertisements and the experience of 'relevant others' (friends, neighbours, family members and colleagues). Also, marketing calls from providers were a source of information for special deals.

"To find information about available packages we usually look on the net, watch ads on TV, although in reality we do not need to do anything as they are calling all the time."

Marketing calls – offering special deals or promotions – have the potential of being accelerators for switching providers or contracts. Many participants, however, found them irritating.

“Yes, they ring all the time, to the extent that it is annoying.”

Although the majority keep an eye on better value offers, there was a distinct group of participants who find it too much trouble to switch providers just for getting a better deal. They are happy that everything is running smoothly and do not want to be bothered with the process of finding a new provider:

“Now we are with Forthnet and happy... before we had such a terrible time with Tellas...I do not want to go through that again for anything! So even if there were cheaper offers from other providers, I’d pay no attention.”

“I didn’t collect any information about other providers... I just knew from everybody that OTE is reliable and I changed to them.”

6.4.5.4 Relevant criteria for the choice of an Internet provider

The three most important criteria for the choice of an Internet provider are the speed and the stability of the connection, as well as the price.

Although the price argument was put forward as a very important criterion when choosing a provider, the discussion within the groups showed that it was definitely not the criterion that bound customers to their provider. In fact, customers only stay with their provider when they are happy with the technical side of their connection. In this respect fast and reliable Internet access appears to be the decisive criterion. When not fulfilled, customers are dissatisfied. A low price cannot compensate for this – customers start to look for alternatives.

“I changed to OTE because it has the fastest Internet and fast technical support. Anything is handled immediately and efficiently, they have a better service overall.”

“Everybody I know being with OTE is satisfied. Went straight there without looking somewhere else.”

Other criteria playing a role in the choice of provider are the provider’s reputation (as this is often taken as a surrogate indicator for the quality of the connection), the offer of attractive packages, and to a lesser degree special gifts or bonuses, such as free tablet, extra minutes or calls abroad. Some participants also mention the attractiveness of loyalty benefits that allow long-term customers to receive free additional minutes, services or equipment.

As Internet access is commonly purchased as part of a bundle – including Internet, telephony and TV – the provider choice is not only dependent on the Internet deal alone, but also on the attractiveness of the other components of the package.

6.4.5.5 Future outlook regarding Internet provision

When asked which criteria will be important in the regarding the future choice of an Internet provider, the following criteria were mentioned:

- high speed connections
- good coverage
- competitive prices

Some participants mentioned the vision of a “free Internet” in the future:

“At some point the Internet should be free. You should be able to have Internet wherever you are without having to pay...”

6.4.6 Network neutrality

The term “network neutrality” was discussed in a series of steps that matched the one used for the earlier topic of how the Internet works¹³⁸. First, participants were invited to state what they immediately associated with this term. After that, they were given a very short definition of “network neutrality” and discussed examples, analogies and explanations based on this term. Additionally they were asked to describe network neutrality in their own words. Finally they received a longer definition of deviations from network neutrality and their possible effects, and they discussed freely and elaborated on their own experiences. This procedure was chosen to generate deeper insights regarding consumers’ conceptualisations of network neutrality, and great care was taken in every discussion to prevent a direct influence on them that could bias the discussion.

When confronted with the term ‘network neutrality’, consumers were completely unaware of its meaning, but immediately had some initial thoughts that are shown in the following paragraphs.

The participant’s initial interpretations were strongly connected to democratic ideas. Some consumers guessed that a neutral network would mean a lack of any competition between providers, and that this would be reached by implementing the same rules for every user, in other words guaranteeing every user the same speed and quality:

“Could it mean that the network would be common for everybody?”

“That the Internet services I get will be the same regardless of who provides them.”

“I am thinking it is the same as what happened with mobile phone chargers, they were all different but now they are all the same. Maybe Internet companies will end up having to do the same. I will have the services that have been agreed and do not need to care who provides them, as they are all the same.”

¹³⁸ For a detailed description please refer to the discussion guide reproduced in the annex to this report.

Others guessed that a lack of competition between various providers could only be reached by the introduction of just one big provider serving the Internet needs of all users. Strongly linked to this idea was the idea that the Internet could become a medium that is controlled and made by the state, and ideally would be free of charge to all users.

"It could refer to a State network, which perhaps could mean that it is free."

"The way I understand it is that there will be only one network, no Wind or OTE, etc. just one network, one provider."

"No competition between companies, they will all be the same or they will all become one. Maybe one will buy the other and they will all merge in the end."

One of the participants in the expert group immediately grasped the idea of 'network neutrality', defining its meaning as all data being equal without priority being given by providers. Again, it should be noted that it has to be viewed as an exceptional instance.

"I think it means that all the data are equal, nobody has priority of anyone else. It means that your provider does not interfere with the route you take when searching for something, so they are neutral."

After this short and unprompted discussion, the moderator read out the short definition of network neutrality as planned in the discussion guide¹³⁹:

Network neutrality means that all data in a network is treated in equal terms. Equal treatment refers to the standard behaviour of how data is forwarded in a network towards its destination. The standard behaviour for equal treatment is that all data is forwarded according to the same rules.

Participants understood this definition in very different ways. Whilst more than half of them understood it and its underlying principles quite well, others did not grasp the meaning of it at all.

Initial reactions were again linked to the democratic principle of 'equality' that consumers tried to transfer to the principles of the Internet, or how it works. This equality was understood as all users having the same speed and opportunities to access and use the Internet for the own purposes, independently from the nature of these purposes. Participants commonly linked this idea to the fact that they did not want anybody looking over their shoulder when they are online deciding if what they were doing currently was to be prioritised or not. This could be interpreted as the participants' implicit understanding of the necessity of deep packet inspection for some traffic management practices and their discontent with it.

¹³⁹ See Annex.

"It contains two things, elimination of priority and also elimination of filtering of content. I mean filtering on the level that serious topics from a University will have the same priority with a game a kid is playing. If the data content of the game is bigger it may even go first, it is like saying that a truck will always go before a bicycle."

"Nobody will monitor when or what information you are asking for, the flow of information is not controlled by anyone."

"It means that there is nobody to judge whether what you are looking for is important or not, that all the information on Internet is of equal value. It is not related to the search process as such. It means that if you are talking with your friend about gossip and we are discussing astrophysics, we are equal."

Participants immediately started to discuss whether 'network neutrality' exists at the moment and agreed (with few exceptions) that at the moment it does not in the form described by the moderator.

Some consumers made the link that some management of data traffic may be needed in times of limited capacity, although many users were not aware of this.

"If the provider has limited capacity, they have to give someone priority, not everyone fits in at the same time. Maybe Internet professionals notice this happens, we do not."

"It is like a car, only 5 fit in, the 6th has to stay out."

"Or the 6th has to squeeze himself very small and be uncomfortable."

"I do not think that currently it is a question of someone wanting to assign priorities, but that technical limitations make it a necessity."

"But in practice you are not aware of this, perhaps now that we have talked about it I will start to suspect it, but so far I never thought that someone had priority over me."

Some consumers stated that there are already some rules that are not the same for every Internet user, as some important users or institutions do have some priority over others.

"Some users may be more critical than others perhaps, so they get priority."

"It is like an ambulance in traffic, it has to have priority."

"OK, if it is like that, I have no objection, things like ambulances must have priority."

"And no neutrality would mean that if a doctor is doing a telediagnosis, he has priority and you wait. So someone is more important and you are kicked out."

While some related the equality principle of ‘network neutrality’ to users, others related it to applications that are given priority over others to guarantee users’ optimal quality of experience.

“So obviously now there must be some rules that determine the priority. If an email had the same priority as a movie being downloaded, it would not work. So there was some protocol that assigned priority, while based on what you just read to us that would no longer be the case. So there were rules, not everyone coming to a crossroads has priority at the same time, as that cannot work.”

It was also stated that some regulations that are already applied are connected to the amount of data that is sent by some users to make sure that the Internet works well for other users at the same time.

“All that happens now is that if someone is sending a huge file, the algorithm does not allow him to take up all the space, but leaves some room for others to send some small messages and things.”

Consumers in Greece agreed that ISPs are responsible for setting up the rules for the users they serve with Internet access. Still, a few of the participants were unsure as to who exactly sets the rules for prioritisation or throttling. Participants often transferred their experiences from prepaid mobile contracts in particular to fixed Internet access. Thus, it registered clearly with them that the specificities of their contracts might also play a crucial role in deciding whether their access may be prioritised or not.

“Yes, but who defines where priority lies? E.g. Email is more important to me than Taxisnet. I don't get asked, so neutrality is more democratic for me. Everyone gets to have equal access to the things he/she wants to do on the Internet.”

“I think this is just what I was saying about my mobile problems, I think they are giving priority to those who have a contract [post-paid], at the expense of people who have a card phone [pre-paid].”

In addition to this, doubts arose that the Internet could offer the same user experience for everyone, because there are some technical reasons at the moment that prevent this:

“If Spyros happens to live closer to the hub, his speed is higher anyway. Before the deviation from neutrality can mean anything in practice, the provider must have first ensured that everyone can at least in theory get the same speed. Otherwise all this is irrelevant.”

After the discussion based on the shorter definition of ‘network neutrality’ participants received a longer definition about ‘deviations from network neutrality’ and were asked to mark those with different colours (green = easy to understand, red = hard to understand).

Greece: Experts

A deviation from **network neutrality** consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. **Specific forwarding rules may apply permanently**, within certain time periods (e.g. during peak times), or dynamically **in response to particular situations in a network**. **Specific forwarding rules may apply to everyone or to some users** in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. **These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.**

2

- 1 difficult
- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.
 - A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.
 - A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.
 - **Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.**

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(6→ complete text is simple)

Easy Difficult Ambivalent

Greece: Participants with little and medium expertise

A deviation from **network neutrality** consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. **Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network**. **Specific forwarding rules may apply to everyone or to some users** in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. **These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.**

3

1 easy, 1 difficult

- 1 easy, 1 difficult
- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.
 - A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.
 - A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.
 - **Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.**

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(4→ complete text is simple)

Easy Difficult Ambivalent

After the participants read the definition, the feeling of being somehow prioritised or throttled caused emotional insecurity that led to the desire to be able to somehow control the effects of such interventions:

“You cannot know whether there are priorities unless you test it, put 4 people to upload the same thing at the same time and see what happens.”

Some started to refer to problems that they had experienced in the past, particularly those related to speed. Whilst some complained about low speeds that were solved by contacting their provider others complained that certain services were not reachable or had longer loading times and attributed these problems not only to their providers but also to a high amount of data traffic at those times.

“Some sites are loaded faster than others, which may be related to this.”

“Skype works better at night, maybe during the day there are more people and it kicks you out, which may also be related.”

“One time I wanted to watch football on TV and it kept on getting stuck, maybe again too many people at the same time.”

“The same happened again later with Wind, so I believe that they had deliberately slowed down my speed in order to increase somebody else’s.”

Within the debate whether ‘network neutrality’ or ‘deviations from network neutrality’ are fair, it became clear that some deviations are perceived as fair, while others are not. On the one hand, some services or institutions as well as businesspeople should be prioritised because they are essential for the functioning of the society.

“Anything to do with healthcare should have priority.”

“If I have a business, I should have a priority.”

“I think a degree of deviation is correct, for instance health services or other services need priority. If a doctor needs to guide a surgery in Karpenissi from Athens, he has to have priority.”

On the other hand, consumers that use the Internet for private purposes and pay the same amounts of money should be treated equally in terms of having the same speed and equal opportunities to use it.

“Why should someone else have a priority if they pay the same money as I do?”

Greek participants displayed a high awareness that users who pay more for their Internet access might also receive preferential treatment. On the other hand, it was clear that they detest such practices as an “extreme form of capitalism”.

“Perhaps if they pay more, OK. For better or for worse, in the society we live in, if someone else pays 100 and I pay 50, they will have a better connection. At least they should also give me the option to pay more, so I would know I have the choice. So whoever wants to always be first, could choose to pay more.”

Some stated that an Internet that follows strict ‘network neutrality’ is nothing more than a romantic idea in a sales-driven, capitalist world. Furthermore, deviations from ‘network neutrality’ were perceived as potential drivers for competition that in the end may lead to better services for consumers.

"This is a very complex topic. It is like anarchy, we all want a society with no rules, but know that it can never happen in reality."

"Neutrality the way we think of it, is kind of the romantic side of the story, but deviation is the realistic side of it."

"As a professor of mine at university once said, in the end all rights end up with the one who pays most, that is how everything works."

"If NN didn't exist would this be a motive for providers to improve their services in which case competition would work well and there would be an overall improvement in the sector, or improvement wouldn't be feasible? If there is a chance of improvement, then deviation from NN is correct."

Some others explained that due to ever increasing amounts of data, the Internet might soon be pushed to its capacity limit. Consequently, they recognised the necessity for some regulation/traffic management in order to keep it functioning.

"I think that if they can fix a good enough infrastructure for everyone to fit in at the same time, there is nobody who would not agree that neutrality is right, as deviation from neutrality means control of the content. So this is not the right time to discuss this, as some prioritisation is a necessity because of the infrastructure."

"I would agree with Vissarion, it is related to the infrastructure. As it is currently, if you do not assign priority, the whole thing will probably crash."

There seems to be a willingness to pay for better services or in other words an ideal Internet usage experience – especially if the Internet is needed for business purposes. However, consumers stated that they would like to somehow control how big the differences are in comparison to a 'normal' connection. The ISPs have to prove that the services they offer at higher prices are really different and better than those used by consumers that pay less.

"I believe that if we wanted to do something on the Internet which would bring us some personal benefit, we would all go for it, the factor "neutrality" wouldn't even go through our minds. So, realistically speaking, the deviation would satisfy more or less all of us."

"No, I can imagine that someone might be willing to pay more, for instance to download movies at a higher speed. In the same way as I now pay a lot more, €60 a month, to watch TV that I can be happy with, the same way someone might be willing to pay for Internet they would be happier with."

Consumers also expressed the strong desire to be able to decide which services or applications are going to be prioritized, as they doubt that the decisions providers make would suit their own needs. Some described their fear that this might lead to the necessity of having contracts with several providers as each of them will guarantee different services and therefore one of them will not be enough to provide everything that one may want or need.

“It would be relevant as a criterion only if the provider could explain exactly how it works and what the advantages and disadvantages are, plus guarantee that that is what you will get.”

“It would only be relevant as a selection criterion if a provider could tell you what specific benefits you would have. Yes, then you might be willing to pay more.”

Although participants overall view deviations from network neutrality as fair and are willing to accept them, one last fear resides with them, and this reflects their feeling of their own lack of control. They feel that they would not be able to detect whether such deviations occurred due to dictatorial purposes in terms of censorship or just to keep the network running in a stable way for the users.

“Overall I’m a suspicious guy and we live a strange time, so I feel that at the end of the road deviation is censorship - like what Turkey and other countries experienced recently.”

6.4.7 Summary

For Greek consumers the Internet is a source of individual entertainment, communication and information. It is rated as an absolute necessity that enables people to be a full and competent member of modern society and it is a part of consumers’ daily lives as it is always available and ready to be used whenever and wherever it is needed.

Although the Internet is a part of people’s daily lives there are some caveats. Greek consumers are torn between appreciation and dislike of the Internet as they recognise that its numerous advantages are often paired with disadvantages or even potential dangers. On the one hand, the Internet helps them to save time when they are organising their daily lives, but on the other hand consumers report that the Internet can be very time consuming. The Internet is perceived as a medium which enables them to keep contact with friends and family very easily, regardless of their location, but at the same time they see negative aspects of this rather impersonal communication as well. In spite of these issues, Greek consumers are not able to imagine a world without the Internet.

When asked about disruptions that participants had experienced in the past, they immediately referred to shorter disruptions, for example longer loading times of certain services or applications. These disruptions, even if they last for a short amount of time, are perceived as ‘major’ when they are related to their work or when they occur while consumers are doing things of high importance. Any disruptions of Internet access that last longer are rated as ‘major’ anyway.

The topic of ‘disruptions’ led to an emotional discussion as consumers stated that they feel very upset in times when the Internet does not work as expected. Disruptions are attributed to several causes, but the providers are generally blamed as they are the ones responsible for delivering the Internet. ‘Minor’ problems are often attributed to a

lack of speed that could result from high data traffic during peak times, but also because providers in general do not provide the speed that was promised in the contract.

The way in which the Internet works was described, without prompting, in a rather technical way as a network of networks and the exchange of data via interconnected devices. It was compared to the television or the telephone, because these devices also transport data in a similar manner. In a more symbolic and usage-related way the Internet was compared to a hotel's passkey that allows people to enter certain rooms.

Greek consumers agreed that companies such as Google are the ones who operate the Internet as they not only serve the technical foundations for its operation, but also produce its content. They agreed that whoever uses the Internet pays for it, and that includes consumers as well as companies, advertisers and the state. The discussion about the rules that apply to the Internet split consumers into two groups; while one group of consumers agreed that companies like Google dictate the rules, the other group thought that ISPs make the rules as they provide the Internet to consumers. Furthermore, data protection rules were added to the list of possible rules even though consumers were not sure who makes these rules or who enforces them.

The definition of how the Internet functions was problematic for the Greek consumers, partly as a result of the usage of abstract terms instead of examples that would have made it easier to grasp the concepts. In particular the Greek translation of 'arbitrary digital data' served as a source of misunderstanding as it can also mean 'randomised digital data'. Instead of terms like 'electronic devices', consumers would prefer specific examples like 'laptop' or 'PC'.

It is very interesting to note that in almost all of the groups, the topic of network neutrality was mentioned unprompted during the discussion on how the Internet works. Although participants did not use the term, it registered clearly with them that some data traffic ought to be prioritised over others to ensure that the Internet works properly. However, one should note that participants were very unsure if and how this was really possible and that such discussions were commonly initiated by one or two 'expert' consumers amongst the focus group participants. Thus this occurrence should be interpreted with some care.

Greek participants reported a good to medium level of satisfaction regarding their current Internet providers. Dissatisfaction was mostly caused when initial technical problems were not solved appropriately through customer service or customer support. Some participants were very satisfied with their Internet access and these were usually those who had so far not experienced any major disruptions and often felt that their package was a 'good bargain'.

As most participants subscribed to bundles with Internet, telephony and television services, the choice of provider did not only depend on the Internet deal alone, but also on the attractiveness of the other components of the package. However with regard to the Internet offer, the speed and stability of access and a competitive price were seen as the most relevant criteria when choosing a provider.

Despite various unprompted discussions on the topic (see above), Greek consumers were completely unaware of the term network neutrality and its meaning. Initially they thought that it meant that all ISPs would be subject to the same rules and would therefore deliver the same quality of experience to all users. An additional, but only slightly different, interpretation was that instead of several different options, only one provider would be available and that the state would be in control over that provider, which in turn would ideally lead to free Internet usage for everyone. Again, the expectation of a good quality of service that is equal for everyone featured prominently here.

The meaning of network neutrality was understood by most of the consumers after they heard the definition as read out by the moderator. Some rated the concept of network neutrality as useful in general, but immediately started to reflect on its appropriateness using examples where strict neutrality would be questionable. Participants were generally convinced that certain measures of traffic management are already applied on the Internet today without users realising, therefore it was not surprising that participants were not against such measures. Consumers concurred that important institutions' data traffic should be of greater importance than normal consumers' data traffic. Additionally, they agreed that certain applications should be prioritised to guarantee their optimal applicability, but at the same time there should be at least some space left for other users and applications to use the Internet. They also agreed that the ISPs are the ones responsible for setting up the rules that in turn affect their Internet usage experience. This kind of regulation is familiar to them, because they have already experienced it with their mobile contracts. Greek participants were not worried about deviations from network neutrality in terms of the differentiated treatment of individual users as they were convinced that this is happening already today anyway.

The longer definition of deviations from network neutrality led to participants attributing to traffic management the responsibility for several shorter disruptions. These disruptions were perceived as uncontrollable and therefore raised the strong wish to be somehow of control of the underlying principles. Whilst deviations were perceived as fair as long as certain institutions and businesses are prioritised, consumers that use the Internet for private purposes and pay the same amount of money should be treated equally. However, participants did not seem at all bothered that somebody could receive better quality services if he or she paid substantially more for it.

In conclusion, consumers in Greece agreed that strict network neutrality is rather a romantic ideal than a sensible reality. Due to their awareness that the Internet has some technical limits regarding the rising amount of data, they preferred regulation and are to some extent willing to pay more for better (i.e. prioritised) services. The main problem they perceived relates to the potential problematic eventualities that not only consumers but also providers will have to resolve when it comes to the individualisation of Internet packages. They doubted that they will be able to find a provider that offers them a contract perfectly matching their requirements. Furthermore consumers remain fearful that those regulatory practises could be used for dictatorial purposes without their recognition, expressing some latent fear of being somehow monitored in order to enable the prioritisation of the selected contents or applications.

6.5 Results of the focus groups: Sweden

6.5.1 Ideas associated with the word “Internet”

For the Swedish participants, the Internet is a way to escape from the world. This includes the more functional aspect of getting access to information and the more emotional aspect of connecting with friends and family who live abroad, as well as those in Sweden and even those who live in the same neighbourhood. The Internet is seen as an absolutely essential tool in people’s everyday lives. There is common agreement that without it people would not be able to have full access to information and consequently would not be able to have full control over their own lives.

The spontaneous word associations that had to start with one of the letters of the word “Internet” are listed fully below (the figure shows English translations); frequently mentioned associations (those that featured in at least in two out of the three groups) are shown in a slightly larger font size. Accordingly, the largest font size applies to associations made consistently in all three groups.



After that, participants came up with further associations that were not related to the letters of the word “Internet”. These associations highlighted the Internet’s relevance for the organisation and convenience of their daily lives, that is to say their work and social lives: *“It helps me a lot during my studies”, “It helps you when traveling”, “Communication, a lot of communication”, “Work”*. Furthermore, using the Internet is seen as a double-edged sword: while on the one hand it seems unconceivable not being online and thus ‘a part of it’, it is also seen as highly addictive - *“You want to use it as soon as you wake up”*. While it allows people to stay in touch with friends and family, it can also be an unsocial medium that leads to social isolation. People seem to be more and more interested in the cultivation of online-based relationships and therefore tend to forget to take part in their direct social environment:

“And if you go by public transport you sit there and use your mobile phone.” “I think about E-isolation, people get isolated. They sit too much using the Internet, they are not getting out and meeting people the ordinary way like we used to do. Everybody is about Facebook and Facebook-friends. This is not the real world! It is dangerous and it will lead to loneliness.”

The Internet is seen as a dangerous medium especially for young children that need to be protected from “bad websites”. Although all participants agreed about the potential danger, none of them actually feel threatened by it.

6.5.2 The role of the Internet

Participants agreed that the Internet as a great tool to make work and life more efficient and exciting. They used it almost unconsciously, and their daily routines are built around it so they are always connected. Naturally, this results in a strong emotional bond with the Internet and in particular its applications. In fact it takes a conscious decision from them to switch Internet-connected devices off. As a result of this, participants feel somewhat overwhelmed by the dominance that the Internet and its applications have gained over their lives, and some fear that they have lost control over their use of it.

Swedish consumers are typically online for the whole day. They use the Internet in the background via applications such as Netflix and HBO that could be described as providing a soundtrack to their lives. In a more active way they periodically check work-related and private emails several times throughout the day, as well as the news and also social network sites. They reported that they usually start the day by picking up their mobile phone to read the news and to find out about what happened during the night.

“I use my telephone as an alarm clock and I check my messages as soon as I wake up. So it starts when I wake up.”

During the day, Swedish consumers are always connected to the Internet and able to use it. The Internet is indispensable for business. Without it, work would not be possible. In fact, participants are convinced that practically all processes and communication happen online. Private use of the Internet during work hours is rather limited, for example to briefly checking emails or social networks.

Mobile Internet use is particularly pronounced when commuting, and it is used almost unconsciously. Therefore participants tend to reflect on their own behaviour when they witness other commuters and how they appear to be disconnected from their surroundings when using their mobile phones. Participants find any disruptions to their mobile Internet very annoying.

“I think that slow Internet is one of the biggest reasons to aggression in the world. I have read something about that”.

At home the Internet is used and appreciated equally as a medium for information, entertainment and the organisation of daily social lives.

It allows access to all kinds of information and in comparison to other media such as newspapers, TV and radio is seen as the one that serves the most recent, detailed and individually-tailored information. Access to news and information from various sources is of high importance and relevance to consumers in Sweden. *"I would be forced to read old news."* The possibility of checking diverse sources allows them to feel not only well-informed but also to make their own unbiased judgments. It puts them in control.

"It's not only the one daily morning paper which tells the truth to you now it's easy to hear other sides. This would not be possible without the Internet."

"The possibility to decide and search for information whenever and where ever I want."

Applications and services like Netflix and Spotify serve individualised entertainment and reflect the sense of self-determination and the independence to make one's own decisions that may differ from what is commonly enjoyed and that used to be dictated by broadcasters.

"I never watch ordinary TV anymore! I stream everything."

"It feels good because I'm not longer sitting there watching nonsense on TV, now I am more selective in my choices."

"I can find movies which I would never find on TV or at the cinema. It's the same thing with music it's very easy to find music that I would never have found elsewhere."

The Internet plays an important role in the organisation of people's daily lives. Diverse applications are used to make everyday life easier and to save time and money when it comes to tasks such as shopping, banking and booking holidays.

Skype (and similar video telephony applications) fulfil a prominent role for participants. They encapsulate the feeling of being connected for them as they enable them to stay in contact with friends and family even if they live far away. Participants particularly appreciate the ability to see each other as the most distinctive feature of this kind of communication, so it is not surprising that they also use these applications when communicating with friends and family who actually live quite close to them. It is interesting to note that Skype differs substantially from Facebook in participants' view: Skype constitutes immediate and almost realistic communication with close friends and family, whilst Facebook is perceived as being somewhat impersonal.

"And it is nice that you can see them as well! I can have dinner with my sons, even if they are in London. (Skype)"

Sometimes the blurring demarcation between real life and life online registered with participants negatively. They perceive being online all the time as stressful: *"Both*

exciting and stressful. We are so available today.” In spite of being rationally aware of this issue, they are rarely able to control themselves:

“They wrote an article in Metro that you shouldn’t open your E-Mail as the first thing you do in the morning”.

This contradiction in terms of recognising the problems of being constantly online, yet being unable to control themselves leads to problematic and uncomfortable emotional states that are countered by finding rational arguments that are used to justify clinging to their current behaviour:

“You can never detach from work related businesses. You are more available”

“But it is also convenient, you can leave your workplace earlier during the day and work at home and during weekends, it’s more flexible now.”

“It feels I’m never finished with my studies because Internet is continuously there. There is always something I should do [...] it’s a bit stressful.”

Based on the focus group discussions, the choice of device depends mainly on two underlying factors: the perceived control/self-protection that participants stated as necessary when using certain applications, and the convenience of access.

- **Mobile phone:** low control/self-protection, high level of convenience (searching for short information, email access, news, listening to music, social networks)
- **Tablet:** rather low control/self-protection, high level of convenience (searching for information, news, watching films)
- **Laptop:** high control/self-protection, fairly high level of convenience (online-banking, booking travel/holiday, Skype, online shopping, watching films, work, emails)
- **PC:** high control/self-protection, low level of convenience (online banking, work, searching for detailed information)
- **TV:** high level of convenience (solely watching IPTV)

6.5.3 Experience of disruptions

Disruptions to Internet connections are perceived as frustrating and annoying. When the topic of disruptions was mentioned, Swedish consumers immediately thought of minor disruptions that disturb their ‘flow-experience’ when using the Internet. Those disruptions are perceived as annoying especially because Internet connections are in general rated as stable and fast.

“It switches very rapidly from fast to slow. You can compare it with cars standing in front of a red traffic light. When the light turns green and the first car doesn’t start driving then the other cars will quickly use the horn. It’s the same feeling here, I’m very impatient.”

Due to the high percentage of consumers in Sweden using streaming services such as Netflix, SVT-Play and TV4 Play, most of them were able to share at least some instances in which they experienced stuttering or repeated buffering when watching films, TV series or sports. As a result of them wanting to use the Internet for relaxation at these times, minor disruptions are perceived as very disturbing and annoying:

"It is annoying when I stream a video and the quality drops and it gets pixelated. I may have finished my working day, I come home and sit in my sofa and I look forward to watch a video, but then this happens. It is annoying."

"The video stream stuttered! It was really annoying. It pissed me off."

These problems were attributed to several origins. First and foremost, participants attributed them to a lack of speed, which in their view could be due various causes. Some argue that a WiFi instead of a fixed line connection to the Internet is responsible and so connect their device via a cable if problems occur. Others explained that such problems with the speed are the result of an overload of their own home network with too many devices being connected at the same time.

"It must be because of a slow Internet connection. It feels like we have several devices connected at the same time now, the computer, the iPad, the mobile phones, my girlfriend has her own iPad and so on."

"I realised that my laptop was connected to the WiFi network, so I connected it with the cable instead. It got slightly better, but I still experienced some stuttering problems."

Some participants blamed their ISPs for being somehow responsible for slow Internet connections that occur from time to time, especially if the site that is slow or not available is possibly overloaded with too many users.

"Can it not be the fact that many users watched the game at the same time? Perhaps it created an overload on the network provider?"

Others attributed slow and stuttering connections to the specific services, but they did not come to a clear agreement as to what the reasons are. Some tend to blame the underdeveloped technology, while others suspect that the service providers manipulate the viewers' experience in a way that leads consumers to enter into premium contracts.

"I know what the problem with TV4 Play is. They want you to subscribe to their premium service. I had no problems at all when I used their premium service!"

Other minor problems that were immediately reported by consumers occur when entering sensitive information while using for example online banking or travel booking websites. The switch to secure websites when typing in credit card information is perceived as problematic due to the longer waiting times. Consumers get nervous because they do not receive immediate feedback and therefore have the feeling of not having any control of if and how their sensitive data and money are transmitted.

"I have experienced problems several times when buying airplane tickets online. I have filled everything in, but nothing happens when I press "send". I don't know if I got the tickets or if they have charged my card."

"I can feel a bit powerless; I don't really know what to do at that point. I have experienced the same thing as you with Norwegian, you never know if you really have a ticket or not."

Additionally, consumers mentioned that some websites occasionally don't load properly, or that they freeze and then send the message that access will be possible in a while. Consumers are convinced that this is due to the fact that these websites are updated from time to time, and they feel annoyed by this.

"It doesn't always have to be some problems with your Internet connection. Some websites may have their own problems, they may conduct an update and then you can't access them. It may last only five minutes or for a longer period, but it is very annoying."

Major distortions were defined as having no Internet for several days in a row. If participants had experienced this, they mainly reported that it was a result of their routers having been broken.

"I just felt it went slower and slower, in general, until I bought a new router. The difference was like night and day! All websites were slow. I did some measuring and I had almost no data traffic at all, so it was something wrong with my old router."

"I had Internet speed problems for several months. I should receive 100 Mbit/s from Comhem but I got 0.7 Mbit/s. They claimed it was my fault, but it turned out to be software problems in the router from Cisco."

After they changed the router, the connection worked well again. One of the participants got the feedback that his connectivity problems were because of capacity problems of his new provider. Connectivity problems are not a big issue for Swedish consumers as they bridge the time until they have full access again by using their mobile phones.

"I used my mobile telephone as much as I could, but I could not do everything with it."

It became clear that Swedish consumers are used to an almost perfect connection when they started to refer to interruptions to their mobile connections. They are so used to being connected that even mobile-related connectivity problems are rated as very serious.

"It is annoying when my mobile carrier doesn't have coverage at certain places. I can't call or use the Internet in my mobile when I travel up to the northern part of Sweden. Then I have to switch to Telia or use something else, which is rather irritating. It shouldn't be like that in a country like Sweden. I want to be able to use my phone in cities like Kiruna as well."

"I have Telenor and when I enter a Lidl store my phone immediately switches to Edge. You can't even open a webpage when using Edge, it is really pathetic. But Telenor claims they have a superior coverage!"

"The signal drops when I drive as well. So the children can't use Netflix in the car!"

The reaction of customer services annoyed participants the most in this part of the discussions. Customer services of ISPs were generally perceived as being not very competent and not fully devoted to helping customers when they are having trouble.

"Yes, the router from Cisco, so Comhem got compensation from Cisco and I got compensated from Comhem. But they didn't know this from the beginning and I called and called, I tested with several computers and laptops, 5 different computers. They always start saying that it is your fault, your hardware."

6.5.4 How the Internet works

The participants understanding of how the Internet works was raised in several steps. First they were asked to explain it to a child, while using a very figurative and symbolic language. This task had to be changed because participants stated that the Internet is not at all suitable for children. To prevent this question from causing too many discussions about the potential dangers for children it was changed into 'please explain how the Internet works to your grandma/friend that has never heard about it before'. We also asked them to think of an article that should be written in an easy to understand newspaper style. When asked in this way, the participants immediately started to describe how it works.

The Internet was described in a rather technical way as a network of many computers and as a network of many networks, as well as in a more symbolic way where the consumers described its technical functioning as a spider's web.

"It is like a spider web of computers."

"A big Network."

"It's a big network. It's a decentralized, big network. There are big servers in the USA, in Australia, in Europe."

The consumers then switched into a rather content-driven description of the Internet. It was described in a way that clearly showed their own Internet use as well as what it means for them. It was compared to a lexicon or even a big library that everyone has access to:

"The biggest lexicon in the world."

"It's like a line connected to every single book in the library."

"[...] you can describe it as a big library, accessible for everyone and where you can find all the knowledge."

Participants in Sweden agreed that every consumer who uses the Internet also pays for it. They stated that as well as paying with money, consumers pay by leaving traces and personal information when using it that are then used by the big companies that are in charge of the Internet.

"And the consumer is paying for it."

"It is a bit scary that you receive personal advertisements wherever you go, they can see where you are and they can see what you do. It feels like we are very controlled."

Like the one about the control of the Internet, the discussion about the rules that apply was loaded with emotions. Consumers detect a sense of menace when it comes to the Internet and so strive for protection on the one hand, but on the other hand they fear that they already are or at least could be controlled by anybody other than themselves. They describe themselves as responsible consumers who are fully able to protect themselves and thus fight for their right for unrestricted access to all content because it is important for them to be well-informed and not to be reliant solely on certain sources. *"That someone else can decide what I can read. That does not feel good, I want to decide that!"* At the same time they desire rules and a safe Internet, to protect not only children, but also society as a whole against fraud and misuse.

"A scary scenario is when the 12 year old kid learns how to make plastic explosives or how to grow marijuana. They are online 8 hours a day! (Moderator: "Should that information be blocked?") Yes. Or Google should provide a false recipe!"

Consumers in Sweden have the strong feeling that big companies like Google, Wikipedia and Microsoft create and in a way potentially control consumers' Internet experience:

"Google is the king of information, the things they present are considered as the truth. You don't go to the tenth page of the search results when you use Google, you look at the first three or four results and you accept this as the truth. [...] Google has the possibility to take control of your opinion in a way."

In addition to this, they stated that everybody who shares content or uses the Internet is also a part of its big community and therefore creates at least small parts of it, regardless of whether this is done consciously or without realising it. They also stated that governments somehow control the Internet, but that this is no problem for them, as they trust their own government and clearly differentiate its rulemaking from other governments as well as from revenue-driven companies.

"I think that the control is okay as long as the one who controls it does not have any vested interest in it."

After the initial discussion about how the Internet works, the participants were given a definition. They were asked to not only read the definition but also to mark those words or sentences that were easy to understand, as well as those that were hard. After the first group, the definition was slightly modified to make it more understandable. All definitions in the individual language versions are shown in annex. Whilst participants in the test areas were given definitions in their native language, the definitions in this report are presented in English to improve readability and comparisons between the different test areas.

As is shown, most difficulties were caused by the formulation 'a set of common technical rules'. Not only beginners and average users of the Internet, but also consumers with high self-ascribed expertise stated that they had difficulty with this phrase.

Sweden: Experts (Group 1)

The Internet allows electronic devices to communicate by exchanging arbitrary digital data. It is not one, but a combination of many networks. A set of common technical rules ensures that data exchanges work, no matter where or how an electronic device connects to the Internet.

2

Two major rules exist. First, every device connected to the Internet has got an individual address. Thus, it can be identified and reached. Second, rules exist that manage the pathway data take from sender to receiver through the different networks.

(6 → complete text is simple)

Easy Difficult Ambivalent

Sweden: Experts (Group 2&3)

6

The Internet allows electronic devices to communicate by exchanging arbitrary digital data. It is not one, but a combination of many networks. A set of common technical rules ensures that data exchanges work, no matter where or how an electronic device connects to the Internet.

3

1 easy, 2 difficult

Two major rules exist. First, every device connected to the Internet has got an individual address. Thus, it can be identified and reached. Second, rules exist that manage the pathway data take from sender to receiver through the different networks.

1 difficult, 6 easy

2

(2 → complete text is simple)

Easy Difficult Ambivalent

Sweden: Participants with little and medium expertise

5 easy, 3 difficult

3 The Internet allows electronic devices to communicate by exchanging arbitrary digital data. It is not one, but a combination of many networks. A set of common technical rules ensures that data exchanges work, no matter where or how an electronic device connects to the Internet.

2 easy, 1 difficult

2 Two major rules exist. First, every device connected to the Internet has got an individual address. Thus, it can be identified and reached. Second, rules exist that manage the pathway data take from sender to receiver through the different networks.

2 easy, 1 difficult

1 easy, 1 difficult

Easy Difficult Ambivalent

The definition as a whole was perceived as quite understandable but too technical compared to the descriptions that were made by the consumers before and also as uninteresting as it lacks emotional and content-related aspects.

“But it was focused on the technology, not the mental point of view. Internet is a big sea of information where you can feel lost. There are both positive and negative aspects of that. It is addictive and you must use it in moderation. Internet both brings people together but it also isolates people. This was not included in the definition. The definition was too rational!”

“This is not a language I would use in my daily life. I would never say “electronic devices” or “exchange of digital”. I do not use words like that!”

Participants agreed that the particular definition that they were given is not ideal to explain how the Internet works to consumers.

“This seems definitely like a legal text of some kind. It is written like a document a proposition to some governmental institution. It is definitely not a text that explains ‘it works like this’.”

Some of the participants stated that it could be very helpful to include some pictures:

“They should add some images here, something that can help to visualise it [...] with a computer, a server, some arrows and connections.” The main problem with the definition being too technical could be that participants tend to lose interest while reading it and let their minds wander, even though the definition itself is easy to understand.

“It is just not interesting. I can’t be bothered to use my energy to read it.”

As explained, most difficulties were caused by the phrase ‘a set of common technical rules’. Not only beginners and average users of the Internet but consumers that were identified as experts in the course of this study stated that they had difficulty understanding it, as it doesn’t seem to explain what these rules are and how exactly they work.

“I understand that it is a set of common technical rules which makes the technical exchange of data possible, but I have no idea of how it works.”

“I did not understand this about “there are common technical rules which ensure”, I understand the words but I don’t know what rules they mean.”

6.5.5 Provider choice criteria

6.5.5.1 Currently used Internet providers, duration and details of contract

Internet providers currently used by the focus group participants in Sweden are Comhem, which has the most users among the participants, followed by Telenor, Tele2, Ownit, Bredbandsbolaget, Bredband2. Meanwhile some participants use Teknikbyran,

Tre, Hallon, Universal and Bahnhof. A minority of participants were unable to recall their Internet provider.

The majority of participants who live in flats reported about binding contracts with certain providers; Comhem, Ownit and Bredbandsbolaget were mentioned in this context. Often the Internet is offered as one part within a package that also contains television and telephony. Many of these participants have the impression that they are not allowed to switch to a different provider:

"I am forced to have Comhem, so I have not got the idea to find and compare other providers."

Some of them knew that they could switch but assumed it would be complicated with the need to change cables and connections in their flats:

"You have to pay for it (change of provider) and I would also need to have new cables in the apartment. Comhem is easy because it is already installed in the wall."

Both assumptions stop participants from considering switching their Internet provider. Under these circumstances changes of Internet providers mostly happen through moving to a different flat or house where there is a contract with another provider.

Participants living in their own properties seem more familiar with choosing providers, comparing prices and changing contracts. Two groups of participants could be identified; those who frequently research Internet offers, and those who know very little about their contracts and current offers, with some of them not even recalling their current provider.

Very few participants do not use landline connections at all, and rely on mobile Internet as the only source of Internet at home, provided by mobile phone contracts or mobile surf sticks.

With regard to their mobile phone contracts, participants seemed generally better-informed. New phones and offers come out regularly, stimulating reflection on existing contracts. This results in more frequent switching compared to participant's fixed line Internet access at home, where participants typically use the same provider for between three and five years, and some have even spent more than ten years with the same provider. However others had switched more recently, within the last two years, and as noted earlier this was commonly due to relocating.

The monthly cost for a fixed Internet access product varies between 50 SEK (for a special deal) and 700 SEK (for a package deal with TV, Internet and telephony). Most participants reported that they pay around 200 SEK per month for the Internet, while students reported that they make use of specific low-cost student offers.

With regard to the contract details, many participants seemed to have started with a 24 month contract that then went to 3-month notice period. They often chose a download speed of around 100 Mbit/s, although they sometimes chose 25 or 10 Mbit/s. Around a

third of the respondents were unable to recall their download speed, and some were unsure about their notice period.

6.5.5.2 General satisfaction with Internet providers

Mostly, the level of general satisfaction with Internet providers is quite high, with participants giving a score of 1-2 on scale of 1 to 6 where 1 is very satisfied and 6 is very unsatisfied. An overall positive experience has led to this high degree of satisfaction. A positive experience is the result of a stable and fast Internet connection, good customer support (easy to reach, instant help) and the impression of a fair price.

Continuous problems, however, cause a high level of dissatisfaction (with a score of 5-6). Major reasons for dissatisfaction are the constant instability of the Internet connection with sudden disconnections, the slowness of the connection and long waiting times when calling customer helplines:

"We had enormous problems with Comhem, the connection dropped constantly and we had many interruptions. I had to call customer support very often; they had really long telephone queues, like 60 minutes and I had to pay for these calls as well. This made me want to switch to another Internet provider."

The feeling of bad customer service and a lack of appropriate help with problems were the most prominent causes for significant dissatisfaction.

Independent from the level of satisfaction, there seems to be a general cautiousness about the integrity of providers and some mistrust of how fair the deal is:

"... I have problems with the mobile Internet connection dropping now and then, even if it is just a minute. I live very close to a 4G-antennae so it should not do that. I imagine that the operator deliberately cuts down my connection".

"I have heard that Bredbandsbolaget does not provide everybody who has 100 Mbit/s in their contract with this download speed as they only have a limited capacity and all the customers have to share this. They want to deliver as little as possible and only increase the speed for complaining customers. If a customer complains a lot, then they increase the speed to the actual speed the customer is paying for."

6.5.5.3 Switching Internet providers

Only very few participants had recently switched their home Internet provider. Reasons for switching were dissatisfaction with the stability of the connection, continuous problems with slowness or price increases, and these were sometimes combined with finding a better offer elsewhere. Switching provider was often closely linked moving flat and taking out a contract with the new "house" provider.

For the majority of participants, switching to a different Internet provider is associated with numerous troublesome procedures:

"I think it would be difficult to switch, I would have to read a lot about the other provider [...]. It is not a problem to check the information about the providers but I am more afraid of how the actual switch is done."

"I don't think it is fun doing that kind of stuff."

"It is almost as complicated as switching banks."

Participants were generally concerned that there would have to be certain technical adjustments to be made to the infrastructure at their homes when they switched providers. In other words, many participants were unsure if a switch could be by a "switch behind the scenes" or it would mean that they needed new cables, new house connections or new sockets and so forth. Due to these uncertainties many participants refrain from switching and thus going through these kinds of inconveniences and instead chose to stay with their current provider:

"I am lazy and cannot be bothered. Maybe somewhere else would be cheaper or better."

Participants who have been considering switching their provider use the following channels for acquiring information: providers' websites, information shared in chat rooms, comparing prices in *Pricerunner* and talking to friends, colleagues and family about their experiences.

"I would call the provider who I am interested in and ask them for their deals, would look at Pricerunner and would compare providers."

Talking to sales representatives from providers is also seen as a good strategy to get a better picture of deals and potential options.

6.5.5.4 Relevant criteria for the choice of an Internet provider

The most important criteria for the choice of an Internet provider are the stability of the connection (in other words no disruptions), the speed of the connection (although this demand varies according to individual usage), a good price, ideally a short contract and good customer service.

"Most important are the speed and the stability. And the price has to be right."

"When choosing a provider the most important thing for me is the stability of the connection...I would be ready to pay extra for this."

"It is a mix between stability and good customer support. I would check how the customer service is because of my bad experiences with Comhem."

As the instability of the connection seems to be the biggest cause of frustration and annoyance, a reliable connection seems to be a very important criterion. If the connection drops, work and surfing are cut off, which often means losing time as work has to start all over again. This is seen as very frustrating and annoying.

A fast connection is the next technical criterion that is seen as very important, with the necessary level of speed being linked to individual demand. Participants who stream films, music and other data, or who play online games, have a higher demand for fast connections and high download volumes.

Another relevant aspect is the length of the contract. The length that is considered acceptable varies between participants. Some are happy to have a 24 month contract, particularly when also receiving new hardware (such as a router, new phone etc.), while others would prefer contracts with shorter or no notice time as it allows them to stay flexible. The latter group would also accept a higher monthly rate to keep this flexibility.

“I prefer having a low monthly amount and are happy to accept a longer binding period.”

“For me it is the opposite, I like to be flexible and hate the idea of being tied down for 2 years.”

All participants emphasised the need to be alert to price differences and interested in the best value deals. Internet portals like “Pricerunner” and providers’ websites are used to find the best deals. Cheap deals, however, are unacceptable if the quality of the connection is compromised:

“I would say the price is very important, but I am ready to pay extra in order to get a better connection.”

“The price is relevant if you choose between two similar deals.”

Another criterion for the choice of a provider was the impression of being offered good customer service. This would include quick, reliable help via telephone, and if necessary sending out technical support for home visits. However, this criterion is likely to be more important for customer loyalty (and therefore more relevant for a successful customer relationship) and customer satisfaction than for the process of choosing a provider.

“The customer support is perhaps not a reason why I would choose a certain provider, but it can be the reason why I want to get rid of that provider in the end.”

“I do not choose an Internet provider because of his customer service but it can make me want switch to some other provider if I am unhappy with it.”

When it comes down to offering package deals, such as TV, Internet and telephony packages, participants expressed a wish to “mix and match” their own ideal packages. When deals include mobile phone usage another criterion can be to use the same provider as friends and family as calls to them are cheaper.

Additional free services or programs – like the offer of Spotify – are attractive but seem less relevant for the choice of provider. They are more seen as an extra bonus rather than a factor that plays a role in the decision.

6.5.5.5 Future outlook regarding Internet provision

When asked which criteria will become more important in the future regarding the choice of Internet provider, the following criteria were mentioned:

- High speed connections
“The speed is getting more and more important, especially among young people.”
“Young people want to stream HD movies and play games and it consumes huge amount of data.”
- The importance of simplicity and standardisation (the ability to easily connect more different devices)
“Everything should just be plug and play.”
- Easier process when switching between providers
“Switching providers will be easier, more wireless connections and no necessity of changing cables or sockets.”
- Providing good streaming options
“Televisions will disappear, everybody will watch TV on their computer.”

6.5.6 Network neutrality

The term “network neutrality” was discussed in a series of steps that matched the one used for the earlier topic of how the Internet works¹⁴⁰. First, participants were invited to state what they immediately associated with this term. After that, they were given a very short definition of “network neutrality” and discussed examples, analogies and explanations based on this term. Additionally they were asked to describe network neutrality in their own words. Finally they received a longer definition of deviations from network neutrality and their possible effects, and they discussed freely and elaborated on their own experiences. This procedure was chosen to generate deeper insights regarding consumers’ conceptualisations of network neutrality, and great care was taken in every discussion to prevent a direct influence on them that could bias the discussion.

When confronted with the term network neutrality, participants were initially completely unaware of it and its meaning. Only one of the ‘expert’ consumers was able to explain the concept almost accurately as he had followed the debate in the US media:

“I have just heard about it, but I haven’t read much about it. This is not really relevant in Sweden yet, but in the US they talk negatively about it. I don’t really know much, but it has something to do with the big US companies, how they want to control the Internet and determine about the prices and Internet speeds and what kind of information should be available online. I know that many people opposed that.”

¹⁴⁰ For a detailed description please refer to the discussion guide reproduced in the annex to this report.

Participants were invited to share with each other whatever came to mind when hearing the term, and ideas came up that were at least somehow related to the meaning of network neutrality. Some participants thought of an Internet that is not controlled by governments or companies:

“Like it is not controlled or regulated by some part. [...] neutral [...] against companies and governments.”

Others suggested that it describes a situation where there is no difference between the treatment of the different devices that are connected to the Internet:

“I think it should mean that no device has any higher priority to the usage of Internet compared to other devices. Like if you have 17 devices and one wireless router, none of the connected devices has priority to the traffic.”

Some participants thought that the term network neutrality could be a network policy that is signed by several governments to implement common rules of data protection and a common protocol, whereas others thought that the Internet itself would be in the hands of the state and that it would no longer be controlled and provided by commercial companies:

“It feels like it should be some state owned service that provides broadband connections to everyone. And you pay them instead! It is no commercial company behind it. That would be neutral in some way.”

“There are many different providers of Internet networks today. This is perhaps an attempt to create some global cooperation between them, rules that could be applicable for all networks. The legal systems are not the same in different countries, the rules can vary. It can be like how they handle confidential information to how providers should work and so on. This is perhaps a way how to create a common protocol in the entire system.”

“I think about FRA (Försvarets radioanstalt), but that is perhaps wrong. They can check everything we do online, read our emails; they can listen to our phone calls. Many political activists have been arrested because of them. This about network neutrality is perhaps the opposite of that!”

After this short and unprompted discussion, the moderator read aloud the short definition as reproduced in the discussion guide in the annex.

Network neutrality means that all data in a network is treated in equal terms. Equal treatment refers to the standard behaviour of how data is forwarded in a network towards its destination. The standard behaviour for equal treatment is that all data is forwarded according to the same rules.

Participants immediately understood and remembered the word ‘equal’, and they liked this concept. Network neutrality was thus conceptualised as a guarantee that democratic rules underlie the Internet. Some of the consumers understood it to affect them on a personal level, in other words that their own personal data would have the

same importance as data from other consumers. The basis for this is to be seen in the strong belief of Swedish consumers in fundamental rights:

"That we will all be treated in an equal way. If I send some information and you send some information, Google will treat us equally! They will not favour anyone!"

"No difference, whether it comes from the US president or from you!"

"Democracy!"

Others understood the description in a more general, location-related as well as government-related way:

"Doesn't this mean that all websites are treated equally? If I live in Africa and have a website, it shouldn't be blocked just because of that."

"I think if I must choose a network from Russia, China or USA. My choice would be rather easy in that case. I know that China and Russia will filter the available information, but USA is much more open."

"I think about Russia and China, that some countries have a stricter filter. There are many countries that prevent things entering and leaving the country. Is this something that should focus on that? A global network available around the globe should be used in equal terms. A country shouldn't decide that some information should be prevented to reach the inhabitants in that country."

Other participants linked the term to providers. They associated it with all providers having essentially equal opportunities to offer high speed to their customers, and to be available throughout the country:

"I understand it like there shouldn't be any difference when sending or managing the data, regardless of it is Comhem or some other Internet service provider. The availability and speed should be the same and no one should be prioritized."

"Network neutrality means that a person sitting in a small country cottage somewhere on the countryside should have the same predispositions as someone sitting next to the Tele2-office! Both should have 100 Mbit/s, all are treated equally."

In general, Swedish focus group participants did not believe that network neutrality exists at the moment, but largely agreed that they would prefer that it did if it resulted in consumers being treated equally. They thought of equal treatment as meaning a user-experience of the Internet that is consistently highly satisfactory for all consumers, regardless of their contract or location. Interestingly, participants were in favour of regulation that would prioritise data that is more important than that of normal consumers, for example important civic information for the fire brigade, the police or the government.

"It is a nice thought. Equality should be present online as well. But I think there must exist some kind of prioritization anyway. Like the example with the fire brigade, or crucial community information must be able to reach regardless if people are downloading games or so."

"[...] analogy with the emergency ward was excellent. Net neutrality would mean that you take a queue ticket and wait on your turn, regardless if you have a heart attack or problems with your little toe."

"I think that there is a need of prioritization, but the network neutrality should be enforced when it has to do with common people, like when I want to send or receive something."

"A police car has the possibility to turn on the blue lights when it is urgent to move quickly. It should be the same online."

Governmental control over the compliance with network neutrality is strongly favoured over company control, because Swedish participants expressed a high level of trust in their government as well as in governmental organisations, as opposed to Internet companies.

"If network neutrality is a possible thing to do, then I think countries like Sweden are ideal for it. It would not work in China, they would just laugh at this."

"They can write a law with an ambition to have network neutrality, because it is impossible to have complete network neutrality. But it is good to have an ambition to work for network neutrality."

"IS, it is the organization behind Bredbandskollen and they manage the .se-domain. It is a governmental organization. I have a friend who works as a lawyer there. We have optical cables running through all of Sweden where everything runs very fast. The governments have a direct contact there."

At the same time, Swedish participants expressed the strong belief that important governmental organisations already do use their own, special 'lines' or are able to interrupt data traffic for important messages:

"They should have their own lines of communications! Shouldn't there be a special line for important civic information, special IP-addresses or whatever? I don't know how the emergency number 112 works like, but I imagine that this could work in the same way."

"You can compare how it is when you travel by car and listen to the radio. The radio shows are suddenly interrupted by traffic messages, it is just for a couple of seconds. It interrupts when there is an important message."

"In Japan they send information about earthquakes through the TV-set, regardless if the TV is on or off. The TV will start automatically when they transmit such kind of information."

Sweden: Experts (Group 1)

2

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. Specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.

- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.

- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.

- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(3 → complete text is simple)

■ Easy ■ Difficult ■ Ambivalent

1 difficult, 2 easy

4 easy

Sweden: Experts (Group 2&3)

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. Specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.

- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.

- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.

- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(2 → complete text is simple)

■ Easy ■ Difficult ■ Ambivalent

2 easy, 1 difficult

1 easy, 1 difficult

3 easy

Sweden: Participants with little and medium expertise

1 easy, 1 difficult

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. Specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

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- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.
- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

1 easy

1 easy, 1 difficult

2

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

(1 → complete text is simple)

Easy Difficult Ambivalent

After being given the definition of deviations from network neutrality, participants occasionally linked their previously reported experiences of disruptions to traffic management issues. Originally they had attributed these minor problems to effects resulting from overloaded provider networks, or to their own devices not working properly:

"I have visited friends who have Comhem and we watches movies from Film2Home without any problems, but at my place it stutters, stops and buffers constantly! We have different providers and I think it is not fair. I thought it was because Bredband 2 is a small company; they have too many customers and cannot manage to deliver. They don't have enough wires for all the customers so they reduce the speed. Their network is overloaded."

"We don't really think like this when we can't access a website. We usually think it is due to a bad connection or something is wrong with my mobile phone."

"I experienced something similar on a website where I could compare home insurance policies. I got only 8 different companies displayed there, but we have many more insurance companies in Sweden. Not even a big company like Trygg Hansa was among them! It seems like they didn't pay money to this website, so they were blocked. It is the same thing here."

After consumers had read the definition, they were asked to describe it in their own words, using analogies and keeping it as simple as possible. In all of the groups emotions rose from that point onwards. Swedish participants showed a strong fear of being treated in an unfair, somehow unpredictable way that would lead to both the Internet's content and access speed being of a lower quality. They fear censorship by an unknown higher power. This strong emotional aspect appeared to be driven by the

role that the Internet plays in their everyday lives¹⁴¹, and the fact that such a regulation was perceived as – on a higher level – a serious threat to the fundamental rights and freedom of a democratic society, in which ‘all people are equal’ and everyone has the human right to be able to make their own free choices:

“It is about filtering and making prioritizations. You can visualize it as a wide highway with many lanes that narrows down to only one lane. Somebody decides which car can go first! Who will decide about this and why? There must be some sort of a police officer there directing the traffic, but this police officer does what he wants. And the police officer may be bribed!”

“Some sort of a privatisation of the Internet. You can compare this with an emergency ward; all brown haired patients must wait for an additional 2 hours! Tall patients receive immediate attention and so on.

“It feels like a censorship. They think that I am not able to decide what to receive or watch. I don’t like that someone decides what I should watch or not. I should decide that and the more information I have, the better I can decide about it.”

“I think it has to do with freedom of speech; it should be okay if you stick to that principle. They should not block our freedom of speech, like they do in China. They block all websites and have only their own version from Chinese media. It is really idiotic! We cannot allow that to happen here! But I don’t feel it could be possible to happen here in Sweden.”

“If you compare it with a mobile phone subscription, I have paid them in order to receive calls from everyone, not only my mother and father or prioritize a call from my girlfriend. The Internet service provider should deliver the data equally!”

“It is like the free encyclopedia, Wikipedia, it is free and accessible for all people. Internet is like an open library; this was the revolutionizing thing about Internet. It is not good to strangle the Internet in this way.”

Participants’ fear of deviations from network neutrality go beyond it having an impact on their daily leaves; they also fear that they would prevent markets from working properly. It clearly registered with them that content providers and companies that offer services online could be disadvantaged by deviations from it. Swedish participants were consequently worried about the impact of deviations on competitiveness that could lead to a serious distortion of the market that in turn would also be problematic for themselves as regular consumers:

“It is like some old man is sitting and paying bribes to some providers in order to prevent the information to reach all customers with the same quality. It feels unfair to the consumers, it feels unfair and disfavour some of the producers of

¹⁴¹ See Section 6.5.2.

the content. This is directed both towards the recipients as well as the senders of the information.”

“This will lead to a situation where the biggest and most powerful companies will weed out all the services which don’t sell well.”

“I think this sounds a bit scary. What if I want to switch to some other provider, but my provider Comhem blocks all the information about other providers? I would not be able to see what kind of deals they have then. Or if I subscribe to Netflix, but they have paid money to Comhem in order to block HBO Nordic so that I can’t watch HBO shows. What if governments start paying the companies to block news sites?”

“It will become harder for smaller companies to develop. This is a way of suppressing smaller companies.”

“It will prevent competition.”

“But the biggest companies like Google, Netflix and Spotify for example, will all pay money to the Internet service providers like Comhem, Telenor and so on. All the providers will provide good streaming from these companies. But they can in the same way pay money to the Internet service providers in order to suppress smaller companies, and that is a very bad thing! There will be less competition on the market and that will lead to higher prices.”

“It will involve to a monopoly, where only the big companies will exist.”

Although participants were at least to some extent aware that there are certain limitations to networks’ capacities already and that data traffic will grow exponentially, they would prefer to expand networks instead of implementing further regulations. At the same time, they realised that this may be wishful thinking, and not a realistic solution. Still, they chose to cling to this ideal, which may be explained by the fact that Internet connections are on average much better in Sweden than in other countries, and are much better than they were in the past, which some participants still remembered vividly. In their opinion, commercial interests would likely drive every regulation of traffic management, and in general they were not happy about this.

“It is better to solve the problem and ensure that the network is big enough to handle all the data needed.”

“I don’t feel that we will benefit anything from this, we will just lose.”

“It is only the Internet providers who benefit from this. We already receive the best possible Internet service as we can at the moment.”

“It is of course about the money. It is not about that they want to prevent me from watching Netflix; it is about receiving money from someone.”

“But when you use Google, then there is someone who thinks instead of you, who knows what you usually search for and give you the most relevant results. So you are not really free anyhow!”

“I think it will be like that. The amount of downloaded information is doubled every eight months; we are talking about extreme amounts of data. The cables we have today are not enough. Sooner or later will it happen! Our fridges will communicate with the Internet as well, everything will be connected. The idea about equal priority is nice, but I don’t think it will work like that”

It was a major challenge to discuss the fairness of network neutrality or the deviations from network neutrality with Swedish participants as they felt that network neutrality would be a human right.

“It is not about being fair; network neutrality is how it should be.”

As reported above consumers make a clear exception when it comes up to deviations that are relevant to the public and society.

“It is good in order to crack down on criminal activities”

“I am a bit divided about that. I am totally fine if they block everything which has to do with child pornography, every single byte of data!”

However, they were also able to at least think of some scenarios in which a commercial-driven deviation from network neutrality could have positive effects on the consumers’ experience of some applications and services. It should be noted that to some extent social desirability had an effect on this part of the discussion. This describes a scenario when people tend to answer in a way that is appreciated or at least not penalised by the other participants. For this reason, the following statements should not be taken literally, but instead give a clue that consumers generally are not completely against the idea of deviations from network neutrality.

“The only advantage I can see is if I would be a die-hard fan of Netflix and want to have the best quality ever. But I feel that it isn’t reasonable.”

“But it is like this in the rest of our society, we get what we pay! We get better quality when we pay more.”

“My grandparents are only using three things, like email, Facebook and the daily news. If the Internet provider could focus all the data traffic only to these three things, then they could perhaps benefit from that. But I hope that most of us are out there doing many fun things on the Internet and it would be bad if the provider block certain things.”

“I think that the general information, like the libraries, they must be accessible for all on equal terms. But then it comes to paid services like Netflix and similar, then I think it can be differentiated.”

An indication of social desirability underlying these responses is that consumers immediately started thinking about the implementation of traffic regulation by their own providers and the effects this would have on their contracts. They mainly feared not being able to control what the provider decides for them nor to have an actual opportunity to make a free choice that would give them a tailor-made and continuously adaptable contract and therefore an ideal Internet experience.

"I don't know...I think I would get pissed off because this. I can only use Bredbandsbolaget in our building, because they installed the network there. Or like in your case, you are stuck with Comhem. It wouldn't be very fun if some third provider appeared, like Bahnhof, and say that I can get a much better Netflix service. I still have to pay for my Netflix subscription, but I must also get a different provider in order to have a better version of the service. It is really idiotic!"

"What if you want to have two services, Netflix and some other service? Netflix works best with Comhem and the other service works best with another provider? What do you do at that point? Will I end up with 5 different Internet providers at the same time?"

The value of network neutrality for consumers is reflected by the importance it is given in comparison to other choice criteria for ISPs. Swedish consumers are divided into two camps. A high proportion of consumers stated that network neutrality would be of the highest importance for their upcoming ISP choices. This is a result of their conviction that guaranteed network neutrality would mean equality for all consumers and therefore their current Internet usage experience would not be changed in terms of the high quality of all services and the freedom of choice.

"I want that all online services should work equally well."

"I have to check with other Internet providers and compare them. I hope that the companies will compete about this and I will pick the least expensive Internet provider who offers network neutrality."

Some participants stated that they would take into account the opportunities provided to receive prioritised services when choosing an ISP. They are aware that this would only be possible if there were deviations from network neutrality.

"All Internet providers should deliver the same thing, but I am fine with paying a premium price for services like Spotify in order to remove the ads or top get an even better and faster Netflix. But it should not be like today, that can't even get this service. I am ready to pay extra in order to receive an improved service. All Internet providers should have the possibility to have better, Premium Netflix. I am ready to pay 180 SEK for that compared to the 120 SEK for the normal service."

"If a salesperson can convince a customer that "Our Internet contains everything but your friends Internet contains only 80% and the things you get there are three hours old. Our information is fresh". That would be a very strong sales

argument, because we want all to have fresh information. I don't know if it possible to do this from a technological point of view, but I would pick the provider where I get the freshest information."

Only a few consumers stated that network neutrality would have no influence on their choice of ISP. This could be by the fact that they want to employ an avoidance strategy to prevent them from feeling overwhelmed, or by the fact that they generally have a high level of trust that everything will be good in the end. In addition to this the concept of network neutrality was very complicated for participants, even after a long discussion that was supported by several definitions and explanations. These consumers belief that network neutrality is less important than other criteria could also be down to the fact that they combine it with other criteria such as speed and availability, so it is somehow already part of the other criteria being used to make a choice.

"All the criteria we listed earlier, all those criteria are more important compared to network neutrality. Even customer support is more important."

"We have never thought about this before, so it can't be that important."

6.5.7 Summary

For Swedish consumers the Internet is an absolute necessity in their lives. There is agreement that it allows them to have full control over their own lives and supports them in being self-determined consumers. Not only does it offer them access to several sources of information, but it also allows them to connect with other people and provides them with entertainment.

Consumers in Sweden use the Internet almost unconsciously as they are constantly connected to it. Nevertheless it is not used without reservation, but is in fact critically reflected on. Consumers agree that the use of the Internet might be dangerous and highlighted that it can be addictive and therefore is a risk to one's 'real' (i.e. offline) social life. Consequently, numerous participants reflect on their own Internet usage critically. They would be inclined to switch off their devices from time to time, but admit that they are not really able to do this.

Swedish consumers are typically online all day every day. They appreciate the Internet's advantages as making not only work, but also their private lives more efficient and exciting. Thus participants could not possibly imagine a life without the Internet despite the latent fear and stress that the blurring of the boundary between online and offline causes.

Due to the fact that Internet connections in Sweden are generally rated as stable and fast, even short and minor disruptions are noticed and rated as frustrating and annoying. Due to the high percentage of Swedish consumers that use streaming services such as Netflix, disruptions such as stuttering and buffering are reported immediately. While some consumers blamed slow connections on their WiFi connection when asked, others thought it was down to the fact that too many devices are connected to their home networks. These problems were also attributed to the providers

and overloaded networks, or to the specific services that manipulate the user's experience to lead them into entering premium contracts. Regardless of the source, Swedish consumers perceive the increased loading times that occur when entering safe-sites (e.g. https script) or as a result of content-updates as annoying and disturbing. If consumers experience longer lasting disconnections from the Internet, these issues are mostly attributed to technical problems such as broken routers. While consumers help themselves by using their mobile Internet connections, they blame their providers as they are responsible for solving these 'major' problems. However some participants stated that providers are, incompetent and not devoted to being helpful. This perception was particularly strongly linked to Comhem.

The way in which the Internet works was spontaneously described in a rather technical way as a network of many computers and a network of many networks. This was symbolised by a spider's web. Other responses from the participants appeared to be rather content-driven, highlighting the meaning of this medium to them as users. The Internet was symbolised as the biggest lexicon or library in the world that offers access for everyone.

A significant proportion of participants were convinced that the users are the ones that pay for the Internet, not only by paying for it to be provided to them, but also by leaving traces of personal data that are in turn used by companies to make money through advertising. Furthermore, participants suspected that these companies (e.g. Google) are the ones that not only create, but also control, users' Internet experiences to a certain extent. However they did not elaborate in detail exactly how this happens.

Swedish consumers showed awareness of some dangers linked to the Internet and so expressed the desire for certain rules that protect them. On the other hand, they perceived themselves as responsible users that are able to take care of themselves. Based on this notion, they rated free and unrestricted access to all contents of the Internet highly desirable. In essence, the Swedish participants want complete freedom online when making decisions about what they want to see and what they do not want to see themselves, but they also want some sort of guardian angel that anticipates which content might offend or pose an actual risk to them, and filters only this content for each individual. The only institution they have faith in being able to fulfil such a function is their government or a government-related institution. They are very suspicious of control managed by other countries, such as Russia or China, as well as private companies, for example Google or Facebook.

The definition of how the Internet works that the participants read during the focus group discussion was rated as comprehensible, but too technical and lacking interesting and engaging aspects like behavioural rules or 'how to use it' information. It was highlighted that a picture could greatly support comprehension. The phrase 'common technical rules' in particular was rated as unclear as it does not explain how these rules work, but only vaguely states that some exist.

In Sweden, the majority of participants expressed a generally high level of satisfaction with their current Internet provider. The main factors contributing to their satisfaction were technically well-functioning Internet connections with appropriate speed and

stability, and good customer service. Although many participants were generally well-informed and interested in keeping an eye on good value deals for home Internet access, there was also a distinct group that showed only little interest in switching providers as the procedures were expected to be complicated and to require a lot of time and effort. In particular, there was a recurring fear that if one switched providers all the cables in one's home would have to be replaced.

Swedish participants showed particularly high expectations of their provider with regard to the speed and the stability of their Internet access, and many of them had a connection speed of 100 Mbit/s already. Most of them seemed well-informed about the technical aspects of the Internet, so speed and stability are the main criteria used for their choice of provider. Bundle subscriptions including Internet, telephony and television were common, and additional bonuses or promotion offers (for example free services, extra minutes or additional equipment) were seen as attractive, but are less relevant factors for their choice of provider.

The vast majority of the Swedish consumers were completely unaware of the term 'network neutrality' and its meaning. Initial discussions of the term covered several aspects that were related to a lack of control that governments enact on Internet companies, and a governmental network policy that implements common rules that are applied to the Internet.

After the definition of 'network neutrality' had been read out by the moderator, Swedish participants appeared to be strongly influenced by the term 'neutrality' and referred largely to themes revolving around 'equality'. They were all appreciative of the idea of an Internet governed by essentially democratic rules. While some points of the discussion referred to the equality of users, others referred to networks, in which content is not filtered nor controlled by governments as it is for example in Russia, China or even the US. Other ideas covered equal treatment and the potential options for ISPs, who would be able to offer countrywide services if network neutrality did exist.

Whilst Swedish consumers did not believe that network neutrality exists at the moment, they agreed that they would prefer that it did provide that that this results in the equal treatment of all consumers. Despite this opinion, they also agreed that the prioritisation of more important data (such as important civic information) is both necessary and useful. As Swedish consumers have a lot of trust in their government, they stated the preference that compliance to network neutrality should be controlled by the government or its institutions.

Consumers were very easily able to attribute disruptions to their Internet connection that they had experienced in the past to deviations from network neutrality having read the definition. This is a highly charged topic for Swedish consumers and their most prominent fear was that their quality of experience might suffer with deviations from network neutrality. They also thought they might be treated unfairly and that such deviations would be a serious threat to the fundamental rights of a democratic society. Deviations from network neutrality were therefore rated as an attack on human rights, as censorship and these types of regulations would restrict their own free choices. Additionally, consumers expected deviations from network neutrality to have a negative

impact on the market for Internet services. They feared that only large companies like Google or Netflix would be able to afford prioritisation of their services, or could even pay ISPs to block competitors' services, for example Netflix could pay to have HBO blocked. Although consumers were aware of certain limitations of the network capacity, they feared that in the end commercial interests would drive every traffic management regulation, although they made a clear exception when it comes to deviations that benefit the general public and society as a whole.

To some extent, consumers were able to imagine that deviations from network neutrality could have a positive influence on their own Internet usage experience. Yet they doubted the actual effect of prioritisation as they already perceived their Internet connections to be very fast and generally stable. They also doubted that tailor-made offers of Internet packages are technically possible and would really match their own needs. The value of network neutrality to consumers was also hard to define, because some considered criteria such as the speed and the availability of the connection to be somehow mixed into the concept of network neutrality, and thus already part of the criteria that they apply when choosing a provider.

6.6 Exploring themes across test areas

6.6.1 Introduction

This chapter aims to summarise and compare the results of the focus groups across the four test areas described in detail in the above. In particular, commonalities and differences between the test areas will be highlighted here. The chapter is structured along the themes that have been set out in the discussion guide and already serve as the structure for the detailed report of the results for each of the test areas.

6.6.2 The role of the Internet

The role that the Internet plays in consumers' lives is the backdrop for all of the following insights. This role differs greatly across test areas. In Sweden the Internet is woven into consumers' lives and they often use it almost without realising, such as when streaming music or videos on a smart stereo system or TV. On the other hand, Czech consumers explained that they are very conscious of their Internet use and do not constantly use it. They predominantly use it for organisational purposes, such as arranging to meet friends. The role it plays in the other two test areas falls between these two extremes. Meanwhile it is interesting to note that there is a high usage of desktop computers in Greece, and that they can even act as a gathering point for the family, in a similar way to the television. Families use the computer to access the Internet together, which allows parents to exert some degree of control over children's online activities. In Greece the Internet is considered a necessity for both people's private lives and their work lives, and participants use it as a retreat from the real world, as do those in Croatia. In the Czech Republic, participants rarely reported that the

Internet plays an equally important role across both their work and private lives, as many employers prohibit the private use of it at work.

Communication and information were frequently mentioned across all test areas as being the major purposes for which participants use the Internet. However, the framing of these purposes and the actual usage differ substantially. In Sweden, communication using applications like Skype, Viber, WhatsApp and so forth is natural and part of modern life. Consumers use these applications to communicate with friends and family regardless of whether they are located on another continent or just around the corner. They particularly enjoy being able to have a video connection while communicating. Someone reported even having dinner together with friends in London via Skype. Again, the picture in the Czech Republic is very different. Participants there are certainly aware of such applications and some reported that they use them. However, their usage remains focused on organizational tasks. They contact friends to arrange meeting them rather than weaving this form of communication as actively into their lives as the Swedes appear to do. For the Greek consumers, communication revolves around their mobile phones. Therefore it is not surprising that the amount of free minutes in their mobile plans is important to them, as will be illustrated later on. In Croatia, the use of the Internet for communication currently seems to be of somewhat lesser importance, as it did not feature prominently in participants' reports of their own usage.

With regard to accessing information, there were few noticeable differences across the test areas. In all discussions, there were participants who check the news on their mobile devices even when they are still in bed in the morning. In general, participants highlighted the fact that anyone can gain immediate access to information as the Internet's most important characteristic. Many participants explained that this free access to information gives them a sense of freedom and individuality.

There were also consumers in all four groups who showed great awareness of the dangers associated with the Internet. In Croatia, this particular side of the Internet seems to be less of an issue to consumers. Examples given of these dangers included people with criminal intent, fraudulent websites, spam and other criminal behaviour. In addition, some participants mentioned cyberbullying and other forms of misbehaviour online. Many were also aware of the amount of time that one can spend, or rather lose, on the Internet. In Greece and Croatia in particular, many participants described the feeling of getting into a flow when using applications or websites such as Facebook or YouTube, and that this only stops when they realise that several hours have passed, leaving them with a feeling of guilt. By and large participants agree that all these problems are more serious when children use the Internet. Some even fear that youths may lose the ability to communicate in a 'normal' way.

With the exception of those in the Czech Republic, consumers cannot imagine a world without the Internet, neither in their private nor their business lives.

6.6.3 Experience of disruptions

As with the other parts of the discussion, the objective of this part was also to first explore participants' initial reactions. Interestingly, these were mostly similar across the discussions with those from Croatia, the Czech Republic and Greece. In all three countries, participants immediately thought of disruptions that lasted at least several hours or even days and usually involved them being completely cut off from the Internet. However in Sweden participants initially brought up comparatively minor disruptions, and had to be prompted to talk about more major issues. Although statistical representativeness is not the objective of qualitative research, this insight indicates that major disruptions happen rarely in Sweden, whilst they appear to be more common in Croatia and Greece, and in the Czech Republic they were described as very frequent. These reports frequently came from participants who use a local WiFi¹⁴² connection to access the Internet.

Disruptions are generally described as 'major' if they last for hours – sometimes they can last for several days in a row – and if they hinder consumers using the Internet in the way that they are used to. When this happens, consumers feel helpless, angry and alienated, but improve the situation by either using mobile Internet or using connections that belong to friends, neighbours or even institutions, such as libraries. This behaviour clearly illustrates the importance that the Internet has for most participants across all test areas.

By and large, all participants also agreed that the ISP is generally not to blame for such disruptions. In the Czech Republic, those using WiFi-connections perceive them to be vulnerable to weather conditions and thus accept that such disruptions occur.

While it was rare for smaller disruptions to be mentioned unprompted, Swedish participants immediately discussed them when asked about disruptions. This appears to be related to the high quality of experience that they are used to. The disruptions that they reported were mostly linked to data intensive services such as Netflix, HBO streaming or Skype. They mainly blamed them on bad connections, specific browsers or slow speeds that could result from networks being overloaded, especially during peak times. Whereas consumers in Sweden and Greece are annoyed even by minor disruptions, consumers in the other countries explained that they are somewhat less bothered by these, especially when they only impact that private use. On the other hand they are irritated by any disruptions, even minor ones, when they have an impact on business or work activities online.

When prompted by the moderator to elaborate on specific disruptions, participants in all four countries referred to some applications that from time to time react slowly or do not work properly. Skype in particular seems to be thought of as very vulnerable to disruptions. Interestingly consumers in all four countries, with the exception of Sweden, were not able to relate these experiences to network neutrality, even after a long and intensive discussion. Instead the disruptions were attributed to the connection being

¹⁴² For an explanation of this specific market situation see Section 4.4.1.3.

impacted by the high amount of data at the time of usage, slow connection speeds, and the kind of network access technology connection used.

6.6.4 How the Internet works

Apart from those in Croatia, participants displayed a generally correct rudimentary knowledge of the concept of the Internet and how it works. Their descriptions and explanations included various aspects: a network, a network of many networks, devices, servers, communication and the exchange of data via codes (zeros and ones). In a more figurative way, the Internet was compared to the television or the telephone, because these devices also transport data in a similar manner, and it was also compared to a spider's web. In a more symbolic and usage-related way, it was compared to a library or encyclopedia that everyone has access to, or to a hotel's pass key that allows people to enter certain rooms.

In all four countries, the Internet is thought of as a public domain that is paid for mainly by its users, who are also seen as providing most of the content. While Croatian participants stated that the users are the ones who mostly pay for and create content, the Swedish participants also suggested that big companies such as Google create it. Participants in the Czech Republic stated that providers also have to pay for it, and Greek participants agreed that everybody who uses it also has to pay for it, not only consumers but also companies, advertisers and the state.

Swedish participants also showed some awareness of the more subtle ways of paying for the use of the Internet. They referred to companies such as Google or Facebook, which use personal data within their business models. This awareness was rare or barely existent in the other test areas, where, mainly in Croatia, it was replaced by a latent fear of being watched online to the extent that 'someone' might come knocking on your door if you type some suspicious terms into Google or similar sites.

Participants across all the test areas share the feeling that there ought to be some rules that apply to the Internet. They frequently suggested behavioural rules such as netiquette, as well as child protection issues and data protection. They very rarely mentioned the technical rules that are needed to guarantee that the Internet works.

When discussing rules that apply to the Internet, participants expressed the strong desire that their governments would bring some rules into force to guarantee some basic principles regarding their personal rights when using the Internet. Consumers in all four countries would prefer governmental legislation to rules that are set by companies, and thus an absence of vested and financially-driven interests. ISPs are only rarely seen as the ones that define such rules. Only some Greek consumers elaborated on this possibility (ISPs' role in defining rules) to a greater extent.

Rules are accepted as long as it is guaranteed that consumers are free to follow their own interests but in a protected environment. In fact, the idea of introducing some rules or rather control of the free nature of the Internet, which was often linked to the absence of rules, is a theme that dominated many of the groups. Participants on the whole

agreed that they would like to be as free and uncontrolled as possible when online. On the other hand however, they also agreed that they would like some sort of guardian angel in the background that anticipates what they would deem as offensive, fraudulent or dangerous and filters only this content. Others have a different attitude and want to perform this task themselves, probably severely underestimating its magnitude. As hard or even impossible it would be to achieve this consumer ideal, the only institution most of the participants would have faith in performing it is their own government.

The definition of how the Internet works was rated as understandable but too technical for all of the consumers. In particular, participants frequently criticised the lack of interesting aspects, as well as the lack of descriptive pictures and easily understandable examples.

Instead of a large amount of technical vocabulary in the description of how the Internet works, it was clear that participants would prefer a description that uses everyday language. Instead of terms such as 'electronic devices' consumers prefer words like 'laptop' or 'PC'. Participants would also prefer a definition that is as simple and straightforward as possible, even though this again may lead to a less detailed description. For example, participants prefer to use the term "network" instead of a "network of networks", as it is easier to understand. It should also be mentioned however, that a noticeable number of participants were already familiar with the concept of a network of networks even before they had read the definition provided in the discussion guide. Participants would also prefer pictures instead of technical terms and cumbersome textual explanations. Some spoke about spiders' webs instead of networks when they explained how the Internet works in their own words, while others compared the transport of data to individual addresses with sending letters, with postal addresses being necessary for the postman to know where to deliver the information. In essence, consumers asked for a much more figurative, vivid and simple way of presenting this information.

The phrase 'a set of common technical rules' was rated as particularly unclear in all four countries as it does not explain which rules apply and how, but only vaguely mentions that some exist. Only some consumers stated that two examples are described later in the definition, but still miss information how exactly the rules are enforced. Therefore the explanation used in the final information package should play down this specific aspect, as it is difficult to understand and does not add substantially to the major topics to be covered in the questionnaire.

The phrase 'arbitrary digital data' was a source of misunderstanding for participants in all four countries, especially in Greece as in Greek it also has the meaning of 'randomised digital data'.

This misunderstanding that data is somehow exchanged randomly is especially problematic when it comes to the role that is attributed to providers in relation to traffic management and regulations, because this definition implies that providers are not able to influence the path that data takes. The implications for the survey explain how the study team intends to address this concern.

6.6.5 Provider choice criteria

The criteria used to choose a provider are very similar across all the test areas. The main criteria are the speed, stability and reliability of the Internet connection. These two factors were also decisive for participants' level of satisfaction with their current provider. Other major criteria were the download speed offered by the provider, the services offered as part of the specific bundle and the price. Some participants mentioned the contract length as also being important. Overall, this is in line with the literature reviewed as part of the proposal to this study and the present report.

Despite this generally similar pattern of the criteria upon which a choice is made, there are noticeable differences in the specific expectations that consumers from the different test areas hold of their Internet access. These strongly depend on the individual's usage pattern as well as the general market conditions. For instance, Swedish participants find a download speed of a 100Mbit/s sufficient, whilst for the other test areas this is the fastest speed possible that is only available in certain areas. Particularly in the Czech Republic, participants are content with much slower connections.

Expectations regarding the price vary in and across all four countries, depending on individual subscription bundles. As bundle subscriptions with different combinations of Internet, telephony and television are the norm, the price range for contracts differs considerably. Participants from all four countries claimed to be very price-aware, but price tends to be seen more as a secondary factor, with the Czech participants being somewhat more price-sensitive in general. The quality of the offer, in other words the speed and stability of the connection, or in case of mobile Internet provision the coverage, is mostly seen as the primary factor; the price then matters most when comparing different deals with similar specifications. The feeling of getting value for money appears to be highest in Croatia and Greece, while participants in Sweden seemed least keen on chasing better value offers because of the inconveniences associated with switching providers.

The general satisfaction with current Internet providers is on a good level in Sweden and the Czech Republic, in spite of numerous disruptions suffered by consumers in the latter, while in Greece it is on a medium level and in Croatia it is medium to low. Factors that contribute to this dissatisfaction are mostly technical problems such as slow and disruptive connections, and insufficient support or none at all from the providers' customer service. Good customer service appeared to be the most important cause of customer loyalty.

In the Czech Republic and Croatia, some participants feel that they don't have a choice of provider, because in their region there appears to be only one available, which is usually the incumbent. Croatian participants reported that the service provided by these incumbents is very unsatisfactory. These negative experiences have led to a high level of mistrust of providers in Croatia.

In all four countries, most participants of our focus groups have Internet contracts as part of a bundle that includes Internet, telephony and TV. This means that the choice of

a provider is not only dependent on the Internet deal alone, but also on the attractiveness of the other package components.

6.6.6 Network neutrality

As could be predicted from the few other studies that have attempted to shed light on the topic of network neutrality using qualitative research methods, this part of the discussion was the most difficult for participants. With very few exceptions, they were completely unaware of the term and constantly had trouble working out what it means, describing its nature and understanding its potential impact. Still, as can be seen from the description of the results for each test area, as well as in the overarching description here, the discussions conducted for the present study yielded much deeper insights into the topic than any previous published study.

As described in the discussion guide¹⁴³, participants were first asked to make word associations with the term. These usually revolved around fundamental policy issues rather than the technical way in which the Internet works. In particular, the term 'neutrality' seemed to mislead participants easily into discussions of democratic concepts, war (in relation to neutral zones) or even gender equality. Suggestions that followed when participants focused on the Internet when trying to interpret the term were frequently related to the absence of Internet censorship and free access for everyone to all content. When participants made a link to how the Internet works, they usually thought that the term referred to the idea that all ISPs would have to conform to the same set of rules and therefore would provide exactly the same quality of experience to every user.

In Sweden, Greece and Croatia, some participants even thought that only one provider would be available. Ideally, they explained that the state would have control over this provider, which would result in the Internet being free of charge for everyone, since it would be paid for by taxes.

Therefore, one major discovery from these discussions is that terminology itself is very misleading for the average consumer. Judging from some of the comments and examples that many participants gave in later parts of the discussion, it appears more sensible to use a term that reflects 'traffic management' more closely, as this concept is likely to be better understood by consumers.

The definition of the term 'network neutrality' that was read out by the moderator was mostly rated as comprehensible by participants. However, similarly to the description about how the Internet works, they found it too technical and unengaging for normal consumers. The definition did not necessarily help participants' comprehension of the term, as the discussions were more political and related to the term 'neutrality' rather than the term 'network'. They also kept using the word 'equality' and only stopped discussing this concept after being guided away from it.

¹⁴³ See Annex.

With minor exceptions, participants were convinced that network neutrality does not exist today. Again, they linked this fact predominantly to issues revolving around the censorship of specific content online. They often referred to countries such as Russia, China or the US as examples of countries where the Internet is not neutral, in other words where it is censored in some way. Furthermore, participants in the Czech Republic identified access barriers to certain websites as not being neutral. Along with Swedish and Greek participants, they also strongly believe that search engines ranking results and including adverts in them is evidence that network neutrality does not exist at the moment.

Interestingly, participants had very different attitudes towards network neutrality's effect on the telecommunications market. Consumers in the Czech Republic consider it a threat to free market competition as it would flatten all differences between competitors, whereas consumers in Sweden are worried about the effects of not having it, as some institutions or companies may pay for prioritisation and those that cannot afford this would be at a disadvantage if it didn't exist.

Despite the general mistrust that many participants have of their ISPs, they failed to see that they have any role to play in the question network neutrality. Even after being prompted by the moderator, they still adamantly blamed disruptions on their own equipment malfunctioning, the ISP's network infrastructure, or the website itself, rather than traffic management by the ISP. Some Swedish and Greek participants were exceptional in this respect and able to make this link.

Therefore, participants were asked to read the text on deviations from network neutrality, which is reproduced in the annex to this report. This text was confusing for some, as in later stages of the discussions it became more and more unclear whether they were talking about network neutrality or deviations from it. Once again the definition was generally rated by participants as too technical and somewhat difficult to understand. However, most of them gained a rudimentary understanding of deviations from network neutrality and were able to discuss the topic further. They rated the text as generally comprehensible. For more detailed analyses of the text please refer to the individual sections on the different test areas.

Deviations from network neutrality were rated as acceptable by consumers in all four countries, as long as they help to give priority to important content and data, especially when it helps governmental or healthcare institutions to react in the case of a disaster. Content blocking is only desired when it leads to the protection of the users, especially children, for example by blocking sites with dangerous content.

While consumers are convinced that deviations from network neutrality already occur to some extent, they doubt that such services are available for 'normal' consumers and able to be customised. If they were available and service quality could be guaranteed, consumers in Greece and the Czech Republic would accept private users receiving prioritised services as long as they pay more for them. Consumers in Sweden believe such services to be undemocratic and contrary to the original idea of the Internet being free medium. They feel that everyone should have unrestricted and good quality access to it.

In conclusion, the prioritisation of certain applications is accepted by consumers in all four countries, while any type of blocking is disapproved of. However, participants were not able to understand how providers could be able to manage the data traffic. It is very important to them to be able to make their individual choices regarding the applications and services that are prioritised, but they doubt that they would be able to find a provider that could offer them a contract that meets their exact needs. Furthermore, they remained fearful that traffic management could be used in a dictatorial manner, without them realising. Also, some participants showed a fear of being controlled associated with the analysis of Internet traffic that ISPs would naturally have to perform to ensure that the right types of traffic are prioritised.

While Internet usage is primarily focused on accessing certain content, the discussions did show that consumers are most comfortable with discussing their Internet usage based on the applications that they use. The idea of restricting access was particularly well understood when it related to specific applications, for example throttled access to video streaming. We therefore propose to adopt an application-driven view of Internet usage in the quantitative survey, both in terms of the general questionnaire and the attributes tested in the conjoint analysis.

6.6.7 Summary

This chapter explored the differences and commonalities across the four test areas, in which the focus groups were conducted.

The role that the Internet plays in consumers' lives was first addressed by a free association task. The results of this task were uniform at face value, with information and communication being mentioned most often by participants. However, the following in-depth discussion revealed differences between the four test areas. In Sweden, the Internet has really become a part of consumers' lives. The boundaries between online and offline have blurred and consumers often use it unconsciously, for example when streaming video for entertainment in the evening on their smart TVs. It also plays an important role in the lives of Croatians and Greeks. However it is less woven into people's lives here, and while it is still used very frequently, it has less of a role than it does in Sweden. In both Croatia and Greece participants reported that they use the Internet as a 'retreat' from the real world. They can spend hours online, but when they realise that they did they show a high degree of self-awareness and reflect negatively on their behaviour. It was also interesting to find that in Greece the desktop computer appears to quite often serve as a gathering place for the family to enjoy what the Internet offers, for example watching streamed videos together, and this installs some control over the Internet consumption of children in the household. Meanwhile in the Czech Republic the Internet is mainly used for business and organisation rather than leisure or entertainment. Consumers organise their lives, coordinate meetings or check public transportation schedules online. They rarely reported using it as a major source of entertainment or even getting into a flow online like participants did in the other test areas. Their description of a typical day's Internet usage was very telling, as many of

them told us that they come home in the afternoon/evening and ‘switch on’ the Internet for an hour or two, which implies a very conscious and controlled use of the medium.

To some extent, the often unreliable and slow connection that many participants told us about in the Czech Republic could be an explanation of why the Internet is used in this way. It should be noted here that in this country local WiFi Internet access services are in widespread use, and this naturally comes with some unreliability due to high levels of data traffic in peak times or even bad weather conditions. Czech consumers are used to this and appeared to not really mind even if disruptions lasted for several hours or days. On the contrary, in Sweden such disruptions would be far beyond what consumers consider as acceptable. In fact, Sweden was the only country in which short and sometimes very minor disruptions were mentioned first and foremost when consumers were asked to discuss the topic of disruptions. This illustrates the high standard of Internet access that Swedes are used to and underlines the importance that being connected has for them. The descriptions of disruptions by Croatian and Greek participants fell in between these two extremes, with the Croatians being somewhat more tolerant towards disruptions and thus closer to the Czech consumers. Greek participants showed somewhat higher levels of annoyance with such disruptions and so lay between Croatia and Sweden in this respect. Despite some differences in the detail, two results were found across all test areas. First, consumers find ways to help themselves if their main source of Internet access fails, for example by tethering using their mobile phones or through the WiFi of a neighbour. Second, participants consistently showed great annoyance with the service offered by ISPs to solve issues with their Internet connections. Technical support was commonly viewed to be slow, unfriendly and sometimes incompetent.

The question of how the Internet works represented quite a challenging subject to the participants in all test areas. Nevertheless, other than in Croatia, participants showed at least rudimentary comprehension of this topic, even prior to reading the definition provided to them as a stimulus in the focus group discussions. Initial suggestions comprised of ideas such as connecting different devices, a network of networks and the exchange of data. When prompted to use more figurative language participants referred to the Internet as a spider’s web or a library. Surprisingly, the commonly used metaphor of a motorway was rarely mentioned by consumers in this context.

Several prompting questions were inserted into the discussion guide¹⁴⁴ to support the exploration of this important theme in the focus group discussions. While all test areas shared the idea that the Internet was a public domain, participants’ thoughts on who actually pays for the Internet differed. In Croatia, participants concurred that consumers pay for the Internet whereas in Sweden they often thought of companies such as Google while also showing some awareness that consumers might also pay with their personal data in addition to the fee that ISPs charge to provide them with access to the Internet. In the Czech Republic the ISPs’ role was seen as very prominent when it

¹⁴⁴ See Annex.

comes to paying for the Internet while in Greece the consensus was that everyone who uses the Internet also pays for it, including users, companies and the state.

Another prompting question referred to the rules that apply to the Internet. Technical rules such as traffic management did not register with the majority of participants unprompted. Although there were some differences across the test areas, the general idea that came out of this part of the discussion was related to the existence of rules or some degree of control over the free nature of the Internet. Participants associated this free nature with an absence of rules, and on the whole coincided in their wish to be as free and uncontrolled. However they also agreed that they want some sort of guardian angel in the background that anticipates what they deem as offensive, fraudulent or dangerous, and filters only this content. Others go further and want to perform this task themselves, probably severely underestimating its magnitude. As hard or even impossible a task it is to achieve this ideal that they desire, the only institution that most of the participants have faith in performing it is their government.

The definition that participants were asked to read during the focus groups was generally rated as comprehensible. Still, participants found it to be too technical, and to lack engaging and interesting information as well as illustrations, which they felt could have helped to overcome this problem.

The criteria that consumers consider when choosing ISPs were very similar across the test areas. Main criteria were the speed and the stability/reliability of the connection. These two factors also were decisive for participants' level of satisfaction with their current provider. Other major criteria were the download speed offered by the provider, the services offered as part of the specific bundle (such as a bundle from Internet and telephony services) and the price. Some participants mentioned the termination of the contract or rather its length in months as an important criterion. Overall, this is in line with the literature that was reviewed as part of the proposal to this study and the present report. It should be noted though that the specific expectations for each of these attributes naturally varied substantially depending on the specific market environment that participants lived in. For instance, for Swedish consumers connection speeds below 100 Mbit/s seemed barely acceptable, while these speeds exceeded consumers' expectations in the other three test areas. Similarly marked differences were found in the perceptions of prices and bundles across the test areas.

The final and most prominent theme covered in the focus group discussions was network neutrality, which was a very difficult and challenging topic for the participants. First of all they were led astray by the term 'neutrality', which inclined them to associate policy and societal equality with the term 'network neutrality'. When they made a link to the technical background of the Internet, they usually associated the term with the idea that all ISPs would have to conform to the same set of rules and therefore would provide exactly the same quality of experience to every user. Given this result, we intend to use the term 'traffic management' in the information package for the survey instead of 'network neutrality' as is also done in Ofcom's information package documented in Section 3.5 of this report.

As with the definition of how the Internet works, participants found the definition of network neutrality that was read out by the moderator during the focus group discussions comprehensible, but lacking engaging information as well as more figurative or everyday language. The terms 'arbitrary data' and 'a set of common rules' were consistently rated as difficult to grasp and should be replaced or deleted from the final information package to be developed for the survey.

With minor exceptions, participants across the test areas were convinced that network neutrality does not exist today. Interestingly, participants had very different attitudes towards its potential effect on the telecommunications market. Consumers in the Czech Republic considered it a threat for free market competition as it would flatten all differences between competitors, whereas consumers in Sweden worried about the opposite, as they fear that some institutions or companies might pay for prioritisation and those that cannot afford to do this this would be at a disadvantage if there is no network neutrality.

Despite their general mistrust of their ISPs, many participants many participants failed to associate them with the subject of network neutrality. Even after prompting by the moderator, participants still attributed disruptions adamantly to malfunctions of their own equipment, the telecommunications infrastructure or the website itself rather than traffic management by the ISP. Only the Swedish and Greek participants were able to make this link.

Although the text on deviations from network neutrality was rated overall as being comprehensible, although again with a wish for more figurative language and illustrations, the progression from explaining network neutrality to deviations from network neutrality challenged many participants. Their ideas often became somewhat confused after having read the text, meaning that it was somewhat unclear whether they were referring to network neutrality or deviations from that principle, and different participants used the two ideas differently. This highlighted the need to find a way to construct the information package so that the text avoided to progress from network neutrality to deviations from it.

Attitudes towards deviations from network neutrality differed markedly across test areas. However participants displayed almost consistent disbelief that ISPs have the ability to actually 'manage' traffic and even greater disbelief that ISPs could make offers that would match their individual needs of prioritising the right services at the right time. In particular, the Greek and Czech consumers would be inclined to purchase such prioritised services if they were available and their quality could actually be guaranteed. On the contrary, Swedish consumers felt such prioritisation when offered to consumers for additional payment would be undemocratic and would oppose the fundamental concept of the Internet. However the prioritisation of services of public interest would be acceptable. In sum, the prioritisation of certain applications is accepted by consumers in all four countries, while any type of blocking is disapproved of. It should be noted that some participants were afraid of being controlled as a result of ISPs analysing Internet traffic, as they would naturally have to do this in order to ensure that the right types of traffic are prioritised.

While Internet usage is primarily focused on accessing certain content, the discussions did show that consumers are rather comfortable with discussing it based on applications used. The idea of restricting access was particularly well understood when it related to specific applications, for example throttled access to video streaming. We therefore propose to adopt an application-driven view of Internet usage in the quantitative survey, both in terms of the general questionnaire and the attributes tested in the conjoint analysis.

6.7 Implications for the survey

6.7.1 Introduction

This section determines implications from the results of the focus group discussions for the quantitative consumer research, which took place during the survey. Two major research outcomes were relevant in this context:

- An information package for respondents in the survey
- Attributes of IAS related to network neutrality to be used in the conjoint experiment in the survey

The implications related to these two outcomes are discussed in the following sub-sections. In addition to this, further implications also emerged from the qualitative research in the project, and these are examined in the final sub-section of this section. The section concludes with a short summary that provides an overview of the main results.

6.7.2 Information package (first version)

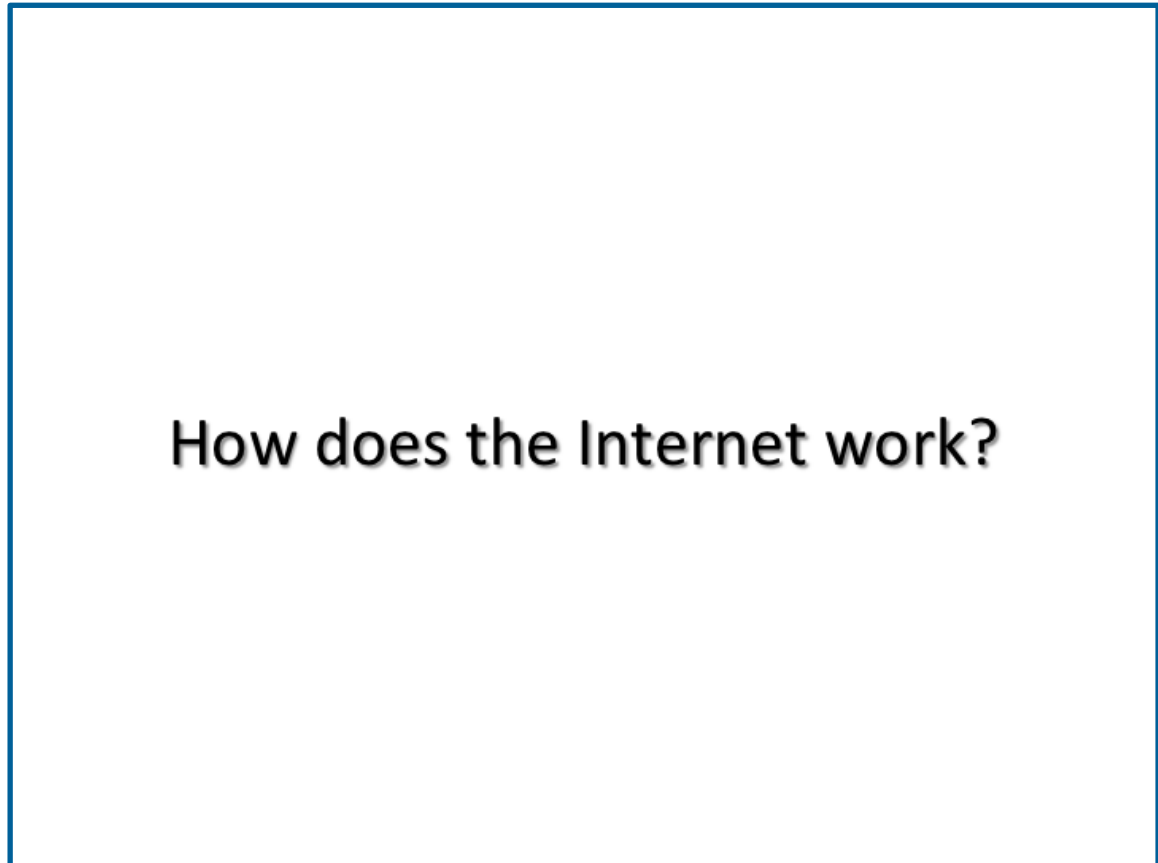
Participants were consistent in their dislike of the rather technical jargon used in the definitions read out from the discussion guide¹⁴⁵. Some of the written definitions also tended to confuse participants, in particular the ones on 'arbitrary data' and 'common technical rules'. However, the definitions were deemed to be understandable on the whole. Furthermore, many participants asked for a definition that used more figurative language and that also highlighted the specific aspects have experience of from their own use of the Internet, such as applications and services like Internet telephony or video streaming. Many also asked for a picture to accompany the text.

The study team addressed these concerns by approaching the task of explaining how the Internet works with a short video clip within the questionnaire for the group that received the information package. The video gave a lively and animated illustration of how the Internet works, and it used popular applications as examples to make the explanation more accessible for consumers. The animation was supported by an

¹⁴⁵ See Annex.

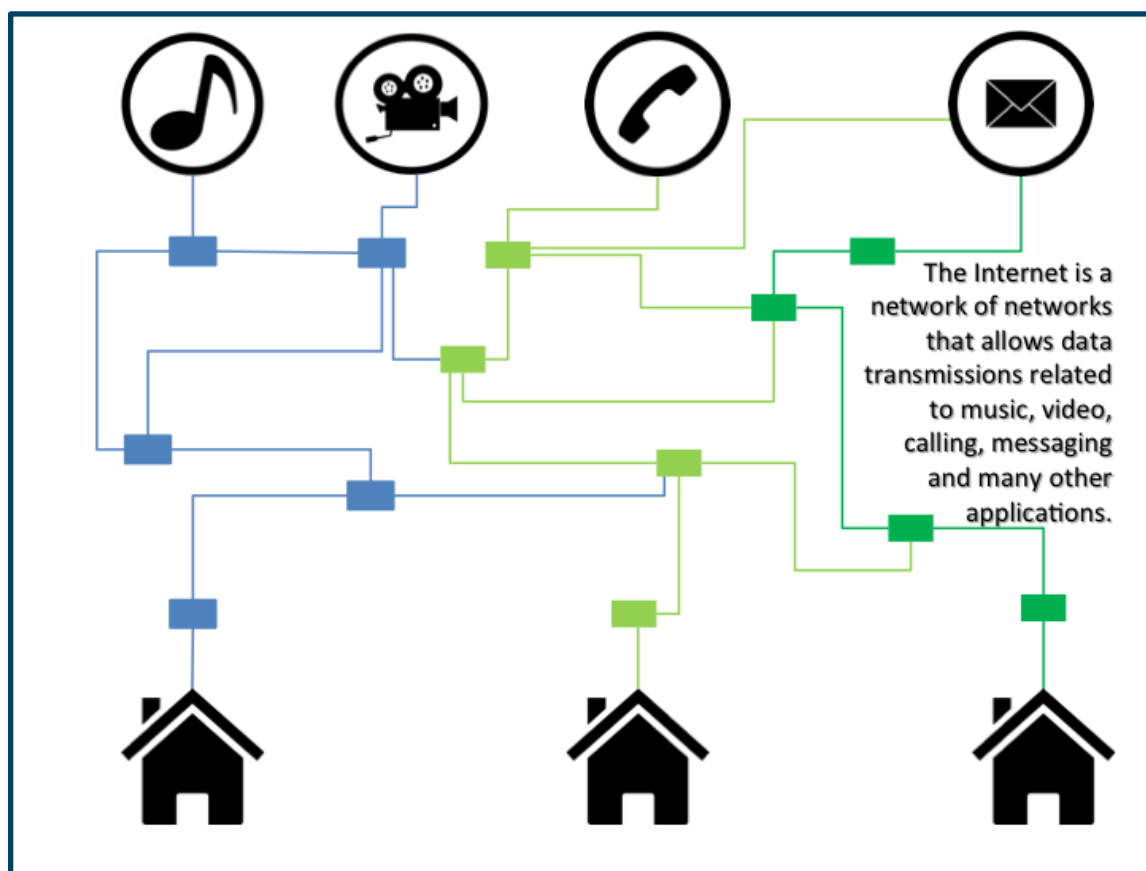
explanatory text that largely built upon the parts of the definition that were rated as easy to understand by participants throughout all of the test areas.

Figure 6-1: Information package – video frame 1



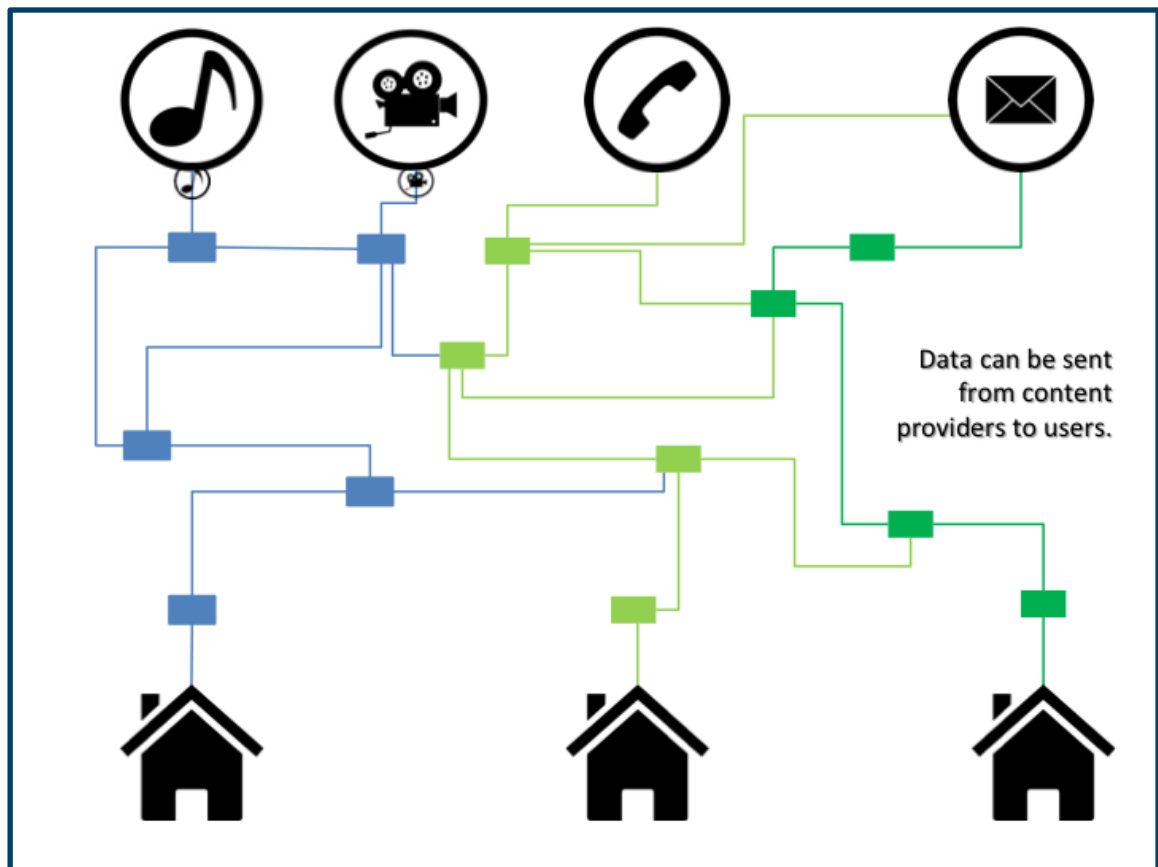
The first frame provided a short introduction to the video. It offered respondents time to 'tune into' the video and prepare for the messages that followed. We chose to use a question as the introduction as this was likely to stir interest and it allowed us to use relatively simple language.

Figure 6-2: Information package – video frame 2



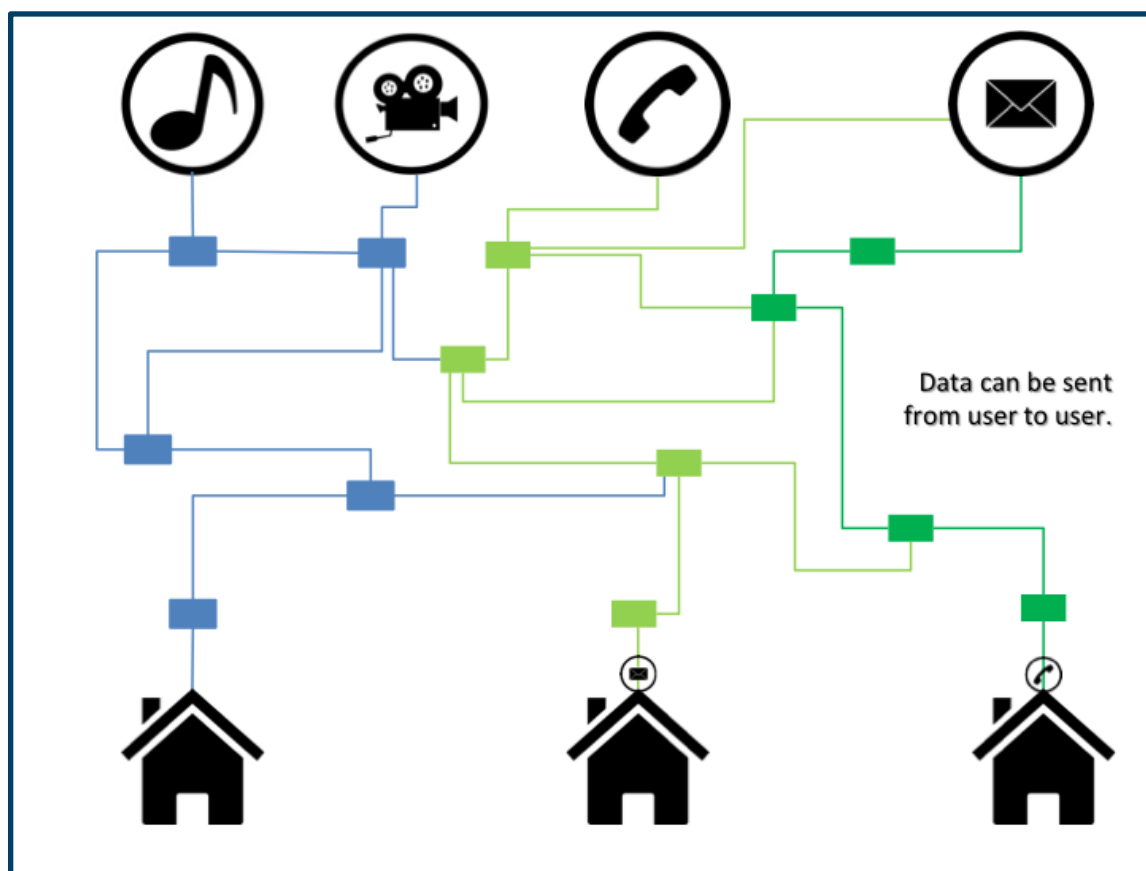
The second frame introduced the concept of the Internet as a network of networks and highlighted how it transfers data. To illustrate this more vividly, we added specific examples of such data. This addressed the major finding from the focus group discussions regarding the participant's evaluation of the description of how the Internet works. The different networks were illustrated in the picture by the differently coloured lines. An open question for discussion was whether introducing this layer of detail is worthwhile in light of the difficulties it posed to some of the participants in the focus groups. From our perspective there were two arguments in favour of keeping it in. Firstly, there was also a noticeable number of participants who understood this idea well or were even aware of it before they had read the description. Therefore it was likely that some respondents who complete the survey may also be already acquainted with this concept. Deleting this detail risked losing the trust in the following explanation of these respondents. Secondly, from a technical perspective, this characteristic appeared as a crucial one for the Internet as we know it today, and it reflected many of the ideas revolving around freedom and equality online that were put forward by numerous participants. Overall, our initial suggestion was to keep this detail in this frame.

Figure 6-3: Information package – video frame 3



The third frame introduced the concept of data being sent from content providers to users, which reflected participants' typical ideas related to how the Internet works. When asked who makes the Internet, many participants described it as consisting of services and applications delivered by specific content providers such as Google, Facebook or local sites such as 24.hr. This led to the question if examples of such content providers might be helpful for respondents' understanding of the information package. Any specific examples may bias its content to some extent. Furthermore, it should be pointed out that the aim was to keep this video as short as possible. Adding further text would have increased the time needed to read and understand the text in this frame.

Figure 6-4: Information package – video frame 4



The fourth frame of the video introduced the idea that data can also be sent from user to user via the Internet. This reflected the idea that everyone is part of the Internet and also partakes in ‘making’ it – which was conveyed almost consistently throughout the focus group discussions. The next frames of the video revolved around the topic of network neutrality and related therefore to implications regarding network neutrality that emerged from results of the focus group discussions.

The discussion of network neutrality and especially the feedback that was received from the focus groups guided our suggestions for the part of the information package that focused on this topic. Participants had difficulty understanding the term, even after the moderator had read out the explanation and they had read the text on deviations from network neutrality themselves, and they frequently criticised the very technical language used in the descriptions. Consequently, and in line with the insights gained from the discussions about how the Internet works, we suggested integrating the explanation of network neutrality and deviations from this principle into the video that we have prepared for the information package. This made the explanation more figurative and generally easier to comprehend.

Secondly, it became obvious that the term ‘network neutrality’ itself was misleading for almost all participants. Initial discussion commonly revolved around policy issues such as democratic participation or even gender equality. All these issues were certainly linked to the idea of neutrality, but not so much to the concept of network neutrality.

Therefore we used the term ‘traffic management’ instead. This was in line with Ofcom’s information package that is reproduced in Section 3.5. From a consumer’s perspective this term seemed to be closer to what network neutrality is actually about. Furthermore, it appeared to be easier to comprehend as it clearly showed a logical step from the definition of the term to its effects. This is strongly linked to the third major insight gained from the focus groups that is explained in the following paragraph. Another possibility was to use the term ‘access management’, which might be a better way of expressing the aspect of ‘traffic management’ that consumers experienced, as it covered an important effect that deviations from network neutrality may have for consumers, that is to say that they may no longer have access, or only limited access to certain applications. ‘Access management’ would also potentially better cover the more ideological component that network neutrality has for consumers, which came up at various points in the discussions. It may highlight that network neutrality does not only involve technical issues, but also the question as to whether all data should be equal on their way to the user. In fact, this term might be more effective than the technical term ‘traffic management’, but it may also cause some problems for respondents, as it would not be linked closely to the rest of the explanations in the video.

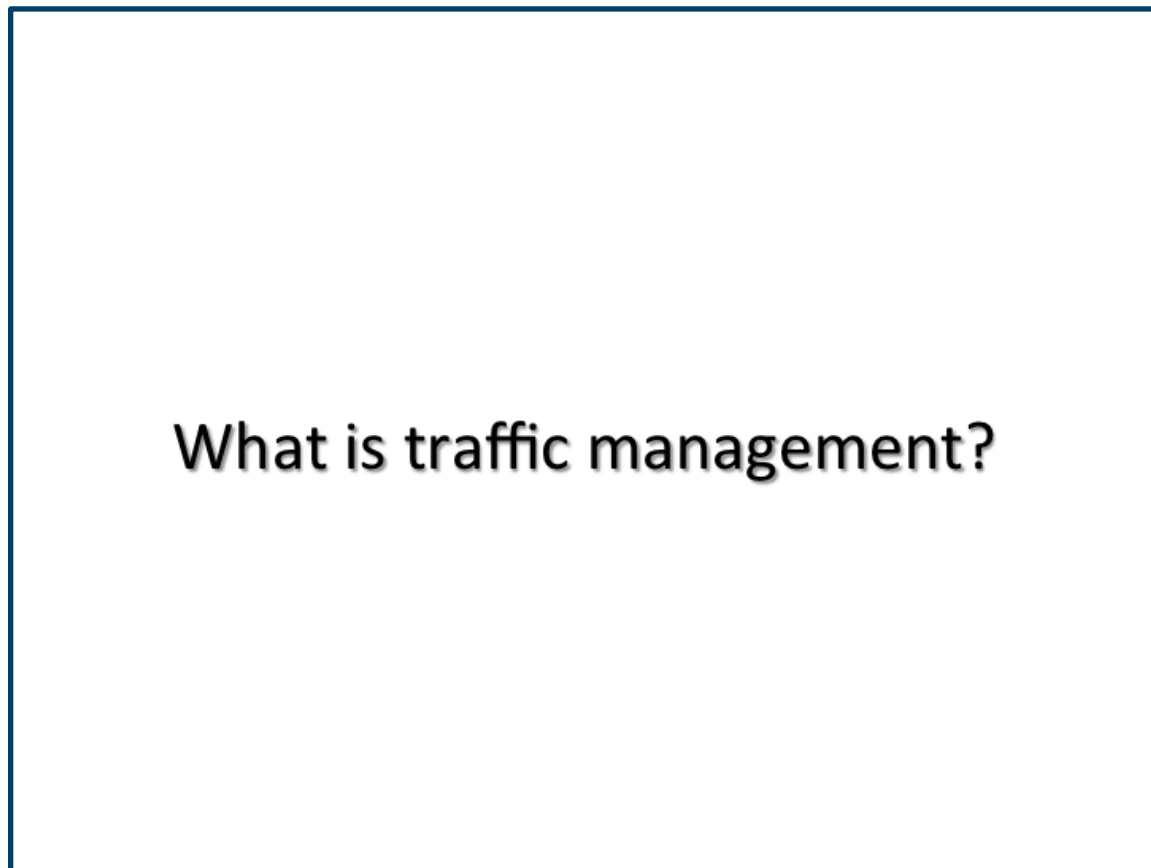
Separating the definition of network neutrality from the text on deviations from network neutrality posed an obvious challenge for participants. Sometimes the second text left them confused and it became more and more unclear in the latter stages of the discussion whether they were talking about network neutrality or deviations from it. Using the term ‘traffic management’ in the information package was likely to solve this issue as it allowed a definition of the term to be given and its consequences explained without causing confusion by explaining a concept and then what happens when the opposite occurs. Thus this terminology was perceived to enhance respondents’ understanding of the issue at hand. The same would have essentially been true for the term ‘access management’, although it seemed to be somewhat disjointed from the remainder of the video as it was then.

Furthermore, participants understood network neutrality mainly in a content-driven way rather than application-driven one. For instance, they frequently mentioned specific content being blocked, rather than specific applications such as VoIP. As we suggested that the network neutrality-related attributes in the conjoint task¹⁴⁶ are related to applications, we opted for a relatively neutral approach in the video, by showing different types of data packets that could be understood in the context of both specific content and applications.

The following pictures show the part of the video that described the issue of network neutrality. The pictures reproduced here only illustrate individual frames, not the animation.

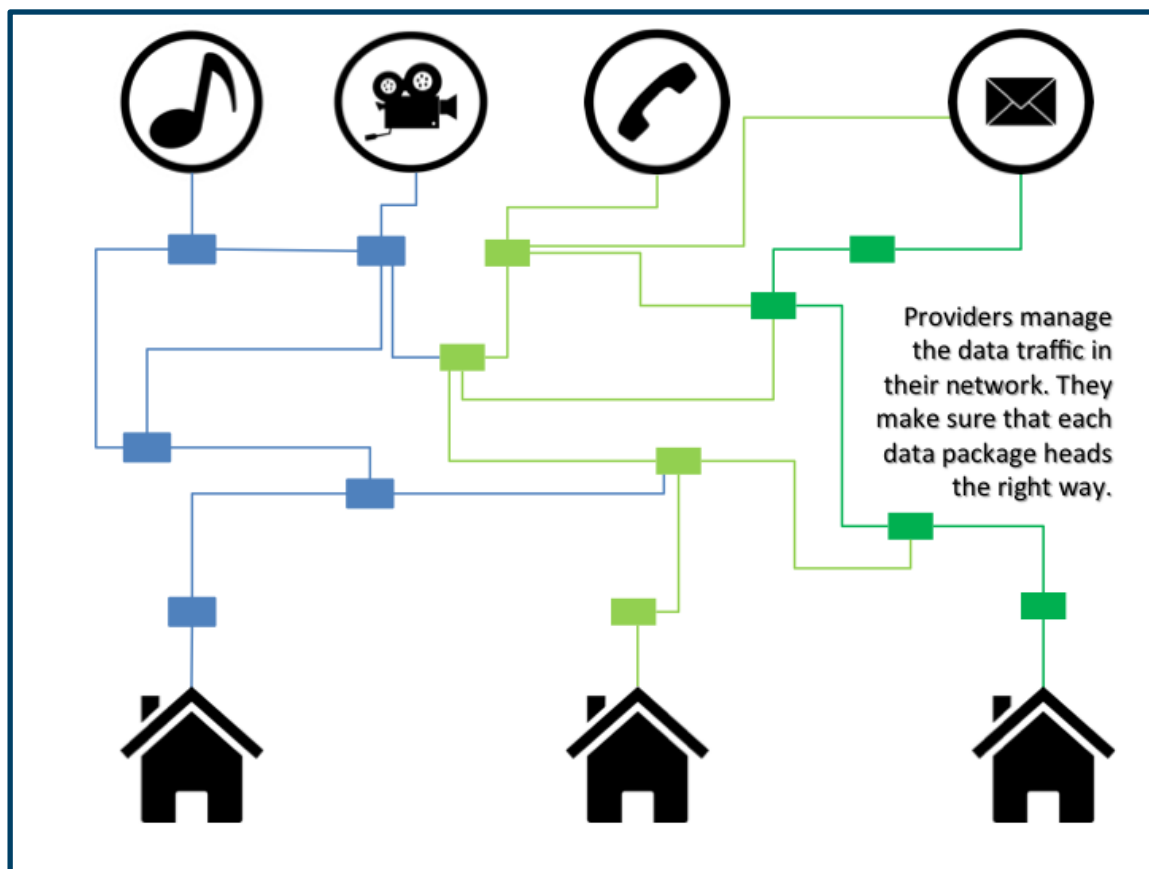
¹⁴⁶ See Section 6.7.4 for details.

Figure 6-5: Information package – video frame 5



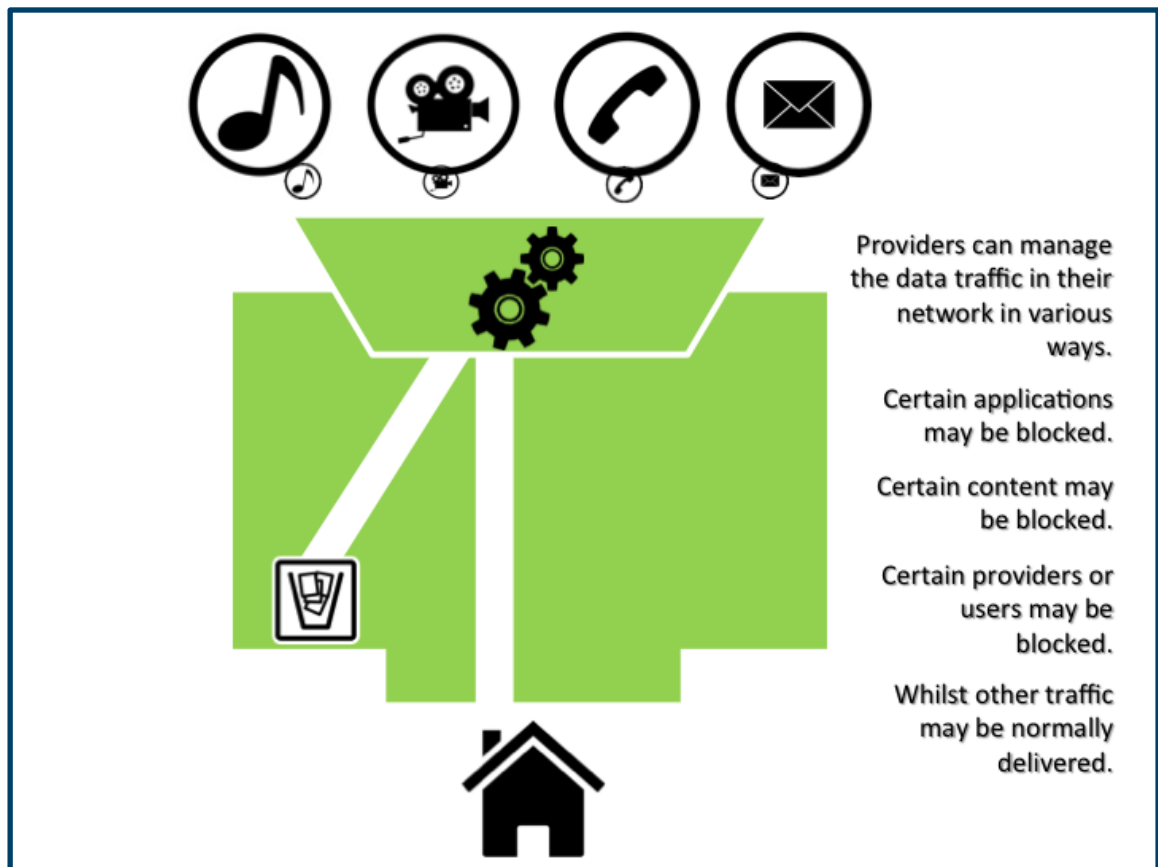
Frame 5 of the video served a similar function as the first frame of the video. It first introduced the term 'traffic management' in the form of a question in order to provoke respondents' curiosity. This frame might also have worked with the term 'access management'. Independent from the choice of terminology, a question for discussion has been whether it was necessary to introduce this second topic of the video already in one of the previous frames.

Figure 6-6: Information package – video frame 6



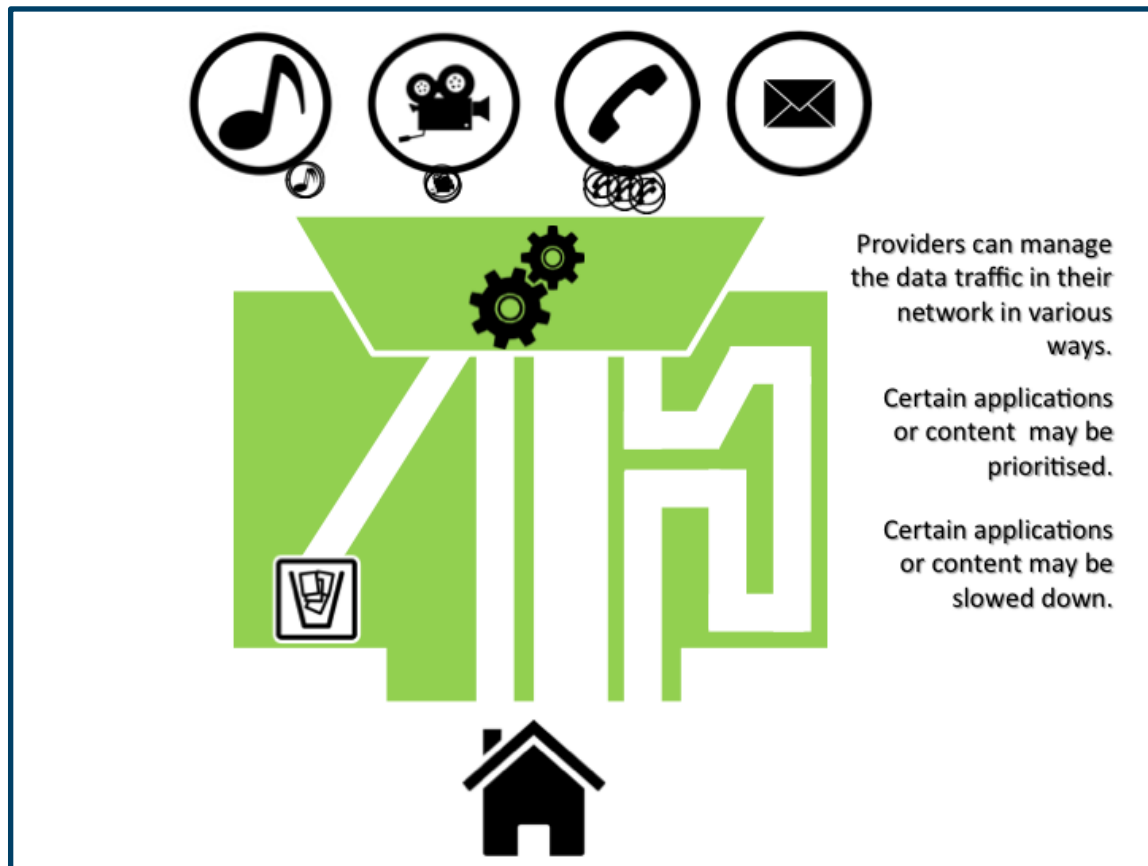
Frame 6 was based on the same picture as the explanation of how the Internet works. This should aid respondents' comprehension of this topic as they could link it back to what they learned earlier. In the picture, the general purpose of traffic management was explained. A question for discussion was whether this position in the video may determine a good opportunity to once again mention the idea of the Internet as a network of networks, highlighting that ISPs can only manage traffic in their own network, and not in networks operated by other ISPs. Another aspect for discussion was if this was a detail that was important enough to introduce here, even though it risked making the information package somewhat longer and more difficult to understand.

Figure 6-8: Information package – video frame 8



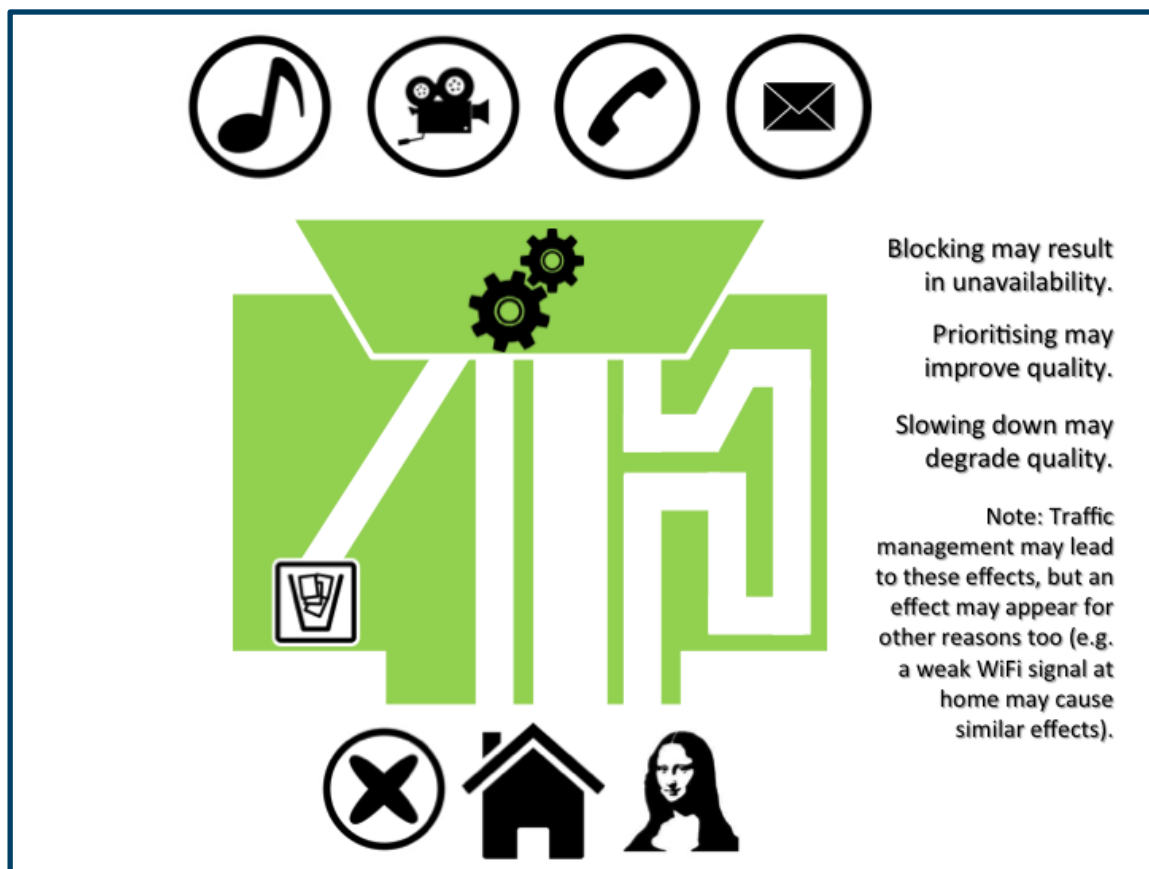
Frame 8 explained blocking, the most severe effect of traffic management. The animation illustrated how specific applications or content are allowed to travel to the user, whilst others are not.

Figure 6-9: Information package – videoFrame 9



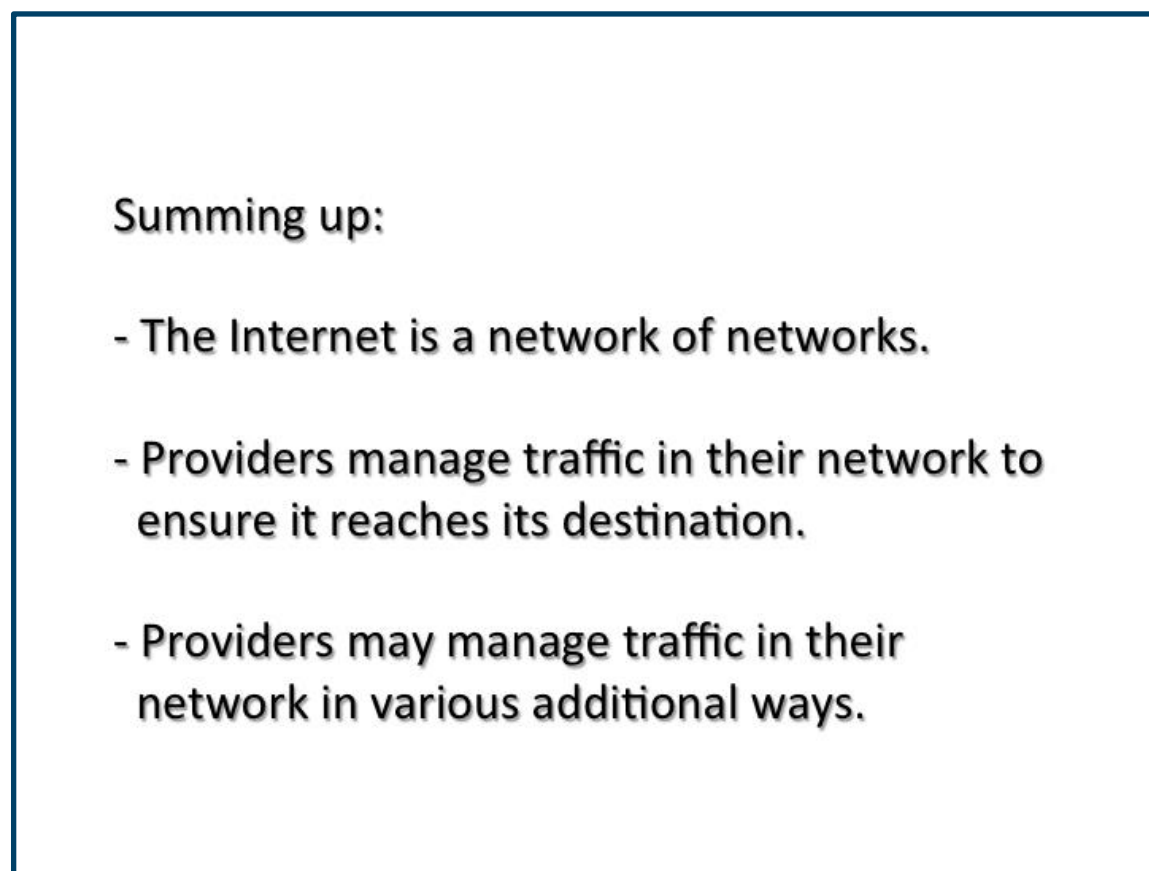
Frame 9 explained the effect of prioritising specific applications or content as opposed to throttling. The animation illustrated how some data packets can travel directly to users, whilst others have to take a much longer route. Although this may not fully reflect the technical background of the traffic management practice, we believed that this was a very figurative way of illustrating the measures that ISPs take, and thus that it was in line with consumers' expectations. Furthermore, we chose to use the term 'slowed down' instead of throttled to accommodate the desire for everyday language, as previously discussed.

Figure 6-10: Information package – video frame 10



Frame 10 focused on the specific effects on users' experiences that the traffic management practices described earlier on in the video could have. One way that this was illustrated in the animation is by the blurring of the picture of the Mona Lisa when data is throttled. We have also included a note that such effects may, of course, also have other reasons than traffic management, such as a weak WiFi signal. An item for discussion was whether these examples reflect the issue with sufficient neutrality. A further open question was whether the note on other potential sources of the effects presented in this frame is appropriate in this context and, if so, whether it should be placed in this frame or a different one.

Figure 6-11: Information package – video frame 11



Frame 11 was the final frame of the video and it set out to sum up the main points.

6.7.3 Information package¹⁴⁷ (final version)

The initial version of the information package (the video presented in the previous section) was the subject of a discussion at a workshop and a project meeting the day after the workshop. The contributions of the external experts participating in the workshop, participants from BEREC and the study team gave key insights and guided the development of the final version of the information package presented below.

First, we have gathered some general remarks about the major underlying ideas of the information package:

- *Information package as a video:* The idea of presenting the information package by means of a video combining animated illustrations with textual elements was generally supported. Video was perceived as a well suited way of introducing the intended information to consumers and creating knowledge in this way prior to one group of respondents in the survey being involved in the conjoint choice experiment.

¹⁴⁷ The translations into test area languages are reproduced in the annex to this report.

- *Focus on vital information to be conveyed:* The first version of the video, which has been discussed at the workshop, was found to lack a single, clearly visible goal. It was perceived to be somewhat confusing as it tried to incorporate information relating to how the Internet works next to information about network neutrality. Although it was planned for the information to be presented in the same package in the tender specifications, the broad consensus of participants at the workshop was that the video should instead focus only on the absolute key information that consumers need to understand.
 - Consumers' understanding of traffic management was defined as vital. Consequently, the information package in the final version focuses on this issue.
 - This scoping definition led to the decision to remove the part on how the Internet works and the description of a network of networks from the video (so frames 2, 3, and 4 were removed).
 - The frames introducing different parts of the video were consequently no longer needed (so frames 1 and 5 were removed).
 - Instead, the final video starts with a frame that clearly outlines what the video is about and what viewers may learn from it. This information will tell recipients about the video's goal, and it will prepare them for the key elements that they should pay particular attention to.
- *Motives for and consequences of traffic management:* The focus on only vital information, in other words traffic management, allowed for a more informative end to the video. Instead of the general summary included in frame 11 in the first version for the workshop, the final video explained why ISPs may want to manage traffic, and what the consequences might be when a consumer chooses a package in which some specific content is prioritised. With regard to these, the decision was taken to deliberately limit the impact of consumers' choices to the potential effects that a consumer could be expected to understand in the relatively short time that the video runs. Therefore further reaching and inherently very complex consequences, such as traffic management practices' potential impact on competition and innovation in the Internet ecosystem, were therefore not included in the final video. Also, at a later stage in the survey, we asked questions about exactly such far reaching consequences in order to shed light on consumers' attitudes towards such potential consequences. Presenting one group of consumers with specific information on such consequences would have biased the results of these questions.
- *Introduction of key concepts:* There was a general understanding that consumers watching the video would benefit from a more intuitive, consistent and engaging experience if it started with an introduction of the key concepts. In particular, the three roles of consumers, content and application providers, and Internet providers (the more user-friendly term used instead of ISP) were emphasised early in the video as an introduction. These roles were mentioned in all of the frames that explain traffic management. Consumers should therefore

be acquainted with them, and they should be able to differentiate between content and application providers and Internet providers. Similarly, and depending on a consumer's understanding of these roles, the introduction of the key concepts was included to give them the ability to associate content and applications with content and application providers, and the transport of data with Internet providers. Frames 6 and 7 of the first version of the video provided only a partial introduction to these key concepts, and one that focused on Internet providers. They were consequently replaced in the final video by three frames (frames 2, 3 and 4) which introduced the three roles as well as content, applications and transport of data.

- *Examples of content and application providers:* The video prepared for discussion at the workshop (the first version of the video) deliberately included generic examples of application types. Specific examples, such as a Netflix logo for video streaming, were avoided in the version for discussion at the workshop in order not to introduce any bias. The generic examples were not labelled explicitly in the text, but represented by an icon only, such as an envelope for instant text messaging. However, after considering the advantages and drawbacks of using specific examples, a decision was taken to include specific examples. The main argument for doing so was that the video should be more engaging and relate more closely to viewers¹⁴⁸ own experiences. Showing examples of a number of widely known content and application providers was perceived as a means of holding their attention and making them feel like the video matters to them.

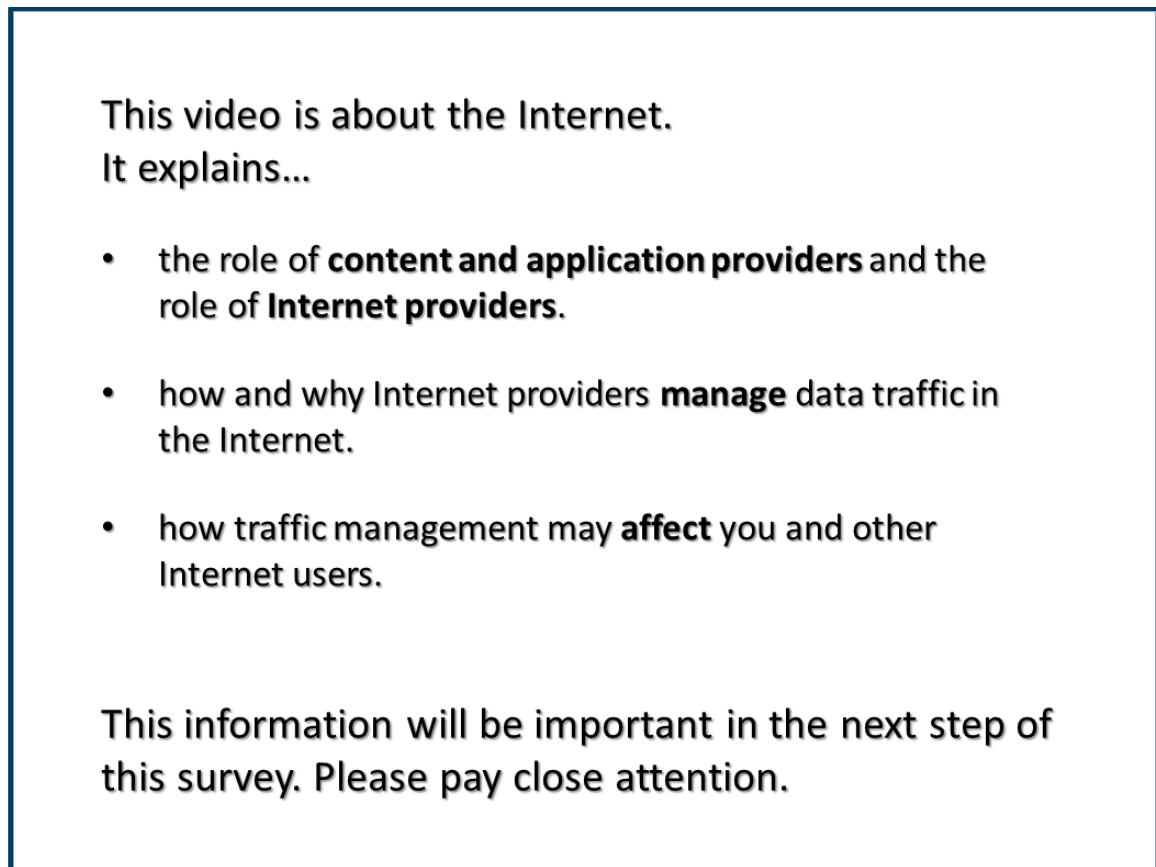
A revised video implementing the above changes was produced after the workshop. Workshop participants were given the opportunity to review and comment on the revised video. The feedback received further improved the quality of the video, as it centered primarily on the fine-tuning of the wording and the illustrations, the order of certain statements, maintaining a balance of positive and negative statements, and considerations regarding timing, in other words keeping the video short.

The following figures and paragraphs present the final video. The final video was positively acknowledged by the experts participating in the workshop.

With the exception of timing-related aspects, which obviously cannot be visualised in written text, the explanatory text passages provided below for each video frame relate to the feedback received. They do so by briefly outlining the reason for presenting a frame in the specific way it was included in the final video. Regarding the timing, the final video was optimised in terms of the animations, the time allocated for views to read the text, and transitions. It was project-internally tested and approved.

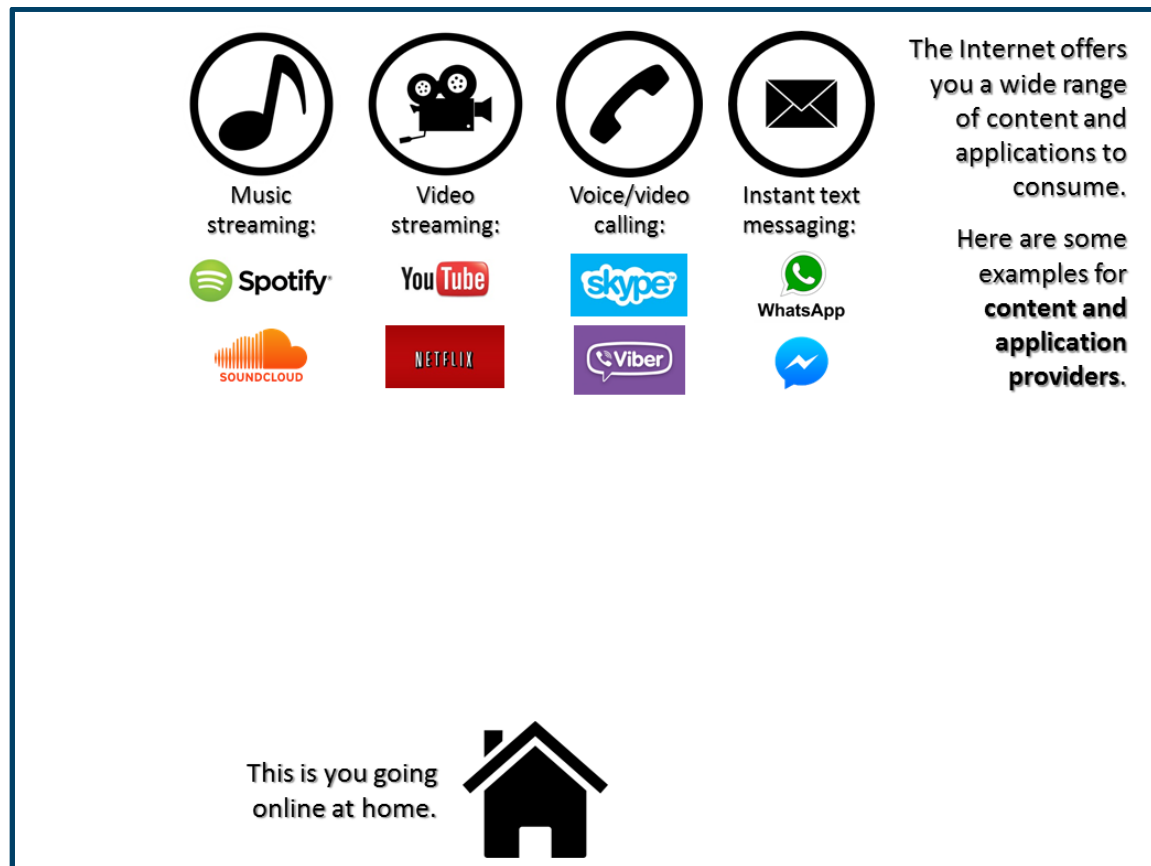
148 Please note that this is a result that is also backed up by the focus group discussions, which showed that consumers by and large are very application-driven when thinking about the Internet and how it works, as well as aspects of network neutrality.

Figure 6-12: Final information package – video frame 1



The first frame in the video intended to grab the viewer's attention and engage them. It first introduced the Internet as the overall context, and then gave a concise description of the three main items they will learn about. It is important that the third item was phrased in a way that shows that the viewer is personally affected by traffic management. The same approach was used in the statement at the end of the frame, in which the importance of the information in the video for the remainder of the survey was highlighted.

Figure 6-13: Final information package video - frame 2



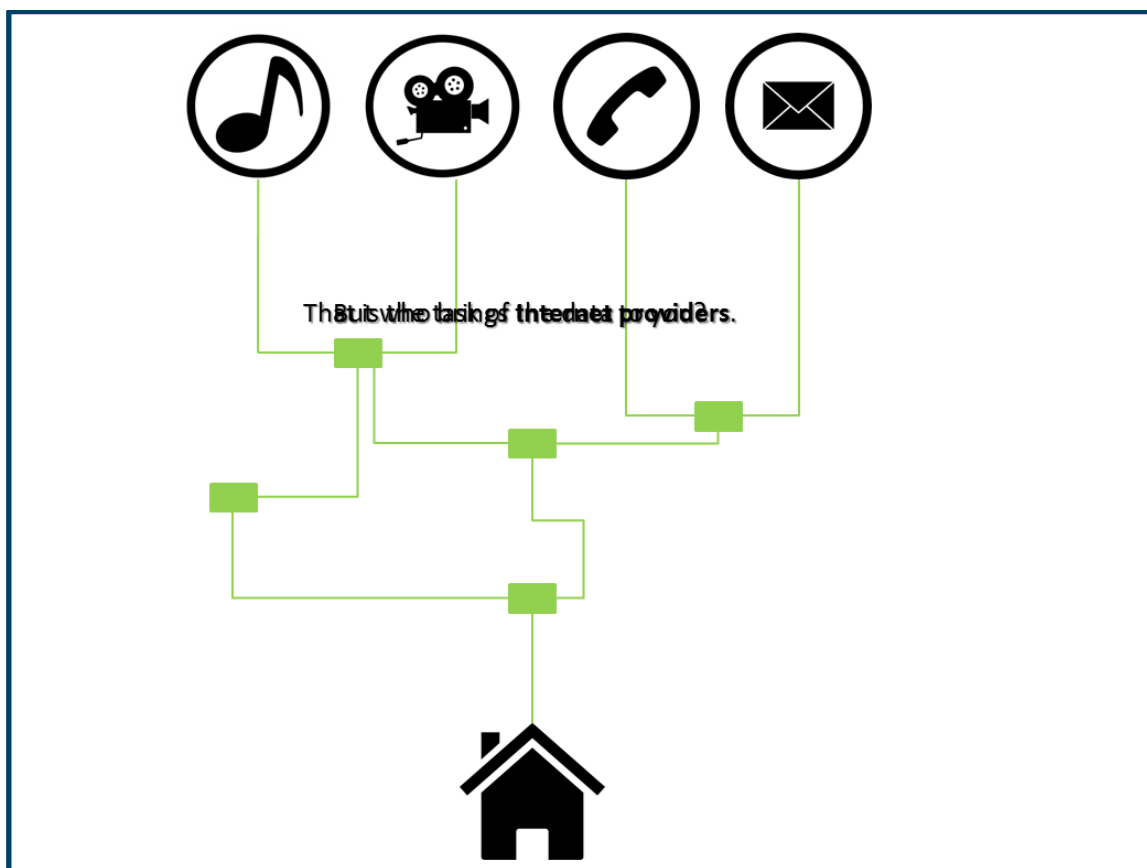
The second frame was the first of three frames to introduce the key concepts to the viewer. It focused on introducing three aspects, namely the consumer going online at home, the content and applications a consumer wants to access on the Internet, and the respective providers that offer them. The first animation was related to the viewer, as starting with a direct and personal link was important to keep them engaged. The icon of a house, which represents them accessing the Internet at home, was present as an element in each frame, up until frame 7, as were the icons representing the various types of content and applications available to consumers online. An explanatory text field was shown when the icons first appeared.

The video then provided two specific examples of widely known content and application providers for each icon. The icons were labelled so that it was clear to the viewers what type of application or content an icon and the two examples provided represent. Bold text stressed the importance of content and application providers' role in providing the material they offer. The exact wording of the labels and the term "content and application providers" was used in the survey, ensuring a high level of consistency for the respondents who see the information package.

The transition to the next frame in the video, frame 3, faded out all textual elements as well as the logos of the example content and application providers. Only the icons representing the types of content and applications plus the house representing the

consumer remained visible at the end of frame 2. These were the elements that were visible from the start of frame 3.

Figure 6-14: Final information package video - frame 3¹⁴⁹



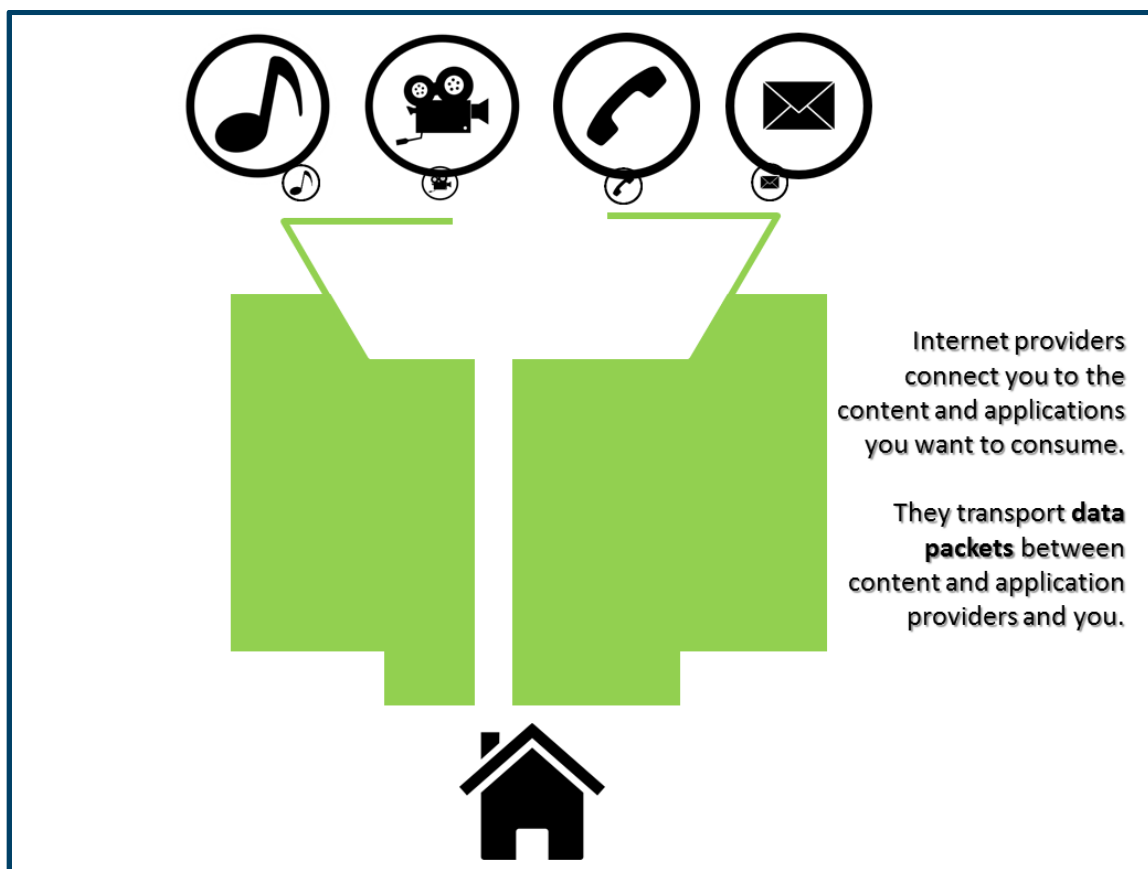
The third frame in the video carried on introducing key concepts, and it focused on the role of Internet providers. The term “Internet” provider was chosen, and consistently used in the survey and elsewhere in the video, over the term “Internet service provider” because it was a shorter term, since it did not introduce yet another concept (service, in addition to content and applications) and since it was presumably closer to everyday language.

The frame was linked to the concepts that viewers learned about in the previous frame. It positioned the Internet provider as a link between content and application providers and consumers by asking a question that appeared on the screen between the icons for content and application providers and the icon for consumers: “But who brings the data to you?” The question addressed the consumers directly in order to maintain their personal involvement. The frame moved on to show a network (coloured green, as is every other graphical representation that relates to an Internet provider in the following frames), and it then provided the answer to the question raised by stating that this is the

¹⁴⁹ A sequence of two text lines appeared in frame 3. The first line asked the question: “*But who brings the data to you?*” The second line was shown after the first line disappeared. It answered the question raised by stating: “*That is the task of Internet providers.*”

task of Internet providers. In essence, this frame introduced Internet providers and data. This may be seen as a relatively small contribution at first, but as the focus groups clearly showed that consumers had great difficulty in differentiating content and applications from data, as well as content and application providers from Internet providers, it was crucial to allocate enough time and room in the video for introducing these concepts. This is why the next frame in the video, frame 4, also covered them. The transition towards frame 4 faded out the green-coloured network, with the exception of a single green rectangle.

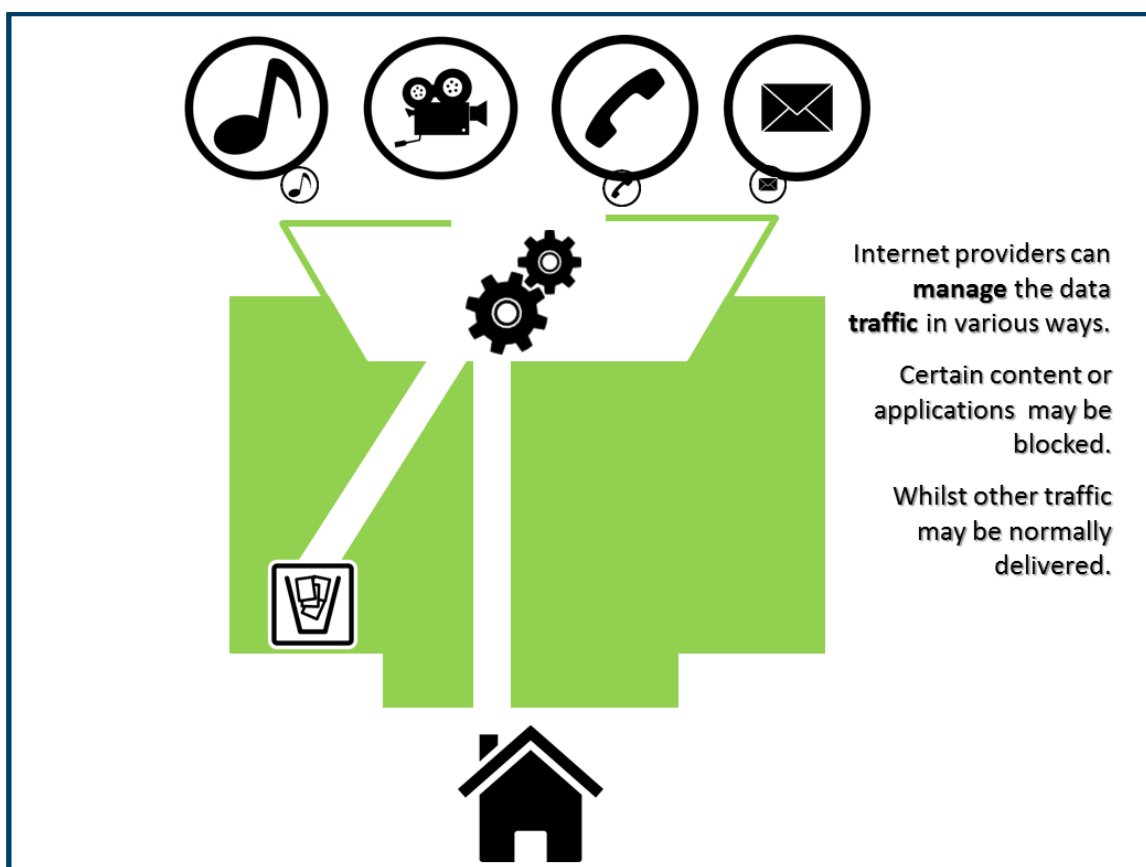
Figure 6-15: Final information package – video frame 4



The fourth frame in the video concluded the introduction of the key concepts. It combined textual and graphical elements to focus again on the Internet provider and its role in transporting data packets from content and application providers to consumers and vice-versa. The textual elements appeared on the right-hand side of the frame, with bold text highlighting the concept of data packets, while the graphical elements illustrated the transport of these packets to the consumer by an Internet provider. This was shown by small-scale versions of the respective icons flowing one after another from the domain of the content and application providers, along a path through a green block in the Internet provider's domain, before finally arriving at the consumer. The green block was the result of a zoom-in effect from the green rectangle that remained at the end of frame 3. This effect took place at the beginning of frame 4, before the small icons, that is to say the data packets, started their journey.

The graphic of the green block has been optimised based on a comment received on the revised video. The data influx element on top was depicted in a way that closely resembles a funnel, in which an Internet provider collects incoming data packets. The green block was kept and its role extended through the illustration of different forms of traffic management in frames 5, 6, and 7. Accordingly, the transition from frame 4 to frame 5 faded out the textual elements, but continued to show the icons, the green block and the house.

Figure 6-16: Final information package video - frame 5



The fifth frame was the first of the three frames that explained the various traffic management practices. Its focus on traffic management showed immediately with the appearance of some text which explains to viewers that Internet providers can manage data traffic in various ways, with bold typeface highlighting “manage” and “traffic”. This statement was supported by an illustration of two cogs appearing in the Internet provider’s funnel for incoming data packets.

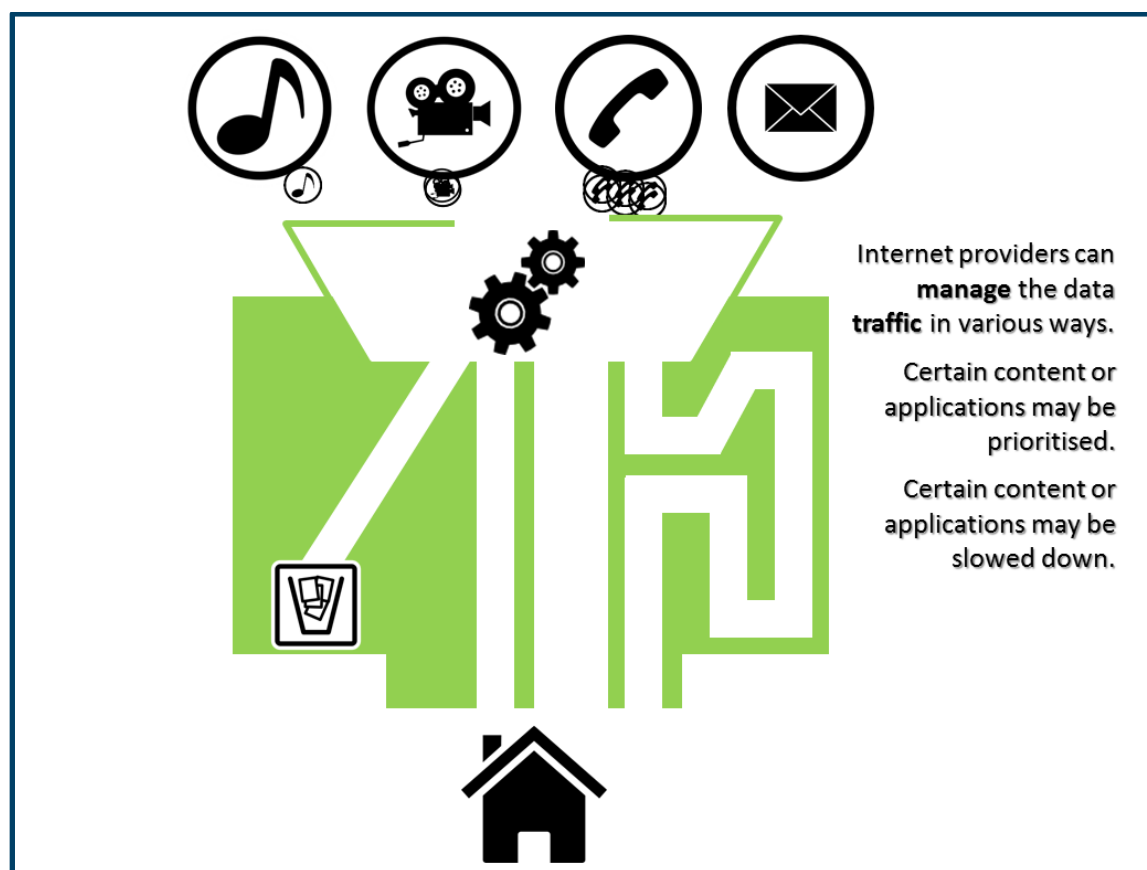
Frame 5 applied a slow-start approach in introducing only one traffic management practice, that of blocking certain content or certain applications. A focus on a single practice allowed viewers to become gradually acquainted with traffic management without being overwhelmed by a topic that they most probably had not heard of before. Frame 5 was very similar to frame 8 in the initial video version. In comparison to the initial video, this one reduced the number of blocking variations which were presented

as individual subcases, which was in line with the slow-start approach described. As a desirable side effect, the overall length of the video was reduced.

Blocking was illustrated by showing an explanatory textual statement and introducing an additional lane that the data packets can take when travelling through the green block, that does not deliver the packets to the consumer, instead delivering them to a bin. Blocking was illustrated by packets being routed to the additional lane, and it was contrasted to normal, non-managed packet delivery. This is supported by a corresponding explanation appearing on the right-hand side of the frame.

The transition to the next frame faded out the text that was specific to blocking and normal delivery, while keeping all of the other elements in the frame. These elements formed the basis for further elaboration on different traffic management practices in frames 6 and 7.

Figure 6-17: Final information package – video frame 6

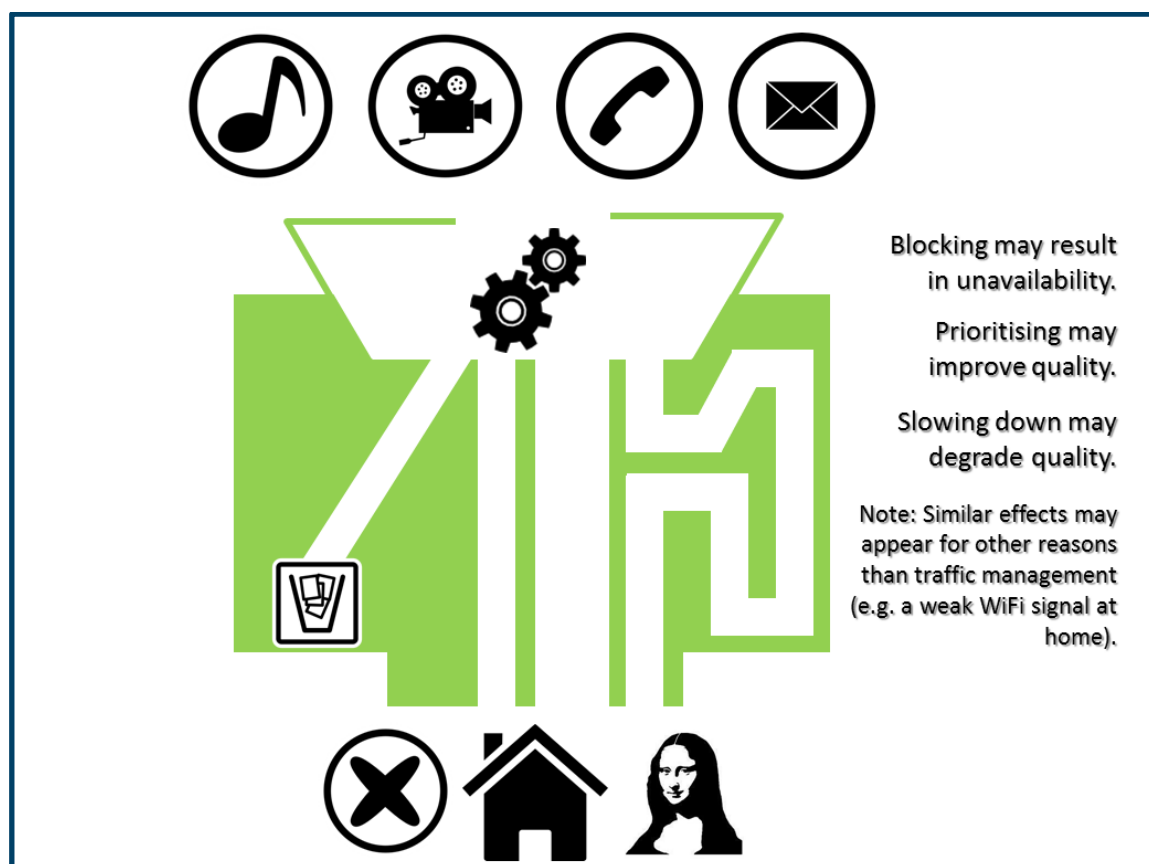


Frame 6 constituted the second of the three frames that explained traffic management practices. The focus was prioritisation and deprioritisation, with the possibility of a degraded performance as a result of the latter. Frame 6 essentially reproduced frame 9 from the initial version of the video, and it had the same purpose. Differences between the two frames affected only minor aspects such as the fine-tuning of the wording and the optimisation of the animation timings, which reduced the length of the video.

Despite some comments on the illustrations of prioritisation and slowing down, the broader lane transporting more packets at a time to demonstrate the former and the longer lane delaying the delivery of packets to demonstrate the latter remained in the final video. The comment received regarding prioritisation was based on the interpretation of the small icons for voice/video calling to each represent a single call, instead of data packets relating to an ongoing voice/video call. As frame 3 and in particular frame 4 dedicated substantially more time in the final video to introducing the concept of data packets, which were represented by the small icons, the comment on graphically representing prioritisation in a different way appeared to be obsolete.

The comment was based on the argument that the longer lane for data packets did not accurately reflect the technical implementation of the traffic management practice in question. While the argument in itself was certainly correct, the chosen representation was kept in the final video for the reason that the frame primarily aimed to present consumers with an illustration which is so so easy to follow that they immediately understand how this practice may affect their experience. This aim appeared to be fully satisfied by the way slowing down was illustrated. A more complex funnel-orientated representation, possibly including “squeezed” data packets as proposed in the comment, would have been less suitable.

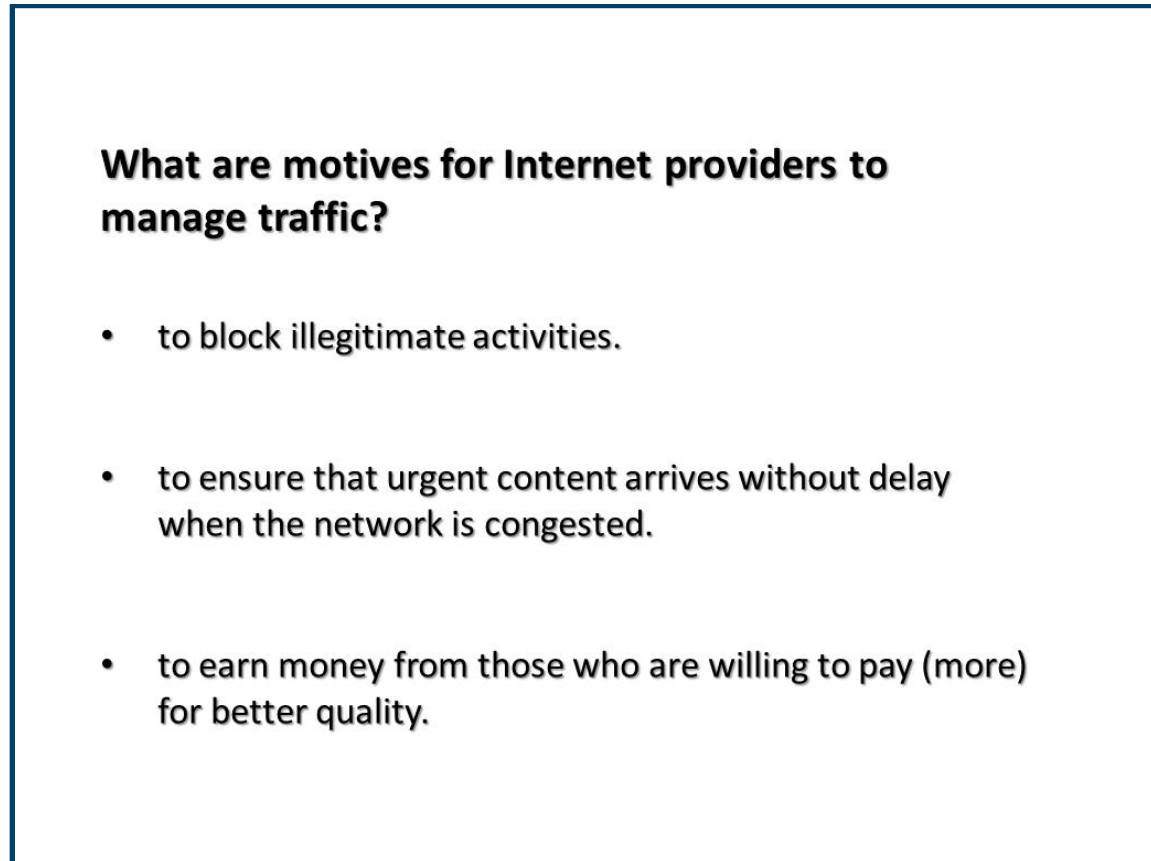
Figure 6-18: Final information package – video of Frame 7



The seventh frame in the final video was the last frame on traffic management practices, and it was nearly identical to frame 10 in the initial video. Only minor

finetuning was applied to the wording, such as shortening the note at the end of the frame, and to the timing, in order to reduce the overall length of the video.

Figure 6-19: Final information package – video frame 8



Frame 8 and frame 9 intended to help viewers reflect on the further reaching implications of traffic management. Frame 8 focused on the main motives for which Internet providers may apply it, and it presented three of these as shown in the above image.

This set of three motives was the result of analysing and addressing multiple comments received on the revised video. The revised video also proposed three motives, but in a different order and with two different ones (the third motive was the same).

Furthermore, frame 8 of the revised video asked a different question (“why do Internet providers manage traffic?”).

The overarching question in frame 8 of the final video was changed to emphasise that there are motives for traffic management instead of implying that Internet providers apply these practices today on a regular basis. The two first motives mentioned were rephrased in order to include the blocking of illegitimate activities and to cover traffic management in situations of congested networks differently. The final wording chosen did not fully match the proposed wording by any of those who commented. The suggestions provided a solid basis for the final wording, but at some points they used highly technical terms, such as delay-sensitive applications, which a person without a

technical knowledge would be unlikely to understand. Other proposed comments combined two aspects in a single bullet, resulting in a statement that was difficult to understand. Consequently, we developed a version that used everyday language that was easy to understand, but was still a good reflection of the comments and stroke a balance between them.

Figure 6-20: Final information package – video frame 9

What are the consequences if you choose a package with some content prioritised?

- For the prioritised content, your quality of experience is likely to be better.
- Your choice may decrease the quality of all non-prioritised content for you and all other users.

Please keep this in mind in the next step of this survey.

The video concluded with the ninth frame. In the same way that frame 8 wanted to stimulate viewers to think about the implications of traffic management, frame 9 let them think about the likely consequences if they make a choice for an Internet access service product that implements the prioritisation of certain content. As consumers who saw the video would choose between differently configured Internet access service products in the conjoint choice experiment (part of the survey), frame 9 stressed at the end the importance of what they have learned in the experiment.

There was a lively discussion at the workshop regarding the wording of the question and the consequences of choosing a prioritised package. The wording chosen for the final video implemented the majority of the proposed changes. It also reduced the number of consequences from three to two, as a direct consequence of a comment by an external expert who participated in the workshop. The expert proposed to present either two or four consequences, with half of the consequences listed being positive ones and the other half being negative ones.

6.7.4 Network neutrality-related attributes and levels for the conjoint choice experiment

It should first be pointed out that the network neutrality-related attributes had to be integrated into typical provider choice criteria, in order to ensure that the results drawn from this study reflect reality as closely as possible. Consequently, the results gained here about the major provider choice criteria were very important for the design of the conjoint choice attributes. The choice criteria were similar across all of the test areas and were generally in line with the expectations gained from the reviews of the past studies. For the survey this implied that the most important choice criteria that should feature next to the attributes revolving around network neutrality were:

- Quality/stability of the Internet connection
- Download speed
- Bundle options
- Price
- Length of the contract

As the quality and stability of the connection were obviously aspects that consumers can only evaluate after having signed a contract with the provider, we expressed this criterion with a selection of major brands in the market of the test area. As some participants also had contracts with regional or even local providers, we also introduced a level called “regional/local provider”. For the download speed, we provided four levels that reflect the breadth of offers in the test areas, while for bundle options, we offered the choice of four levels. Although this somewhat simplified the current situation in most markets, and did not account for specifics regarding for example the details of the telephony part of the bundle such as the number of free minutes to mobile phones, or the channels that are part of the TV offer, these four levels represented the most prominent aspects of this criterion. Adding more attributes relating to this issue would have been likely to give this factor too much weight in the subsequent analysis, and would have also made the choice even more difficult and cumbersome for respondents. We also used four levels for the pricing, that reflected the typical price levels in the specific test area. Similarly, we presented four levels for the contract length. This has been reduced to three levels after discussions at the workshop.

Although a lot of participants’ discussion in the focus groups revolved around specific content rather than applications, it was found that their ideas relating to network neutrality, and in particular deviations from it that might turn into services that they could potentially purchase, was more geared towards thinking about specific applications like a video streaming service. Therefore, it seemed appropriate to approach this topic referring to access to applications rather than content. In total, we featured four attributes related to applications and the effect that traffic management may have on how they work, that is to say on consumers’ quality of experience:

- Access to P2P file sharing
- Access to VoIP

- Access to video streaming services
- (Access to music streaming services) This attribute was cancelled from the list after discussion with the representatives from BEREC and external experts, as well as after some internal reflection within the project team.
- Access to online gaming

Finally, we integrated an attribute on data caps. Although, strictly speaking they are not a network neutrality issue as such, consumers may see this as a potentially strong infringement of their idea of freedom and unlimited access to all of the Internet's resources. Specifically, we used the following levels for this attribute. After careful consideration, it was decided to also include zero-rating within this attribute.

- 10 GB (with additional zero-rating examples)
- 50 GB (with additional zero-rating examples)
- No data cap

In addition to implications related to the two major research outcomes of this stage, the focus group discussions also yielded insights relevant to the development of the questionnaire in the survey of this project, which are discussed in the following section.

6.7.5 Other implications for the survey

The identified differences in the role that the Internet plays in people's lives highlights the need to have a part of the questionnaire that asks about the respondent's usage patterns in the survey. From this information, it was possible to determine the degree of Internet 'aptitude' in the specific test area as well as the specific profile of the respondent. Furthermore, with this information it was possible to identify different types of users. Finally, it was used to analyse the other parts in more depth and identify if and how a user's aptitude for the Internet influences their willingness to pay for Internet access in general, as well as their understanding of and their attitude towards network neutrality.

Similarly, questions relating to the experience of disruptions provided relevant background information that allowed the responses to be evaluated from different perspectives. For instance, a respondent that reports frequent disruptions to their Internet access may be keener to pay more for a guaranteed quality of service as part of an Internet access service offer. On the other hand, the insights gathered in other stages of the focus group discussions reported here pointed to the fact that a consumer who has experienced many disruptions may also be doubtful about whether any quality enhancement at all is possible, and thus may refrain from choosing such offers.

6.7.6 Summary

This section has discussed the implications of the qualitative research conducted in this project towards the questionnaire and in particular the information package as well as the attributes for the conjoint experiment in the survey. The implications drawn from the focus groups refer mainly to the major research outcomes defined for the qualitative research in the project, that is the information package to be shown to one group of respondents in the survey and the attributes to be used in the conjoint task that was part of the survey for all respondents.

First and foremost, it emerged clearly from the focus group discussions that the verbal description that was thus far used to explain the fundamental concepts of how the Internet works, as well as network neutrality and deviations from this principle, were perceived overall as comprehensible, but overly technical and distant from consumers' everyday language. Furthermore, various participants asked for a more figurative way of explaining these issues as well as an explanatory picture to facilitate comprehension. This was taken as the impetus to develop an video for the information package instead of another version of the verbal description.

The video addressed the points raised by participants in the focus groups throughout the four test areas. It enabled a figurative and vivid illustration of how the Internet works, as well as an explanation of network neutrality and the effects of deviations from this principle. The main alterations from the original plan of how to explain these two topics concerned the terminology. The word 'neutrality' as part of the term 'network neutrality' was deemed rather misleading for consumers based on the results of the focus group discussions; the term 'traffic management' (or alternatively 'access management') was deemed more appropriate to the purpose at hand and also easier to comprehend. In addition to this, some other terminology was altered in order to match consumers' everyday language more closely so for instance 'throttling' was now described as 'slowed down'.

In line with the application-driven arguments used by participants when discussing their potential willingness to pay for traffic management based services, we suggested that the attributes related to network neutrality for the conjoint experiment in the survey should be formulated revolving around specific applications. Based on the focus group discussions and the related studies reviewed for this project we suggested the following applications:

- Access to P2P file sharing
- Access to VoIP
- Access to video streaming services
- (Access to music streaming services) This attribute was cancelled from the list after discussion with the representatives from BEREC, external experts as well as some internal reflection within the project team.
- Access to online gaming

In addition to these we included an attribute based on data caps. Although strictly speaking they are not an issue of network neutrality as such, consumers may see this as a potentially strong infringement of their idea of freedom and unlimited access to all resources on the Internet. Specifically, we used the following levels for this attribute:

- 10 GB (with additional zero-rating examples)
- 50 GB (with additional zero-rating examples)
- No data cap

Out of these levels, the two that cap the data were also shown to respondents with their favourite application (e.g. video streaming) not counting towards the data cap. The applications shown echoed the ones used in the other sections on network neutrality.

Naturally, the attributes relating to network neutrality have to be integrated into a broader set of attributes that are generally important when choosing an Internet provider. Those derived from the focus groups discussions in the test areas were in line with previous studies on this topic. We suggested the following attributes to be added:

- Quality/stability of the Internet connection
- Download speed
- Bundle options
- Price
- Length of the contract

Finally, the focus group discussions justified the wording of other parts of the questionnaire. Throughout the questionnaire, it was paramount to use consumers' everyday language to ensure that all questions were understood well. Furthermore, it emerged that consumers strongly link network neutrality to ideas of democracy, participation, and the freedom of speech and information. Therefore these aspects also had to be reflected in the part of the questionnaire that discussed network neutrality in general in order to enable this project to shed light on the core research question as to what 'the value of network neutrality to European consumers' is from different perspectives and thus gain a fuller picture.

7 Survey Results

7.1 Introduction

This chapter details the results of the survey conducted as part of this research. The major objectives to be fulfilled by the survey refer to understanding consumers' purchase choice criteria and preferences as well as their evaluation of network neutrality. Next to these core objectives of the survey, other themes were also addressed by the questionnaire¹⁵⁰. These themes, on the one hand, provide background variables for deeper analyses such as identifying and characterising consumer segments. On the other hand, these themes offer relevant insights in their own right such as a deeper understanding of switching in the test areas selected for the present research.

The chapter commences with a section referring to the descriptive analysis of major sample characteristics highlighting the representativeness of the sample for the relevant populations in the test areas. Furthermore, the descriptive analysis stretches to characteristics of Internet access that shape the backdrop of respondents' Internet experience as well as their satisfaction with their current Internet access at home. The final two sub-sections of the descriptive results detail Internet usage patterns and ISP switching of respondents across test areas, both of which are relevant to contextualise and interpret the following analytical results. The analytical section presents the results from the survey immediately associated with the major research objectives of the present research study. First, the effect of the information package¹⁵¹ is presented. Second, the part-worth utilities drawn from the conjoint analysis are presented for both the overall sample and by the two experimental groups in the project i.e. respondents who have seen the information package and those who have not seen it during the survey. Based on these results, the third part of the analytical section provides an understanding of the value that consumers attach to network neutrality-related attributes as part of Internet access offers for stationary access at home. Fourth, psychographic results referring to attitudes towards network neutrality are presented in detail distinguishing between respondents having seen the information package and those who have not. This section provides important background to better understand the purchase choice preferences of consumers. The penultimate section then develops the segmentation of consumers in the test areas according to their purchase preferences as regards stationary Internet access at home. These segments are hence analysed and characterised in depth detailing their specific part-worth utilities for Internet access products, socio-demographic variables, usage patterns, attitudes towards the Internet, and network neutrality; culminating in short overarching characterisations of each segment. Finally, conjoint analysis' implications for market efficiency are presented. A summary highlights the major insights gained in the survey.

¹⁵⁰ See Annex.

¹⁵¹ See Section 6.7 for an in-depth description of the information package.

7.2 Descriptive results

7.2.1 Sample characteristics

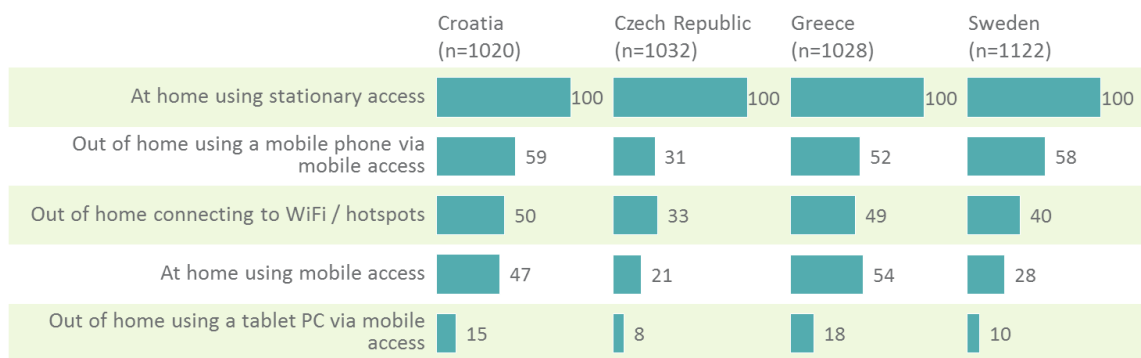
7.2.1.1 Screening criteria

Respondents had to undergo a series of questions to determine their eligibility for the survey. Respondents' eligibility was assessed by two key criteria:

- Respondents had to have some kind of stationary Internet access available at home,
- And had to be involved in the purchase decision for this Internet access.

Respondents who did not fulfil both criteria were screened out from the survey. After screening and data cleaning, 1,020 respondents from Croatia were interviewed, 1,032 from the Czech Republic, 1,028 from Greece, and 1,122 from Sweden.

Figure 7-1: Available types of Internet access across the sample



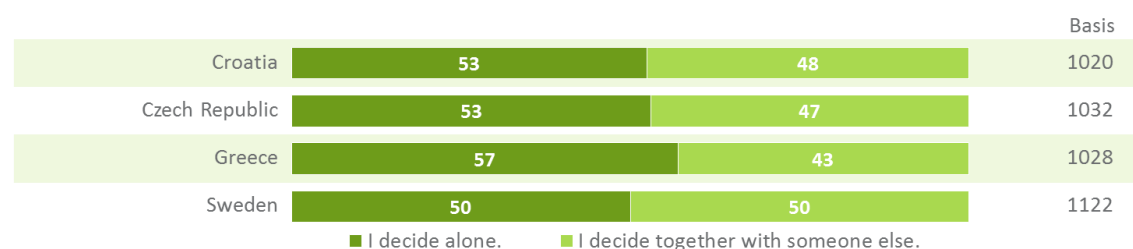
Basis: All respondents

Values shown in %

Figure 7-1 shows the types of Internet access available to respondents in the survey sample. For each type of Internet access the share of respondents, who claim to have access via it, is presented above. In general, differences are minimal. However, it is noteworthy that Czech respondents are considerably less likely to have out of home Internet access than respondents from Croatia, Greece, and Sweden. This is true for both mobile network connections and WiFi connections in the “out of home” usage situation. Mobile access at home is also less common in the Czech Republic than elsewhere.

Figure 7-2: Decision making regarding stationary Internet access at home

Decision making (in terms of stationary Internet access)



Basis: All respondents
Values shown in %

In terms of decision making (see Figure 7-2), respondents were eligible if they either took the purchase decision for their stationary Internet access at home on their own or were involved in the decision otherwise i.e. that they took the decision together with somebody else. In Sweden, just as many respondents took the decision on their own as did together with someone else. In the other countries the share of respondents who took the decision on their own is slightly higher than that of those who took the decision together with someone else.

7.2.1.2 Criteria of representativeness

Respondents were recruited to be a representative sample for the Internet population of each test area (cf. Section 5.3.1). Within the framework of this study, representativeness was defined as the samples per test area reflecting the characteristics of the population (i.e. persons having stationary Internet access available at home) with respect to predefined criteria¹⁵². Those criteria were age, gender, and living region. Sampling procedure followed the principle of approximating the distributions of these variables within the population. This was ensured through a combination of representative quotas on these criteria during fieldwork and weighting of individual respondents during analysis. If one quota was filled during fieldwork, no additional respondents with that particular profile could enter the survey.

After fieldwork, data was cleaned in terms of length of interview. Respondents who completed the survey in less than one third of the median time per country were dropped. After data cleaning, sample sizes per test area were as follows:

- Croatia: n=1,020 individuals
- Czech Republic: n=1,032 individuals
- Greece: n=1,028 individuals
- Sweden: n=1,122 individuals

¹⁵² As samples were drawn from online access panels and were aligned to predefined quotas, the framework of this study does not follow a random sampling approach (cf. 5.3.1).

Discrepancies between original quotas (i.e. distributions within the populations) and distributions within the final samples due to data cleaning and hard-to-reach subpopulations were compensated for by the weighting of the appropriate respondents. While the number of actual individuals within the samples remained as reported above, results were mathematically weighted according to the distributions of quota variables within the populations. In Table 7-1 to Table 7-4, distributions of quota variables within the samples are shown in the columns *un-weighted*. Distributions of quota variables within the populations are shown in the columns *weighted*. Respondents of subgroups that were overrepresented in the samples were given lower weights in analyses. Likewise, respondents of subgroups that were underrepresented received higher weights in analyses. Throughout the following chapters, weighted results are reported. On the other hand, information with respect to the basis always refer to the number of actual respondents considered for analysis (i.e. basis figures are unweighted).

Table 7-1: Distribution of age

Age	Croatia (n=1020)		Czech Republic (n=1032)		Greece (n=1028)		Sweden (n=1122)	
	unweighted	weighted	unweighted	weighted	unweighted	weighted	unweighted	weighted
18 to 34 years	33%	46%	26%	42%	46%	49%	24%	29%
35 to 54 years	41%	45%	31%	41%	46%	43%	39%	35%
Older than 54 years	25%	9%	42%	17%	7%	8%	37%	35%

Basis: All respondents

As shown in Table 7-1, respondents older than 54 years are overrepresented in the Croatian and the Czech sample (column *unweighted* shows the actual distribution in the sample, column *weighted* the distribution in the population). To approximate results as closely as possible to the Internet population, results were weighted according to the age distribution in the population. Respondents aged 18 to 34 years received larger weights, respondents older than 54 years lower weights. In Greece and Sweden, unweighted and weighted distributions are very similar. Thus, results in both countries are only slightly weighted to meet the respective target distribution.

Table 7-2: Distribution of gender

Gender	Croatia (n=1020)		Czech Republic (n=1032)		Greece (n=1028)		Sweden (n=1122)	
	unweighted	weighted	unweighted	weighted	unweighted	weighted	unweighted	weighted
Male	49%	49%	49%	50%	47%	53%	56%	50%
Female	51%	51%	51%	50%	53%	47%	44%	50%

Basis: All respondents

With respect to gender, deviations between the distributions within the samples and within the populations were low (see Table 7-2). Weighting due to variances in the distribution of gender was only necessary to a minor degree.

Table 7-3: Sample distribution across regions (Croatia and Czech Republic)

Region	Croatia (n=1020)			Czech Republic (n=1032)	
	unweighted	weighted		unweighted	weighted
Zagrebačka	7%	7%	Středočeský	12%	12%
Krapinsko-zagorska	3%	3%	Plzeňský	5%	5%
Sisačko-moslavačka	5%	4%	Karlovarský	2%	3%
Karlovačka	4%	3%	Ústecký	8%	7%
Varaždinska	5%	4%	Liberecký	4%	4%
Koprivničko-križevačka	3%	3%	Jihočeský	6%	6%
Bjelovarsko-bilogorska	3%	3%	Královehradecký	4%	5%
Primorsko-goranska	8%	7%	Pardubický	4%	5%
Ličko-senjska	1%	1%	Vysočina	5%	5%
Virovitičko-podravská	1%	2%	Jihomoravský	12%	11%
Požeško-slavonska	2%	2%	Zlínský	5%	6%
Brodsko-posavska	4%	4%	Olomoucký	6%	6%
Zadarska	4%	4%	Moravskoslezský	13%	12%
Osječko-baranjska	7%	7%	Hlavní město Praha	14%	13%
Šibensko-kninska	3%	3%			
Vukovarsko-srijemska	3%	4%			
Splitsko-dalmatinska	5%	8%			
Istarska	5%	5%			
Dubrovačko-neretvanska	3%	3%			
Međimurska	4%	3%			
Grad Zagreb	18%	19%			

Basis: All respondents

Table 7-4: Sample distribution across regions (Greece and Sweden)

Region	Greece (n=1028)			Sweden (n=1122)	
	unweighted	weighted		unweighted	weighted
Attiki	38%	35%	Blekinge	2%	2%
Continent	4%	4%	Dalarnas	1%	1%
Ionian Islands	1%	1%	Gävleborgs	3%	3%
Crete	6%	5%	Gotlands	1%	1%
Central Greece	5%	5%	Hallands	5%	5%
North Aegean	2%	2%	Jämtlands	2%	2%
East Macedonia and Thrace	5%	7%	Jönköpings	5%	5%
Peloponnese	9%	9%	Kalmar	3%	3%
South Aegean	2%	2%	Kronobergs	2%	2%
Thessaly	7%	6%	Norrbottens	2%	2%
West Greece	5%	5%	Örebro	3%	3%
West Macedonia	2%	2%	Östergötlands	9%	9%
Central Macedonia	14%	17%	Skåne	11%	11%
			Södermanlands	3%	3%

		Stockholms stad och	22%	22%
		Uppsala	4%	4%
		Värmlands	3%	3%
		Västerbottens	2%	3%
		Västernorrlands	3%	3%
		Västmanlands	3%	3%
		Västra Götaland	11%	11%

Basis: All respondents

With respect to region (Table 7-3, Table 7-4), recruited samples matched the target distributions very closely. Region therefore had the smallest impact on respondent weighting.

Weighting procedures were performed by calculating one weighting factor per respondent. Thus, this weighting factor integrated weights resulting from deviations of all three representativeness criteria (i.e. age, gender, and region). Weighting factors varied from 0.20 to 4.00.

7.2.1.3 Socio-demographic sample characteristics

The monthly household net income per country is shown in Table 7-5. The share of respondents not giving information on their household net income varies from 10% in Greece and the Czech Republic up to 15% in Sweden. In Greece and in the Czech Republic, low and medium household net income groups are more strongly represented than high income groups. In Greece, almost two-thirds of respondents state that their household net income is up to 1,500 €. In the Czech Republic, 69% report a household net income of up to 40,000 Kč.

In Croatia and Sweden, distributions of net income show ceiling effects. In Croatia, income groups up to 8,000 Kn receive shares of 7% to 9%. Overall, half of Croatian respondents fall into income groups up to 8,000 Kn. The two income groups on the upper end of the scale are valid for 37%. In Sweden, 56% of respondents fall into household net income groups up to 36,000 kr. Almost one third of Swedish respondents state that they dispose of a household net income, more than 36,000 kn.

Table 7-5: Monthly household net income

Croatia (n=1020)	Share in %
Up to 3,000 Kn	7%
3,001 – 4,000 Kn	8%
4,001 – 5,000 Kn	7%
5,001 – 6,000 Kn	9%
6,001 – 7,000 Kn	9%
7,001 – 8,000 Kn	8%
8,001 – 10,000 Kn	15%
More than 10,000 Kn	22%
No answer / dont know	14%

Czech Republic (n=1032)	
Up to 20,000 Kč	19%
20,000 – 30,000 Kč	25%
30,001 – 40,000 Kč	25%
40,001 – 50,000 Kč	11%
50,001 – 60,000 Kč	6%
60,001 – 70,000 Kč	2%
More than 70,000 Kč	1%
No answer / don't know	10%
Greece (n=1028)	
Up to 500 €	11%
501 – 1,000 €	27%
1,001 – 1,500 €	25%
1,501 – 2,000 €	16%
2,001 – 2,500 €	6%
2,501 – 3,000 €	2%
3,001 – 4,000 €	2%
More than 4,000 €	1%
No answer / don't know	10%
Sweden (n=1122)	
Below 9,000 kr	3%
9,000 kr – 13,500 kr	6%
13,501 kr – 18,000 kr	7%
18,001 kr – 22,500 kr	10%
22,501 kr – 27,000 kr	11%
27,001 kr – 31,500 kr	10%
31,501 kr – 36,000 kr	9%
More than 36,000 kr	30%
No answer / don't know	15%

Table 7-6 shows the area of living as reported by respondents. Across all countries, people of the Internet population are more likely to inhabit urban areas. In the Czech Republic, the share of people who consider themselves living in an urban area is lowest (48%), still every other respondent indicates that urban describes his or her living area best. In Greece, almost two-thirds (62%) describe their living area as urban. In addition, about one-fifth considers themselves living rather urban across all countries. Rural areas are of minor importance. The share of people living in rural or rather rural areas varies from 33% in the Czech Republic to 19% in Greece.

Table 7-6: Living area

Living Area	Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
Rural	11%	20%	9%	13%
Rather rural	11%	13%	10%	15%
Rather urban	21%	19%	18%	18%
Urban	56%	48%	62%	54%
No answer / don't know	1%	1%	1%	1%

Urban areas also reflect the respondents' living conditions (see Table 7-7). Across all countries, studios and flats are the most common accommodation. The share of people living in studios or flats is highest in Croatia and the Czech Republic (both 44%) and lowest in Greece (37%). The second most common type of accommodation is detached houses. This type of accommodation is more common in Croatia (39%) and Sweden (37%) than in Greece (31%) and the Czech Republic (29%). While semi-detached houses (12%) and terraced houses (11%) are more common in Greece, these types of accommodation play a minor role in all other countries.

Table 7-7: Accommodation

Accommodation	Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
Detached house	39%	29%	31%	37%
Semi-detached house	7%	6%	12%	3%
Terraced house	3%	6%	11%	7%
Maisonette	4%	7%	5%	3%
Studio / Flat	44%	44%	37%	40%
Bungalow	0%	1%	0%	2%
Other	1%	5%	2%	7%
No answer / don't know	1%	2%	2%	1%

Household size differs between the four test areas (see Table 7-8). In Croatia, the Czech Republic and Greece, a vast majority of respondents live in multi-person households (defined as households with more than two members). In contrast, almost half of Swedish respondents live in two-person households. Single-person households are of minor importance in Croatia (6%), the Czech Republic (10%), and Greece (7%) while being more prevalent in Sweden (23%).

Table 7-8: Household size

Household size	Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
Single-person household	6%	10%	7%	23%
Two-person household	19%	28%	24%	43%
Multi-person household	73%	60%	67%	32%
No answer / don't know	2%	2%	2%	2%

Across all countries, the majority of respondents is working full time (see Table 7-9). The lowest share of people working full time is found in Greece (43%), the highest share is found in the Czech Republic (54%). Working part time is more common in Greece (12%) than in other countries (Sweden: 9%; Czech Republic: 7%; Croatia: 6%). In Croatia, the Czech Republic, and Greece, about one in six respondents considers themselves primarily a student. In Sweden, this share is significantly lower (9%). As a consequence of the Internet population being older in Sweden, the share of people in retirement is higher than in other countries. While about one-fourth of respondents is in

retirement in Sweden, this is only the case for six percent in Greece. The share of retired people in the Czech Republic (15%) and Croatia (10%) falls in between. With respect to unemployment, the four countries at hand are divided. While unemployment is high in Greece (21%) and Croatia (17%), shares are significantly lower in the Czech Republic (7%) and Sweden (6%).

Table 7-9: Employment status

Employment status	Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
Working full time (30 or more hours per week)	49%	54%	43%	50%
Working part time (8-29 hours a week)	6%	7%	12%	9%
Working part time (Less than 8 hours a week)	2%	2%	4%	2%
Full time student	15%	13%	13%	9%
Retired	10%	15%	6%	23%
Unemployed / Not working	17%	7%	21%	6%
Other	4%	7%	3%	3%
No answer / don't know	1%	1%	2%	1%

7.2.2 Characteristics of Internet access

7.2.2.1 Characteristics of at-home Internet access

The part of the questionnaire that refers to the characteristics of respondents' at-home Internet access asked respondents about their provider, their access speed (up to speed as foreseen in the contract), whether it comes in a bundle, the price they monthly pay for Internet access and the length of time that they have been with their current provider. In the following, the results from this part of the questionnaire are documented. Within that, comparisons will be made to the market data that have been reviewed from each of the test areas.

The question for the current provider clearly shows the respective role played by the incumbent in the test areas. In Croatia, Hrvatski Telekom¹⁵³ is the provider for 44% of respondents. Its subsidiary, Iskon, provides Internet access to 13% of our sample. B.net is the provider for 14% of respondents. Optima Telekom, Vip and H1 telekom hold 11%, 7% and 5% respectively. The remaining 6% fall to other ISPs. In the Czech Republic, other ISPs (consisting mainly of local WiFi providers) provide Internet access to 40% of respondents. The incumbent O₂ connects close to a fourth of respondents. The second most relevant ISP is UPC delivering Internet access via cable. In Greece, the incumbent's share of respondents is somewhat higher than in the Czech Republic. OTE provides Internet access to 28% of respondents. The remaining market is, however, much less fragmented. Only four other ISPs provide access to respondents: forthnet

¹⁵³ Participants in the focus group discussions referred to the company as T-Com.

(26%), hellas online (17%), Wind (13%) and Cyta (11%). In Sweden, the incumbent Telia has a stronger foothold with survey respondents than the incumbents in Greece and the Czech Republic connecting 35% of respondents. The second largest group of respondents gets their access via cable on com.hem's network. The third significant ISP is bredbands bolaget with 13% of respondents in our survey. The remainder of the market is fragmented amongst various ISPs including many municipal networks, which are strong in the Swedish market.

Figure 7-3: Internet services providers in the test areas as represented in the survey

Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
Hrvatski Telekom 44	O2 23	OTE 28	Telia 35
B.net 14	UPC 18	forthnet 26	com hem 19
Iskon internet 13	T-Mobile 6	hellas online (hol) 17	bredbands bolaget 13
Optima Telekom 11	Vodafone 2	Wind/Tellas 13	TELE2 7
Vip 7	STARNET 2	Cyta 11	Bahnhof 5
H1 telekom 5	PODA 1	Vodafone 2	telenor 3
Amis 4	NejTV 1	Cosmote 1	3 2
Metronet telekomunikacije 0	RIO MEDIA 1	On Telecoms 1	Bredband2 2
Terrakom 0	Internethome 1		AllTele 2
Magic Telekom 0	COMA 1		Glocalnet 2
	GTS 1		T3 1
	SMART Comp. 0		Net4Mobility 0
	AirTelecom (U:fon) 0		IP-ONLY 0
Other 2	Other 40	Other 0	Other 8
No answer / dont know 0	No answer / dont know 2	No answer / dont know 0	No answer / dont know 1

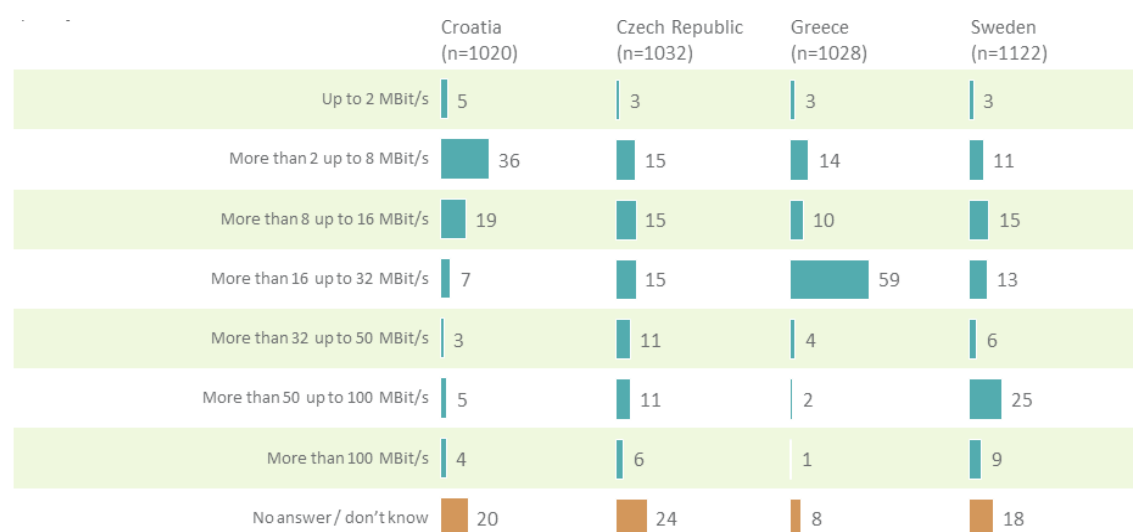
Basis: All respondents
Values shown in %

Download speed can be a strong predictor of Quality of Experience (QoE) for consumers. Thus, it was important to gain information about the download speed that is accessible to respondents in the survey. The results on download speed (see Figure 7-4) reflect the results of the market data review¹⁵⁴ and the focus group discussions¹⁵⁵. Croatia, on average, has the slowest connections as reported by respondents. More than a third is on contracts with speeds up to 2 to 8 Mbit/s. In the Czech Republic, download speeds are more widespread across the full range, however, due to the high market share of local WiFi providers (see above), actual download speeds vary strongly, even depending on weather conditions, and are likely to be considerably below the “up to” speeds promised in the contract that respondents were asked to report in our survey. In Greece, the dominating download speed is between 16 and 32 Mbit/s. This is in line with what participants in the focus groups reported consistently. The standard Internet access service contract comprised a 24 Mbit/s download speed. Internet access in Sweden is on average the fastest amongst the four test areas. One fourth of respondents report to be on a contract enabling them Internet access at 50 to 100 Mbit/s.

¹⁵⁴ See Section 4.

¹⁵⁵ See Section 5.2.

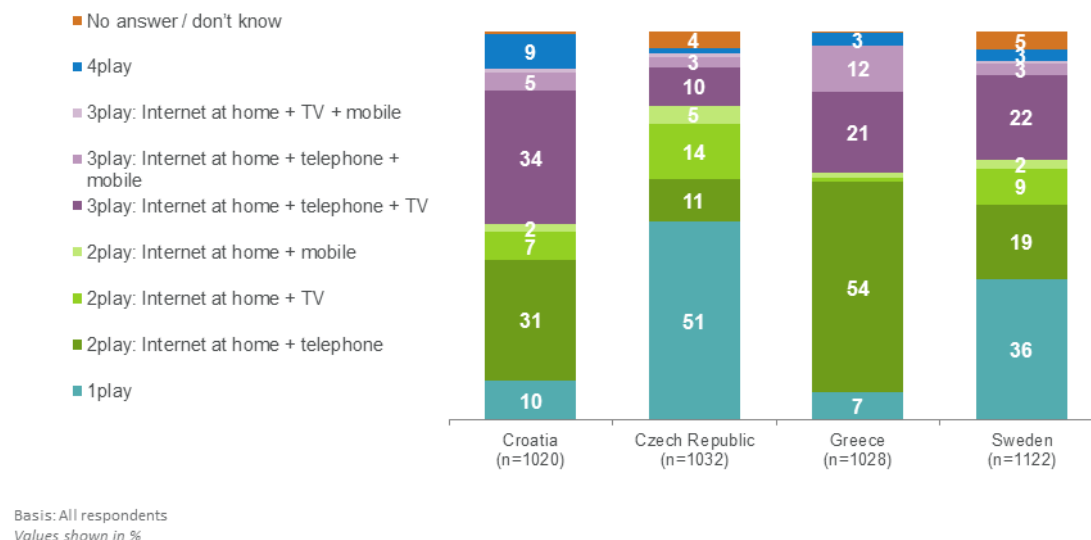
Figure 7-4: Download speed as purchased by test area ("up to" speed)



Basis: All respondents
Values shown in %

As regards bundling of Internet access services with other services, the Czech Republic emerges as the test area with the least bundling in our sample. Here, half of the respondents have a 1play contract for their Internet access, i.e. they receive only their Internet Access Service within their contract enabling them to access the Internet in the at home usage situation. If respondents have got bundle contracts, they either have a 2play contract combining Internet access and TV (14%) or Internet and (fixed) telephone services (11%). A further 10% have got a 3play bundle combining Internet, (fixed) telephone and TV. In Greece, 2play bundles clearly dominate. In total, 56% have such a contract with the vast majority combining Internet access and (fixed) telephone services. Croatia and Sweden are more mixed as regards market shares for different types of bundling. In Croatia, 40% of respondents reported to have 2play bundles. Most these are bundles of Internet access and (fixed) telephone services. Another 40% report having a triple-play-bundle. Commonly, these bundles consist of Internet access, (fixed) telephone and TV. It should be noted that in Croatia just over half of respondents have TV included in their service contract that also gives them access to the Internet. This is significantly more than in the other test areas: Sweden: 35%; Czech Republic: 27%; Greece: 24%. Croatia is also the only test area that has a significant share of 4play contracts amongst respondents. In Sweden, the most common type of contract is 1play Internet access only. 2play and 3play are also common in Sweden with 30% and 26% respectively. Commonly, respondents combine Internet and (fixed) telephone services (19%) or Internet access and TV (9%). A further 22% have a 3play bundle combining Internet, (fixed) telephone and TV.

Figure 7-5: Bundling in the test areas



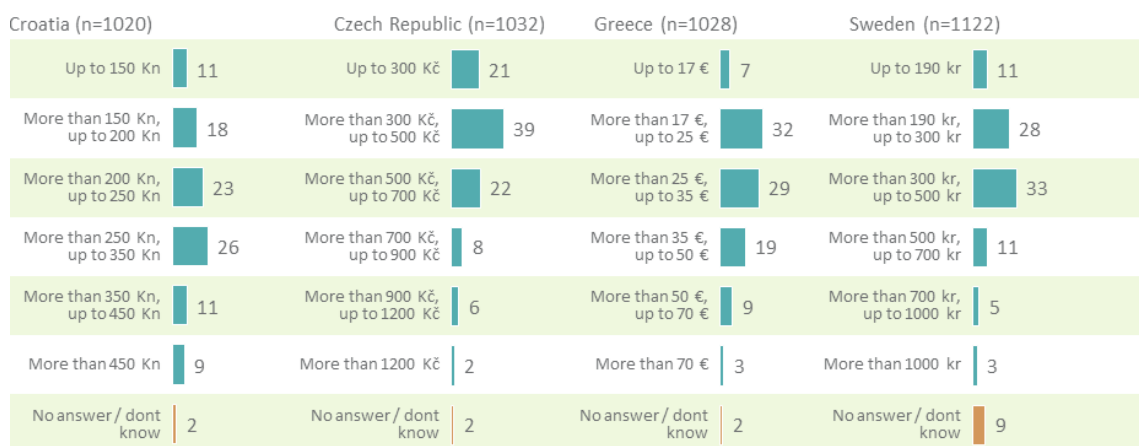
Having established the fundamental characteristics of respondents' contacts, it is also important to understand how much respondents pay for their Internet access services. Overall, the price¹⁵⁶ brackets used in the questionnaire show a good coverage of the actual costs associated with Internet access as reported by respondents to the survey. As one would expect, the more products are integrated in the bundle the more expensive it becomes. This is true across all test areas and supports the validity of the data. Although they can only be indicative of how well our samples reflect the market in the respective test areas, BEUC data reviewed as part of our market review in this study¹⁵⁷ supports the general trends the emerge from the data gathered here. In Croatia, prices for stationary Internet access appear to be somewhat above average given the relatively low income level in the country. For the Czech Republic, our data indicates relatively low price brackets for stationary Internet access. Again, this matches BEUC data. It can be explained by the relatively low income level in this test area as well as the fact that many consumers rely on local WiFi ISPs, whose offers are generally cheaper than the average of the market. In Greece, the average price for stationary Internet access at home also appears to be relatively low. This is in line with trends BEUC data indicates and can probably be attributed to strong competition in the market through frequent switching of consumers in recent years due to the financial crisis in the country. This also implies that a lot of retention pricing is happening in the market, which naturally cannot be captured by BEUC or, in fact, any official data. Thus, it is not surprising that the prices as represented in our sample may be below the figures commonly portrayed for the Greek market. In Sweden, both average incomes and willingness-to-pay for high quality Internet access at home are amongst the highest

¹⁵⁶ Prices are quoted throughout this report in local currency in order to reflect survey results in the test areas as closely as possible. Exchange rates for November 2014 should be applied when converting prices in another currency. XE reports the following average exchange rates for euro in November 2014: HRK/EUR = 0.1302, CZK/EUR = 0.0361, SEK/EUR = 0.1081.

¹⁵⁷ See Section 4.

in Europe. Thus, it is all but surprising that the average price for stationary Internet access in this test area is the highest in our sample. Again, this reflects BEUC data well.

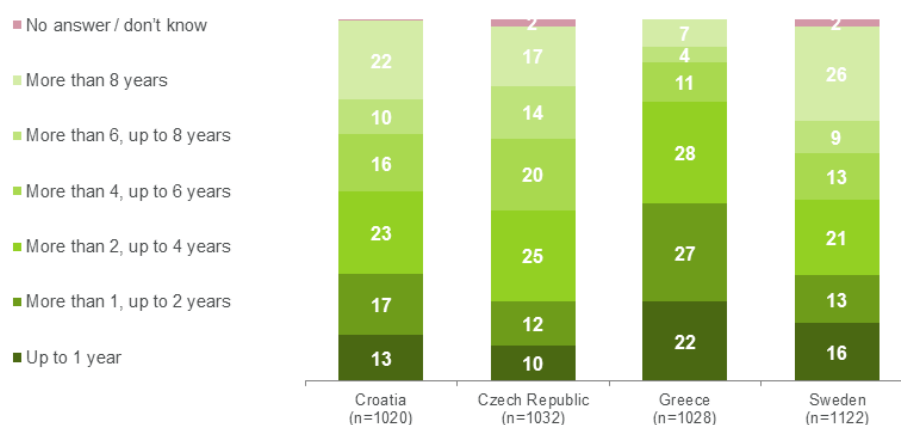
Figure 7-6: Price brackets for stationary Internet access in the test areas



Basis: All respondents
Values shown in %

Finally, with the prospect of understanding more about switching induced by network neutrality policies, it is relevant to understand how long respondents have been attached to their current Internet access service provider. Figure 7-7 shows the time in years that respondents have been with their current ISP for at home Internet access. The length was provided to respondents in brackets containing lengths between “up to 1 year” up to “more than 8 years”. These brackets were deemed sufficient based on similar studies. The results generally showed a fairly equal spread across the different brackets for the four test areas. Throughout Croatia, the Czech Republic and Sweden, it can be seen that around half of the respondents in our survey have been with their current ISP for at least 4 years indicating a low intention to switch providers common for this type of service. Only Greece shows markedly different results with almost half of respondents having switched their ISP within the last 2 years. This is largely in line with data gathered from European statistics in preparation for the survey.

Figure 7-7: Time spent with the current ISP in test areas

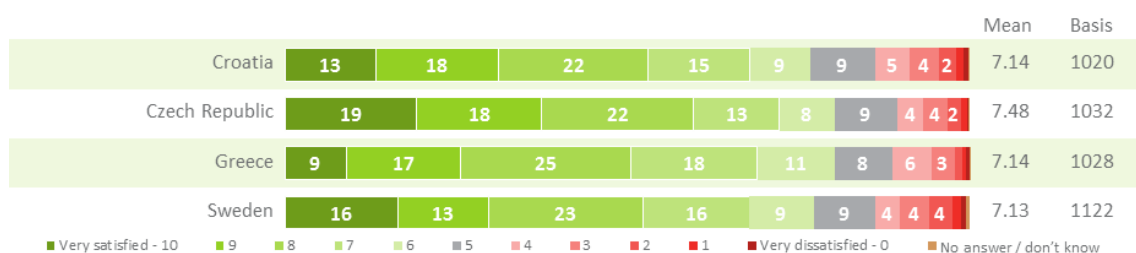


7.2.2.2 Satisfaction with Internet access

Satisfaction, or rather dissatisfaction, with one's current ISP is a strong precursor for switching as it is widely published in other studies and has been reflected in the focus group discussions as part of this research. Thus, respondents were asked about their level of satisfaction with their current ISPs for at home access as well as mobile Internet access¹⁵⁸ as part of the survey. Respondents were asked to rate their satisfaction on Likert-like scale ranging from 0 = "very dissatisfied" to 10 = "very satisfied".

Overall, respondents show high levels of satisfaction with their current ISP for at home Internet access. In all test areas, around half of the respondents showed a high degree of satisfaction i.e. 8 and above. In the Czech Republic, 60% of respondents are satisfied with their current ISP. This is in spite of the often poor quality of experience that was reported throughout the focus group discussion in the Czech Republic. This has been explained by consumers in the Czech Republic being used to bad quality services. In all test areas, only under 5% of respondents are deeply unsatisfied with their ISP i.e. they gave a rating between 0 and 2 out of 10. There is a strong correlation with the download speed that respondents have purchased as shown in their contracts. The higher the purchased download speed, the more satisfied respondents are with their at home Internet access.

Figure 7-8: Satisfaction with current ISP in test areas



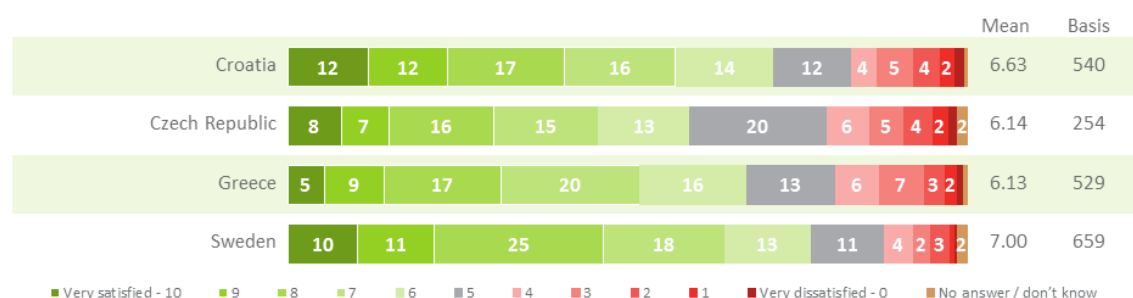
Satisfaction levels with ISPs for mobile Internet access¹⁵⁹ are markedly lower than for at home access. The respondents from the Czech Republic and Greece show the lowest levels of satisfaction. Only around 30% give a high satisfaction rating i.e. 8 and above. In Croatia, 41% of respondents rated their current ISP in the same way. Swedish respondents are most satisfied with their mobile Internet access¹⁶⁰. Here, 46% gave a rating of at least 8 out of 10. Somewhat more respondents show strong dissatisfaction with their mobile ISPs as compared to their at home access.

¹⁵⁸ Please note that mobile Internet access is not the same as „out of home“ usage situation. For a detailed explanation see Section 2.1.3. Mobile Internet access refers solely to Internet access realized via mobile network infrastructure such as 2G, 3G or 4G networks that is related to a mobile device and commonly used in an “out of home” usage situation.

¹⁵⁹ See footnote above.

¹⁶⁰ Reasons for high satisfaction figures with mobile Internet access in Sweden may be good coverage of 4G networks as well as comparably low prices. Qualitative findings point towards the direction that Swedes have the possibility to be ‘always-on’ while being out of home to a greater extent than consumers in other test areas (cf. Section 6.5.7).

Figure 7-9: Satisfaction with mobile Internet access in test areas



7.2.3 Internet usage

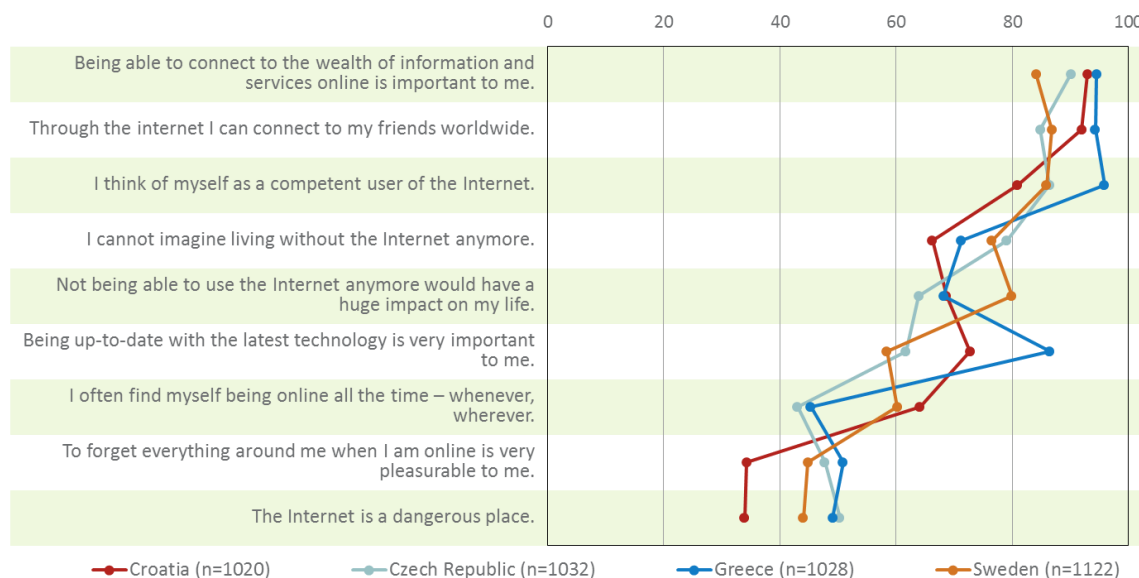
7.2.3.1 Attitudes and usage behaviour

General perceptions of the Internet show foremost positive associations across all countries (see Figure 7-1). Being able to connect to the wealth of information and services online is important to almost everyone, with Greeks (95%) and Croatians (93%) agreeing more frequently than Czechs (90%) and Swedes (84%). More people use the Internet to communicate with friends around the world in Greece (94%) and Croatia (92%) than in Sweden (87%) and the Czech Republic (85%), yet figures are high throughout all countries. With respect to seeing oneself as a competent user of the Internet, results are more diverse. While 96% of Greeks consider themselves a competent user, this is the case for only 81% of Croatians. This difference is statistically significant. Swedes and Czechs (both 86%) fall in between this range. Czechs and Swedes feel most dependent on the Internet: 79% respectively 77% rather agree to the statement to not being able to imagine living without the Internet anymore. In Greece (71%) and Croatia (66%), this is the case significantly less frequently. Being up-to-date with the latest technology is important to 86% of Greeks. This attitude is less often found in Croatia (73%), the Czech Republic (62%), and Sweden (58%). Not being able to use the Internet having a huge impact on one's life is most frequently agreed by Swedes (80%). In Croatia (69%), Greece (68%), and the Czech Republic (64%), this is significantly less often the case. This reflects very well the results from the focus groups in the respective countries revolving around the role that the Internet plays in one's life.¹⁶¹ With respect to being "always on", 64% of Croatians and 60% of Swedes agree to often finding themselves being online all the time. This notion is significantly less frequently agreed upon by Greeks (45%) and Czechs (43%). On the phenomenon of immersion, especially Greeks (51%) and Czechs (48%) state that it is pleasurable to them to forget everything around them. In Sweden (45%) and Croatia (34%), the share of those feeling pleasure when experiencing immersion is significantly lower. On the risks associated with the Internet, Greeks and Czechs are most cautious. About half of Greeks (49%) and Czechs (50%) agree to the notion that the Internet is a dangerous

¹⁶¹ See Section 6.

place. The share of those being cautious is significantly lower in Sweden (44%) and especially in Croatia (34%).

Figure 7-10: Attitudes towards the Internet

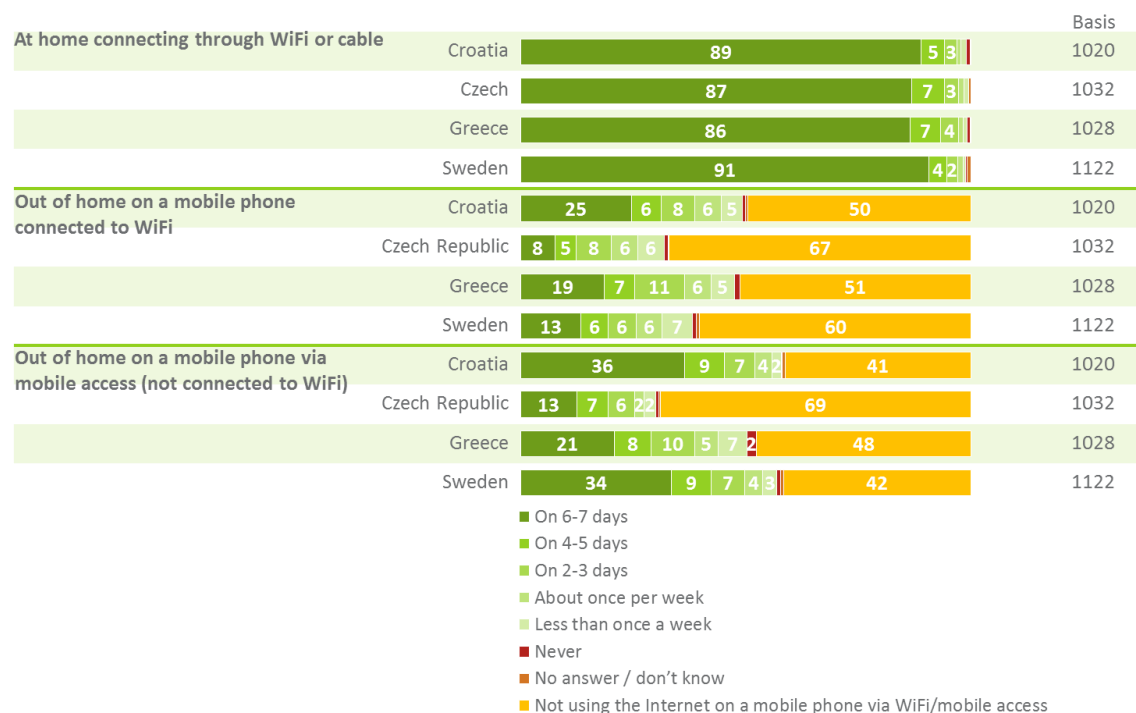


Basis: All respondents

Values shown in %; Top2Boxes = Category „Rather agree“ + „Completely agree“

With respect to the frequency of Internet usage at home connected through WiFi or cable, the vast majority of respondents actively uses the Internet almost daily throughout all countries (see Figure 7-11). In Sweden, 91% of all respondents stating to use the Internet on six to seven days per week, in Croatia this is the case for 89 percent. This share is significantly higher in Sweden and Croatia than in the other countries (Czech Republic: 87 percent; Greece: 86%). Proportionally, the share of respondents actively using the Internet at home on less than six to seven days per week is lower in Sweden (four to five days: four percent; two to three days: two percent) than in the other three countries. In Croatia, five percent use the Internet at home on four to five days and another three percent on two to three days. In the Czech Republic, this is the case for seven percent respectively three percent. In Greece, seven percent use the Internet at home on four to five days and four percent on two to three days. The share of respondents who use the Internet at home about once a week or even less is marginal throughout all countries. This is also the case for those not actively using the Internet at home at all. Shares of respondents not actively using the Internet at home vary from zero percent in Sweden and the Czech Republic to one percent in Croatia and Greece. As having stationary access to the Internet at home was a selection criterion for the samples, these findings are in line with expectations.

Figure 7-11: Frequency of Internet usage



Basis: All respondents
Values shown in %

With respect to the frequency of out of home usage of the Internet on a mobile phone connected to WiFi, differences between countries are more pronounced (see Figure 7-11). The share of respondents not using the Internet out of home via WiFi is highest in the Czech Republic (67%). This share is significantly lower in Sweden (60%) and Croatia (51%). It is lowest in Greece with 50%. When looking at those accessing the Internet out of home via WiFi, usage frequencies are highest in Croatia and Greece. In Croatia, 25% use this type of Internet access on six to seven days per week. In Greece, this is the case for 19%. In contrast, only eight percent of Czech respondents and 13% of Swedish respondents use the Internet out of home via WiFi nearly daily.

Out of home usage of the Internet on a mobile phone via mobile access (not connected to WiFi)¹⁶² is most common in Croatia and Sweden (see Figure 7-11). Only 41% of Croatians and 42% of Swedes do not use the Internet via mobile access. This share is significantly higher in Greece (48%). Similar to the findings regarding out of home Internet usage via WiFi, this share is highest in the Czech Republic (69%), significantly outperforming all other countries. About one-third of respondents in Croatia (36%) and Sweden (34%) use the Internet out of home via mobile access on six to seven days per week. These shares are significantly higher than in Greece (21%) and in the Czech Republic (13%).

Greek results regarding out of home Internet access are especially noteworthy when compared to Croatia and Sweden. Figure 7-11 illustrates that Greek users show nearly

¹⁶² Internet access via 2G, 3G or 4G networks.

the highest levels and relatively high levels of out of home Internet usage via WiFi and via mobile access, respectively. Greek respondents thus seem to be well aware of both opportunities to use the Internet out of home (via WiFi and via mobile access) and they appear to carefully decide between either connection type. In light of the current financial situation in Greece, this may be due to the relatively high costs associated with mobile data consumption. Where Greek out of home usage (both in case of access via WiFi and via mobile access) differs clearly from Croatia and Sweden is in the share of respondents that use out of home Internet access on a near-daily basis. Near-daily out of home usage is significantly less frequent in Greece than in Croatia (access via WiFi case) and in Croatia as well as Sweden (mobile access case). As a consequence, the share of users who access the Internet out of home less frequently is comparatively high in Greece. For instance, seven percent of Greek respondents use the Internet out of home via mobile access less than once a week. In contrast, mobile access seems to be first choice to Swedish respondents when using the Internet out of home. Both penetration and usage frequency of mobile access are high, while out of home usage connected to WiFi is less common and frequent¹⁶³.

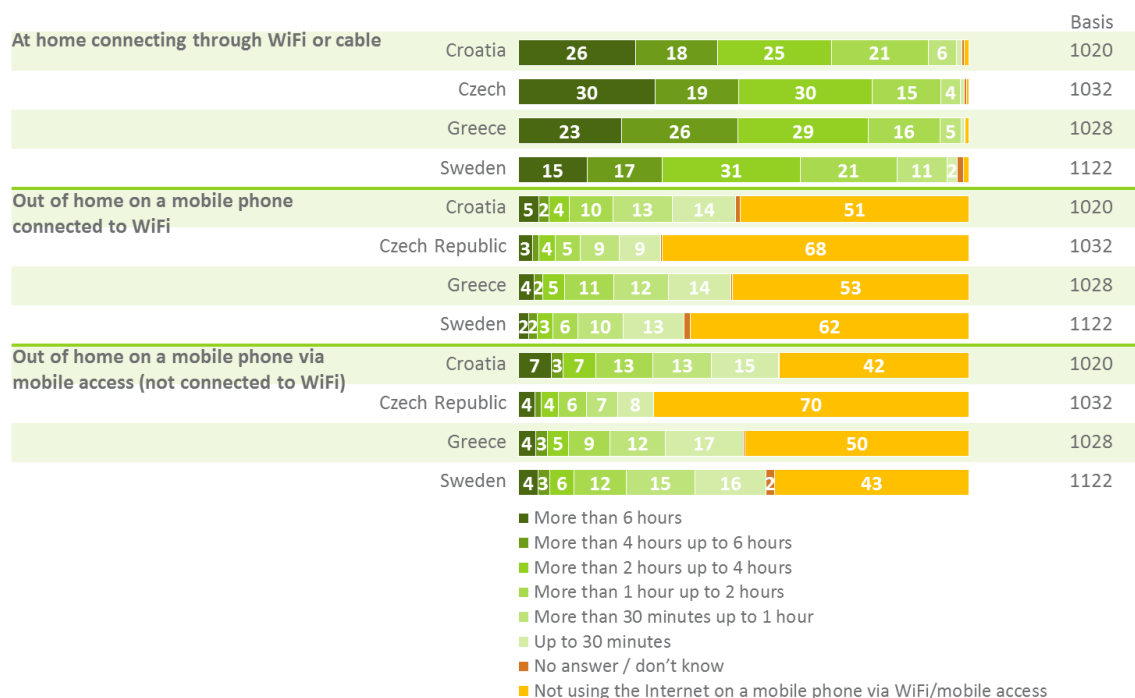
The analysis of the data shown in Figure 7-11 has noted already that Czech respondents reported by far the lowest out of home Internet usage rates across the test areas, both for out of home access via WiFi and via mobile access. Low usage rates are well reflected by low availability rates of out of home Internet access for Czech respondents. From the screening data (cf. Section 7.2.1) it follows that out of home Internet availability is lowest in Czech Republic in comparison to the other test areas. Aggregated screening data shows that only 44% of Czech respondents have access to the Internet out of home. Availability of out of home Internet via mobile access is especially low (31%). The combination of lowest availability and usage rates of out of home Internet suggests that out of home Internet access is less developed in the Czech Republic than in other European countries.

Patterns with respect to the average duration of usage show that respondents in Sweden use the Internet at home the least long (see Figure 7-12). About one-third are online for up to two hours when using the Internet at home¹⁶⁴. In comparison, this is the case for only 22% of Czech respondents and 21% of Greece respondents. The share of respondents using the Internet at home for more than six hours is significantly lower in Sweden (15%) than in other countries (Croatia: 26%, Czech Republic: 30%, Greece: 23%). This finding is somewhat contradictory to the expectations that one might draw from the focus groups discussions as well as the market data. On the other hand, the focus group results may also help to explain this finding to some extent as they clearly showed that being online is almost unconscious to Swedes nowadays. So, they may be online more often and longer without actually noticing it. Consequently, Swedish respondents may have underestimated the time they actually spend online here.

¹⁶³ For possible explanations of these findings, see footnote 160.

¹⁶⁴ Respondents were asked to express the duration of usage on the days they use the Internet.

Figure 7-12: Duration of Internet usage



Basis: All respondents
 Values shown in %

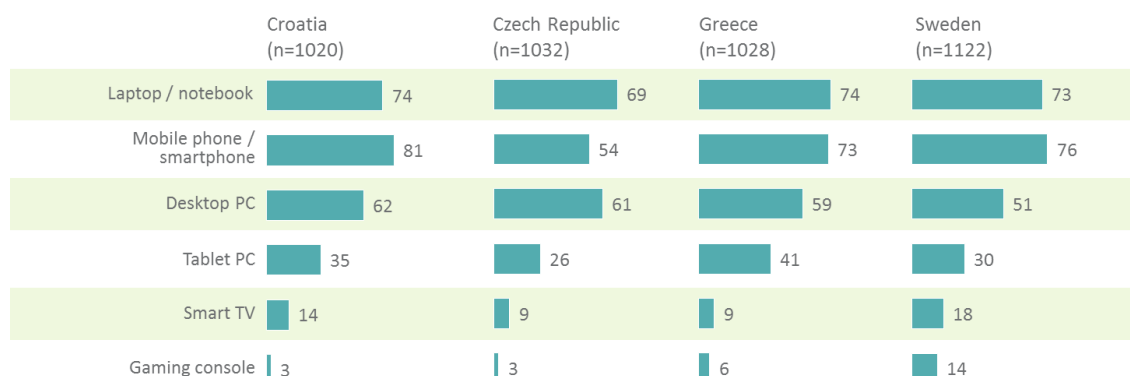
Out of home usage connected to WiFi predominantly is rather a short-term activity (see Figure 7-12). Across all countries, the majority of those using this type of access typically use the Internet out of home connected to WiFi up to one hour. Notably, usage duration longer than one hour is more common in Croatia and in Greece. These patterns reflect the findings with respect to frequency of out of home Internet connected to WiFi usage showing that this type of access is more relevant in both countries.

With respect to duration of out of home Internet usage via mobile access, usage patterns again show a clear-cut tendency for short-term usage across all countries (see Figure 7-12). Again, the typical usage duration is up to one hour. As an effect of the proliferation of mobile access, the shares of different usage periods in the Czech Republic are significantly lower than in other countries. In Croatia, the share of respondents using mobile access up to one hour (28%) and the share of those using mobile access longer than one hour (30%) almost balance each other. Both in Sweden and in Greece, the share of respondents using mobile access up to one hour (Sweden: 31%, Greece: 29%) is higher than the share of those using mobile access longer than one hour (Sweden: 25%, Greece: 21%).

The relevancy of different devices for accessing the Internet differs by country (see Figure 7-13). In both Sweden and Croatia, the share of respondents using mobile phones or smartphones (Sweden: 76%, Croatia: 81%) exceeds the share of those using laptops or notebooks (Sweden: 73%, Croatia: 74%). In Greece, these two types of devices are equally relevant (mobile phones or smartphones: 73%, laptops or notebooks: 74%). In the Czech Republic, the share of respondents using mobile phones or smartphones is significantly lower (54%) than those using laptops or notebooks.

Assuming that these devices are most commonly used for out of home access, this figure is in line with the finding that Czech respondents show the lowest levels of out of home Internet access in general.

Figure 7-13: Devices used for Internet access



Basis: All respondents
Values shown in %

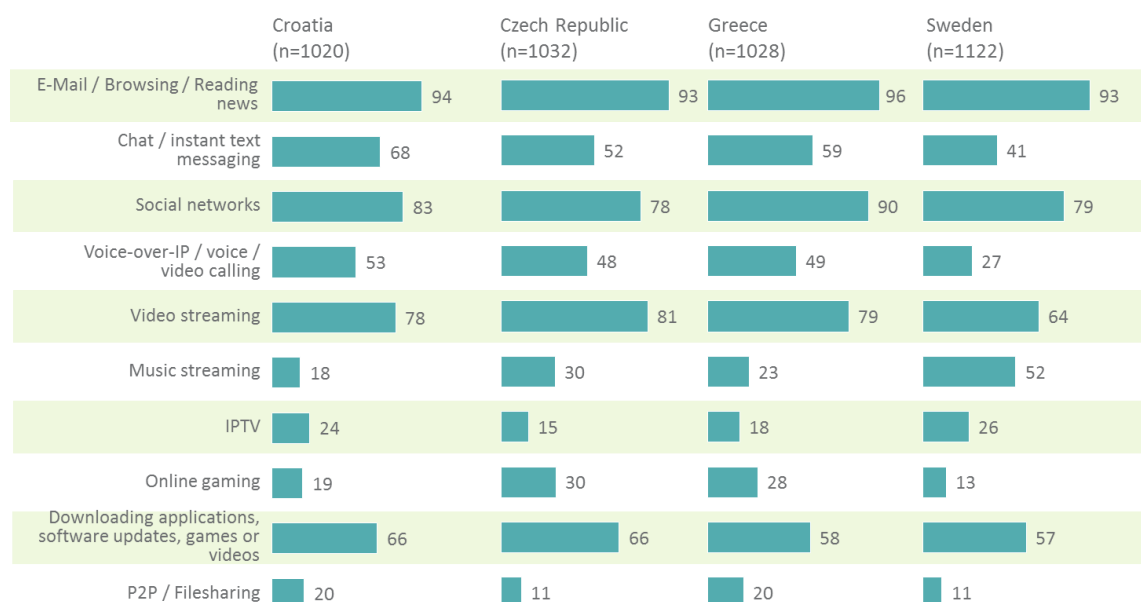
Using desktop PCs for accessing the Internet is most common in Croatia (62%) and in the Czech Republic (61%), and in Greece (59%). This is significantly less frequent in Sweden (51%). Tablet PCs are especially used in Greece: 41% of Greek respondents use such a device for accessing the Internet. This figure is significantly lower in Croatia (35%) and in Sweden (30%). Again, proliferation is lowest in the Czech Republic: only 26% of Czech respondents use Tablet PCs for accessing the Internet.

Of all devices prompted, Smart TVs and gaming consoles are least frequently used for accessing the Internet. Usage figures are significantly higher in Sweden, with 18% using Smart TVs and 14% using gaming consoles. While in Croatia 14% use Smart TVs, usage rates are single-figured in Greece (nine percent) and in the Czech Republic (nine percent). With respect to the usage of gaming consoles, differences between Sweden and the other countries are even more pronounced. Overall, 14% of Swedes are accessing the Internet via gaming console. In Greece, six percent of respondents use gaming consoles for accessing the Internet, in both Croatia and the Czech Republic this is the case for only three percent. Overall, this echoes the results emerging from the focus group discussions in the test areas apart from the finding that Greeks are more heavily attached to the desktop PC in their homes as the major access point to the Internet.

With respect to Internet applications used, e-mailing, browsing and reading news are activities performed by almost every respondent across all countries (see Figure 7-14). Usage rates vary from 93% in the Czech Republic and Sweden up to 96% in Greece. Social networks are the second most frequently used Internet application in Greece (90%), Sweden (79%) and Croatia (83%). Across all countries, Greek respondents use social networks significantly more often. In the Czech Republic, the second most frequently used Internet application is video streaming (81%), whereas social networks are used by 78%. With respect to video streaming, Greece (79%) and Croatia (78%)

are meeting Czech levels. In Sweden (64%), this application is used significantly less frequently. Lower usage rates of video streaming may be related to the significantly more frequent usage of IPTV in Sweden (26%).

Figure 7-14: Usage of Internet applications



Basis: All respondents
Values shown in %

Usage rates for chat / instant messaging and Voice-over-IP / voice / video calling show significantly higher figures in Croatia, the Czech Republic and Greece than in Sweden. Chat applications are used by 41% of Swedes, whereas this is the case for more than half of the respondents in Croatia (68%), the Czech Republic (52%), and Greece (59%). Cross-country differences are even more pronounced when it comes to Voice-over-IP / voice / video calling. While only 27% of Swedes use Voice-over-IP, proliferation of such applications is twice as high in other countries (Croatia: 53%, Czech Republic: 48%, Greece: 49%). At first sight, this result appears to be very counterintuitive given the overall very advanced usage patterns found in Sweden that also reflected in the focus group discussions¹⁶⁵. However, when considering that using VoIP is often a means to reduce the costs of calls, it actually seems plausible that this is an application that finds more widespread use in Croatia, the Czech Republic and Greece as compared to Sweden¹⁶⁶.

Music streaming is especially relevant in Sweden. More than half of Swedish respondents (52%) are using this application. Differences to other countries are significant: in Croatia, only 18% use music streaming, in Greece (23%) and in the Czech Republic (30%) figures are slightly higher. Online gaming is of minor importance in Sweden (13%) and Croatia (19%), whereas 30% of Czechs and 28% of Greeks play games

¹⁶⁵ See Section 6.5.

¹⁶⁶ Other factors such as applicable tariffs and market structure may influence the substitutability of VoIP and traditional telephony in addition to income levels.

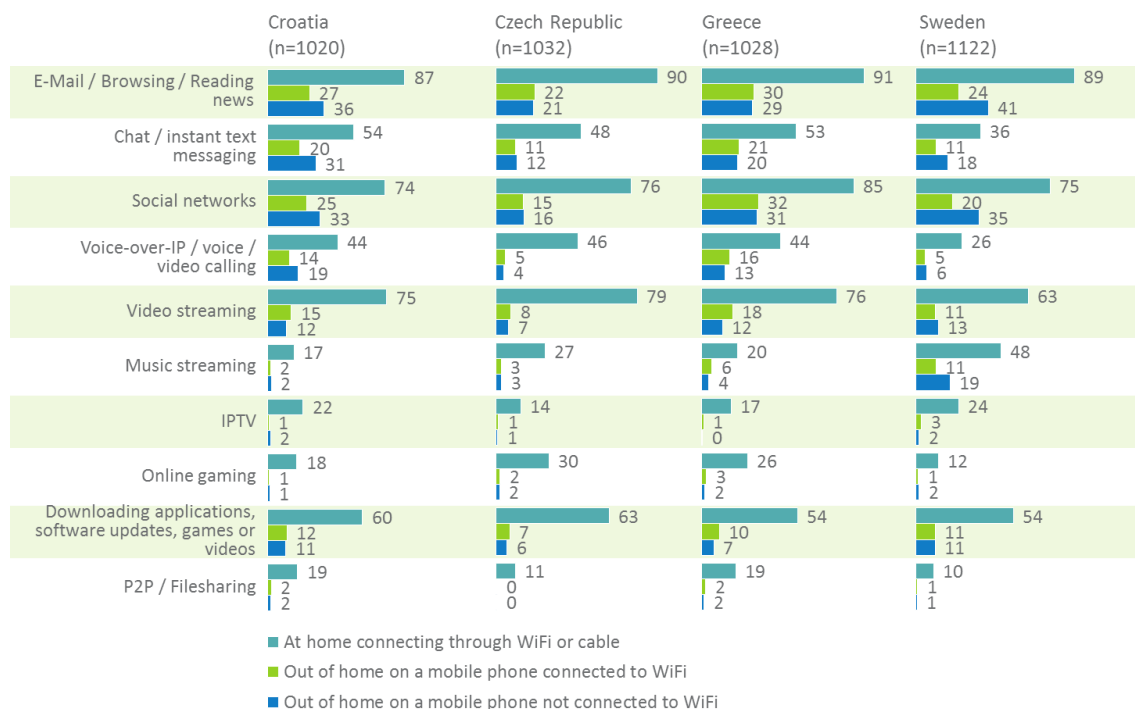
online. P2P / File sharing is most common in Croatia and Greece: 20% are using such applications. Differences to other countries are significant. In the Czech Republic and in Sweden, 11% use file sharing applications.

Across all countries, Internet applications are predominantly used at home connected through WiFi or cable (see Figure 7-15). The most common applications like e-mailing / browsing / reading news, social networks or video streaming are used at home by a majority of respondents. Applications like IPTV, online gaming and P2P / File sharing are almost exclusively used at home. When looking at specific applications, important cross-country differences can be observed. With respect to e-mailing / browsing / reading news, 87% (Croatia) to 91% (Czech Republic) use these applications at home via fixed connection. Swedes frequently use such applications significantly more via mobile access out of home. This is in line with the finding of high proliferation of mobile access in Sweden in general. Still, not even half of the Swedes (41%) use these applications via mobile access. Figures in Croatia (36%), Greece (29%) and especially the Czech Republic (21%) are significantly lower.

Regarding the usage of social networks, patterns are quite similar. 74% (Croatia, Czech Republic) to 85% (Greece) use social networks via at home access. In contrast, about one third of Swedes (35%), Croatians (33%), and Greeks (31%) use social networks via mobile access. Again, usage via mobile access is least common by far in the Czech Republic (16%). Mobile usage further decreases when it comes to chat / instant messaging. Such applications are used by about half of Czechs (48%), Croatians (54%), and Greeks (53%) and by one third of Swedes (36%) via at home access. Figures of usage via mobile access are about half as high in Croatia (31%), Greece (20%), and Sweden (18%). In the Czech Republic, one in ten (12%) uses chat and instant messaging applications via mobile access.

With respect to music streaming, usage figures suggest that the market situation in Sweden is different compared to other countries. While 48% of Swedes use such applications at home, this is the case for only a minority in the Czech Republic (27%), Greece (20%), and Croatia (17%). Differences become even more pronounced with respect to mobile access. 19% of Swedes use music streaming via mobile access. Usage figures are significantly lower in other countries and vary from two percent (Croatia) to four percent (Greece).

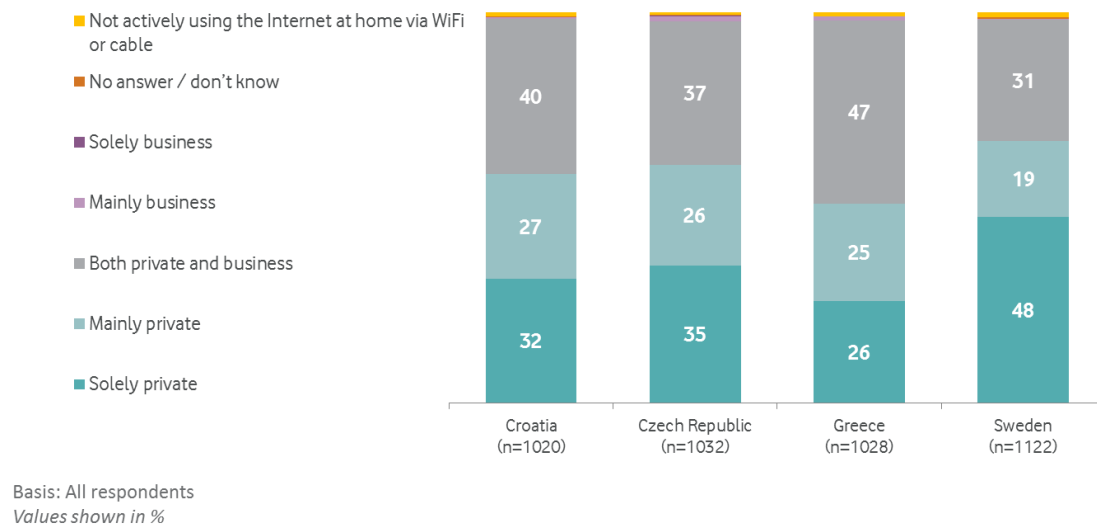
Figure 7-15: Usage of Internet applications by Internet access



Basis: All respondents
 Values shown in %

Not surprisingly, the purpose of at home usage of the Internet is predominantly private (see Figure 7-16). The share of those using the Internet at home exclusively for private purpose is highest in Sweden (48%). Significant lower figures are found in the Czech Republic (35%) and Croatia (32%). Greece stands out in the way that only 26% use the Internet at home solely for private purpose. Another 25% of Greeks state that they use the Internet at home mainly for private purpose, just as much as in the Czech Republic (26%) and in Croatia (27%). The share of those using the Internet mainly for private purpose is lower in Sweden (19%). Figures for mixed usage (both private and business purposes) are on comparable levels in Croatia (40%) and the Czech Republic (37%). The share of respondents using the Internet at home for mixed purposes is lowest in Sweden (31%). In contrast, Greeks use the Internet at home significantly more often for mixed purposes. Almost half of Greeks (47%) state that they use the Internet for both private and business purposes. Overall, Swedes, Croatians, and Czechs are generally private users with about two-thirds using the Internet at home for mainly private purpose. As opposed to this, Greeks are more likely to use the Internet at home access for both private and business purposes.

Figure 7-16: Purpose of Internet usage at home



7.2.3.2 Experience of disruptions

Experience of disruptions constituted a major theme in the focus group discussions in the test areas¹⁶⁷. It emerged that consumers' experience of disruptions and in particular how they were dealt with by their ISPs played a strong role in their emotional assessment of their Internet connection. In fact, participants' experiences of disruptions stretched through the complete length of almost all discussions. Mostly they attributed bad quality of experience to insufficient network capacity at peak times or more commonly to malfunctions of their own equipment or rather servers on the web. Interestingly, participants blamed ISPs only rarely for such disruptions. Rather, they blamed them for not reacting appropriately. Also, it should be noted that participants rarely made the link between traffic management practices and their own quality of experience. The insight that consumers were only in few cases able to establish this link, does not diminish in any way the importance that consumers attribute to disruptions. As the qualitative research indicates throughout all test areas that experiences of disruptions are likely to play an important role for respondents, disruptions played an important part in the survey.

Respondents were asked about three types of disruptions as gathered from the focus group discussions: (1) Losing connection entirely, (2) Sudden slow speed / loading / reduced quality and (3) websites unavailable / cannot be reached. All three types of disruptions were answered by respondents referring to their experiences at home and out of home¹⁶⁸. In each case, respondents, who had experienced the respective type of disruption, were asked to indicate how long these disruptions normally last. The following figures show the results for these questions in the four test areas.

¹⁶⁷ See Section 6.

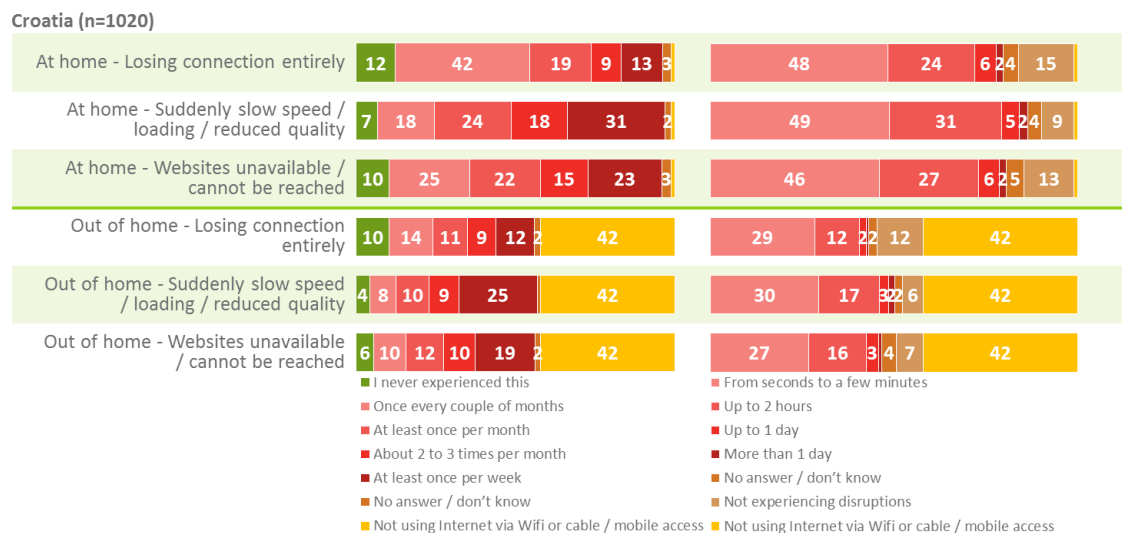
¹⁶⁸ Respondents were informed that here we refer only Internet access through mobile networks e.g. 2G, 3G or 4G.

Across all test areas, most consumers experience all three types of disruptions at home from time to time. Most of them indicate that they experience disruptions less than once per week. Also, it emerges that most disruptions last only a few seconds or minutes or rather up to 2 hours. Such disruptions were commonly described in the focus groups as minor disruptions. Judging from the focus group results, consumers tend not to be overly bothered by such disruptions.

Severe disruptions i.e. disruptions that last longer than 2 hours or even persists for more than 1 day are reported by few respondents. Between 7% (Croatia) and 12% (Greece) have experienced such disruptions with their at home Internet access.

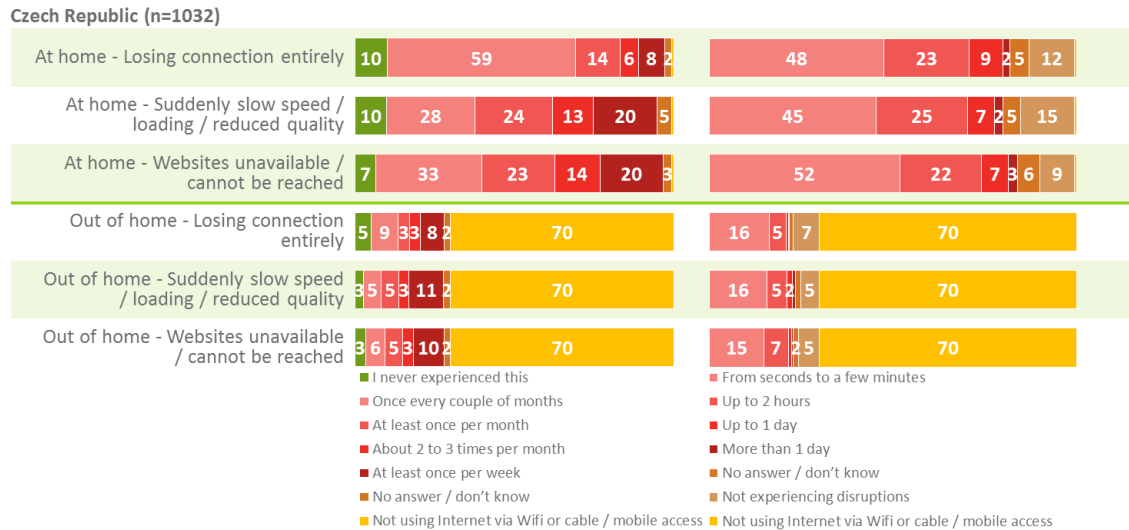
All types of disruptions are more frequent when respondents access the Internet on a mobile device using a mobile network. Also, respondents report that on mobile networks tend to be more persistent.

Figure 7-17: Experience of disruptions in Croatia



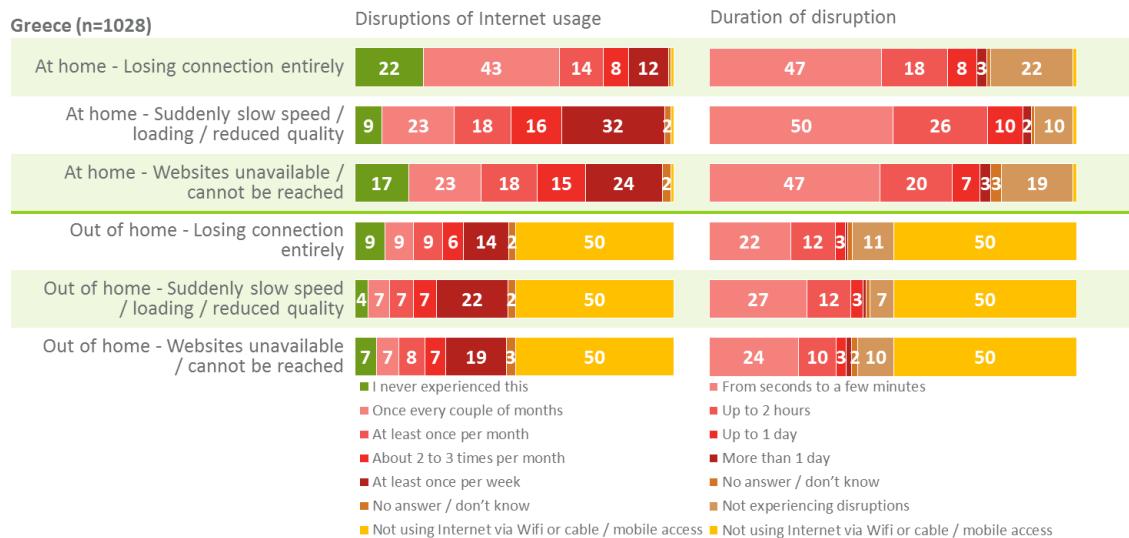
Basis: respondents from Croatia
Values shown in %

Figure 7-18: Experience of disruptions in the Czech Republic



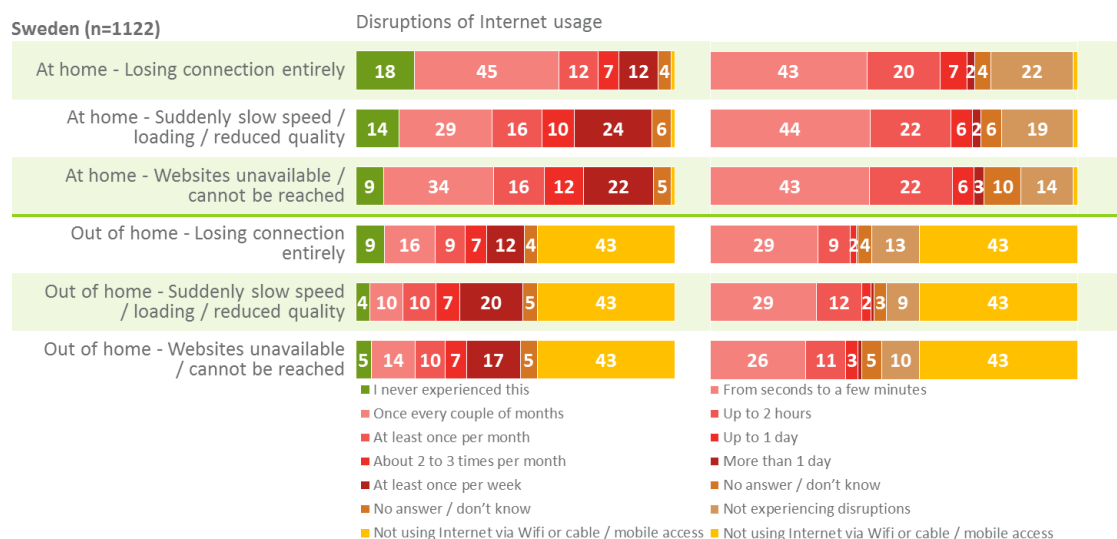
Basis: respondents from the Czech Republic
Values shown in %

Figure 7-19: Experience of disruptions in Greece



Basis: respondents from Greece
Values shown in %

Figure 7-20: Experience of disruptions in Sweden



Basis: respondents from Sweden
Values shown in %

7.2.4 ISP Switching

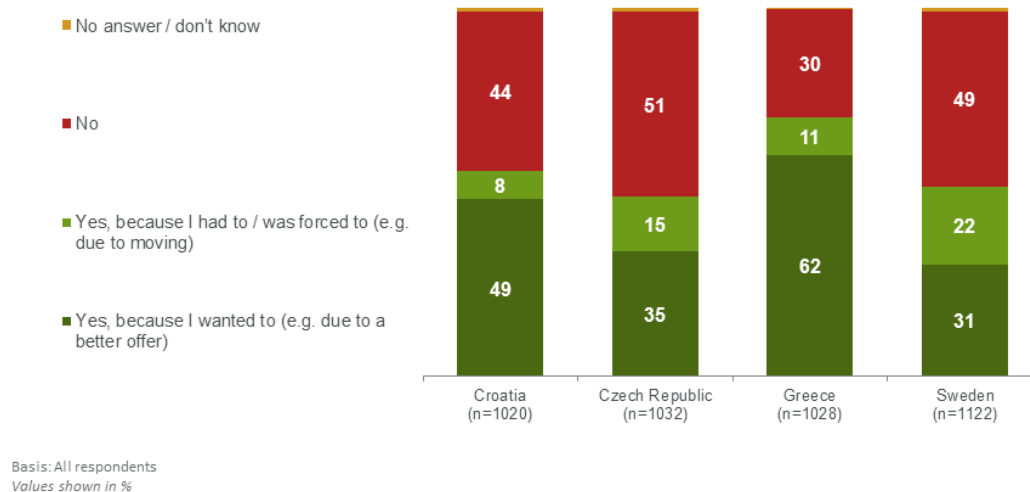
As part of the presentation of survey results, the time respondents have been with their current provider as well as several potential precursors for switching have already been shown. Since part of the present research also aims to shed light on market efficiency in the test areas, it seemed appropriate to also address the topic of switching more directly in the survey. This Section reports the results of the questions addressing switching in the survey.

First, respondents were asked if they had ever switched their ISP for 'at home' Internet access. To gain more in-depth insights, three items were offered to respondents: (1) No; (2) Yes, because I had to / was forced to (e.g. due to moving) and (3) Yes, because I wanted to (e.g. due to a better offer). The results of this first question underline the finding of strong customer loyalty with their ISP. In Croatia, the Czech Republic and Sweden around half of respondents have never switched their ISP for Internet access at home in the past. In Greece, this share is substantially lower at 30%¹⁶⁹. The results for respondents, who have switched their ISP at least once, indicate some market characteristics beyond switching itself. The share of respondents who switched ISPs on their own differ by country. In the Czech Republic and Sweden, only about one third of respondents indicated that they switched ISPs because they wanted to. In Croatia, this is the case for 49% of respondents. Switching ISPs voluntarily is most common in Greece, where this is the case for the majority of respondents (62%). In Croatia, only 8% of respondents indicated that at some point they were forced to switch ISPs, whilst in Sweden 22% of respondents have been in this situation. This underlines a result from

¹⁶⁹ According to market observations of the Greek NRA, the higher share of respondents with switching experience may be explained by discount offers being more prevalent due to the economic situation in Greece over the past years.

the Swedish focus group discussions, where numerous participants stated that they felt that their Internet access was strongly linked with their flat or house and would have to be changed if they moved or rather was not easy to switch without moving house¹⁷⁰.

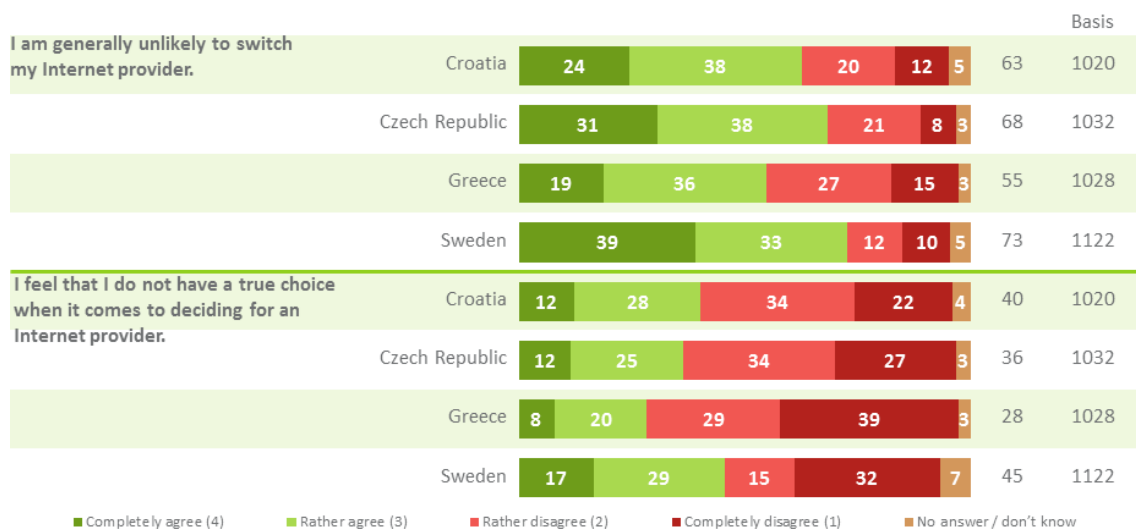
Figure 7-21: Shares of respondents with switching experience



In fact, the perception of actually having a choice played a role in all focus group discussions in one way or the other. Consequently, a corresponding question was introduced into the questionnaire. In line with the focus group results, respondents in Sweden are most likely to feel that they do not have a true choice when it comes to ISP for at home Internet access. Here, 46% agreed with this statement. In the remaining test areas, agreement is lower. In Greece, only 28% agreed with the statement. This result may be influenced by the fact that many respondents have switched their ISP recently and can draw from that experience. Despite the rate of actual switching in Greece, more than half of respondents in Greece agreed with the statement that they were generally unlikely to switch ISPs. In the other test areas, this figure is even higher. In Sweden, 72% of respondents indicate that they are generally unlikely to switch.

¹⁷⁰ Please note that this result represents participants' perceptions and not necessarily the actual situation. More detail can be found in Section 5.2.

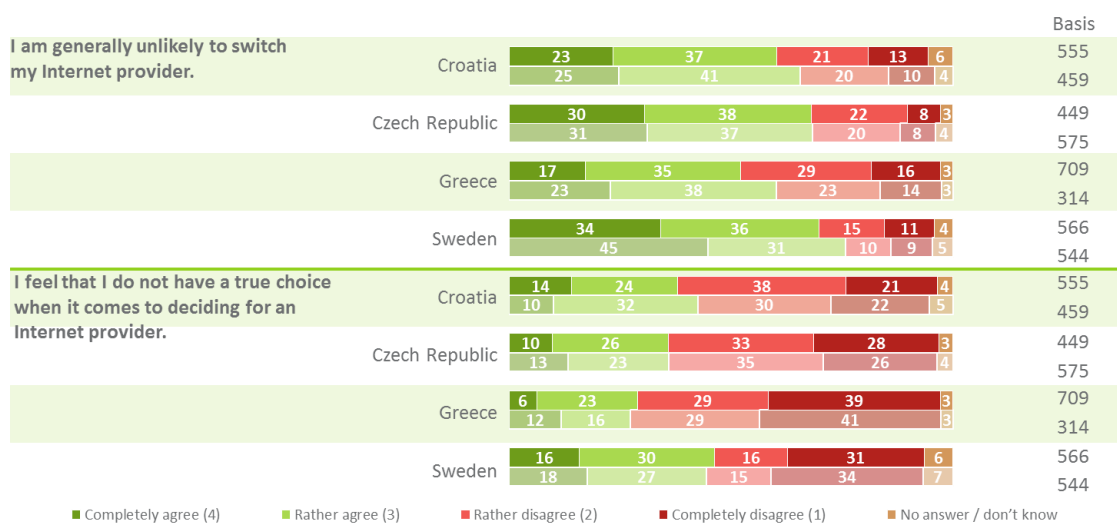
Figure 7-22: Inclination to switch ISPs per test area



Basis: All respondents
Values shown in %

Figure 7-23 shows results for respondents who have switched ISPs at least once in the past (in full colour) versus respondents never having switched ISPs (in transparent colour). With the exception of Czech respondents, respondents who have never switched ISPs are more likely to agree to the statement “I am generally unlikely to switch my Internet provider”. With respect to the item “I feel that I do not have a true choice when it comes to deciding for an Internet provider.” results are heterogeneous. While in Croatia respondents who have never switched before are of the opinion that they do not have a real choice when considering the top two box category (completely agree and rather agree), there are no (substantial) differences between respondents with and without switching experience in the other test areas.

Figure 7-23: Inclination to switch ISPs by switching experience per test area



Basis: All respondents
Values shown in %; values in full colour: respondents having switched at least once in the past, values in transparent colour: respondents having never switched before

Respondents, who indicated to be unlikely to switch ISPs in the previous question, were then asked about their reasons. They could select the three most important reasons from a list that is reproduced in Figure 7-24 below. Across all three test areas, the two most common reasons are the same although differing in their specific value somewhat. Generally, respondents are satisfied with their current ISP, which underlines the results of the question on satisfaction reported earlier and thusly do not see any reason to switch. Also, they do not feel that they receive a corresponding incentive in form of a (notably) better offer from another ISP. Otherwise, reasons appear to differ across test areas. In Croatia, the perception that there is no other ISP available anyway and long contract durations present the most important hurdles for respondents. Equally, respondents fear risks attached to switching ISPs such as loss of service or paying double. The effort needed to switch is also an important reason not to switch for 16% of Croatian respondents. Whilst respondents from the Czech Republic share the perception of risks attached to switching ISPs, they perceive actual choice of ISP and contract durations as less of an issue. Furthermore, only 8% of Czech respondents feel that it takes too much effort to switch ISPs. This is lowest value of the four test areas. In Greece, respondents perceive the risk of paying double for a while as most important reflecting the sustained financial crisis in the country. Similarly, Greeks worry about temporary loss of service. In line with results from other questions, Greeks do not perceive actual choice as an issue for switching. Swedish consumers appear to differ from the other three somewhat as regards reasons for being unlikely to switch ISPs. In particular, they perceive switching to be very tedious and difficult, which is also reflected in the high value they attach to difficulties comparing ISP offers. Also, it is interesting to note that in Sweden a relatively large share of respondents is worried about losing related services such as their email address or personal web page. The full results are reproduced in Figure 7-24.

Figure 7-24: Reasons for not switching ISPs in test areas

	Croatia (n=639)	Czech Republic (n=707)	Greece (n=567)	Sweden (n=812)
Satisfied with current Internet provider	69	70	69	61
No other Internet providers offer better value for money	39	41	45	26
No other Internet providers available for my household	24	14	8	21
Long binding times / minimum contract durations	28	12	18	11
Risk of a temporary loss of service during the switching process	16	17	23	11
Requires too much time / effort	16	8	13	24
Risk of paying for two Internet providers during the switching process	13	12	27	8
Comparing different Internet providers is too difficult	6	8	7	13
Loss of related services (e.g. e-mail address, personal web page)	6	4	6	12
Finding information on Internet offers is too difficult	2	6	2	5
Not sure what steps to take	2	3	2	5
Other	4	3	3	8
No answer / don't know	1	3	1	2

Basis: Respondents who are (rather) unlikely to switch their provider
Values shown in %

The results presented in the CIVIC report approach the issue of switching from the perspective of those who have already switched their provider. The main reason for switching here is commonly the price i.e. consumers switched providers because they found a better offer. This is true for 47% (Czech Republic); 46% (Greece) and 36% (Sweden)¹⁷¹. Another important driver is dissatisfaction with the current provider, which also emerges as one of the strongest drivers for switching in the focus groups and is reflected in the data presented in Figure 7-24 by the fact that satisfaction with the current provider is the most important driver for not switching with our respondents across all test areas.

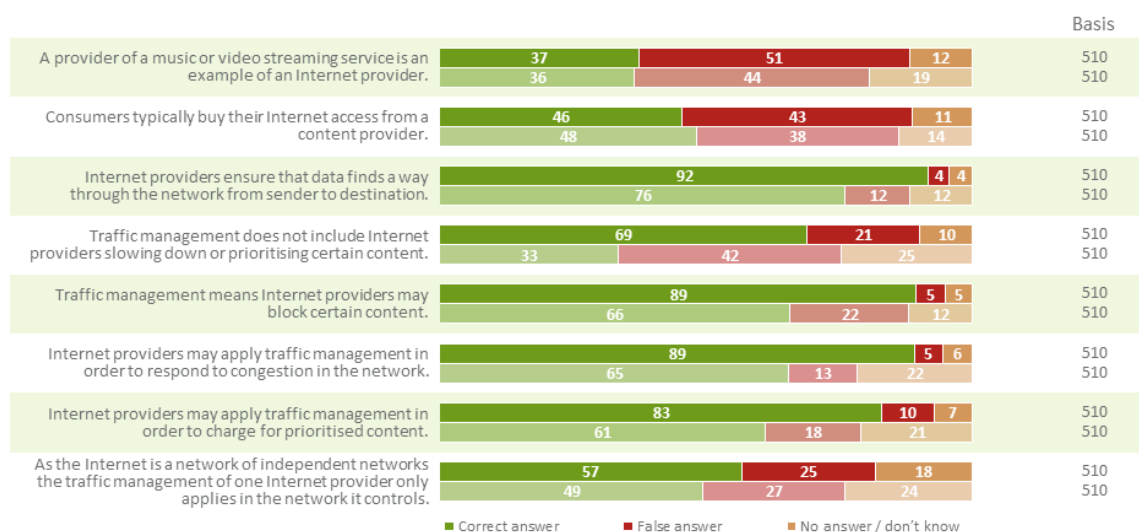
7.3 Analytical section

7.3.1 Effect of the information package on knowledge

As outlined in the focus group results of this report (see Section 6), only one group of respondents saw the information package developed based on the literature review, the focus group discussion results as well as the discussions with external experts. In order to measure the educational effect of the information package, 8 questions were introduced into the survey. Here, respondents were asked to indicate whether the respective statement was true or false. The statements are reproduced below (Figure 7-25 to Figure 7-28). The results show that the information had an educational effect on respondents. The share of correct answers is consistently higher or in two cases statistically insignificant (i.e. there is no measurable difference between the two groups of respondents). The effect is most visible in all items referring to traffic management as this is a term that consumers are not familiar with as it already transpired in the focus groups. We can therefore conclude that the information package has had the intended effect.

¹⁷¹ There is no data available for Croatia.

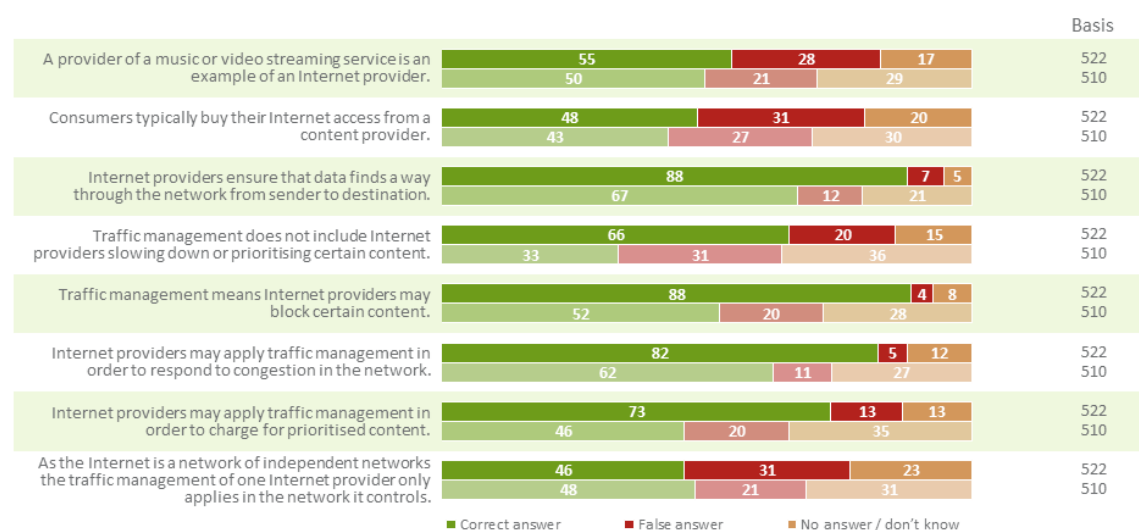
Figure 7-25: Manipulation test - educational effect of information package in Croatia



Basis: All respondents

Values shown in %; values in full colour: information package seen, values in transparent colour: information package not seen

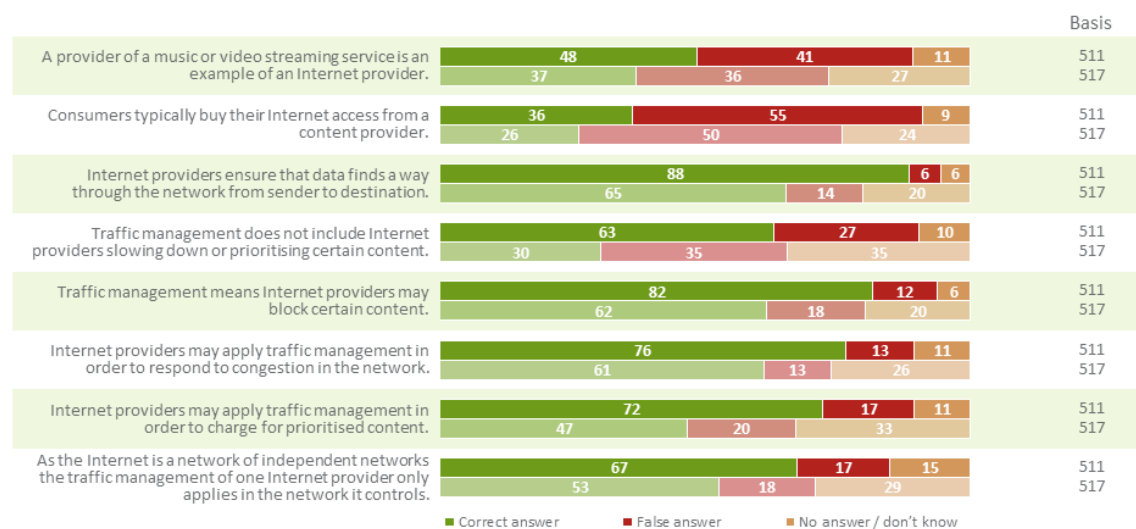
Figure 7-26: Manipulation test - educational effect of information package in the Czech Republic



Basis: All respondents

Values shown in %; values in full colour: information package seen, values in transparent colour: information package not seen

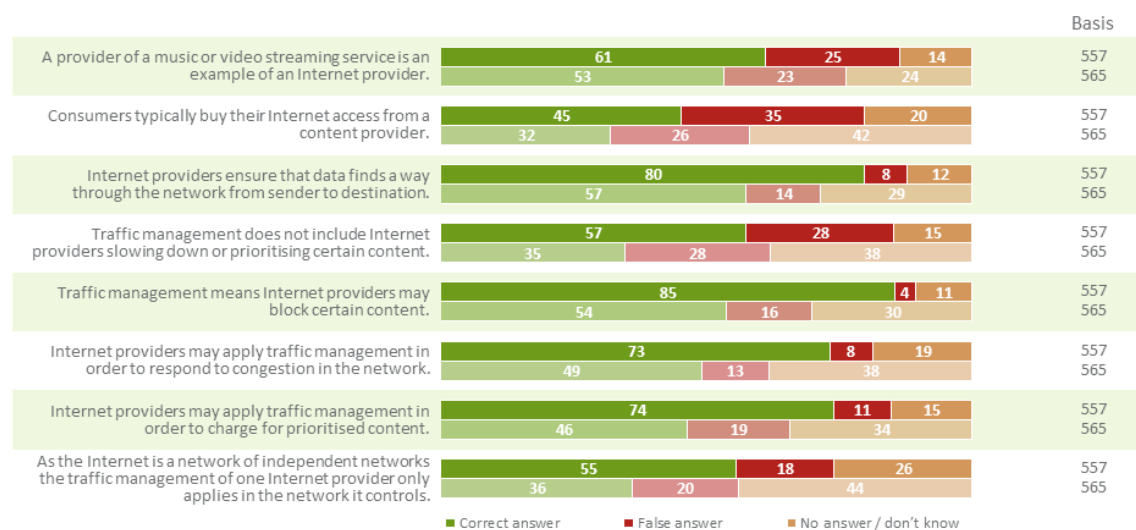
Figure 7-27: Manipulation test - educational effect of information package in Greece



Basis: All respondents

Values shown in %; values in full colour: information package seen, values in transparent colour: information package not seen

Figure 7-28: Manipulation test - educational effect of information package in Sweden



Basis: All respondents

Values shown in %; values in full colour: information package seen, values in transparent colour: information package not seen

7.3.2 Conjoint utilities total and by experimental group

An adaptive conjoint analysis (ACA) was conducted to determine respondents' preferences in terms of offers for stationary Internet access at home¹⁷². A Hierarchical Bayes (HB) approach using Sawtooth Software ACA/HB was employed to estimate part-worth utilities on the level of individual respondents.

¹⁷² For discussion of the reasons for and implications of the conjoint method applied, see Section 5.3.2.

Part-worth utilities reflect the value an attribute level has to respondents. Although there are techniques to estimate part-worth utilities on an aggregated level, techniques to estimate part-worth utilities on an individual level (i.e. part-worth utilities are computed for each individual respondent) provide multiple advantages (such as higher accuracy or the possibility of further analyses). HB estimation provides part-worth utilities on an individual level. HB applies a two-level approach when estimating part-worth utilities. On the first level, HB assumes that individuals' part-worth utilities follow a multivariate normal distribution. On the second level, HB takes into account that—dependent on first-level part-worth utilities—an individual's probability of rating an attribute level follows a regression model¹⁷³. In practice, initial estimation of part-worth utilities for an individual is improved iteratively by taking into account the estimated part-worth utilities of other individuals in the sample. HB leads to more accurate estimation of part-worth utilities.

The statistical model behind this is an additive function which assumes that the total utility of a product concept is the sum of the part-worth utilities of its attribute levels. In general form the model looks as follows¹⁷⁴:

$$y_k = \sum_{j=1}^J \sum_{m=1}^M b_{jkm} \times x_{jkm}$$

where y_k : estimated total utility of product concept k
 b_{jkm} : part-worth utility for level m of attribute J
 x_{jkm} : 1 if in product concept k attribute j is present as level m ; else 0

Two approaches to estimate utilities were considered. On the one hand, individual estimations for each country can be conducted. This approach would account well for potential differences between the countries. However, a direct comparability of utility results between the countries would be impeded and require a normalisation of results, which would also make a segmentation based on part-worth utilities less straightforward. On the other hand, estimation can be conducted using an aggregated sample of all respondents from all countries ($N=4,202$). With this approach, direct comparability of results would be enhanced, which would also benefit a subsequent segmentation. However, as described above, HB estimates utilities for respondents by using not only their individual answers but also the answers of other “similar” respondents. In an aggregated sample across all countries, this could result in an estimation that shows an overall tendency towards the average across all countries, concealing potential differences between countries.

To decide on the approach, both types of estimations were conducted and results were evaluated with respect to similarities and differences between countries in terms of preference structure. In this evaluation, no substantial differences between an aggregated estimation and individual estimations for each country were found.

¹⁷³ See Orme, B. (2000): Hierarchical Bayes: Why all the attention? Sawtooth Software Research Paper.

¹⁷⁴ For extensive explanation and documentation of estimation models and procedures, see <http://www.sawtoothsoftware.com/support/technical-papers/sawtooth-software-products/acahb-technical-paper-2006>.

Preference patterns per country were very similar regardless of the approach. Consequently, a decision was made to base further results on the aggregated estimation.

A central result to be drawn from part-worth utilities is the relevance of each attribute in terms of how strongly it affected a decision in the conjoint tasks. To calculate the relevance of attributes on the level of individual respondents, the difference between the highest and the lowest part-worth utility is calculated within each attribute. This provides the span of utilities for each attribute. From this, attribute relevance is calculated by dividing the span for one attribute by the sum of spans across all attributes.

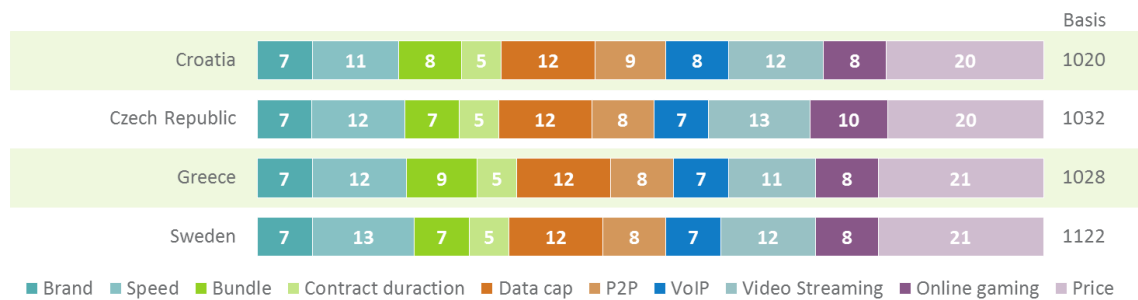
$$w_j = \frac{\max[\beta_{jm}] - \min[\beta_{jm}]}{\sum_{j=1}^J (\max[\beta_{jm}] - \min[\beta_{jm}])}$$

where w_j is the relative importance of the attribute j
 β_{jm} is the part-worth-utility of level m of attribute j

Figure 7-29 shows the relevance of the attributes tested in the conjoint analysis for each country. The overall picture shows similar patterns with respect to the attributes of fixed Internet offers across all countries. Price is the most important attribute in all countries accounting for about 20% of respondents' decisions made in the conjoint analysis. Yet, it has to be kept in mind that the method of ACA tends to underestimate the relevance of price in most empirical studies¹⁷⁵. Download speed, data cap, and video streaming are second most important, yet being roughly half as important as price. Download speed is slightly more important in Sweden than in Croatia. The Czech Republic and Greece fall in between. The accessibility of video streaming is slightly more important in the Czech Republic. Also, Czechs are more attuned to the accessibility of online gaming applications than respondents in other countries. The attribute bundle is more important to Greeks than to Czechs and Swedes, Croatians fall in between. The accessibility of P2P / Files haring applications, VoIP applications, and the attribute brand are almost equally important with only minor deviations across countries. Contract duration is the least important attribute by far across all countries.

¹⁷⁵ Reasons for ACA underestimating the relevance of price may be that respondents (a) perceive other attributes than price not being independent from each other and thus these attributes may count multiple times in respondents' preferences or (b) have difficulties in differentiating large numbers of attributes resulting in more similar relevancies for all attributes. Due to this bias, other techniques (i.e. Choice Based Conjoint) should be applied when pricing issues are main focus. See Pinnell, J. (1994): Multistage Conjoint Methods to Measure Price Sensitivity. Paper presented at the Advanced Research Techniques Forum, Beaver Creek, CO.

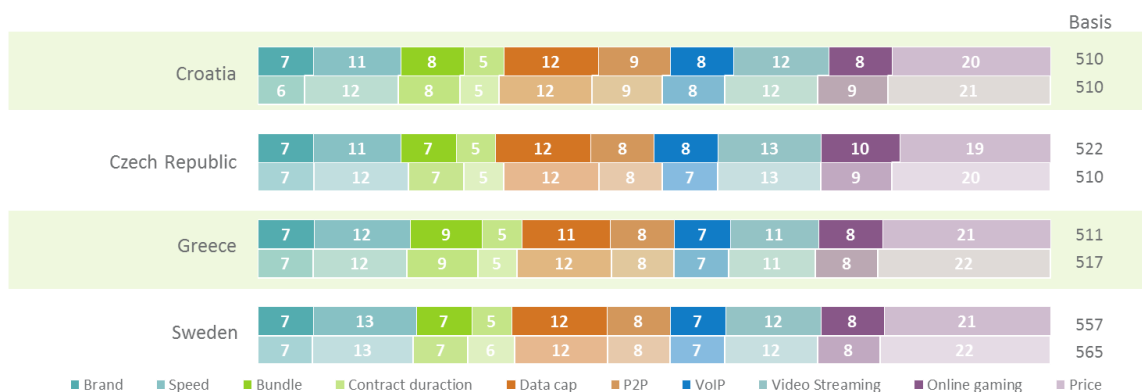
Figure 7-29: Relative importance of attributes by country



Basis: All respondents
Values shown in %

Results for respondents who have been shown the information package (test group) and those who have not been shown the information package (control group) are rather similar (see Figure 7-30). Overall, respondents in the control group place little more importance on price than respondents in the test group. With respect to network neutrality-related attributes (data cap, accessibility of P2P / File sharing, VoIP, video streaming, and online gaming)¹⁷⁶, differences between test group and control group are only minor if occurring at all. In Croatia, accessibility of online gaming applications is slightly more important than in the test group. This finding contradicts expectations of the information package priming attitudes related to network neutrality. In the Czech Republic, the relevance of VoIP and online gaming applications being accessible is more important in the test group than in the control group. Yet, differences are marginal. In Greece and in Sweden, there is no effect of the information package on the perceived relevance of network neutrality-related attributes.

Figure 7-30: Relevance of attributes by experimental group and country



Basis: All respondents
Values shown in %; values in full colour: information package seen, values in transparent colour: information package not seen

¹⁷⁶ The four attributes that cover the accessibility of specific applications (P2P / File sharing, VoIP, video streaming, online gaming) relate to network neutrality by way of their attribute levels, namely normal (unmanaged), prioritised, slowed down and blocked access. The data cap attribute constitutes the fifth attribute with relation to network neutrality. Data cap in itself is not network neutrality-related, but since the attribute includes levels that reflect zero-rated access to specific applications, it is counted as an attribute with relation to network neutrality.

While the relevance of attributes reflects the importance of whole attributes in the decision making process of respondents, it does not give any information on which specific levels of attributes are preferred by respondents. Conclusions on preferences with respect to attribute levels have to be made on the basis of part-worth utilities.

For ease of interpretation, raw part-worth utility values were transformed by scaling the part-worth utility value of the least attractive level of an attribute to zero. This does not mean that the least preferred level is not attractive to consumers at all, yet it is least attractive among all the levels tested within an attribute. Other than that, part-worth utilities are interval scaled and do not carry an inherent meaning (cf. Section 5.3.5). In consequence, they are to be interpreted in a relative fashion (e.g. level A is twice as attractive as level B).

Principles of interpretation are as follows:

- The least attractive attribute level is the baseline for interpretation per attribute. It is set to zero, yet this does not reflect that this level is not attractive at all.
- Absolute values may not be interpreted across attributes, test areas, or subsamples (e.g. experimental groups, consumer segments). This is also the case for differences: absolute differences between two levels may not be compared across attributes, test areas, or subsamples.
- For basic interpretation, ranks of levels within an attribute may be considered. Differences in terms of ranks of levels within an attribute may be compared between test areas or subsamples.
- Conclusions about the amount of attractiveness of a specific level may be drawn in a relative fashion considering the range of part-worth utilities within an attribute. Increases and decreases in attractiveness may be calculated and then compared in a relative manner (i.e. the difference between level A and level B vs. the difference between level B and level C).

Figure 7-31: Reading example part-worth utilities

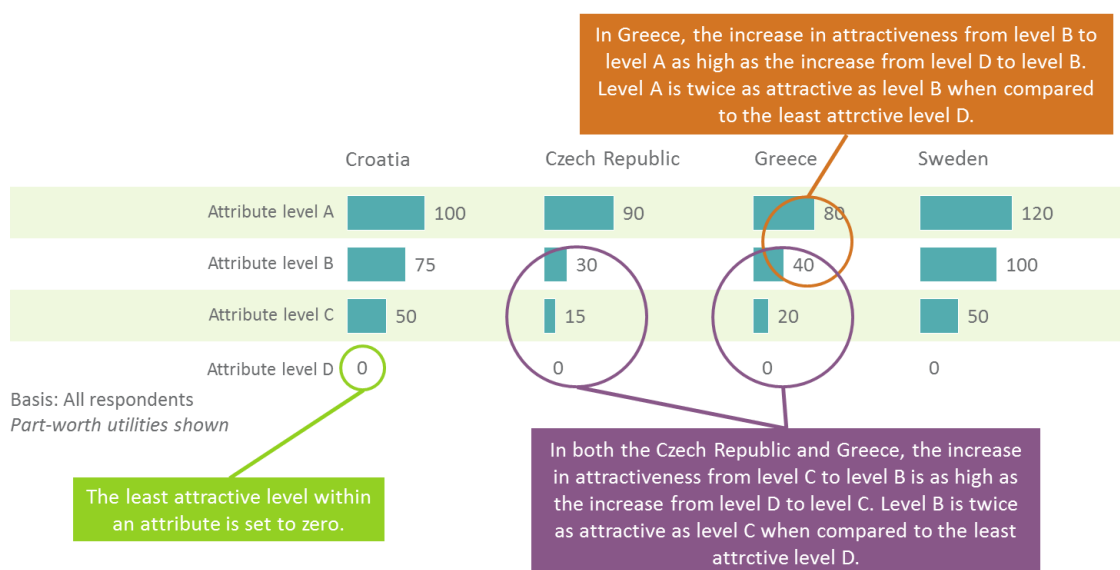


Figure 7-31 provides a fictitious reading example. In all test areas, the least attractive level is set to zero. In Greece, the range from the least attractive level D to level A is twice as large as the range from level D to level B. Thus, level A is twice as attractive as level B. When comparing the levels B and level C, the range from the least attractive level D to level B is twice as large as the range from level D to level C. In conclusion, level B is twice as attractive as level C when compared to the least attractive level. Although absolute values differ, the same relation can be described with respect to Czech results.

Part-worth utilities of the levels of the attribute *brand* are shown in Figure 7-32. In Croatia, Hrvatski Telekom is the most attractive ISP. B.net is the second most attractive ISP, yet being about three times less attractive than Hrvatski Telekom. Local Internet providers are preferred over Metronet telekomunikacije. In the Czech Republic, O2 Czech Republic is most likely preferred. Local Internet providers are the second most attractive ISPs and are preferred over UPC Česká republika and RIO media. In Greece, OTE is the most attractive ISP being about four times as attractive as forthnet ranked second. Hellas online (hol) and local Internet providers are least attractive. In Sweden, Telia is twice as attractive as local Internet providers. Telenor and TELE2 are much less attractive and stay behind.

Figure 7-32: Part-worth utilities attribute brand by country

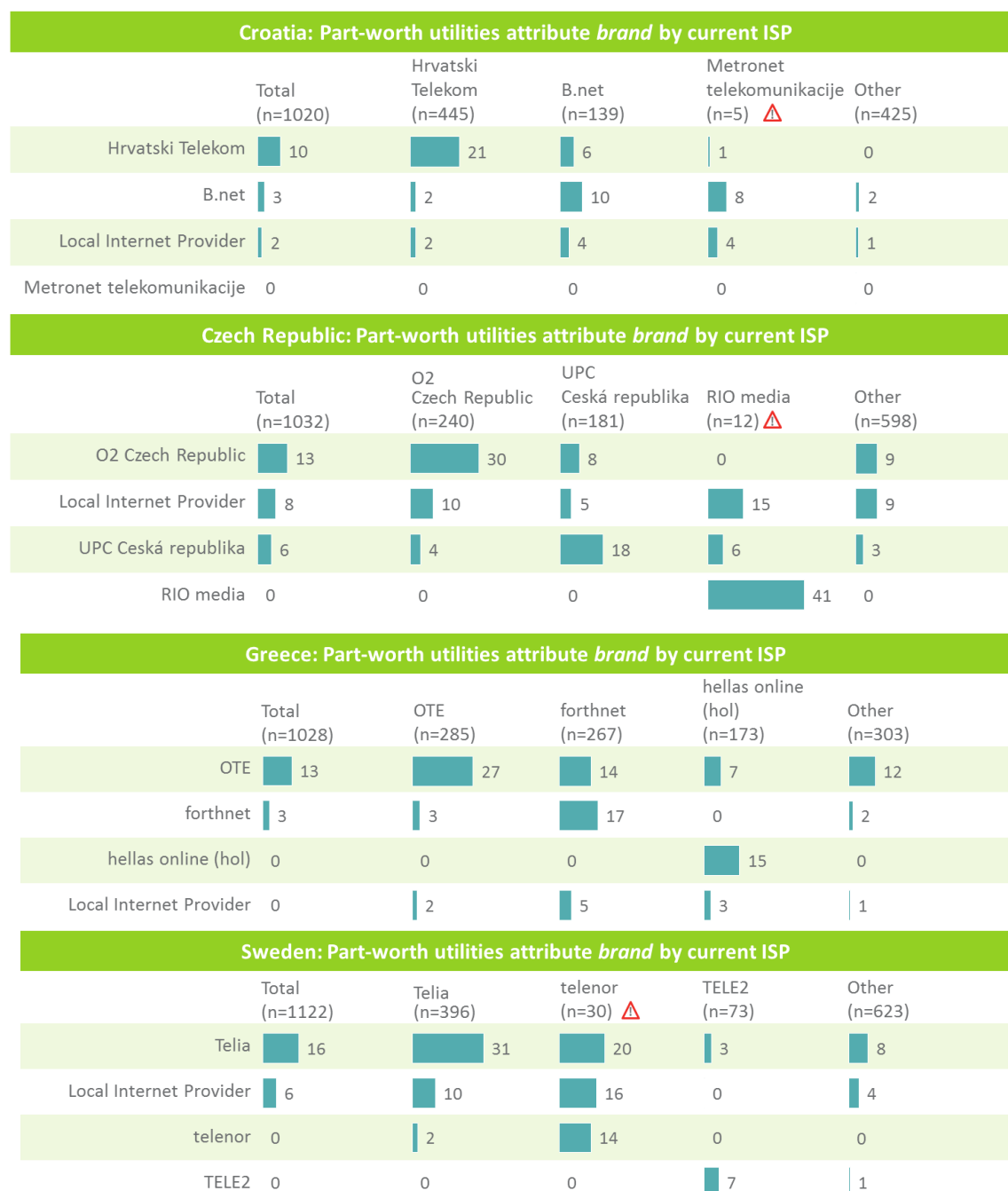
Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
Hrvatski Telekom 10	O2 Czech Republic 13	OTE 13	Telia 16
B.net 3	Local Internet Provider 8	forthnet 3	Local Internet Provider 6
Local Internet Provider 2	UPC Česká republika 6	hellas online (hol) 0	telenor 0
Metronet telekomunikacije 0	RIO media 0	Local Internet Provider 0	TELE2 0

Basis: All respondents
Part-worth utilities shown

Regarding the question of whether customers show systematically higher preferences for their current ISP, part-worth utilities were analysed separately for customers of the three ISPs tested in the conjoint analysis. Figure 7-33 shows that customers show clear preferences for their current ISP¹⁷⁷. This supports the results gained in the items on why respondents are unlikely to switch. The most important reason there is also “satisfied with current ISP”.

¹⁷⁷ Part-worth utilities of the ISPs Metronet telekomunikacije (Croatia), RIO media (Czech Republic), and telenor (Sweden) should not be interpreted due to low sample sizes.

Figure 7-33: Part-worth utilities of attribute *brand* by currently used brand and country¹⁷⁸



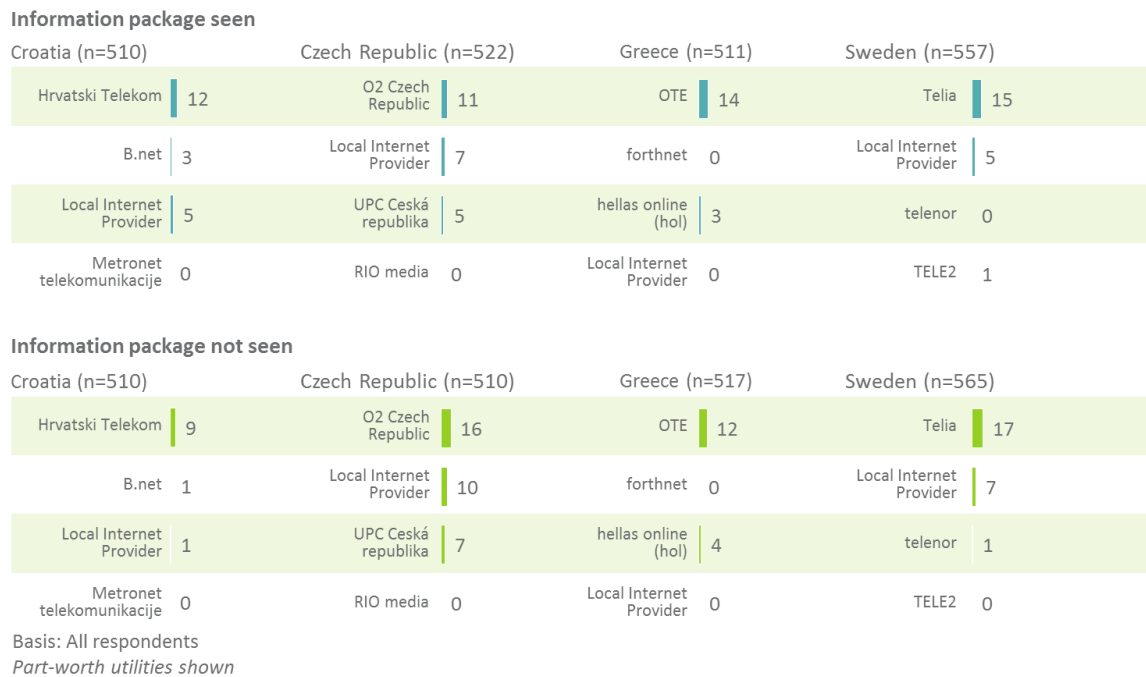
Basis: All respondents
Part-worth utilities shown

Figure 7-34 shows part-worth utilities of the attribute *brand* by test group (test group: information package seen; control group: information package not seen) and country. Differences between the test group and control group are only minor with respect to the preferred brands. In Croatia, B.net and local Internet providers are equally attractive in

¹⁷⁸ Figures marked with a warning sign should not be interpreted due to low sample size.

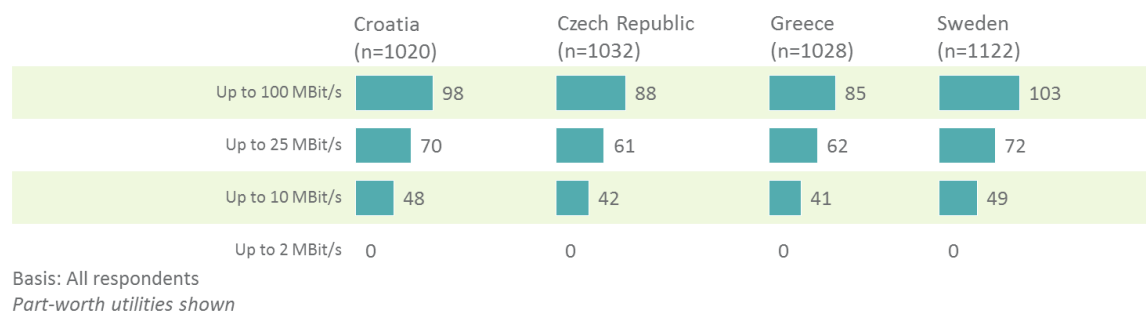
the control group whilst local Internet providers are preferred to B.net in the test group. In Sweden, telenor is preferred to TELE2 in the control group. In the test group, TELE2 is more attractive than telenor. Yet, differences in attractiveness for these two brands are marginal between both groups. In the Czech Republic and in Greece, preference structures of test group and control group are similar.

Figure 7-34: Part-worth utilities attribute brand by experimental group and country



With respect to the attribute *download speed*, findings are in line with expectations (see Figure 7-35). Higher rates of download speed are preferred over lower rates of download speed across all countries. In general, rates up to 100 MBit/s are about twice as attractive as rates up to 10 MBit/s. In Croatia and Sweden, the value of rates up to 100 MBit/s compared to rates up to 25 MBit/s is higher than in the Czech Republic and in Greece.

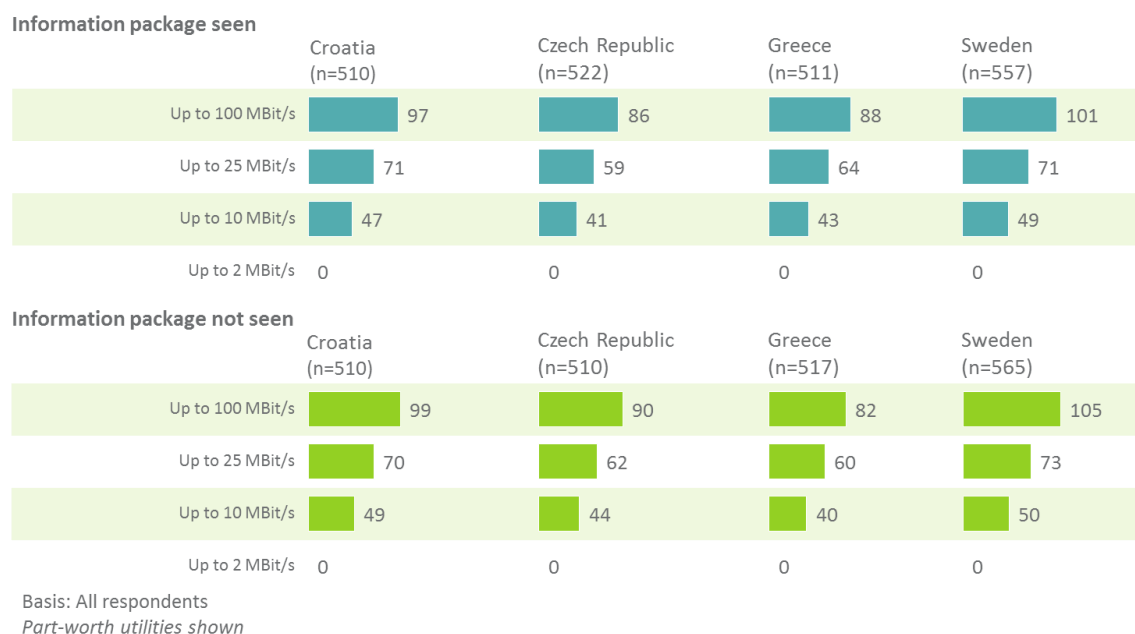
Figure 7-35: Part-worth utilities attribute download speed by country



Regarding differences in preferences for *download speed* options between the test group and control group, preference structures of respondents who had seen the

information package about network neutrality and those who had not are similar (see Figure 7-36).

Figure 7-36: Part-worth utilities attribute download speed by experimental group and country



Bundled services are preferred over stand-alone Internet offers in general (see Figure 7-37). Bundled services including Internet, telephone, and TV are most attractive across all countries. Yet, regarding preferences with respect to other bundled services, differences between countries are found. In Croatia, bundled services including Internet, telephone, and TV are clearly preferred over bundles including Internet and TV. Bundles including Internet and telephone are ranked third. In Greece, bundles including Internet, telephone, and TV are also most attractive by far. Preferences for bundles including Internet and TV versus services including Internet and telephone are not distinct. Both types of bundled services are equally attractive in Greece. In the Czech Republic and in Sweden, bundles including Internet, telephone, and TV are most attractive. Other than in Croatia and Greece, the growth in utility against the second ranked bundled service (Internet and TV) is less distinct. Bundles including Internet and TV are preferred over those including Internet and telephone.

Figure 7-37: Part-worth utilities attribute bundle services by country

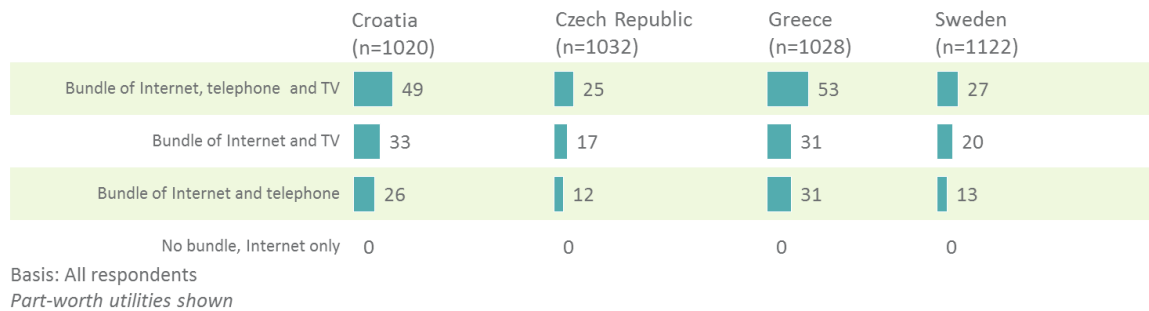
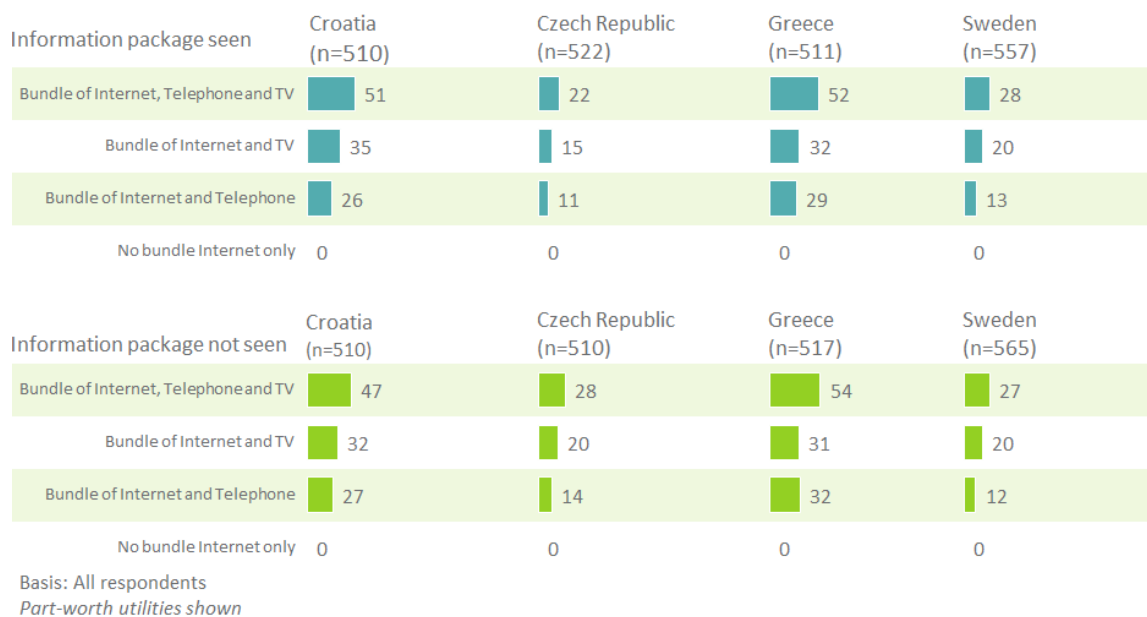


Figure 7-38 shows part-worth utilities of the attribute *bundle services* by test group and country. Preferences structures of test group versus control group show similar patterns across countries.

Figure 7-38: Part-worth utilities attribute bundle services by experimental group and country



Part-worth utilities of levels of the attribute *minimum contract duration* are shown in Figure 7-39. While shorter contract durations are more attractive in Croatia and Sweden, a contract duration of twelve months is preferred over the shortest contract duration tested (one month) in the Czech Republic and in Greece. Across all countries, the maximum contract duration of 24 months is least attractive.

Figure 7-39: Part-worth utilities attribute minimum contract duration by country

	Croatia (n=1020)	Czech Republic (n=1032)	Greece (n=1028)	Sweden (n=1122)
1 month	25	11	12	27
12 months	20	13	15	21
24 months	0	0	0	0

Basis: All respondents
Part-worth utilities shown

Concerning the attribute *minimum contract duration*, preference structures of the test group and the control group do not differ (see Figure 7-40).

Figure 7-40: Part-worth utilities attribute minimum contract duration by experimental group and country

Information package seen

	Croatia (n=510)	Czech Republic (n=522)	Greece (n=511)	Sweden (n=557)
1 month	23	12	12	26
12 month	19	15	15	20
24 month	0	0	0	0

Information package not seen

	Croatia (n=510)	Czech Republic (n=510)	Greece (n=517)	Sweden (n=565)
1 month	26	10	11	28
12 month	21	12	14	22
24 month	0	0	0	0

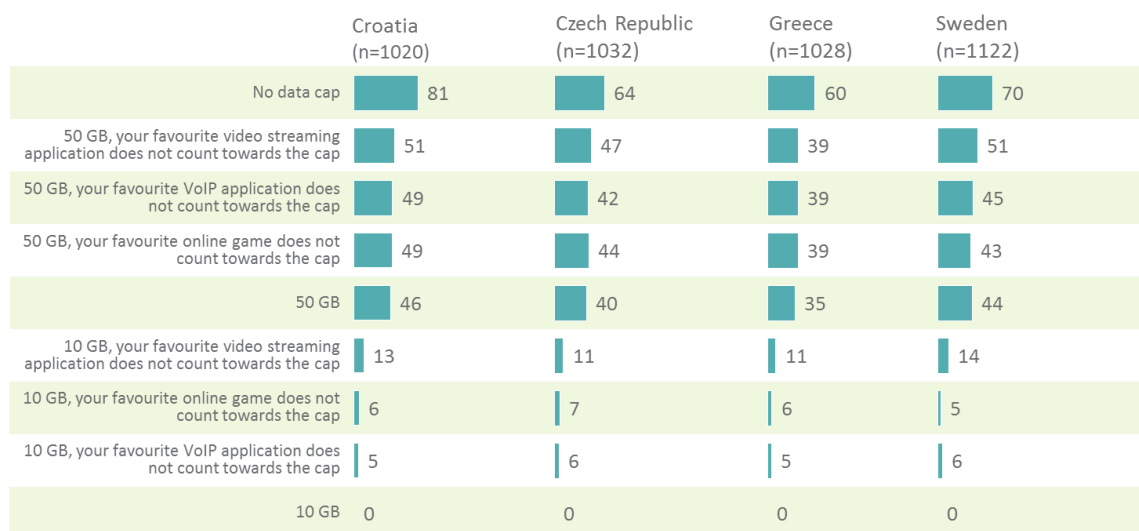
Basis: All respondents
Part-worth utilities shown

With respect to different characteristics of *data cap*, offers without data cap are clearly preferred over those containing any type of data cap. As this is the economically most favourable option from a respondent's perspective and as well as the most common configuration of already existing offers, this finding is not surprising. In line with rational thinking, data cap options of 50 GB per month are preferred over 10 GB options. Notably, offers including data cap options of 50 GB reach only about 60% to 75% of the attractiveness of offers not including a data cap.

Differences in utilities among specific data cap options of 50 GB are minor. In Croatia, the Czech Republic, and Greece, options with zero-rated applications (i.e. the use of a specific application is exempted from the data cap) are more attractive than the data cap of 50 GB without any exemptions. Among options with zero-rated applications, zero-rating of video streaming applications is most attractive (yet, zero-rating options of offers of 50 GB data cap are almost equally attractive in Greece).

Data cap options of 10 GB are least attractive. As within 50 GB data cap options, the option including a zero-rating for video streaming applications is most attractive among 10 GB data cap options across all countries. As expected, the data cap option of 10 GB not including any exemption is least attractive overall.

Figure 7-41: Part-worth utilities attribute data cap by country



Basis: All respondents

Part-worth utilities shown

Figure 7-42 shows the part-worth utilities of the attribute *data cap* by test group and control group. Differences in attraction of no data cap, 50 G data cap options, and 10 GB data cap options are similar within test group and control group across all countries (i.e. the ratio of part-worth utilities of no data cap and the most attractive 50 GB data cap option respectively the most attractive 10 GB data cap option are similar for test group and control group). Yet, there are minor differences in preferences for specific attribute levels. In Croatia, the 10 GB option with VoIP being zero-rated is more attractive than the 10 GB option with online gaming being zero-rated within the test group. Within the control group, the 10 GB option with online gaming being zero-rated is more attractive. In the Czech Republic, data cap options with online gaming being zero-rated are preferred to data cap options with VoIP being zero-rated in the test group. In the control group, online gaming being zero-rated and VoIP being zero-rated are equally attractive. In Greece, 50 GB data cap options including zero-rated applications are slightly more attractive compared to the 50 GB data cap without zero-ratings within the control group than in the test group. In Sweden, the 50 GB option without zero-rating is preferred to the 50 GB options with online gaming being zero-rated within the test group, whilst both options are equally attractive within the control group.

Figure 7-42: Part-worth utilities attribute data cap by experimental group and country

Information package seen

	Croatia (n=510)	Czech Republic (n=522)	Greece (n=511)	Sweden (n=557)
No data cap	84	65	64	70
50 GB, your favourite video streaming application does not count towards the cap	53	47	40	51
50 GB, your favourite VoIP application does not count towards the cap	51	42	40	44
50 GB, your favourite online game does not count towards the cap	50	45	39	41
50 GB	48	41	36	43
10 GB, your favourite video streaming application does not count towards the cap	15	11	12	15
10 GB, your favourite online game does not count towards the cap	5	7	7	5
10 GB, your favourite VoIP application does not count towards the cap	7	5	3	6
10 GB	0	0	0	0

Information package not seen

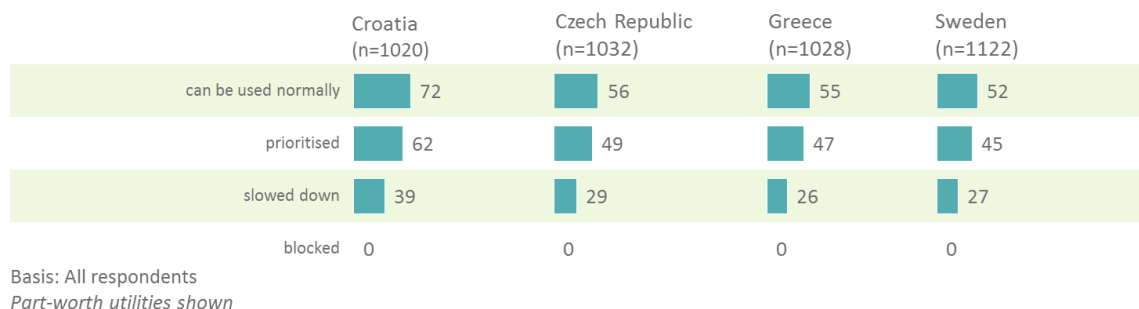
	Croatia (n=510)	Czech Republic (n=510)	Greece (n=517)	Sweden (n=565)
No data cap	79	63	57	70
50 GB, your favourite video streaming application does not count towards the cap	50	46	38	51
50 GB, your favourite VoIP application does not count towards the cap	47	43	38	46
50 GB, your favourite online game does not count towards the cap	47	43	39	44
50 GB	45	40	33	44
10 GB, your favourite video streaming application does not count towards the cap	11	12	10	13
10 GB, your favourite online game does not count towards the cap	7	6	5	4
10 GB, your favourite VoIP application does not count towards the cap	4	6	6	6
10 GB	0	0	0	0

Basis: All respondents

Part-worth utilities shown

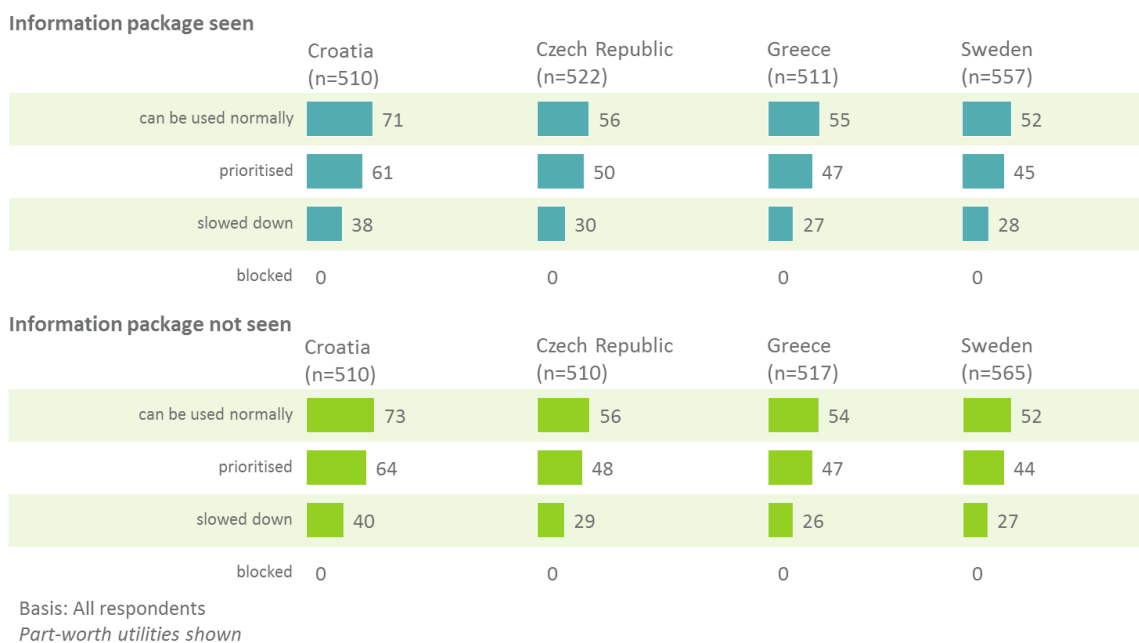
Part-worth utilities of the levels of the attribute *P2P / File sharing* show clear preferences for normal usage of P2P / File sharing applications (see Figure 7-43). Unrestricted and not prioritised access to P2P / File sharing applications is the most attractive across all countries. Prioritised access is ranked second. For slowed down accessibility of P2P / File sharing applications, a substantial loss in utility can be observed. Across all countries, slowed down accessibility is only about half as attractive as normal use. As to be expected, blocked access of P2P / File sharing is least attractive.

Figure 7-43: Part-worth utilities attribute P2P / File sharing by country



Experimental manipulation does not have an effect on preference structures of the test group and control group (see Figure 7-44). Both groups show very similar preferences, with the utility decreasing substantially from prioritised access (rank 2) to slowed down access (rank 3).

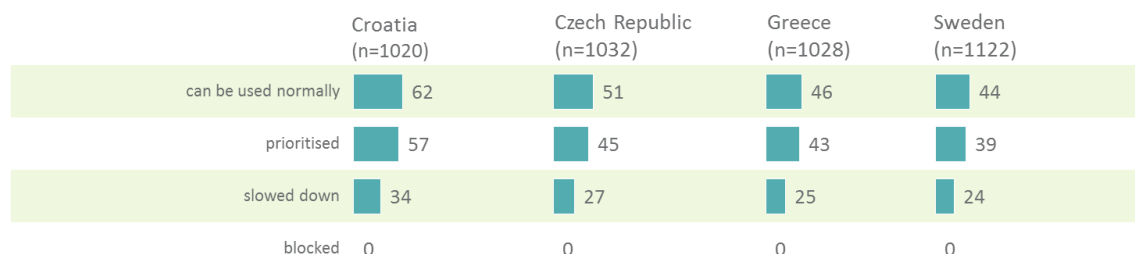
Figure 7-44: Part-worth utilities attribute P2P / File sharing by experimental group and country



Similar patterns of the preference structure found with respect to the accessibility of P2P / File sharing applications are observed for the other network neutrality-related attributes reported subsequently. The clear preference of respondents for accessibility of applications without any restrictions or prioritisation might be a consequence of existing market structures. To this date, consumers are predominantly confronted with fixed Internet offers that guarantee unrestricted accessibility to any given Internet applications. This characteristic of market offers is likely to serve as a basic standard used for comparison. Deviations from this basic standard might induce uncertainty or even reluctance resulting in reduced attractiveness.

With respect to the accessibility of *VoIP services*, normal usage is the most attractive option as well across all countries (see Figure 7-45). As reported for the accessibility of P2P / File sharing applications, attractiveness is substantially lower for slowed down access to VoIP applications.

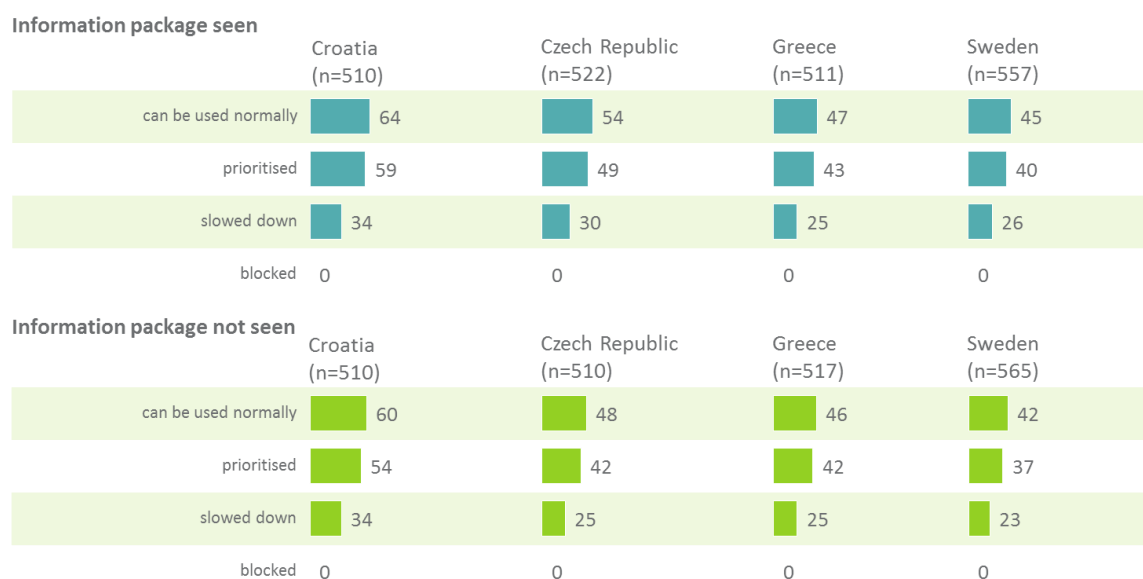
Figure 7-45: Part-worth utilities attribute VoIP services by country



Basis: All respondents
Part-worth utilities shown

Experimental manipulation does not affect preference structures with respect to the accessibility of VoIP services (see Figure 7-46).

Figure 7-46: Part-worth utilities attribute VoIP services by experimental group and country



Basis: All respondents
Part-worth utilities shown

Figure 7-47 shows the part-worth utilities for the accessibility of *video streaming* applications. The preference structure is similar to those of the network neutrality-related attributes reported above. Normal usage is most attractive. Part-worth utilities decrease substantially for restricted accessibility of video streaming applications.

Figure 7-47: Part-worth utilities attribute video streaming by country

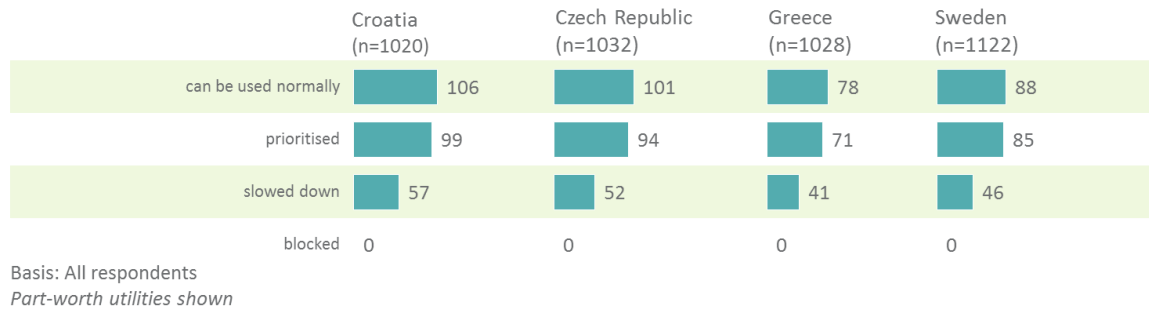
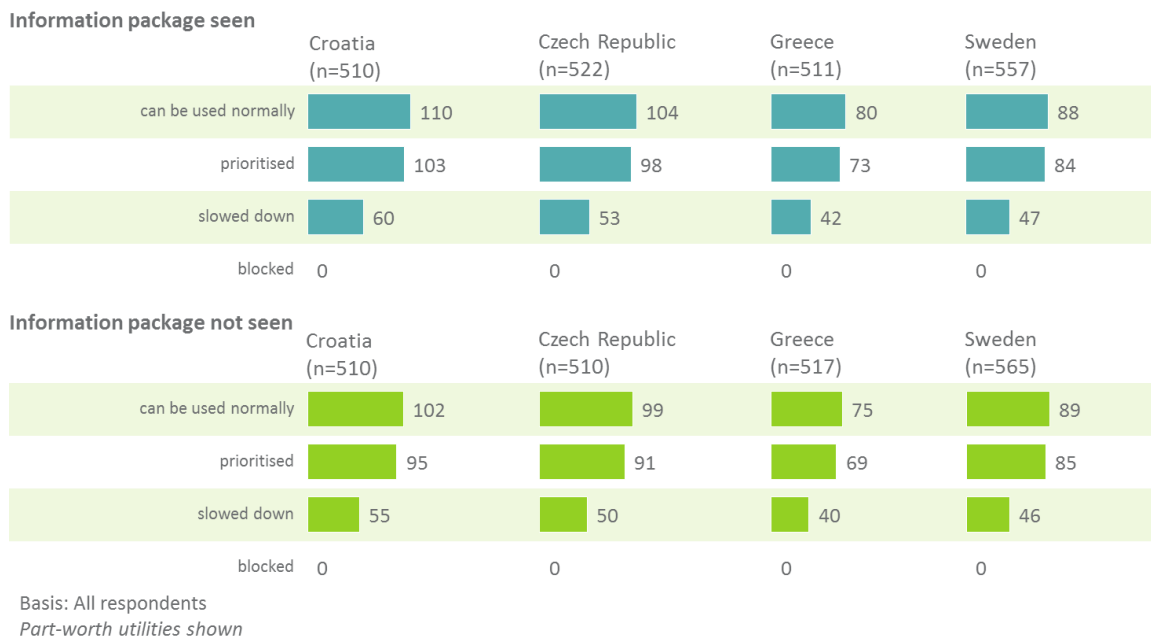


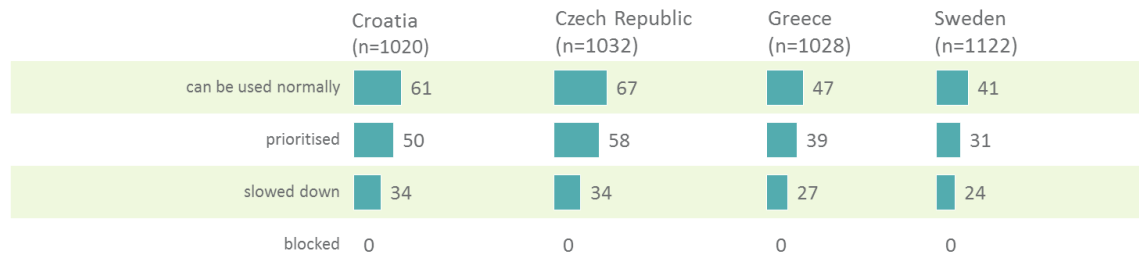
Figure 7-48 shows part-worth utilities for the accessibility of video streaming applications by experimental manipulation. Results show no differences between test group and control group.

Figure 7-48: Part-worth utilities attribute video streaming by experimental group and country



With respect to accessibility of online gaming applications, normal usage is most attractive as well across all countries (see Figure 7-49). Again, restricted accessibility in terms of slower speed is about half as attractive as normal usage.

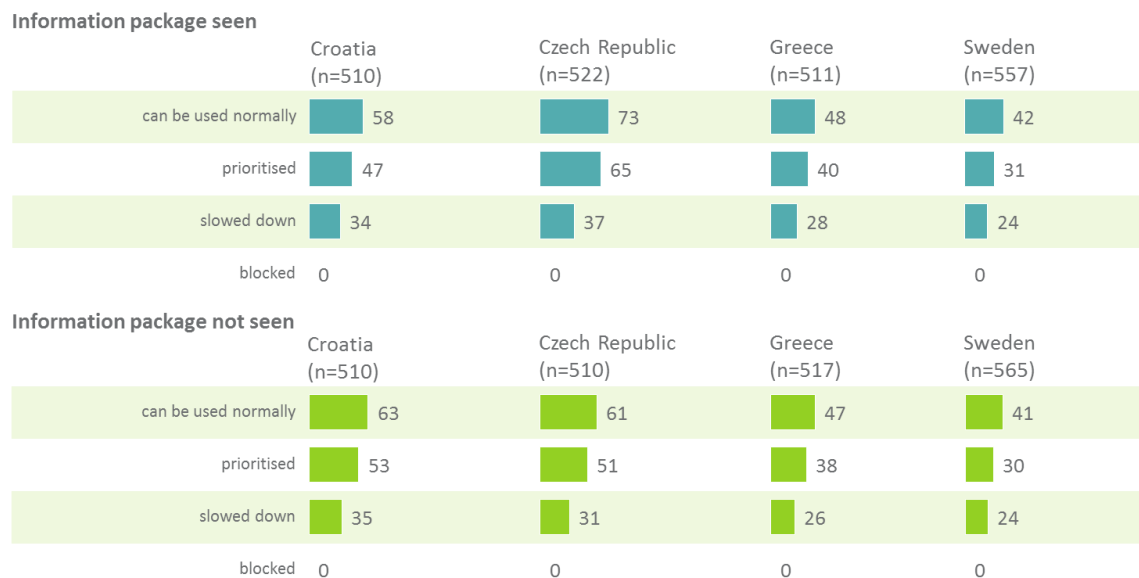
Figure 7-49: Part-worth utilities attribute online gaming by country



Basis: All respondents
Part-worth utilities shown

Part-worth utilities of the attribute accessibility of online gaming applications show similar preference structures for test group and control group (see Figure 7-50).

Figure 7-50: Part-worth utilities attribute online gaming by experimental group and country



Basis: All respondents
Part-worth utilities shown

Figure 7-51 shows part-worth utilities for the price levels tested in the conjoint analysis. As expected, lower price levels are preferred over higher price levels in general.

Figure 7-51: Part-worth utilities attribute price by country

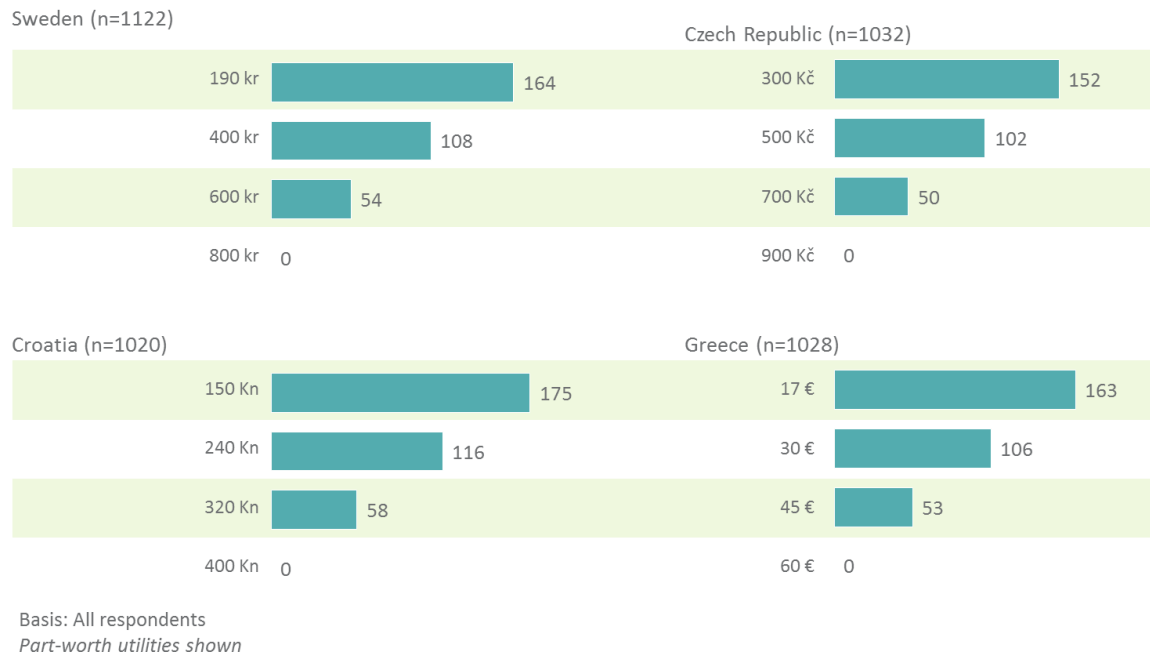
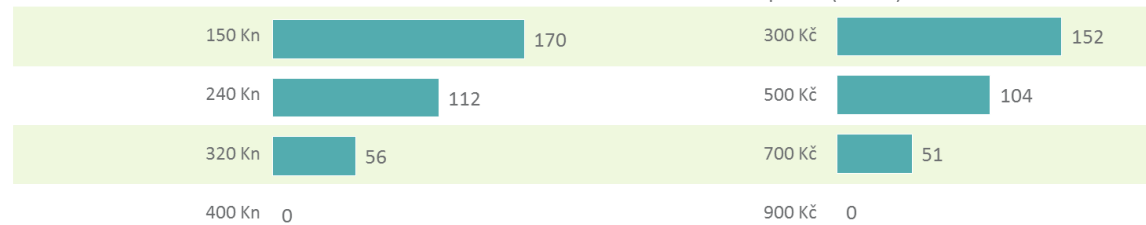


Figure 7-52 shows part-worth utilities for the attribute levels of price for an experimental group per country. Preference structures within test group and control group are similar.

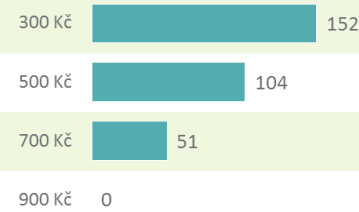
Figure 7-52: Part-worth utilities attribute price by experimental group and country

Information package seen

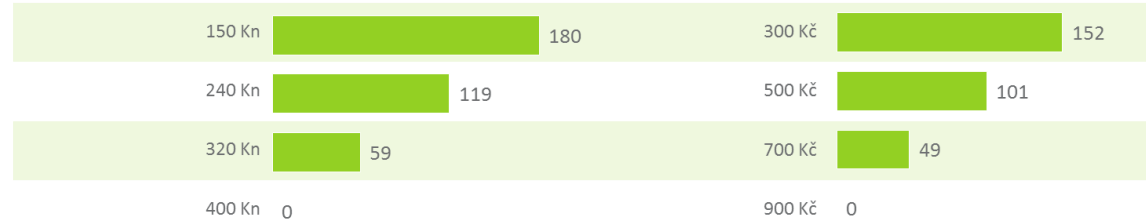
Croatia (n=510)



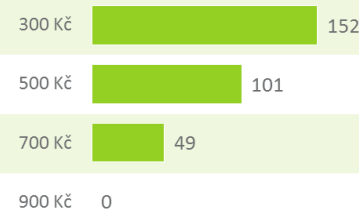
Czech Republic (n=522)

**Information package not seen**

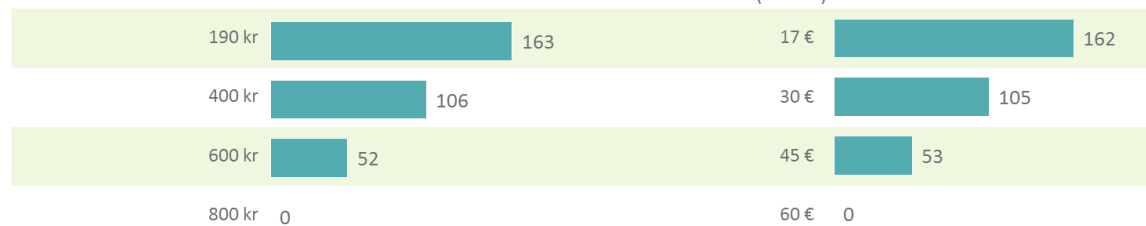
Croatia (n=510)



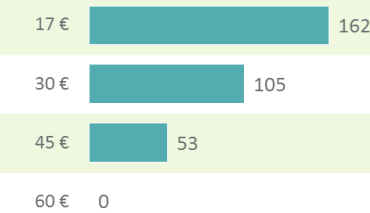
Czech Republic (n=510)

**Information package seen**

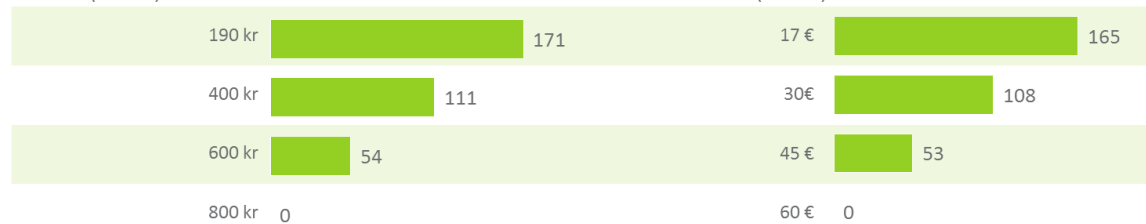
Sweden (n=557)



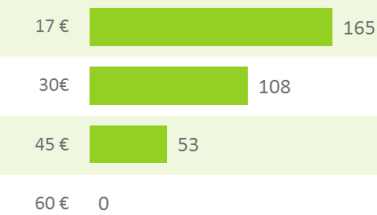
Greece (n=511)

**Information package not seen**

Sweden (n=565)



Greece (n=517)



Basis: All respondents

Part-worth utilities shown

7.3.3 The value of network neutrality-related attributes

Whilst existing offers for Internet access at home have fewer deviations from network neutrality than mobile offers¹⁷⁹, we may see more such offers in the future. Thus, it is important to learn whether consumers appreciate or disfavour offers with deviations from network neutrality. Hence, it is also relevant to evaluate the degree to which consumers appreciate or disfavour such offers.

In chapter 7.3.2, part-worth utilities for network neutrality-related attributes are reported (cf. Figure 7-43, Figure 7-45, Figure 7-47, and Figure 7-49). Part-worth utilities show clear preferences for normal usage of the Internet applications tested across all countries. Interestingly, normal unrestricted access even is more attractive than prioritised access to these applications. Although loss in attractiveness from normal usage to prioritised access is low, respondents prefer normal access i.e. the level of service that they are familiar with.

Moreover, loss of attractiveness for the options *slowed down access* and *blocked access* is crucial. Throughout all attributes reflecting accessibility to specific applications, the option *slowed down access* is only about half as attractive as normal usage of the applications. Loss in attractiveness from the option *slowed down access* compared to *blocked access* is about as high as the loss observed from normal usage to *slowed down access*. These findings indicate that deviations from the principle of normal unrestricted access are strongly disfavoured by consumers across all test areas. It has to be discussed whether network neutrality has to be understood as a basic factor for consumers. Such a basic factor might be seen as a standard requirement of Internet offers. In consequence, violations of this standard might be penalised harshly by consumers resulting in substantial drops in utility.

For further analysis of the value of network neutrality offers to consumers, the relationship of price and network neutrality-related attributes was investigated. Analyses were performed by systematically varying price as well as the accessibility of specific Internet applications. By simulating offers with different price points and different types of access to P2P / File sharing, VoIP services, video streaming, and online gaming utility scores for these offers were calculated. Other attributes were held constant by including the most attractive level across all offers simulated per country. Brand was excluded from this principle. As interactions of brand and price (as well as other performance-orientated attributes) are likely, each combination of price and network neutrality-related attribute level was simulated for all brands included in the conjoint analysis. Subsequently, utility scores of one offer (i.e. a specific price and network neutrality-related attribute level) were averaged across all brands. Analyses were performed using the Sawtooth SMRT (*Sawtooth Software Market Research Tools*) tool.

¹⁷⁹ For a comprehensive overview of traffic management practices in Europe see: BEREC (2012): BEREC findings on traffic management practices in Europe. A view of traffic management and other practices resulting in restrictions to the open Internet in Europe. BoR (12) 30.

Figure 7-53 to Figure 7-56 show raw utility scores (averaged across brands) for each network neutrality-related attribute per country. Utility scores are reported for each price point tested in relationship to attribute levels of P2P / File sharing, VoIP services, video streaming, and online gaming. Absolute values of utility scores may not be interpreted rather than ratios of scores dependent on different types of access to Internet applications.

Utility scores for combinations of price and different types of access to Internet applications in Croatia are shown in Figure 7-53. Results show that utility scores decrease slightly for prioritised access compared to normal access. This pattern holds true for all Internet applications and all price points tested. Utility scores for blocked access options decrease substantially. When comparing utility scores of the combination of blocked access options and the lowest price point (150 kn; in orange colour) with the combination of normal access options and the next higher price point (240 kn; in purple colour), the first only reaches about the utility level of the latter. With respect to video streaming, the blocked access option at 150 kn is below the utility level of the normal access option at 240 kn. This finding shows that an offer including blocked access to video streaming at 150 kn is of lower utility to Croatian consumers than an offer including normal access to video streaming at 240 kn. Slowed down access options typically fall in between the range of utility scores of normal access options and blocked access options.

Figure 7-53: Association of price and accessibility of Internet applications (Croatia)



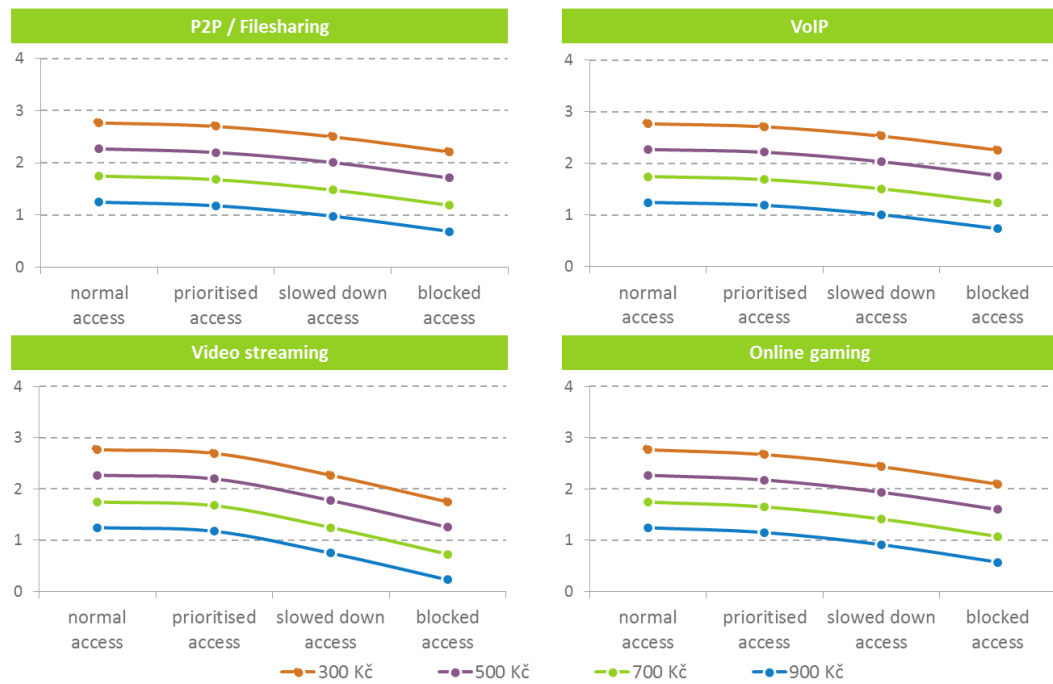
Basis: Respondents in Croatia, n=1020

Raw utility scores shown

These findings are replicated in the Czech Republic (see Figure 7-60), Greece (see Figure 7-61), and Sweden (see Figure 7-62) with only minor deviations. In the Czech Republic, the pattern described for access options to video streaming (such that utility

scores for blocked access options fall below utility scores of the normal access option of the next higher price point) is also found for the accessibility to online gaming applications. In Sweden, the decrease in utility from prioritised to slowed down access to online gaming applications is less distinct.

Figure 7-54: Association of price and accessibility of Internet applications (Czech Republic)



Basis: Respondents in Czech Republic, n=1032

Raw utility scores shown

Figure 7-55: Association of price and accessibility of Internet applications (Greece)



Basis: Respondents in Greece, n=1028

Raw utility scores shown

Figure 7-56: Association of price and accessibility of Internet applications (Sweden)



Basis: Respondents in Sweden, n=1122

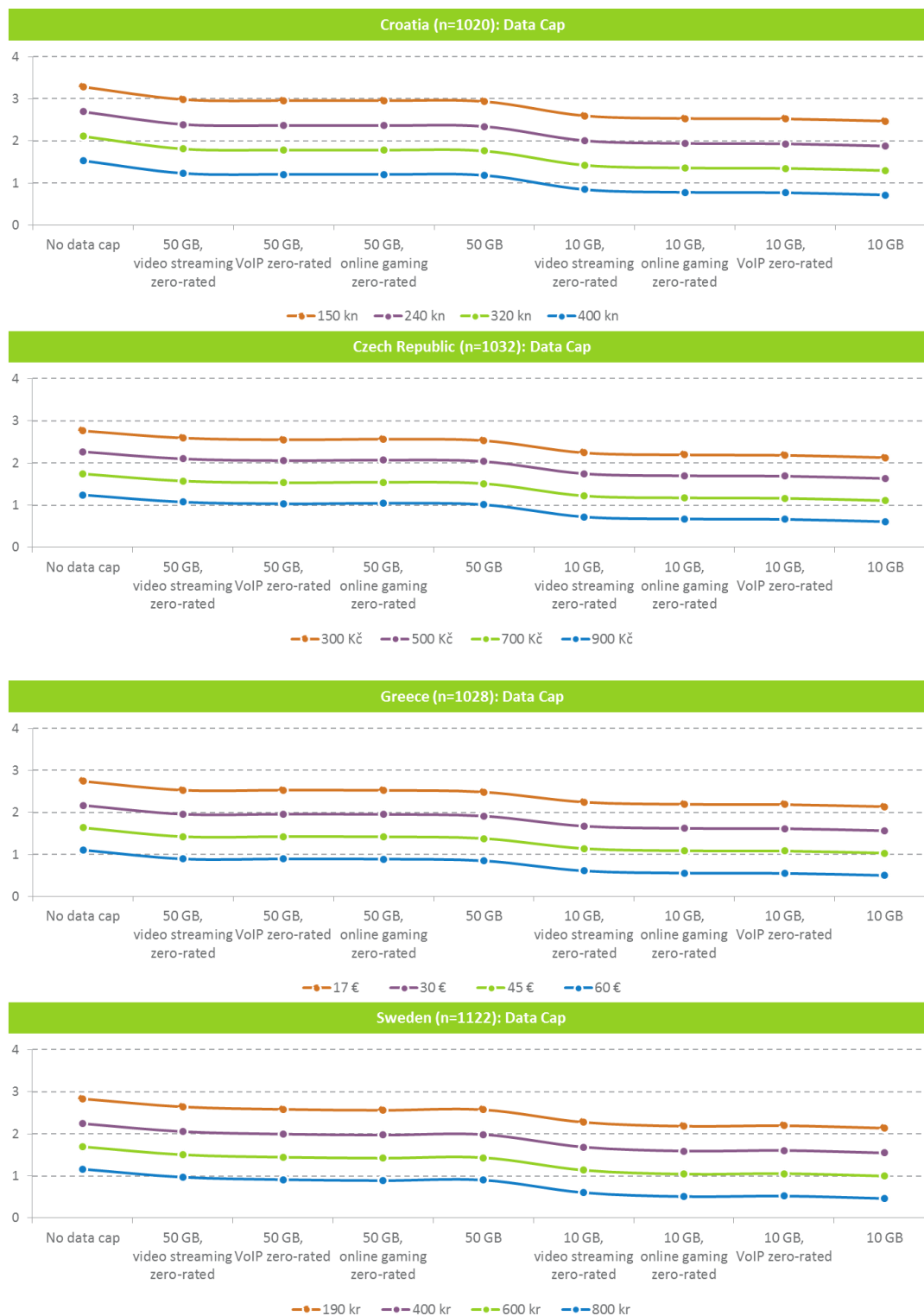
Raw utility scores shown

Overall, these findings clearly indicate that deviations from normal access is penalised by decline in utility. This also holds true for slowed down and, to a lesser extent, prioritised access. Utility for offers with blocked access options declines to an extent

that offers with normal access options at a higher price point can compete or even exceed blocked access options in terms of utility.

Figure 7-57 shows raw utility scores per price point for the data cap options tested in the conjoint analysis. As outlined above, analyses were performed by varying data cap options and price for each brand tested while holding everything else constant. Utility scores were averaged across brands. Results show the characteristic decrease in utility for 50 GB options versus the no data cap option and for 50 GB options versus 10 GB options that are described in Section 7.3.2. Utilities for 10 GB options roughly score on the level of the no data cap option given the next higher price point (e.g. the utility of the 10 GB option with video streaming zero-rated on the level of 150 kn is about as attractive as the option without data cap on the level of 240 kn in Croatia).

Figure 7-57: Association of price and data cap options by test area



Raw utility scores shown

7.3.4 Psychographic section

The results of the focus group discussions revealed that network neutrality and deviations from this principle can be a very emotional topic for consumers once they have learned about the effects this may have on their own quality of experience, the quality of experience of others or the wider economic environment. In order to reflect this in the survey, several questions addressing the issues discussed in the focus groups as well as raised by external experts in the review workshop held a part of the present research project were added to the questionnaire. The following paragraphs show the results of these questions. First, the average results for each test area are discussed. Each line in the two following figures indicates the average ratings for one of the test areas: Croatia in red; Czech Republic turquoise; Greece in blue and Sweden in orange. Since one would expect respondents' rating to vary according to whether they had seen the information or not, individual test area results split by the groups of respondents are to be discussed after the average ratings.

As regards their attitudes towards network neutrality, respondents were asked to state their agreement with two batteries of statement items on 4-point Likert-scales. The figures below show the two top boxes of agreement i.e. "rather agree" "completely agree". It should be noted that for some of the items there is a relatively high percentage of non-response ("I don't know")¹⁸⁰. Wherever this is significant, it will be mentioned in the following.

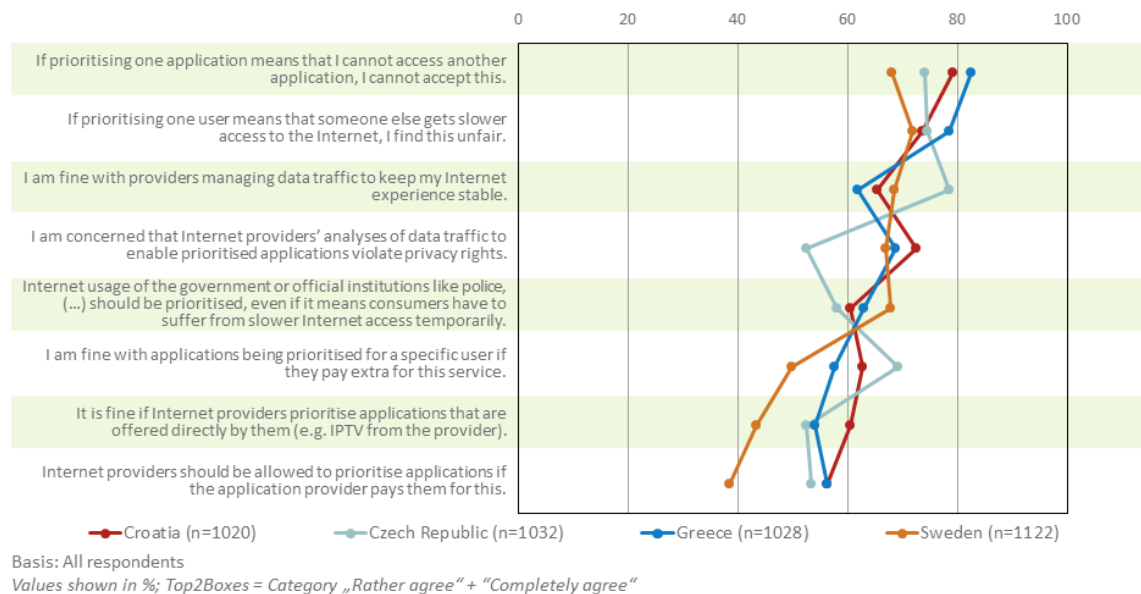
The first of the two item batteries revolves around the immediate effects of traffic management on one's or other customers' own quality experience. It featured both positively and negatively framed items as reproduced in Figure 7-58 below.

For the first item "If prioritising one application means that I cannot access another application, I cannot accept this." there is on average the highest level of agreement. In Croatia (79%) and Greece (82%), around four fifths of respondents agree with this statement. In the Czech Republic and Sweden, a statistically significant smaller share of respondents agrees with the statement. It should be noted that in Sweden 16% of respondents did not answer this question (Czech Republic: 11%, Croatia: 6%, Greece: 5%). The ratings for the item "If prioritising one user means that someone else gets slower access to the Internet, I find this unfair." are more similar across test areas. In all countries, around three fourths of respondents agree with this statement. Again, Sweden shows a relatively high percentage (15%) of non-response compared to the other countries (Czech Republic: 10%, Croatia: 7%, Greece: 6%). Whilst respondents in Croatia, Greece and Sweden rate the item "I am fine with providers managing data traffic to keep my Internet experience stable" similarly, a statistically significant higher percentage of respondents from the Czech Republic agree (78% - of these 34% agree completely). Again, in Sweden 14% of respondents did not respond to this item (Czech Republic: 10%, Croatia: 7%, Greece: 6%). Czech respondents differ also statistically

¹⁸⁰ Top two box figures take non-response into account (i.e. top two box figures indicate the share of respondents answering "rather agree" and "completely agree" versus respondents answering "rather disagree", "completely disagree", and "don't know").

significantly from the other test areas for the following item “I am concerned that Internet providers’ analyses of data traffic to enable prioritised applications violate privacy rights.” They are much less concerned about ISPs analysing their data than respondents in the other test areas. Swedish and Croatian respondents appear particularly worried about this with 38% and 36% of them agreeing with this item respectively. Czech respondents appear to be rather undecided with 25% not responding to this item (Sweden: 17%, Greece: 10%, Croatia: 8%). For the item “Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily.” Swedish respondents show the highest agreement. In total, 39% of them completely agree with this statement. This is far more than in all the other test areas: Croatia (25%); Czech Republic (22%); Greece (25%). Non-response ranges from 14% in Sweden to 6% in Croatia and Greece. This result reflects the outcome of the focus groups well. Here the Swedes were strongly in favour of prioritising content that has obvious priority for the higher good of society. As the figure shows, the percentages for the two top boxes do not differ so much. For the next item “I am fine with applications being prioritised for a specific user if they pay extra for this service.” Swedes show the least agreement. Only half of them agree with this statement. Amongst them, only 17% agree completely. Again, this reflects the Swedish focus group results well. Although a few Swedish focus group participants indicated interest in purchasing prioritised services, the majority of them either did not consider such agreement to be fair or would only enter them if they were not at the expense of other users being slowed down. Czech respondents to the survey showed the highest agreement with this item. This may echo the generally more unstable Internet access in this test area as compared to other test areas. Thus, respondents may empathise more strongly with others wishing for prioritised access to certain applications or contents. Swedish respondents also show the lowest agreement with the following two items “It is fine if Internet providers prioritise applications that are offered directly by them (e.g. IPTV from the provider).” and “Internet providers should be allowed to prioritise applications if the application provider pays them for this.” Thus, Swedish consumers appear opposed to prioritisation of applications and content independent from who pays for this prioritisation and which application or content is prioritised. Whilst the ratings by Croatian and Greek respondents remain more or less stable across the three items, respondents from the Czech Republic show significantly less agreement with the latter two items. It should be noted that again in Sweden there is a high percentage (around 20%) of non-response for the three final items (Czech Republic: 11% to 14%, Croatia: 7% to 8%, Greece: 6% to 11%).

Figure 7-58: Attitudes towards traffic management across test areas



The average agreement ratings for the network neutrality items featured in the survey show some significant differences between the four test areas as shown in the above. Since in each test area respondents had been split into two groups, one that was shown an information package¹⁸¹ about network neutrality and its effects and the other that did not see this information. The figures below show the results of these items. All the items are reproduced as part of the figures. The lines indicate the group of respondents, who had seen the information package (blue), the ones, who have not seen it (green) and the total in grey for each of the four test areas. The items have been sorted according the share of answers in the agree part¹⁸² of the 4-point Likert-scale that was used to capture responses from highest to lowest.

Interestingly, this manipulation did not have a very distinct effect on respondents' stated attitudes towards network neutrality as the figures for the four test areas below indicate. In Croatia, agreement levels for respondents with and without prior information about network neutrality and its effects are almost perfectly similar. Even in the responses from the other test areas, only the difference in Swedish responses "Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily." reaches statistical significance at the 5% level.

¹⁸¹ The information package came in form of an animated video. The details of this video can be found in Section 6.7.

¹⁸² This means the top two boxes "rather agree" and "agree completely".

Figure 7-59: Attitudes towards traffic management in Croatia

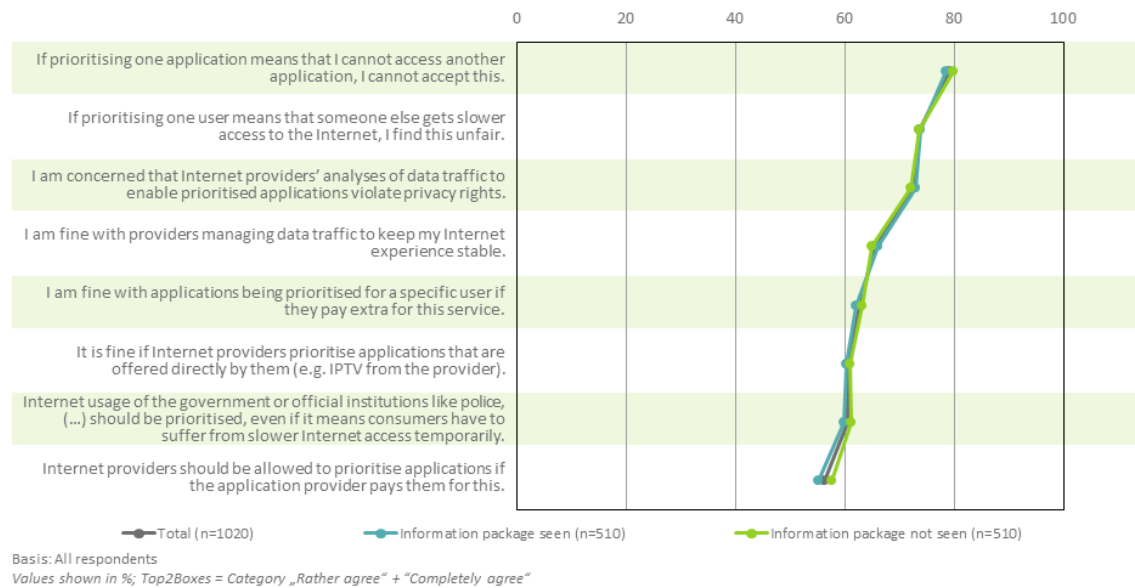


Figure 7-60: Attitudes towards traffic management in the Czech Republic



Figure 7-61: Attitudes towards traffic management in Greece

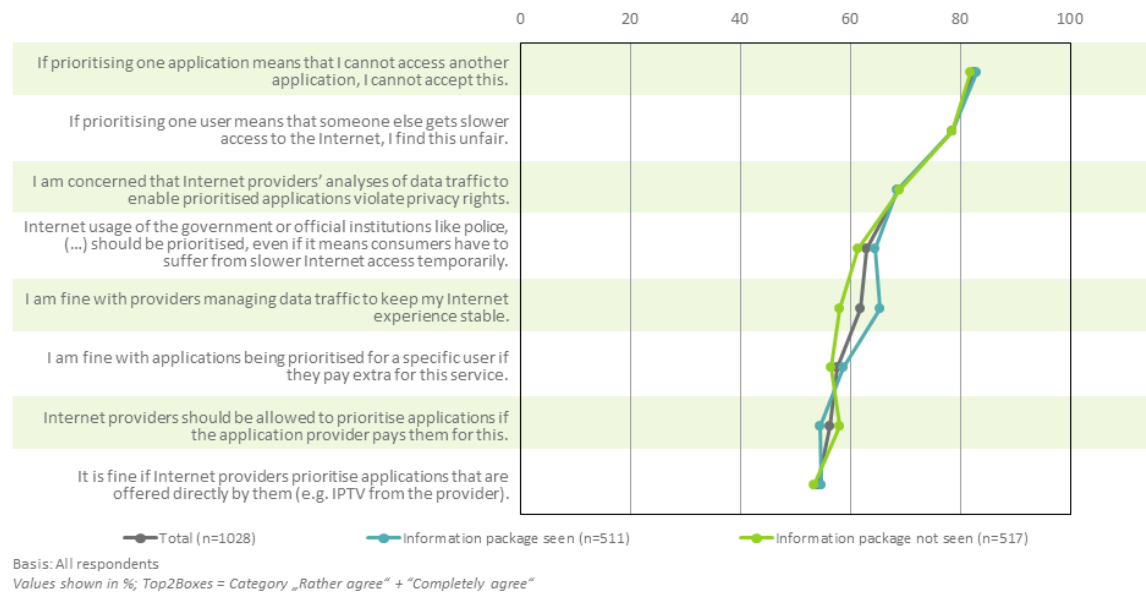
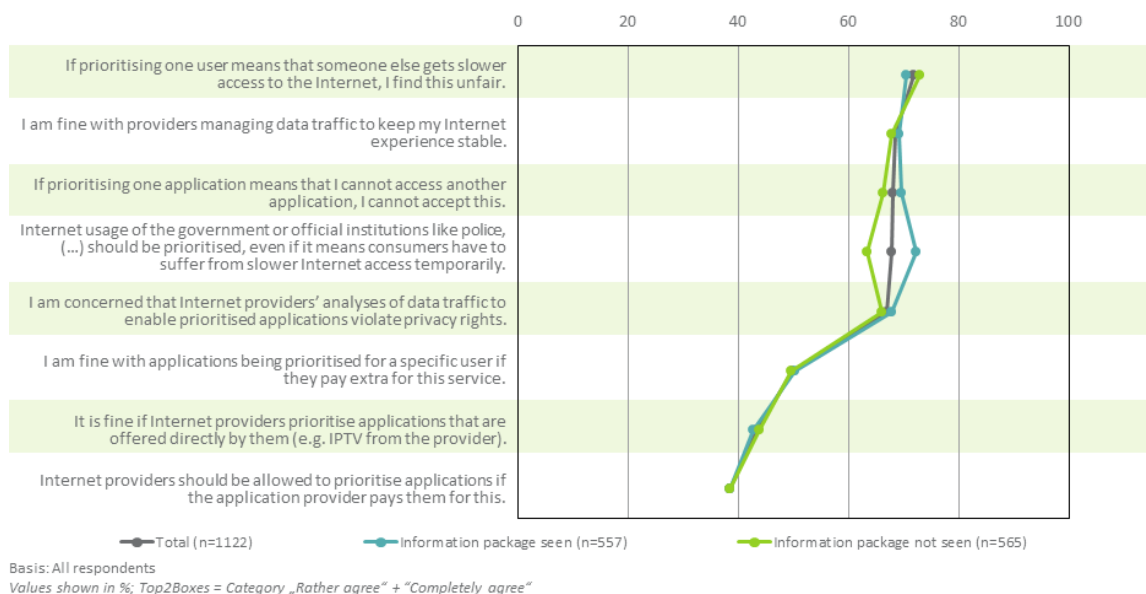


Figure 7-62: Attitudes towards traffic management in Sweden



The second item set referred to more general aspects of network neutrality deliberately going beyond the immediate sphere of respondents. Just as with the previous item set the following paragraphs first present and compare the average results for the four test areas. Hence, in each test area, results for the two groups of respondents in the survey are compared against each other. The test areas are depicted in the Figure 7-63 as follows: Croatia in red; Czech Republic turquoise; Greece in blue and Sweden in orange.

Considering agreement levels across test areas; they appear to follow a common thread with Sweden usually showing the lowest agreement with the items and Greece

or Croatia in turns showing the highest agreement. Within this thread, however, for some items, statistically significant differences emerge between test areas. The following paragraph will present each item in turn and highlight these differences wherever they appear.

The first five items in Figure 7-63 show a similar pattern. Agreement level of Swedish respondents is the lowest. The ones from Greek respondents are the highest. The responses from Croatia and the Czech Republic fall in between with the Czech Republic being closer to Sweden and Croatia being closer to Greece (items 2, 3 and 5). On the remaining two items (1 and 4), respondents from the Czech Republic and Croatia show almost the same level of agreement.

The first item “Everybody should have the right to receive all the content and applications that are offered online.” shown in Figure 7-63 triggered the highest levels of agreement amongst the respondents in the test areas on average. To understand how convinced consumers in the test areas are about this item, one should, however, also consider the percentage of respondents that “completely agree”: Croatia (50%); Czech Republic (46%); Greece (54%) and Sweden (45%). Thus, around half of consumers in the test areas are likely to completely agree with this statement. This underlines the results emerging from the focus group discussions: namely, that consumers understand the Internet as a fundamentally free and open environment, where they themselves can make decisions about what applications they want to use and what kind of content they want to engage with. It should be noted that the relatively low agreement levels for the top two boxes in Sweden may stem from a relatively high percentage of non-response in this test area (18%).

The second item “Internet providers are socially responsible to provide everyone with the same quality of access to the Internet.” shows fewer commonalities amongst the four test areas. Levels of agreement are statically higher in Greece and Croatia (both 85%) than in the Czech Republic and Sweden with 76% and 71% of respondents agreeing respectively. Turning from the top two boxes to the ones that “completely agree” with this statement, the picture becomes even clearer. In Croatia (58%) and Greece (52%), more than half of consumers are likely to feel strongly about this issue. In the Czech Republic (38%) and Sweden (41%), the percentage of people, who agree completely with this statement, is much lower. Again, it should be noted that in Sweden there is 16% of non-response for this item.

The third item “Equal and unrestricted access to the Internet is a human right.” shows a very similar pattern. Again, more than half of the respondents from Croatia (58%) and Greece (55%) agree completely with this statement, whilst in the Czech Republic (37%) and Sweden¹⁸³ (37%) less than half of respondents feel the same way.

The fourth item “Transparency is all that it needs: people will switch providers if they do not agree with prioritising or blocking Internet traffic, as long as they are informed that it takes place.” shown in Figure 7-63 addresses the idea that consumers will switch if they

183 15% of non-response for this item.

do not agree with the traffic management practices of their ISP. Also this item triggers high levels of agreement with respondents. In Greece, 83% agree with this statement. This is more statically significant than in all the other test areas. Given the high level of switching over recent years, ISPs certainly should take this issue seriously. In Croatia (79%), the Czech Republic (77%) and Sweden (67%), a high percentage of consumers are also likely to agree with this statement, however, both secondary and focus group results indicate that actual switching appears to be less likely in these countries unless one's own quality of experience is severely compromised by such traffic management practices. Again, the figure for Sweden should be interpreted carefully as 25% of respondents did not respond to the item. In the Czech Republic, it was 14%. So, for both test areas actual agreement amongst consumers may be even slightly higher.

The next item "National regulators have a responsibility to make sure that everyone is treated equally when it comes to Internet access and speed." is one of two items within this set that refers to the role of national regulators. It refers directly to their involvement in network neutrality issues. As it emerged from the focus groups, consumers generally lack the technical knowledge to express their wishes in technical or economic terms, however, as the first three items of this set also reflect, they have strong preconceptions about the nature of the Internet as a highly democratic medium that everyone who wishes ought to have (unrestricted) access to. The responses to this item indicate that consumers in the four test areas are likely to want their national regulator to ensure equal access to the Internet and its' applications and content. In Greece and Croatia, 84% and 82% respectively assign the task of making sure that everyone is treated equally when it comes to Internet access and speed. In Sweden (67%) and the Czech Republic (69%) still the vast majority of respondents feel the same way. In both of the latter test areas, there is a relatively large percentage of non-response: Sweden 21% and the Czech Republic 13%. It should also be noted that in Croatia more than half of the respondents completely agree with this statement indicating a particularly strong trust in their national regulator. This somewhat echoes the focus group results, where Croatians also showed high levels of awareness and use of their NRA's services¹⁸⁴.

Online privacy had not been emphasised particularly in the focus group discussions, however, it has been a latent theme underlying many of the discussions. Consumers do not like the idea of being spied on or seeing their data being used for advertising and other purposes. Thus, it is not surprising that there is a generally high level of agreement with the item "Internet providers should not monitor what individual users do online." In all test areas, consistently 70% or more respondents agree with this statement. In Sweden, agreement is particularly high with more than half of respondents completely agreeing with the statement (57%). This is statistically significantly higher than in the remaining three test areas.¹⁸⁵

The seventh item "National regulators have a responsibility to make it easier for users to find alternative offers." shown in Figure 7-63 is the second item of this set that addresses the role of NRAs. In particular, Greek consumers appear to agree strongly

¹⁸⁴ See focus group results in Section 6.

¹⁸⁵ Again, Sweden shows a relatively high percentage (14%) of non-response on this item.

with this statement. Here, 83% of respondents and thus statistically significantly more than in the other three test areas agree with this statement. In Croatia, 78% of respondents agree with this statement. In both countries a similar percentage (42% and 43% respectively) completely agrees with this statement. In the Czech Republic (68%) and Sweden (62%) significantly fewer respondents agree with the statement. Across two test areas, there is high percentage of non-response for this item: 15% in the Czech Republic and 23% in Sweden.

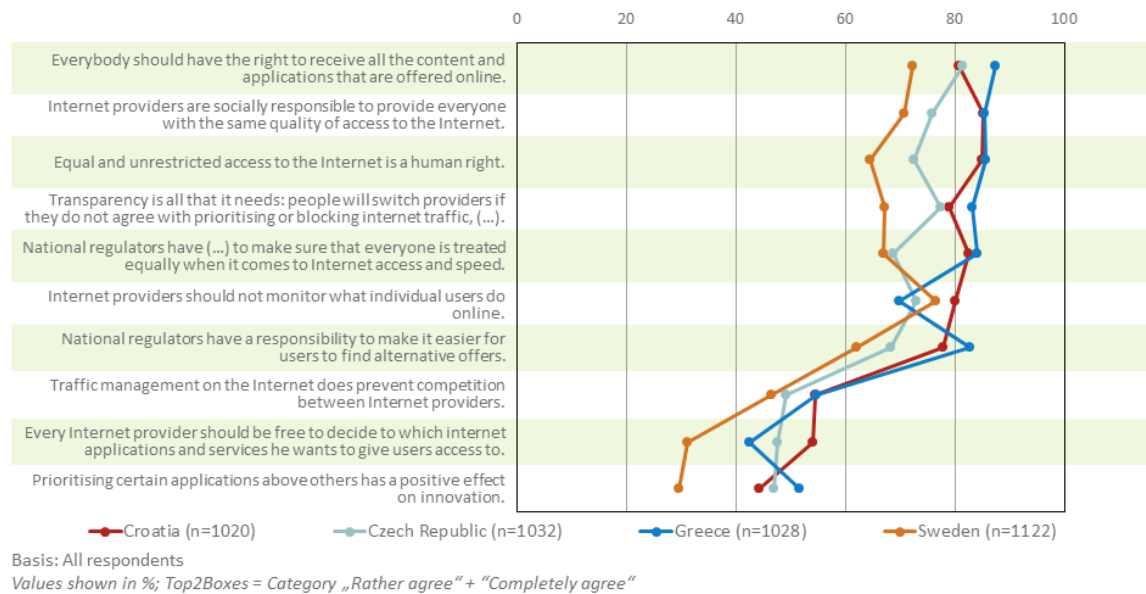
The consistently high percentages of non-response for the item “Traffic management on the Internet does prevent competition between Internet providers.” – Croatia: 18%; Czech Republic: 26%; Greece: 18% and Sweden: 36% – indicate that respondents had great difficulties in evaluating this statement. As the focus group results indicate consumers find it very difficult to assess the wider economic impact of traffic management. Thus, the survey results for this item further underpin this finding. Nonetheless, it is interesting to note that in Croatia (54%) and Greece (55%) more than half of the respondents agree with this statement, whilst in the other two areas statistically significant fewer respondents do so: Czech Republic (49%) and Sweden (46%).

For the penultimate item “Every Internet provider should be free to decide to which Internet applications and services he wants to give users access to.” it is probably more relevant to consider the percentage of respondents not agreeing with this statement. In Greece (50%) and Sweden¹⁸⁶ (49%), there is strong opposition from consumers to the idea that ISPs can control which applications and services consumers can access. In the other two test areas, fewer respondents oppose this idea – Croatia: 38%; Czech Republic: 41%. Still, this is a considerable part of the market.

The item “Prioritising certain applications above others has a positive effect on innovation.” appears to be similar to the item “Traffic management on the Internet does prevent competition between Internet providers.” above. Again, there is a large percentage of non-response across all test areas: Croatia: 12%; Czech Republic: 24%; Greece: 11% and Sweden: 30%. In line with the focus group results, the Swedes appear to be the only ones that feel that prioritisation could have a potentially harmful effect on innovation. Here, only 30% of respondents agree with the statement. Out of them, only 6% completely agree. In the other test areas, around half of respondents agree with the statement.

186 20% non-response on this item.

Figure 7-63: Attitudes towards network neutrality in general across test areas



Just as for the other item set, the information package did not make an actual difference to respondents' attitude towards the statements as can be seen from the following figures depicting the three groups of respondents in the survey: respondents who have seen the information package in blue, the ones who have not seen it in green and the total in grey for each of the four test areas.

Figure 7-64: Attitudes towards network neutrality in general in Croatia

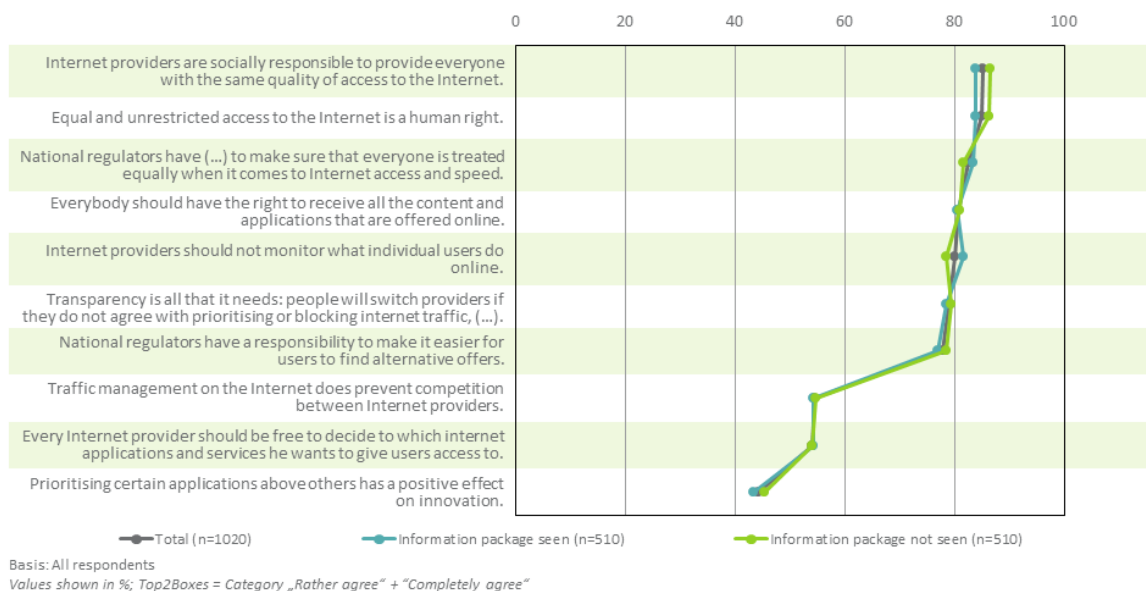


Figure 7-65: Attitudes towards network neutrality in general in the Czech Republic

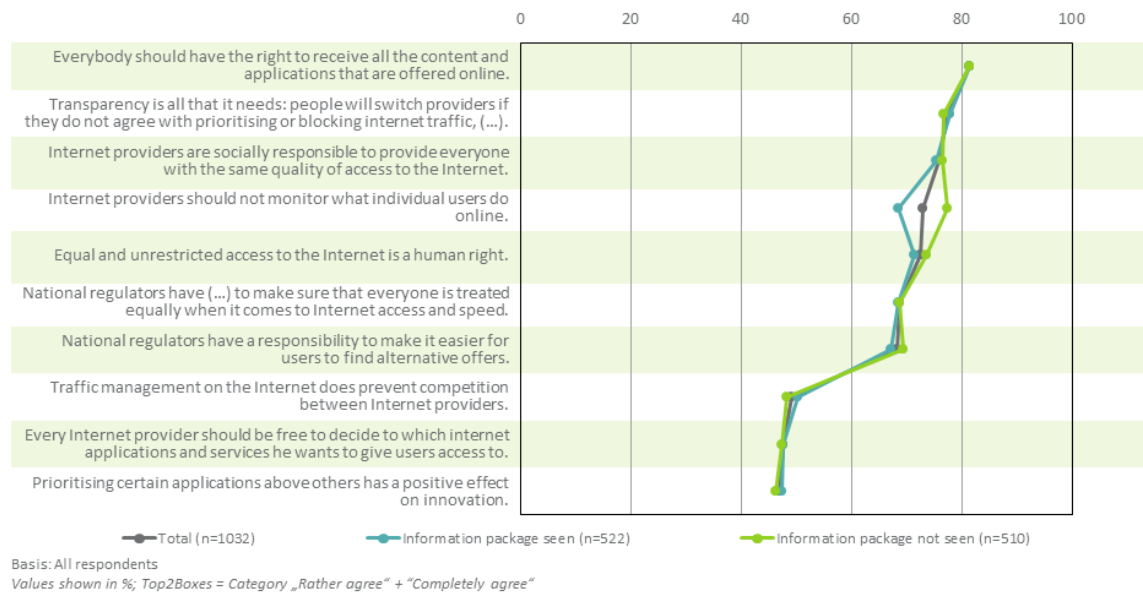


Figure 7-66: Attitudes towards network neutrality in general in Greece

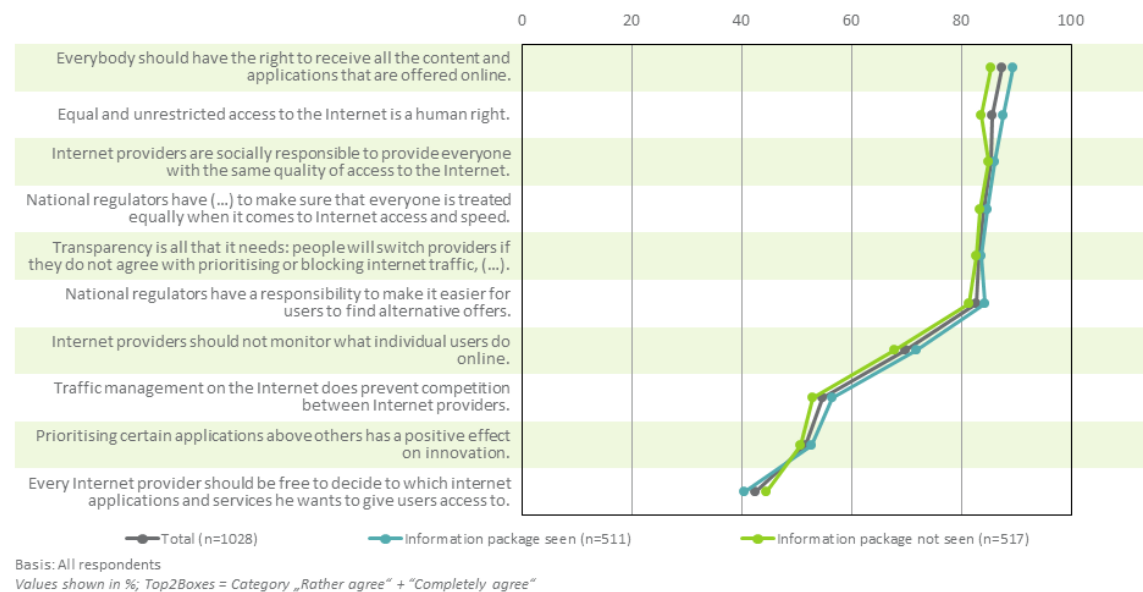
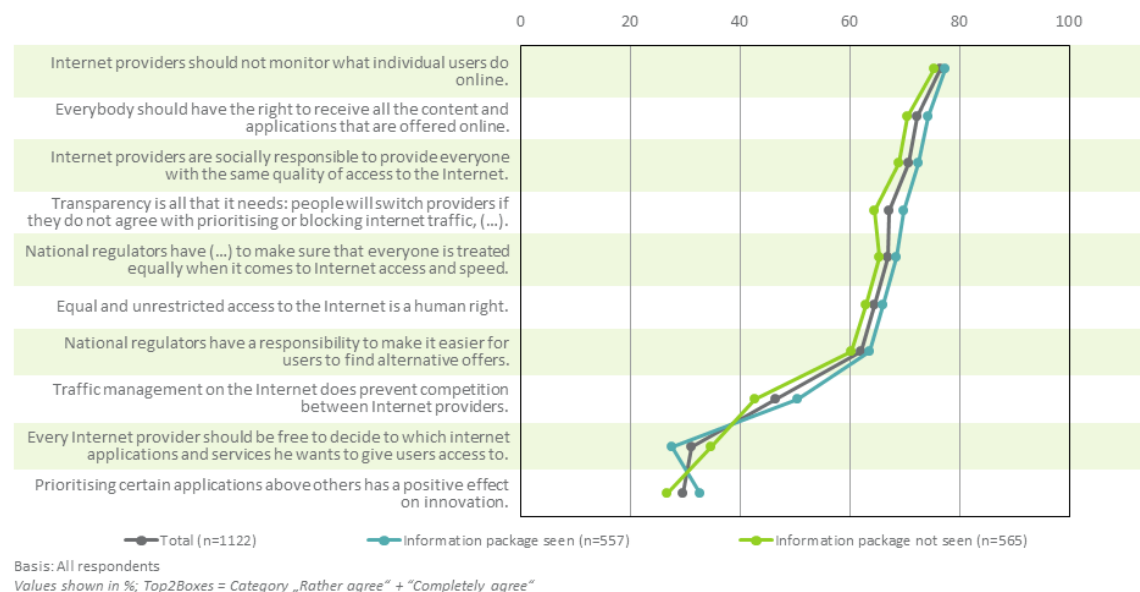


Figure 7-67: Attitudes towards network neutrality in general in Sweden



7.3.5 Consumer segmentation

In order to identify distinguishable consumer groups, post hoc market segmentation was conducted based on the conjoint results as input data. Segmentation was conducted across all countries to derive stable segments valid for all countries (i.e. the segmentation procedure was applied across the overall sample including all test area samples). Concretely, the objective was to categorise respondents based on their preferences as measured in the conjoint analysis. Characteristics of such preference-based consumer segments will be described in detail referring to socio-demographics, usage patterns and attitudes.

Fulfilling this objective, respondents' relative importance for each of the product attributes was used to identify mutually exclusive segments of consumers. The relative importance of the attributes tested (cf. Section 7.3.2) provided input data for the segmentation procedure. This means, that consumers in each segment share largely similar preferences for the different attributes.

The following paragraph describes the consumer segments identified, including a brief explanation of the statistical methods used, and concludes in a detailed consumer profiling by examining the key discriminating characteristics (e.g. background-descriptor and behaviour-related variables) for those segments. Profound profiling beyond preference similarities is essential for gaining deeper customer insights, eventually labelling the different consumer segments due to their typical distinctive features and allowing for implementation in product positioning and pricing, as well as differentiated marketing and targeting.

An agglomerative hierarchical clustering-procedure was applied in order to identify heterogeneous subpopulations of Internets users. For the purpose of identifying those subgroups and assigning cases to one of the groups, each case was initially treated as

an individual cluster within the overall population. Subsequently, at each step, two of the clusters were iteratively merged into super-clusters, such that, the average distance between the members of the resulting cluster is minimised. Here, the distance metric was defined as the Euclidean distance in the 10-dimensional importance-vector space. Since all importance vectors were scaled equally, no prior normalisation was required. The distance d between any two members (a and b) was calculated as follows:

$$d_{(a,b)} = \sqrt{(a_1 - b_1)^2 + (a_2 - b_2)^2 \dots + (a_{10} - b_{10})^2}$$

The procedure of choosing the to-be-merged clusters based on a loss-function that minimizes the average distance between all members of the resulting cluster is also termed the *within group linkage*. It is the average Euclidean distance K between all n possible pairs of members in the newly formed cluster.

$$K = \sum_{j=1}^n \frac{d_j}{n}$$

The loss function L that underlies *within group linkage* then seeks the q th pair of clusters, for which the average Euclidean distance within the resulting group is minimal and merges it into a super-cluster.

$$L = \min_{q \in M} K_q$$

After inspection of the distributions of group members within the four different countries for each of the four different clustering solutions (i.e. 2, 3, 4 and 5 remaining clusters), a thorough heuristic examination resulted in a well-defined hierarchical clustering solution with four extracted groups as fitting the data best (e.g. being the most meaningful and consistent grouping in accordance with the observed consumer characteristics).

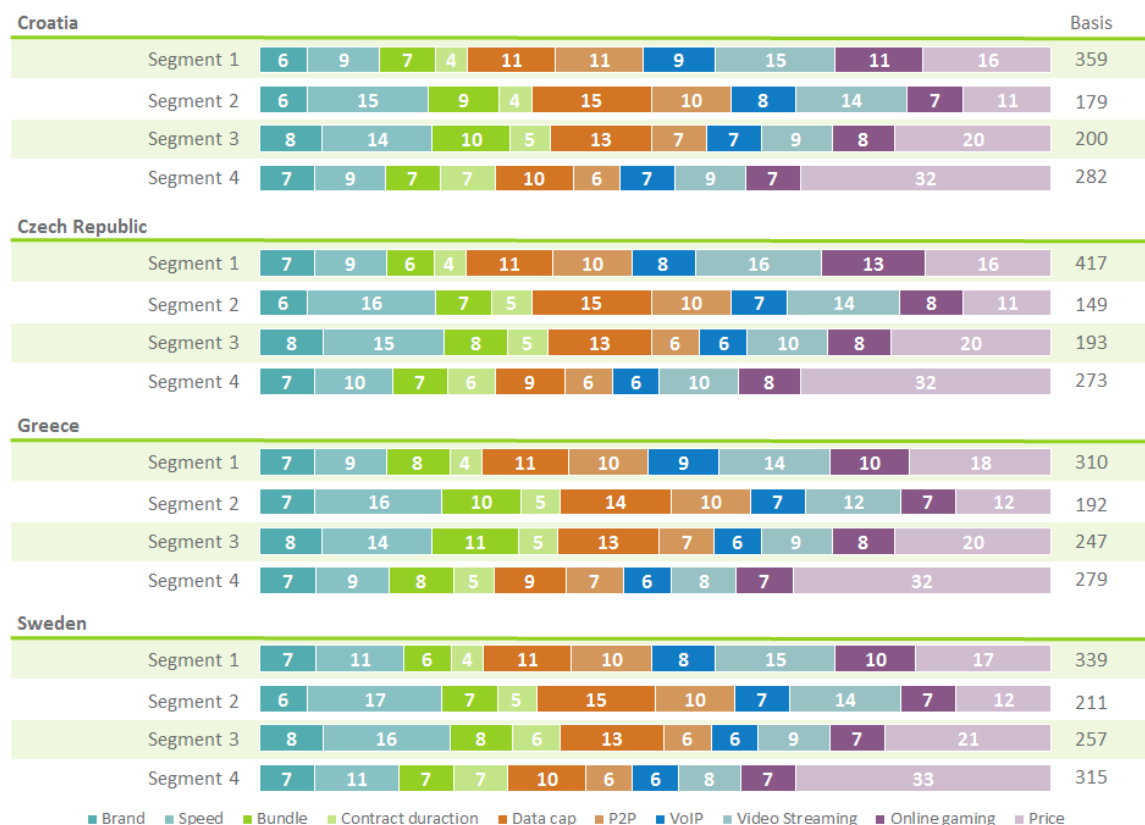
7.3.5.1 Preference-based segmentation of consumers

Preference-based segmentation of consumers leads to a four segment solution. These four different consumer segments represent homogenous consumer groups with largely similar preferences that are subsequently discussed further in regard to their specific preference structure. Overall, consumers' preferences are multi-dimensional resulting in more complex preferences structures across segments. When differentiating consumer segments, several attributes have to be taken into account.

Results show a clear dichotomy with respect to the relative importance of network neutrality-related attributes across segments (see Figure 7-68). For consumers in segments 1 and 2, the accessibility of *P2P / File sharing*, *VoIP*, and *video streaming* is more important than for those in segments 3 and 4. With respect to the accessibility of *online gaming*, this is the case for segment 1. Clearly, consumers of segments 1 and 2 place more importance on the accessibility of specific Internet applications. Within this dichotomy, another important distinction has to be made. Consumers in segments 3 and 4 are more likely to be driven by *price* resulting in higher relative importance values than the segments 1 and 2. These findings are stable across all four test areas.

This dichotomy of segments that are clearly distinguishable by the importance of network neutrality-related attributes and price may be further split up by taking more performance-orientated attributes into account. Segments placing higher importance on network neutrality-related attributes (i.e. segments 1 and 2) as well as segments placing higher importance on price (i.e. segments 3 and 4) can each be differentiated into one segment that is rather performance-driven and another segment that is rather price sensitive. When comparing segment 1 and segment 2, consumers of the first are more price sensitive. The attribute *price* is more important to consumers of segment 1 than to consumers of segment 2. On the contrary, the attributes *download speed*, *bundle services*, and *data cap* are more important to consumers of segment 2. This pattern is also found when comparing segments 3 and 4. Consumers of segment 4 are driven more by price than those of segment 3. Consumers in segment 4 attach the highest importance to *price* compared to all other segments. In contrast, the attributes *download speed*, *bundle services*, and *data cap* are more important to consumers in segment 3.

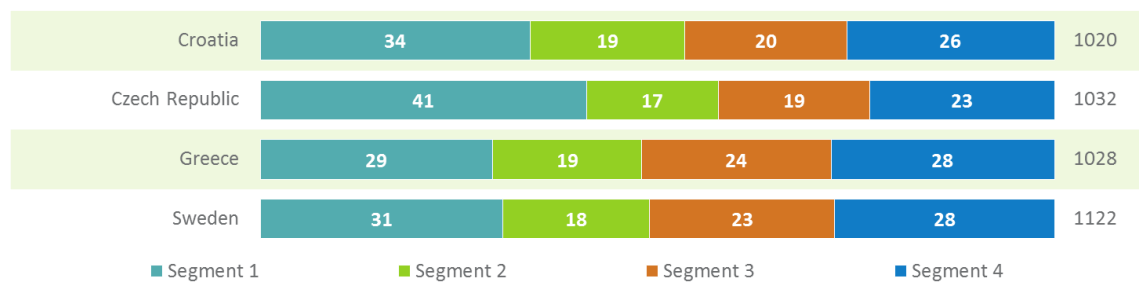
Figure 7-68: Relative importance of attributes by segment and country



Basis: All respondents
Values shown in %

Figure 7-69 shows the distribution of segments by participating countries. Segment 1 is the largest segment across all countries, followed by segment 4. Especially in Croatia and the Czech Republic, shares of segment 1 are higher than those of other segments. In Greece and Sweden, the shares of segment 1 and 4 are almost equally distributed. The shares of segments 2 and 3 are lower. The shares of segment 2 and 3 are almost similar in amount within countries.

Figure 7-69: Distribution of segments by country



Basis: All respondents

Values shown in %

7.3.5.2 Utilities by segment

To better understand not only the broad hierarchy but moreover the structure and also valence of consumer preferences, a detailed analysis of the mean part-worth utilities for each level of the ten attributes is necessary in addition to the preliminary investigations and segment-specific importance of attributes.

As far as the *brand* attribute is concerned only country-specific results are reported due to the different ISPs in each area. In Croatia, Hrvatski Telekom is much more attractive for users of segment 1, 2, and 4 than any of the other ISPs present. Only consumers in segment 3 prefer the Local Internet Provider almost as strongly as Hrvatski Telekom whereas B.net is only about half as attractive to this consumer segment. Metronet telekomunikacije is the least attractive ISP to segment 2 and 3 consumers and also only fairly attractive for both the other segments 1 and 4.

The results for Czech Republic show a similar pattern as regards the attractiveness of the incumbent. Rio media is the least attractive ISP for all of the segments. Moreover, segments 1 and 3 find O2 about twice as or even more attractive than local Internet providers ranking second in terms of attractiveness. This is different for segment 2. O2 still is preferred most, yet UPC Česká republika is ranked second outperforming local Internet providers.

As regards Greek respondents, segments 1 and 2 are quite similar in their brand preferences with both perceiving local Internet providers as the least attractive option and preferring OTE above all others. The remaining ISPs such as forthnet and hellas online (hol) are about three times less attractive compared to OTE with exception of segment 1 users who consider forthnet even five times less attractive. On the other hand, segments 3 and 4 are least preferential of forthnet. To segment 3 and 4 consumers, hellas online (hol) and local Internet providers are about half as attractive compared to OTE.

Finally, Swedes are very uniform in their preferences across all segments regarding brand. TELE2 is consistently rated as the least attractive provider followed by only minimal increases in utility for telenor. The highest attractiveness is found for the major

ISP Telia which is more than twice as attractive compared to local Internet providers for segment 1 and 4 and even up to three and five times as attractive for segment 2 and segment 3.

Figure 7-70: Part-worth utilities of attribute brand by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Hrvatski Telekom	10	11	18	9
B.net	3	4	8	0
Local Internet Provider	0	3	14	3
Metronet telekomunikacije	3	0	0	1
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
O2 Czech Republic	15	10	16	9
Local Internet Provider	9	5	9	7
UPC Česká republika	6	8	8	2
RIO media	0	0	0	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
OTE	15	19	18	10
forthnet	3	6	0	0
hellas online (hol)	5	4	7	5
Local Internet Provider	0	0	3	5
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
Telia	19	9	20	13
Local Internet Provider	9	3	4	5
telenor	0	1	2	0
TELE2	0	0	0	0

Basis: All respondents
Part-worth utilities shown

Considering that the preferences for *download speed* are generally evolving in ascending order, such that higher rates of download speed go along with higher preferences, this previous finding (cf. conjoint results for the overall samples in chapter 7.3.2) is replicated. Slow download rates delivering only up to 2 MBit/s are the least attractive attribute level uniformly across all segments, whereas high-speed rates up to 100 MBit/s show the highest benefit and are generally more than twice as attractive as download rates of up to 10 MBit/s across all segments.

However, segments differ quite distinctively in their growth of utility, for example with segment 2 being most attracted by very fast download rates and featuring the highest growth in utility in contrast to other user groups. While the increase in utility from 2 MBit/s to 10 MBit/s is higher than increases that come with faster download rates (e.g. from 10 MBit/s to 25 MBit/s), growth in utility approximates a linear function across ascending download rates from 10 MBit/s on. Segments 1 and 4 do not prefer higher download rates as strongly as the previous consumer groups resulting in lower

importance figures (cf. Figure 7-68). Those low-importance segments exhibit just a moderate rise in utility growth featuring part-worth utility values only half the size for 100 MBit/s rates.

This dichotomy of utility patterns for the segments 1 and 4 as gaining lower benefits by increasing download rates and for segment 2 and respectively 3 being very much in favour of speed enhancement is very well retrieved within the countries (cf. Figure 7-71).

Figure 7-71: Part-worth utilities of attribute download speed by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Up to 100 MBit/s	84	146	113	68
Up to 25 MBit/s	61	105	78	50
Up to 10 MBit/s	48	66	50	35
Up to 2 MBit/s	0	0	0	0
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
Up to 100 MBit/s	73	134	111	63
Up to 25 MBit/s	51	91	76	43
Up to 10 MBit/s	40	57	49	30
Up to 2 MBit/s	0	0	0	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
Up to 100 MBit/s	66	129	99	64
Up to 25 MBit/s	51	90	70	48
Up to 10 MBit/s	36	59	44	33
Up to 2 MBit/s	0	0	0	0
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
Up to 100 MBit/s	85	143	127	76
Up to 25 MBit/s	60	97	89	53
Up to 10 MBit/s	44	65	56	38
Up to 2 MBit/s	0	0	0	0

Basis: All respondents
Part-worth utilities shown

The division into two main parties of segments is again to be found when examining the respondents' part-worth utilities for the attribute *bundled services* where segment 2 and 3 are once again very similar in their utility patterns compared to the remaining consumer groups (see Figure 7-72). Although segment 2 and 3 consumers prefer the 2play option including Internet and TV over the 2play option including Internet and telephone, they are by far the most attracted to the 3play option with the highest increase of utility.

As for segments 1 and 4, consumers of these segments are almost equally attracted to the 2play options including Internet and telephone and Internet and TV. Amongst those two generally less preferential consumer groups, the 3play option is the most attractive and is preferred over the other bundle options presented. Segment 4 lists the lowest

utilities and represents the consumer group placing the lowest importance on bundle services across all segments. The 1play option remains the least attractive option across all segments.

Comparing this to the national results in Figure 7-72, the main findings for the overall segmentation are well-replicated within each of the participating countries showing similar patterns with only small deviations that are to be neglected.

Figure 7-72: Part-worth utilities of attribute bundle services by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Bundle of Internet, telephone and TV	49	71	56	27
Bundle of Internet and TV	34	47	37	19
Bundle of Internet and telephone	30	36	27	14
No bundle, Internet only	0	0	0	0
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
Bundle of Internet, telephone and TV	20	36	34	18
Bundle of Internet and TV	17	22	22	12
Bundle of Internet and telephone	14	14	10	11
No bundle, Internet only	0	0	0	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
Bundle of Internet, telephone and TV	44	75	62	38
Bundle of Internet and TV	27	44	35	25
Bundle of Internet and telephone	29	43	31	25
No bundle, Internet only	0	0	0	0
Sweden	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
Bundle of Internet, telephone and TV	25	35	36	18
Bundle of Internet and TV	20	24	25	12
Bundle of Internet and telephone	15	15	14	9
No bundle, Internet only	0	0	0	0

Basis: All respondents
Part-worth utilities shown

The maximum *contract duration* of 24 months is the least attractive attribute level across all segments and countries (see Figure 7-73). The only exception of this pattern is segment 2 consumers in the Czech Republic preferring 24 months to 1 month. Within segments 1 and 2, consumers prefer medium contract durations. With the exception of Croatia (segment 1), consumers of segments 1 and 2 prefer 12 months contracts to 1 month contracts (although preferences for 12 months contracts compared to 1 months contracts are less distinct in Sweden). Within segment 4, consumers clearly prefer shorter contract durations. The 1 month option is the most attractive option, decrease in part-worth utility values from the 12 months option to the 24 months option is higher than the increase in utility from the 12 months option to the 1 month option. According

to the principle 'the shorter the better', these users value short contract commitments and enjoy high flexibility.

Within segment 3, preference patterns are inconsistent across countries. In Croatia and Sweden, patterns are similar to segment 4. The 1 month option is preferred over the 12 months option; decrease in utility from 12 months option to the 24 months option is high. In the Czech Republic and in Sweden, the 12 months option is preferred to the 1 month option.

Figure 7-73: Part-worth utilities of attribute contract duration by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
1 month	19	5	22	48
12 months	16	13	19	31
24 months	0	0	0	0
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
1 month	8	0	13	23
12 months	13	8	14	18
24 months	0	2	0	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
1 month	7	3	6	27
12 months	12	12	14	19
24 months	0	0	0	0
Sweden	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
1 month	14	14	27	49
12 months	15	16	22	30
24 months	0	0	0	0

Basis: All respondents
Part-worth utilities shown

The results of the *data cap* attribute are in line with the general findings shown in chapter 7.3.2. Substantial differences in preferences for different attribute levels were only detected as regards the 50 GB levels being preferred over the 10 GB levels and solely exceeded by the no data cap option with the highest part-worth utility values.

As far as segment specific preferences are concerned, the highest utility values are expressed by segment 2 consumers reflecting the higher relative importance of the attribute data cap within this segment (cf. Figure 7-68). Segment 2 consumers are also characterized by the highest growth in utility comparing the 50 GB options against the more preferred no data cap option. A completely unrestricted data volume access is highly attractive for segment 2 consumers. Consumers of segments 3 and 1 are very much alike showing moderate utility values across user groups. The most substantial differences are found for segment 4 respondents who assign noticeably low importance to the data cap attribute in general and moreover express only a very minimal gain in

benefit for a possible upgrade to the unrestricted data capacity. Thus the 50 GB attribute levels remain almost as equally attractive for this consumer segment.

When looking at data cap options of 10 GB, results show a clear-cut increase in utility for the 10 GB option with video streaming zero-rated compared to other 10 GB options with zero ratings for segments 1, 2, and 3. This finding is in line with video streaming apparently being the most valued Internet application (as tested within the conjoint analysis; cf. findings with respect to the relative importance of attributes in Section 7.3.2 and 7.3.5.1). In contrast, preferences with respect to 10 GB options do not follow a distinct pattern within segment 4.

Figure 7-74: Part-worth utilities of attribute data cap by segment for Greece and Sweden

	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Croatia				
No data cap	86	121	76	49
50 GB, your favourite video streaming application does not count towards the cap	50	78	55	33
50 GB, your favourite VoIP application does not count towards the cap	49	68	50	35
50 GB, your favourite online game does not count towards the cap	50	69	49	31
50 GB	50	64	47	33
10 GB, your favourite video streaming application does not count towards the cap	14	22	14	5
10 GB, your favourite online game does not count towards the cap	7	4	5	8
10 GB, your favourite VoIP application does not count towards the cap	7	6	8	2
10 GB	0	0	0	0
Czech Republic				
No data cap	67	99	70	28
50 GB, your favourite video streaming application does not count towards the cap	45	66	54	29
50 GB, your favourite VoIP application does not count towards the cap	41	60	50	26
50 GB, your favourite online game does not count towards the cap	44	61	49	26
50 GB	40	61	40	26
10 GB, your favourite video streaming application does not count towards the cap	12	22	11	2
10 GB, your favourite online game does not count towards the cap	9	6	5	4
10 GB, your favourite VoIP application does not count towards the cap	4	7	7	6
10 GB	0	0	0	0

Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
No data cap	60	97	64	33
50 GB, your favourite video streaming application does not count towards the cap	39	56	44	25
50 GB, your favourite VoIP application does not count towards the cap	37	56	45	26
50 GB, your favourite online game does not count towards the cap	36	53	44	28
50 GB	35	51	36	22
10 GB, your favourite video streaming application does not count towards the cap	11	19	13	3
10 GB, your favourite online game does not count towards the cap	7	4	7	5
10 GB, your favourite VoIP application does not count towards the cap	5	7	4	5
10 GB	0	0	0	0

Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
No data cap	71	112	76	36
50 GB, your favourite video streaming application does not count towards the cap	51	73	55	32
50 GB, your favourite VoIP application does not count towards the cap	43	61	50	31
50 GB, your favourite online game does not count towards the cap	42	62	49	25
50 GB	44	63	47	28
10 GB, your favourite video streaming application does not count towards the cap	17	23	14	4
10 GB, your favourite online game does not count towards the cap	6	5	5	2
10 GB, your favourite VoIP application does not count towards the cap	6	5	8	5
10 GB	0	0	0	0

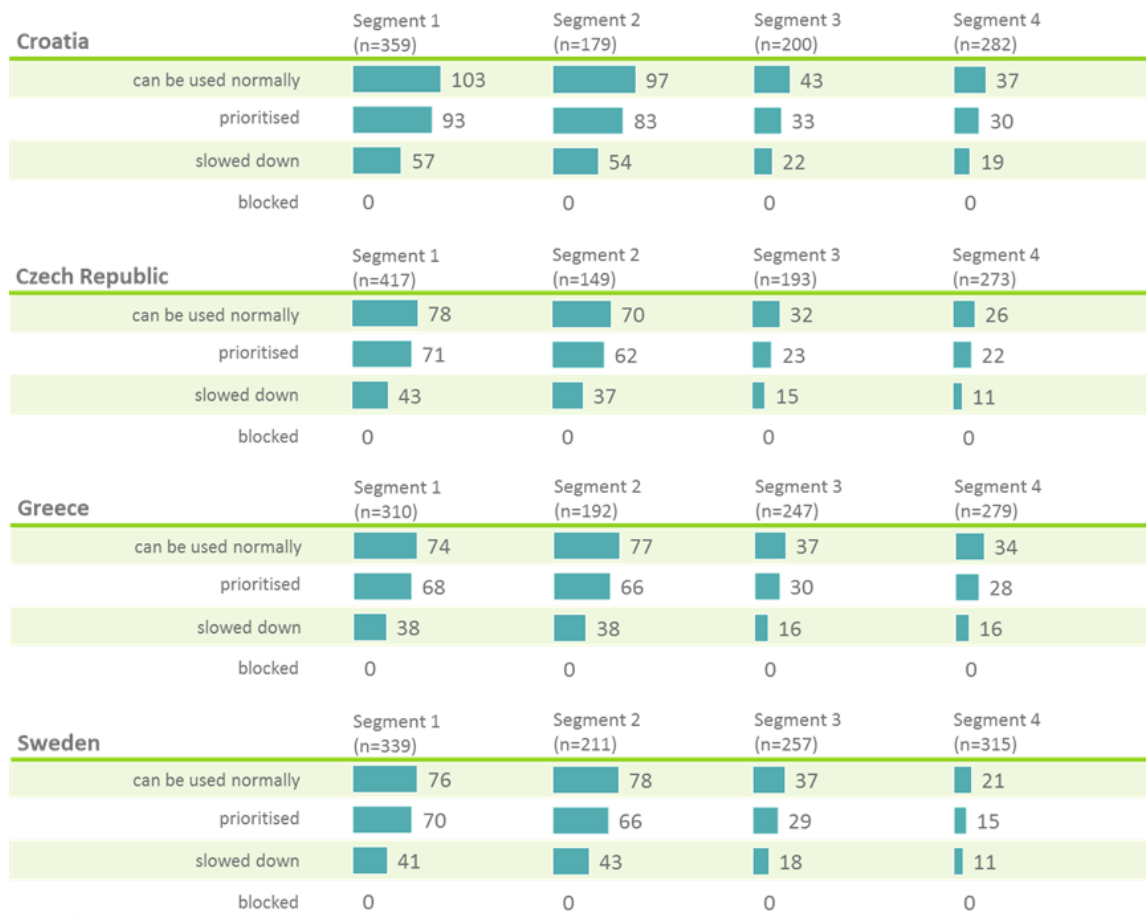
Basis: All respondents

Part-worth utilities shown

As indicated already in the overarching results of the conjoint analysis for the attributes on network neutrality issues, normal usage of Internet applications is always the most attractive option as it also applies to the *P2P / File sharing* attribute across all segments. This standard option is followed by gradually lower benefits gained from the prioritised to the slowed down access to eventually the least attractive option of blocked *P2P / File sharing* applications. In general, normal usage is about twice as attractive as slowed down access when compared to the least preferred blocked access. This patterns can be found within all segments. Differences between segments occur with respect to the attractiveness of prioritised access. Within segments 1 and 2, the growth in utility from slowed down access to prioritised access is substantially higher than the growth from prioritised access to normal access. Compared to prioritised access, the preference for normal access is less distinct. In contrast, segments 3 and 4 show a slightly different pattern. The increase in utility that comes with prioritised access compared to slowed down access is less pronounced when compared to the increase in utility from prioritised access to normal access. Consumers of segments 3 and 4 gain more (relatively) utility (in a relative fashion) from offering normal access compared to prioritised access than consumers of segments 1 and 2.

The preference pattern is similar across test areas with only minor deviations from the global characteristics identified (e.g. preference patterns of segments 3 and 4 in Greece are more similar to the pattern found for segments 1 and 2; cf. Figure 7-75).

















































Figure 7-75 Part-worth utilities of attribute P2P/ File sharing by segment and country



Basis: All respondents
Part-worth utilities shown

With respect to the accessibility of *VoIP services*, patterns in preference structures of different segments are quite similar. Other than within the P2P / File sharing attribute, the pattern of the growth in utility from slowed down access to prioritised access exceeding the growth from prioritised access to normal access is found within all segments (cf. Figure 7-76).

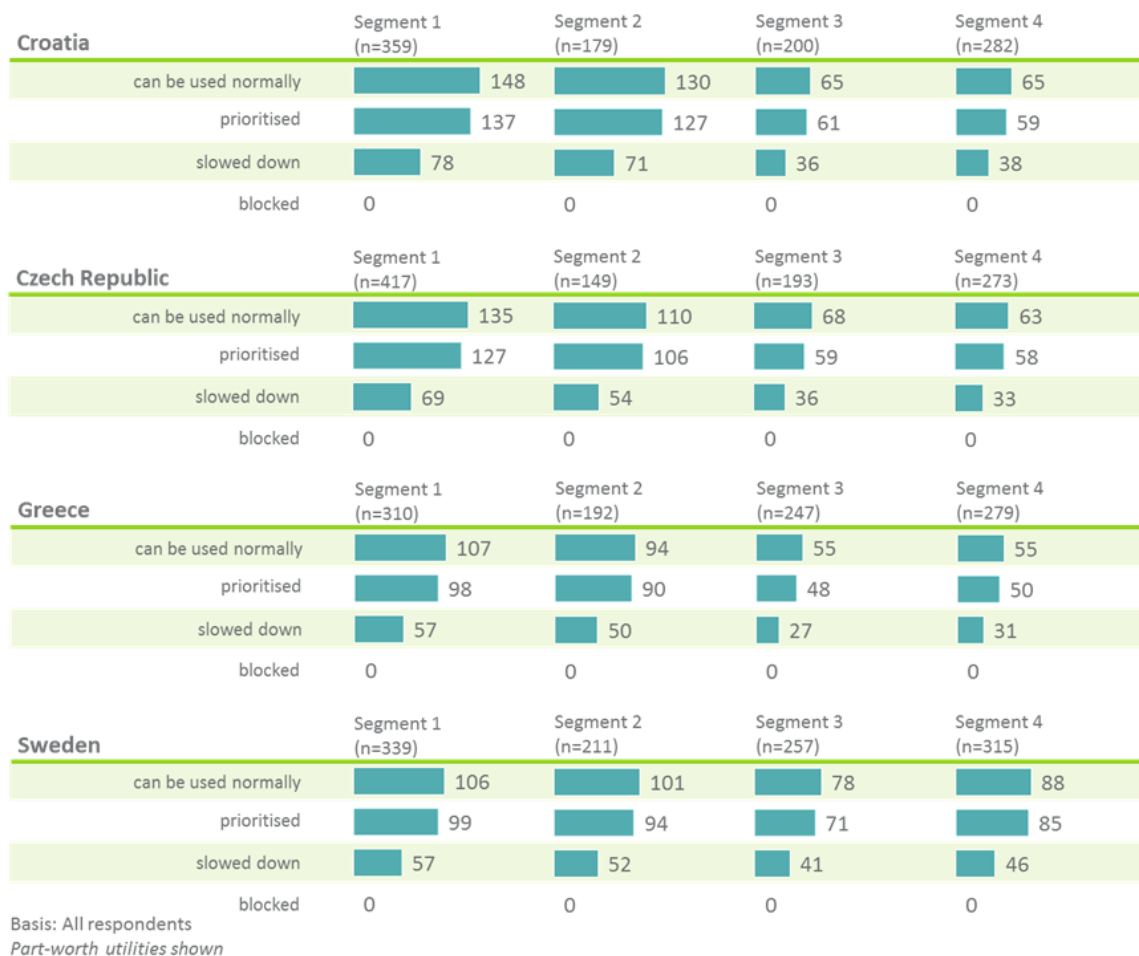
Figure 7-76: Part-worth utilities of attribute VoIP services by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
can be used normally	 86	 74	 38	 42
prioritised	 78	 68	 34	 38
slowed down	 45	 44	 18	 24
blocked	0	0	0	0
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
can be used normally	 68	 53	 32	 35
prioritised	 61	 49	 27	 30
slowed down	 36	 30	 14	 20
blocked	0	0	0	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
can be used normally	 60	 54	 33	 38
prioritised	 55	 49	 31	 35
slowed down	 33	 29	 18	 21
blocked	0	0	0	0
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
can be used normally	 61	 52	 31	 30
prioritised	 55	 47	 26	 26
slowed down	 35	 27	 15	 17
blocked	0	0	0	0

Basis: All respondents
Part-worth utilities shown

Further examination of the part-worth utilities of the *video streaming* attribute across segments continues in highlighting the previously identified threshold between slowed down and prioritised access as well (see Figure 7-77). Differences between segments are rather found with respect to the importance of the accessibility of video streaming (as described in Section 7.3.5.1) than in terms of preferences for access options.

Figure 7-77 Part-worth utilities of attribute video streaming by segment and country



Finally, the network neutrality-related attribute of *online gaming* is slightly different from the very similar preference hierarchy among the other Internet applications previously identified. Here, the typical reduction in benefit from prioritised to slowed down access is particularly found within segment 1. The growth in utility from slowed down access to prioritised access exceeds the growth from prioritised access to normal access (see Figure 7-78).

As for segments 2, 3, and 4, this typical pattern is not found. Within segment 2, the increase in utility is larger from prioritised access to normal access than it is from slowed down access to prioritised access. The only exception of this structure is found in the Czech Republic. In segment 3, the typical pattern of substantially decreasing utilities for slowed down access is found in Croatia and the Czech Republic, yet not in Greece and Sweden. Segment 4 consumers rather show similar increases in utility from slowed down access to prioritised access as well as from prioritised to normal access in the Czech Republic and in Greece.

Interestingly, slowed down access is more preferred than prioritised access for segment 4 consumers in Sweden. This might be the effect of a very low frequency of online gaming usage. Consequently, Swedish segment 4 consumers might attribute only minor

importance to the attribute, as was previously stated in Section 7.3.5.1. When they do not care for online gaming, they probably neither perceive a significant utility loss by slowed down access to online gaming, nor do they realise any added value in prioritised access to online gaming.

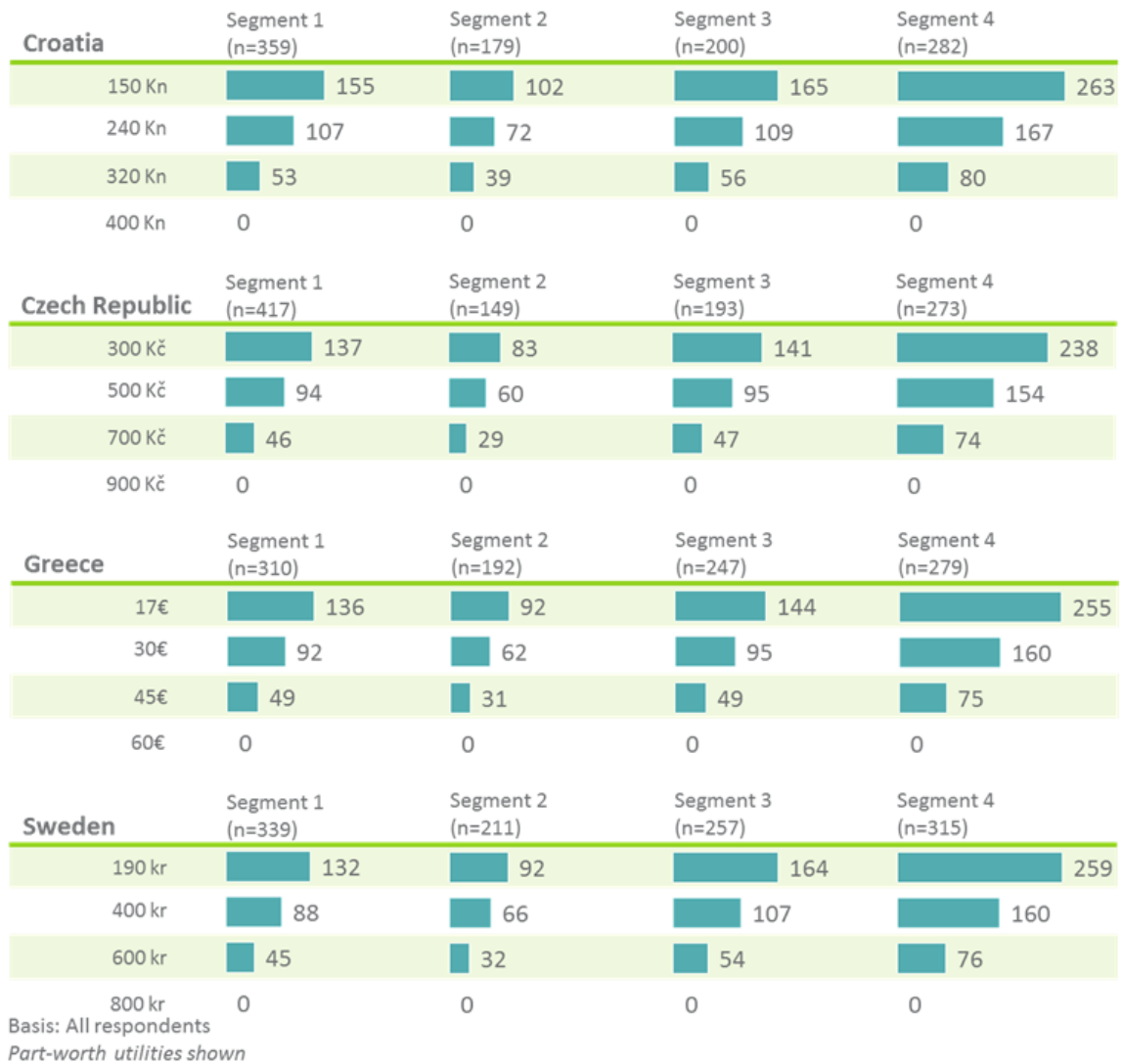
Figure 7-78: Part-worth utilities of attribute online gaming by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
can be used normally	96	53	36	40
prioritised	83	38	32	30
slowed down	49	36	21	25
blocked	0	0	0	0
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
can be used normally	103	57	39	34
prioritised	91	48	33	27
slowed down	52	28	20	19
blocked	0	0	0	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
can be used normally	68	45	34	39
prioritised	60	33	28	30
slowed down	37	26	21	22
blocked	0	0	0	0
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
can be used normally	70	46	30	15
prioritised	59	35	21	5
slowed down	38	26	19	12
blocked	0	0	0	0

Basis: All respondents
Part-worth utilities shown

Eventually comparing the utilities for the different levels of the attribute price, it becomes obvious that the segments' characteristic preferences are very similar across countries (see Figure 7-79). Segment 4 is very much in line with the previously stated high relative importance of the price attribute for this user group (cf. Figure 7-79) and shows very large growth in attractiveness per decreasing price level. The Swedish segment 4 users are for example more than twice as attracted by a price of 400 kr versus a price of 600 kr.

Figure 7-79: Part-worth utilities of attribute price by segment and country



7.3.5.3 Socio-demographics by segment

To further characterize the four revealed Internet user groups, an analysis of the socio-demographic questionnaire items was conducted for each segment.

Looking at the *gender* distribution the male and female respondents in segment 1 and segment 3 are roughly equally distributed within the segments (see Table 7-10). The only substantial differences exist for segment 2 which is represented by a somewhat higher percentage of men which applies to all the countries to a higher or less degree (Croatia: 58%, Czech Republic: 60%, Greece: 55%, Sweden: 61%). Furthermore there is a small surplus of women in segment 4 regarding the overall country-unspecific population used for the segmentation, whereas this finding is not true for Greece only with a proportion of 43%.

Table 7-10: Gender by segment and country

	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Croatia				
male	45%	58%	51%	46%
female	55%	42%	49%	54%
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
male	49%	60%	55%	41%
female	51%	40%	45%	59%
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
male	48%	55%	53%	57%
female	52%	45%	47%	43%
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
male	52%	61%	44%	46%
female	48%	39%	56%	54%

As far as the *age* of different user preference groups is concerned, segment 1 resembles the standard middle-ager with around 50% of respondents between 25 to 44 years (Croatia: 51%, Czech Republic: 49%, Greece: 55%, Sweden: 41%) and only very few older respondents with 55 years and older (Croatia: 9%, Czech Republic: 16%, Greece: 5% and only slightly more in Sweden with 25%; see Table 7-11).

The users in segment 3 are slightly older with the centroid of users being between 25 to 54 years (Croatia: 65%, Czech Republic: 62%, Greece: 70%, and only slightly more in Sweden with 43%), covering the broadest range of middle-agers. It also features a

relatively high proportion of 55 years and older (this holds true for Czech Republic with 17% and Sweden with 43%, but with slight differences for Croatia: 7% and Greece: 8%).

Table 7-11: Age by segment and country

	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Croatia				
18 to 24 years	19%	35%	27%	18%
25 to 34 years	26%	17%	20%	24%
35 to 44 years	25%	18%	18%	22%
45 to 54 years	20%	22%	27%	26%
55 to 64 years	7%	7%	6%	8%
Older than 64 years	2%	1%	1%	3%
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
18 to 24 years	20%	28%	22%	9%
25 to 34 years	22%	25%	20%	25%
35 to 44 years	27%	20%	27%	24%
45 to 54 years	16%	14%	15%	19%
55 to 64 years	8%	7%	7%	10%
Older than 64 years	8%	6%	10%	13%
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
18 to 24 years	21%	23%	23%	22%
25 to 34 years	28%	27%	25%	27%
35 to 44 years	27%	28%	27%	23%
45 to 54 years	19%	12%	18%	17%
55 to 64 years	4%	9%	8%	8%
Older than 64 years	1%	0%	0%	3%
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
18 to 24 years	16%	16%	14%	6%
25 to 34 years	22%	15%	16%	13%
35 to 44 years	19%	24%	10%	17%
45 to 54 years	18%	18%	17%	17%
55 to 64 years	13%	15%	19%	18%
Older than 64 years	12%	13%	24%	28%

Segment 4 differs quite substantially in representing the oldest user group with the highest amount of 64 years and older (this again applies to the Czech Republic with 13% and especially Sweden with 28%, but is with exception of Croatia and Greece with both 3% each) and a very low level of youngsters at the age of 18 to 24 years.

On the contrary, segment 2 is on average the youngest user group with a significantly higher number of respondents in the age of 18 to 24 years (Croatia: 35%, Czech Republic: 28%, Greece: 23%, Sweden: 16%) and notably less users in the older age categories (which applies again to all countries examined except for Sweden).

No substantial differences between user segments can be identified in regard to *household size* (see Table 7-12). Segments 1 to 3 represent households with multiple residents and make up about half of the sample which is consistent with the country-specific figures. Croatia has up to almost three quarters of respondents living in multi-person households and is the most pronounced country, followed by Greece and the Czech Republic, whereas Sweden differs moderately featuring equally or in some segments higher amounts of two-person households. The overall global segmentation discovered just minimally more single-person households for segment 4 users which can only be validated for the Czech Republic and is also slightly indicated for Croatian respondents.

Table 7-12: Household size by segment and country

	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
Croatia				
Single-person household	4%	7%	5%	9%
Two-person household	21%	13%	18%	20%
Multi-person household	73%	77%	76%	68%
No answer/ don't know	2%	3%	2%	2%
	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
Czech Republic				
Single-person household	9%	7%	7%	16%
Two-person household	26%	31%	30%	27%
Multi-person household	64%	57%	61%	55%
No answer/ don't know	1%	6%	2%	2%
	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
Greece				
Single-person household	7%	7%	7%	7%
Two-person household	29%	23%	22%	21%
Multi-person household	62%	69%	69%	71%
No answer/ don't know	2%	1%	3%	1%
	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
Sweden				
Single-person household	29%	19%	17%	24%
Two-person household	34%	39%	51%	48%
Multi-person household	35%	40%	29%	27%
No answer/ don't know	2%	1%	2%	2%




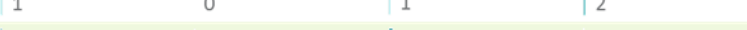



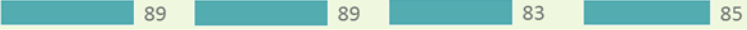


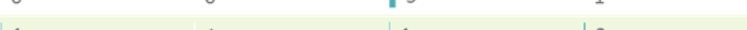










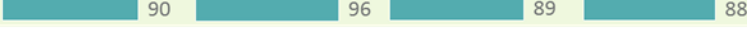


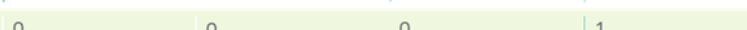

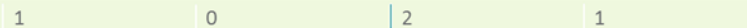

7.3.5.4 Usage by segment

In order to gain deeper insight beyond the common division of heavy, medium and light user types of Internet usage behaviour, the identified preference groups are further explored in regard to any existing segment-specific characteristics.

Comparing the segments in respect to their frequency of at home Internet usage the previously described dichotomy of broad consumer preference parties is evident with segment 1 and 2 consumers representing higher shares of a very frequent and nearly daily usage of the Internet in contrast to segment 3 and 4 consumers. Moreover, subtle differences exist among the heavier users showing that segment 2 consumers going online at home on six to seven days per week marginally more often.

Those findings are very well replicated within the single countries with exception of the Czech Republic where the minimal contrast between segment 1 and 2 consumers is not that obvious (cf. Figure 7-80). On the other hand, the differences between the broad segments categories are not that pronounced in Sweden where the proportion of segment 3 and 4 and also segment 1 being online on a daily level is very much alike.

Figure 7-80: Frequency of at-home Internet usage by segment and country

Croatia		Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
On 6-7 days		90	93	87	86
On 4-5 days		6	5	4	6
On 2-3 days		2	1	3	4
About once per week		1	0	1	2
Less than once a week		1	1	3	1
Never		1	0	2	1
No answer / don't know		0	0	0	0
Czech Republic		Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
On 6-7 days		89	89	83	85
On 4-5 days		8	9	5	7
On 2-3 days		2	2	5	5
About once per week		0	0	5	1
Less than once a week		1	1	1	2
Never		0	0	0	0
No answer / don't know		1	0	1	0
Greece		Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
On 6-7 days		89	92	84	83
On 4-5 days		6	3	9	8
On 2-3 days		3	4	3	5
About once per week		1	1	2	1
Less than once a week		0	1	0	2
Never		1	0	1	1
No answer / don't know		0	0	1	0
Sweden		Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
On 6-7 days		90	96	89	88
On 4-5 days		4	2	5	5
On 2-3 days		3	1	3	3
About once per week		2	0	1	1
Less than once a week		0	0	0	1
Never		1	0	0	0
No answer / don't know		1	0	2	1

Basis: All respondents
Values shown in %

Although there are no noticeable differences between segments as regards how frequently the out of home Internet is used on a mobile phone (connected to WiFi), the proportion of consumers not using WiFi-Internet on a mobile phone differs across some of the groups. Thus segment 2 features the lowest share of non-user going online out of

home via WiFi more often than on the contrary segment 4 which shows the highest share of non-users therefore seldom being online out of home.

This finding also applies to the country-specific results segregating on the one end the more frequent mobile WiFi-Internet users (segment 2) from the most infrequent mobile WiFi-Internet users (segment 4) with both segment 3 and 4 in-between those two groups (see Figure 7-81). The only exemption is reported for Greece where all segments are very much alike in their proportion of respondents not using WiFi-Internet on a mobile phone. Inspecting the share of very frequent nearly daily users in each of the countries, only Sweden deviates slightly from the mostly consistent shares across all segments and displays a decently lower percentage of heavy users in segment 4.

Figure 7-81: Frequency of out of home Internet usage via WiFi by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
On 6-7 days	26	23	25	25
On 4-5 days	5	9	9	5
On 2-3 days	7	11	9	5
About once per week	7	7	5	4
Less than once a week	6	3	6	4
Never	0	0	2	1
No answer / don't know	0	0	0	2
Not using the Internet on a mobile phone via WiFi/mobile access	50	47	45	55
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
On 6-7 days	6	9	10	7
On 4-5 days	6	7	4	2
On 2-3 days	7	9	8	8
About once per week	7	6	4	5
Less than once a week	5	5	7	6
Never	1	1	0	1
No answer / don't know	0	0	0	1
Not using the Internet on a mobile phone via WiFi/mobile access	67	63	67	71
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
On 6-7 days	18	21	21	16
On 4-5 days	6	4	9	7
On 2-3 days	14	10	8	11
About once per week	5	6	6	7
Less than once a week	5	7	4	5
Never	1	0	1	3
No answer / don't know	0	0	0	0
Not using the Internet on a mobile phone via WiFi/mobile access	52	51	50	51
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
On 6-7 days	14	19	13	9
On 4-5 days	6	5	8	5
On 2-3 days	10	6	3	4
About once per week	5	9	4	5
Less than once a week	6	8	7	7
Never	1	0	1	1
No answer / don't know	0	2	1	0
Not using the Internet on a mobile phone via WiFi/mobile access	57	51	63	67

Basis: All respondents
Values shown in %

Additionally, comparing the out of home Internet usage via mobile access, no further major segment-specific characteristics can be emphasized (see Figure 7-82). The country related results broadly reflect the previous findings and depict segment 2 users as the heavy users which apply very well to the figures shown for the Czech Republic and Sweden.

Figure 7-82: Frequency of out of home Internet usage via mobile access by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
On 6-7 days	36	34	36	40
On 4-5 days	9	13	8	6
On 2-3 days	7	7	6	7
About once per week	4	4	4	3
Less than once a week	2	1	4	2
Never	0	0	0	0
No answer / don't know	1	0	2	0
Not using the Internet on a mobile phone via WiFi/mobile access	41	42	40	41
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
On 6-7 days	11	18	13	10
On 4-5 days	9	9	4	3
On 2-3 days	4	7	8	7
About once per week	2	3	3	1
Less than once a week	3	1	2	3
Never	0	1	2	1
No answer / don't know	0	0	0	1
Not using the Internet on a mobile phone via WiFi/mobile access	70	60	68	74
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
On 6-7 days	19	22	20	23
On 4-5 days	9	3	10	9
On 2-3 days	11	7	11	9
About once per week	5	4	6	5
Less than once a week	6	10	6	5
Never	2	2	2	2
No answer / don't know	0	0	0	0
Not using the Internet on a mobile phone via WiFi/mobile access	48	52	44	47
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
On 6-7 days	36	44	29	27
On 4-5 days	9	7	10	9
On 2-3 days	10	6	6	7
About once per week	4	4	4	4
Less than once a week	2	3	4	4
Never	1	0	1	1
No answer / don't know	1	0	2	0
Not using the Internet on a mobile phone via WiFi/mobile access	38	35	44	49

Basis: All respondents

Values shown in %

Looking closer at the segment-specific duration of Internet usage at home the basic groupings are continued featuring segment 1 and 2 with longer periods being online per

day (see Figure 7-83). Thus, segments 3 and 4 show higher percentages in the medium range with usage times of either one to two or respectively two to four hours per day across all countries.

Figure 7-83: Duration of at-home Internet usage by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
More than 6 hours	27	30	28	21
More than 4 hours up to 6 hours	18	23	17	15
More than 2 hours up to 4 hours	27	23	22	28
More than 1 hour up to 2 hours	20	15	26	24
More than 30 minutes up to 1 hour	6	8	4	7
Up to 30 minutes	1	1	1	2
No answer / don't know	0	1	0	1
Not using the Internet on a mobile phone via mobile access	1	0	2	1
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
More than 6 hours	33	38	26	23
More than 4 hours up to 6 hours	22	17	16	17
More than 2 hours up to 4 hours	29	27	28	34
More than 1 hour up to 2 hours	12	13	21	19
More than 30 minutes up to 1 hour	3	3	6	6
Up to 30 minutes	0	2	1	1
No answer / don't know	1	0	1	0
Not using the Internet on a mobile phone via mobile access	1	0	1	0
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
More than 6 hours	27	24	20	20
More than 4 hours up to 6 hours	25	26	28	25
More than 2 hours up to 4 hours	28	28	26	33
More than 1 hour up to 2 hours	14	15	19	16
More than 30 minutes up to 1 hour	5	5	5	4
Up to 30 minutes	0	1	0	1
No answer / don't know	0	0	0	0
Not using the Internet on a mobile phone via mobile access	1	0	2	1
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
More than 6 hours	17	21	13	12
More than 4 hours up to 6 hours	18	19	19	12
More than 2 hours up to 4 hours	30	31	31	30
More than 1 hour up to 2 hours	20	17	22	26
More than 30 minutes up to 1 hour	9	10	10	15
Up to 30 minutes	2	1	1	4
No answer / don't know	3	0	2	1
Not using the Internet on a mobile phone via mobile access	1	0	2	1

Basis: All respondents

Values shown in %

No further differences can be identified for the usage periods of Internet access out of home on a mobile phone via WiFi comparing the segment-specific results across all countries (see Figure 7-84). This holds true for the duration of out of home Internet usage not connected via WiFi as well as no substantial deviations between segments (see Figure 7-85). In Croatia the heavy user segment 2 shows slightly elevated usage periods but overall the country resembles a main trend without any major differences

Figure 7-84: Duration of out of home Internet usage via WiFi by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
More than 6 hours	3	5	7	4
More than 4 hours up to 6 hours	3	2	2	2
More than 2 hours up to 4 hours	5	6	2	4
More than 1 hour up to 2 hours	9	15	8	8
More than 30 minutes up to 1 hour	14	13	12	13
Up to 30 minutes	14	11	20	12
No answer / don't know	1	1	2	0
Not using the Internet on a mobile phone via mobile access	50	47	46	58
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
More than 6 hours	2	5	4	3
More than 4 hours up to 6 hours	1	3	1	1
More than 2 hours up to 4 hours	4	6	4	1
More than 1 hour up to 2 hours	6	6	8	3
More than 30 minutes up to 1 hour	9	9	6	10
Up to 30 minutes	10	8	10	9
No answer / don't know	0	0	0	0
Not using the Internet on a mobile phone via mobile access	68	64	67	72
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
More than 6 hours	3	4	4	3
More than 4 hours up to 6 hours	2	1	3	1
More than 2 hours up to 4 hours	4	5	5	5
More than 1 hour up to 2 hours	12	10	10	11
More than 30 minutes up to 1 hour	11	12	13	12
Up to 30 minutes	14	15	13	14
No answer / don't know	0	0	0	0
Not using the Internet on a mobile phone via mobile access	53	51	52	54
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
More than 6 hours	2	2	3	2
More than 4 hours up to 6 hours	2	2	2	2
More than 2 hours up to 4 hours	4	5	2	2
More than 1 hour up to 2 hours	8	6	4	4
More than 30 minutes up to 1 hour	11	14	12	6
Up to 30 minutes	13	16	10	15
No answer / don't know	1	1	2	1
Not using the Internet on a mobile phone via mobile access	58	53	65	69

Basis: All respondents
Values shown in %

Figure 7-85: Duration of out of home Internet usage via mobile access by segment and country

Croatia	Segment 1 (n=359)	Segment 2 (n=179)	Segment 3 (n=200)	Segment 4 (n=282)
More than 6 hours	6	8	8	9
More than 4 hours up to 6 hours	2	2	3	3
More than 2 hours up to 4 hours	7	6	9	7
More than 1 hour up to 2 hours	12	17	9	13
More than 30 minutes up to 1 hour	17	16	9	10
Up to 30 minutes	15	9	19	15
No answer / don't know	0	0	0	1
Not using the Internet on a mobile phone via mobile access	42	43	42	42
Czech Republic	Segment 1 (n=417)	Segment 2 (n=149)	Segment 3 (n=193)	Segment 4 (n=273)
More than 6 hours	3	9	3	2
More than 4 hours up to 6 hours	1	1	2	1
More than 2 hours up to 4 hours	5	5	1	4
More than 1 hour up to 2 hours	7	6	9	4
More than 30 minutes up to 1 hour	5	10	8	8
Up to 30 minutes	9	8	7	7
No answer / don't know	0	0	0	0
Not using the Internet on a mobile phone via mobile access	71	61	70	75
Greece	Segment 1 (n=310)	Segment 2 (n=192)	Segment 3 (n=247)	Segment 4 (n=279)
More than 6 hours	4	4	4	3
More than 4 hours up to 6 hours	3	3	4	1
More than 2 hours up to 4 hours	4	4	3	6
More than 1 hour up to 2 hours	7	8	10	11
More than 30 minutes up to 1 hour	13	10	13	13
Up to 30 minutes	18	15	19	16
No answer / don't know	0	1	0	1
Not using the Internet on a mobile phone via mobile access	50	55	46	49
Sweden	Segment 1 (n=339)	Segment 2 (n=211)	Segment 3 (n=257)	Segment 4 (n=315)
More than 6 hours	4	4	6	3
More than 4 hours up to 6 hours	2	4	3	2
More than 2 hours up to 4 hours	9	9	4	2
More than 1 hour up to 2 hours	14	16	7	11
More than 30 minutes up to 1 hour	17	17	14	13
Up to 30 minutes	13	14	18	18
No answer / don't know	2	2	2	2
Not using the Internet on a mobile phone via mobile access	39	36	46	50

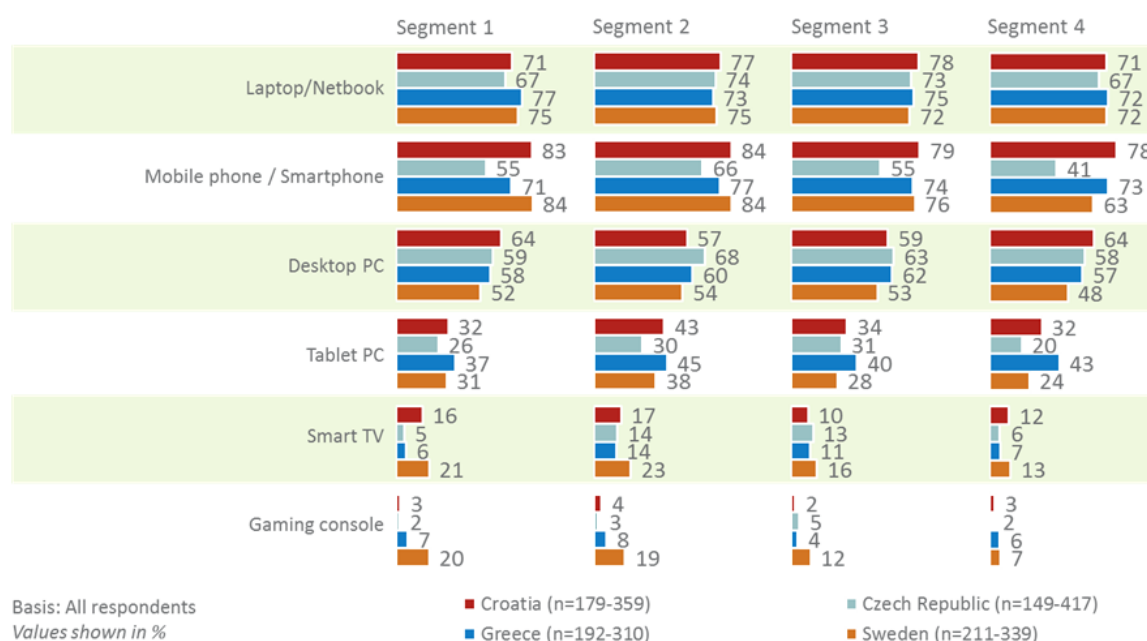
Basis: All respondents

Values shown in %

Reviewing the prominence of the several devices used for Internet access in each of the segments, striking differences can be found for the mobile phone usage. The segment 2 consumers responded to the most frequent use of either the mobile or smartphone across all groups (see Figure 7-86). Segment 4 consumers show the least prevalence of mobile online usage comparing all preference groups which applies to all markets except the Greek one. Overall, laptop (or netbook respectively), mobile and desktop PC access to the Internet are mostly equally distributed across all segments.

More salient results are found in regard to the segment 2 consumers who dominate the Internet access via tablet PC and smart TV across all preference groups. Once again segment 4 stands out with the least prevalence of Smart TVs which holds especially true for the Czech Republic and Sweden. As far as gaming consoles are concerned, the common pattern of segment 1 and 2 versus segment 3 and 4 emerges with a higher utilisation of gaming consoles for the former especially pronounced in Sweden.

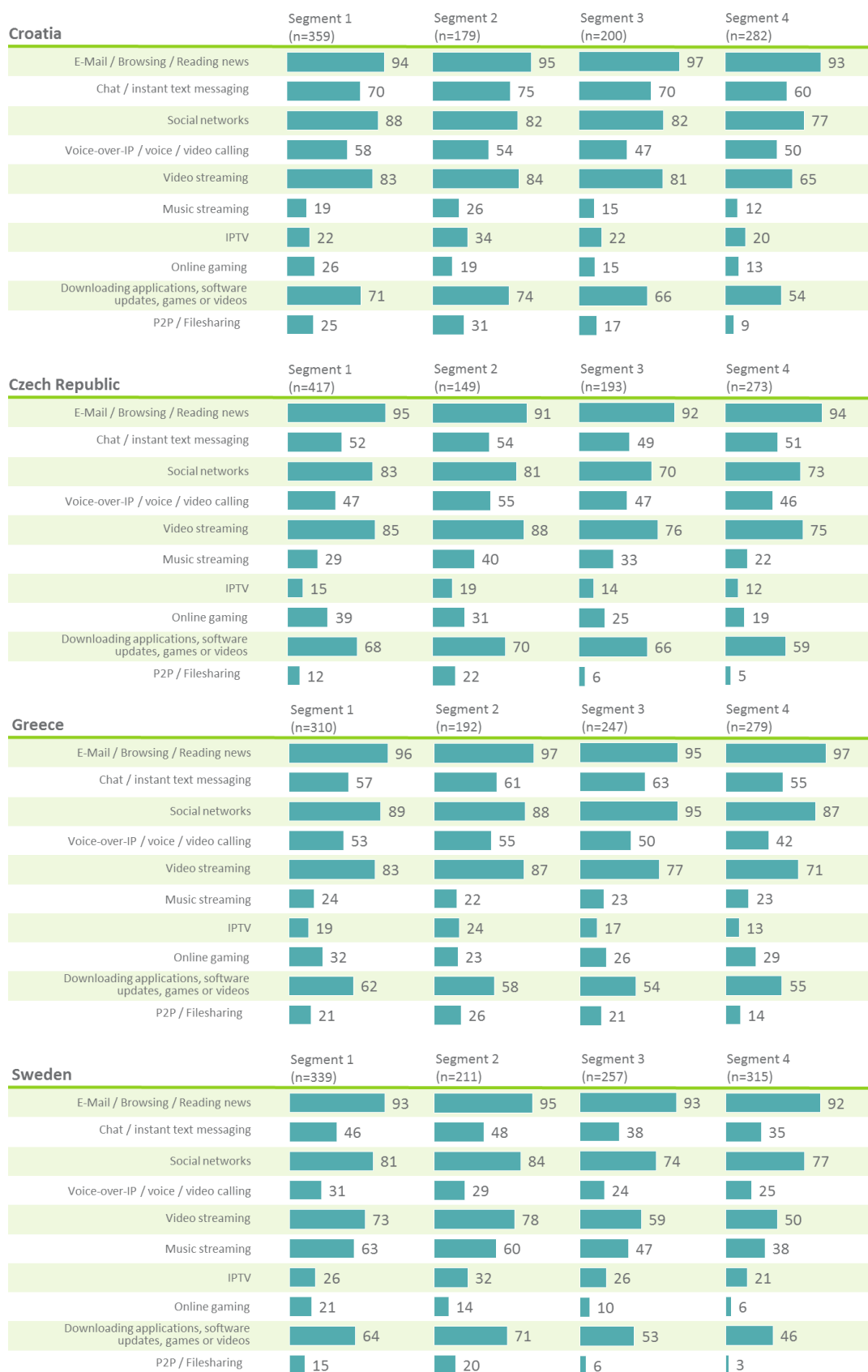
Figure 7-86: Devices used for accessing the Internet by segment and country



Remarkable differences between the segments are indicated with respect to their stated usage rate of the network neutrality related Internet applications. For music streaming, P2P / File sharing and IPTV applications the pattern of segment 2 as heavy users and segment 4 with the lowest usage rates holds true once again with only minor country-specific differences in Greece where music streaming is used at the nearly identical rate by almost all of the consumer segments (see Figure 7-87). Regarding VoIP services and video streaming, segment 1 and 2 both feature high usage rates outperforming, once again, the light users of segment 4 with constantly lower utilisation of those Internet applications.

Segment 1 also stands out concerning the usage rates of online gaming applications with clearly the highest shares of respondents followed by medium proportions in segment 2 and 3 and as expected followed by the very low use in segment 4 consistently across all countries.

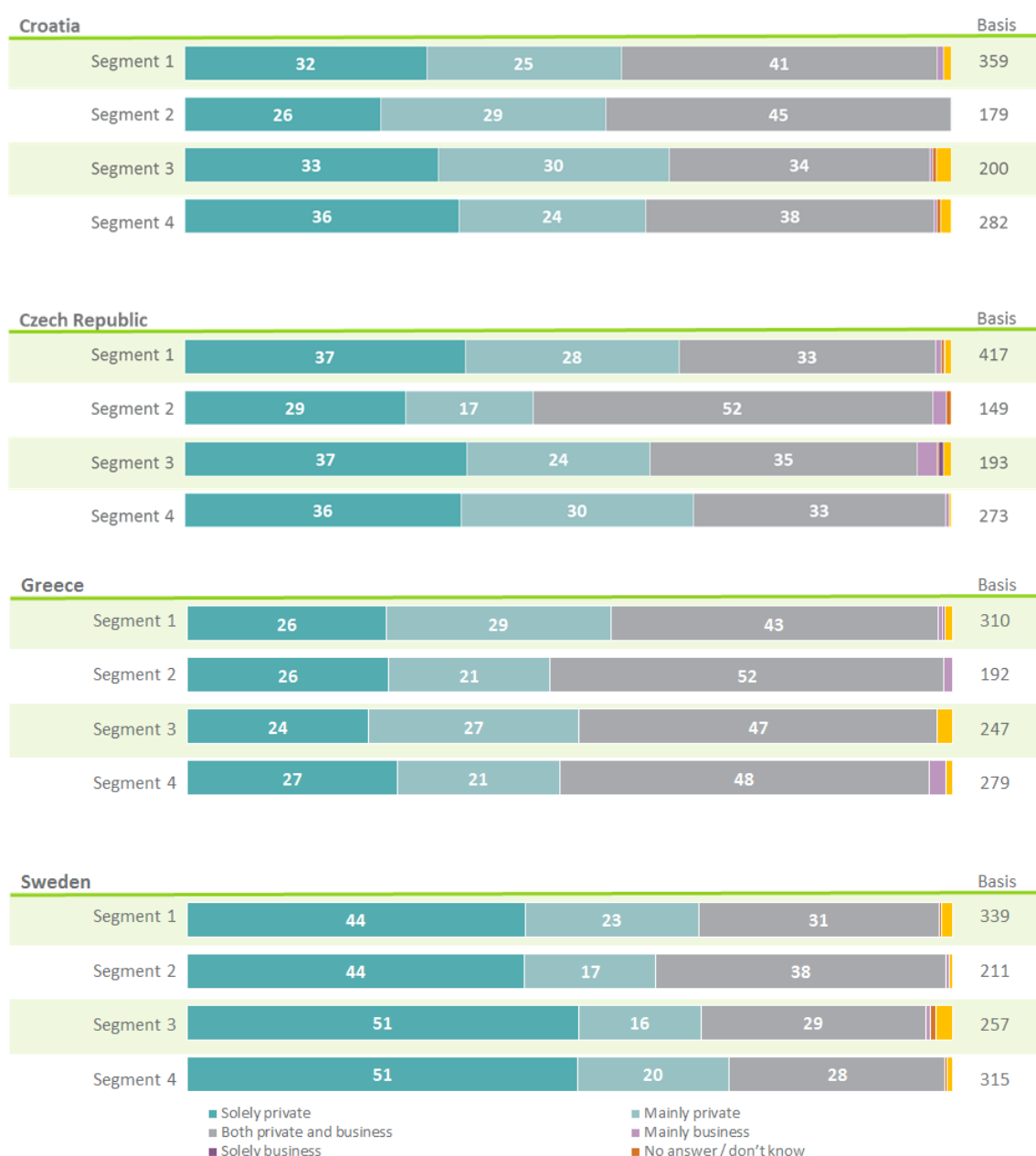
Figure 7-87: Usage of Internet applications by segment and country



Basis: All respondents
Values shown in %

Regarding the usage of the Internet for private versus business purposes the consumers of segment 2 stand out due to their considerably higher share of both private and business use in comparison to the other mostly homogenous segments (see Figure 7-89). This pattern is emerging within the country results to a higher (e.g. Czech Republic) or sometimes lesser degree (e.g. Croatia). The remaining segments are characterized by a greater extent of using the Internet for solely or mainly private use.

Figure 7-88: Purpose of at-home Internet usage by segment and country



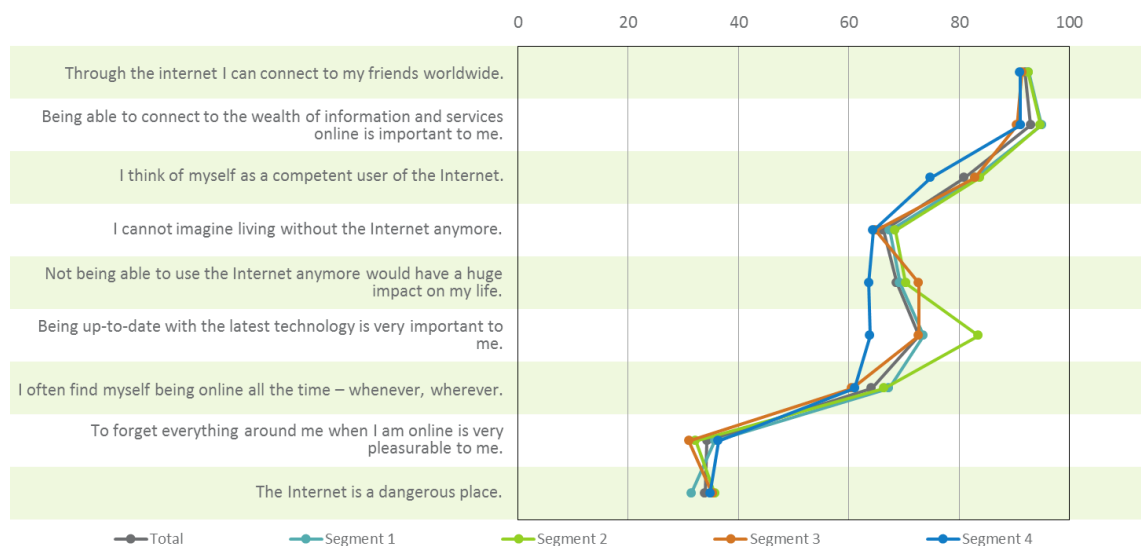
Basis: All respondents

Values shown in %

7.3.5.5 Attitudes by segment

Findings with respect to general attitudes towards the Internet reveal country-specific results regarding perceptions of the Internet by consumers of different segments. These will be detailed later on in this section. First and foremost, however, some salient overarching differences between segments can be described. Consumers of segment 2 show the most favourable attitudes towards the Internet across most items and countries (see Figure 7-89 to Figure 7-92). Findings for the four identified segments in Greece differ from the other countries fundamentally, as differences between segments here were smaller on average than in the other test areas. In Croatia, the Czech Republic, and Sweden, consumers of segment 2 are most likely to show positive associations to the Internet. In contrast, consumers of segment 4 are most likely to be sceptical about the Internet in general, feel least dependent on the Internet, and feel least competent with respect to their ability in using the Internet.

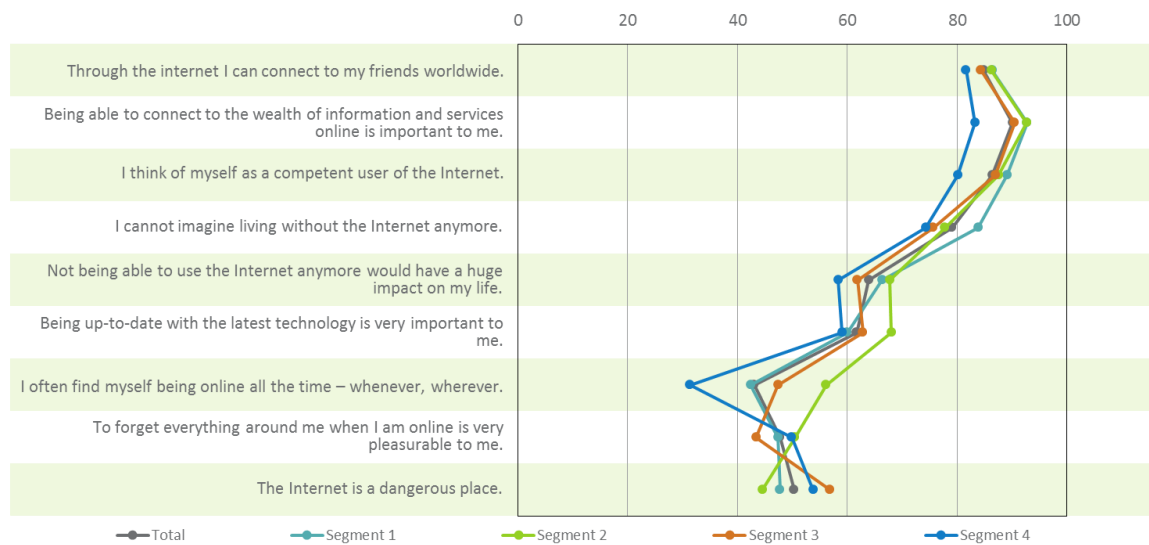
Figure 7-89: General attitudes towards the Internet by segment (Croatia)



Basis: All respondents

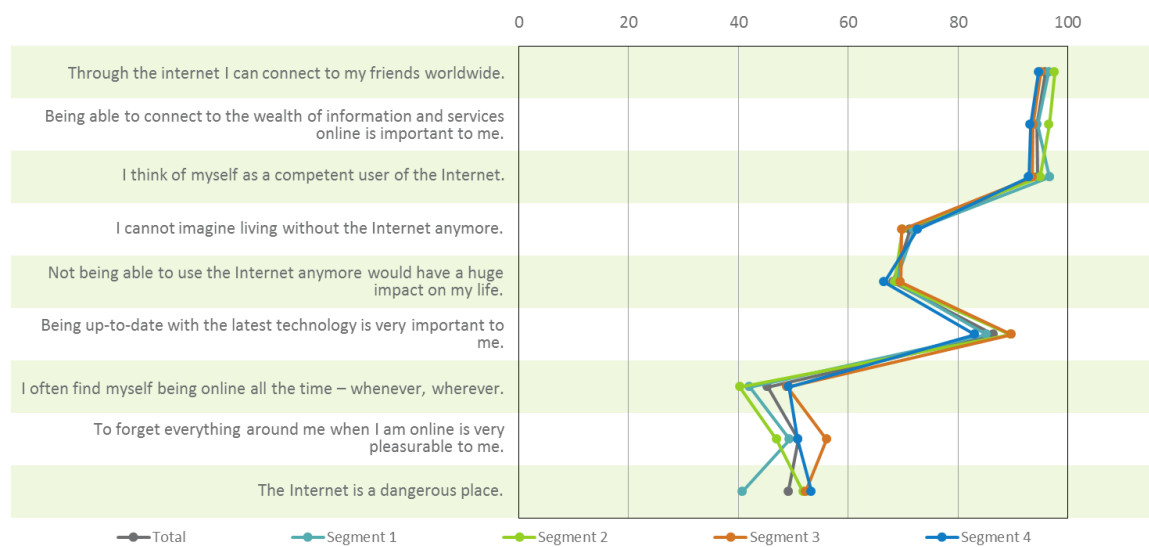
Values shown in %; Top2Boxes = Category „Rather agree“ + „Completely agree“

Figure 7-90: General attitudes towards the Internet by segment (Czech Republic)



Basis: All respondents
Values shown in %; Top2Boxes = Category „Rather agree“ + „Completely agree“

Figure 7-91: General attitudes towards the Internet by segment (Greece)



Basis: All respondents
Values shown in %; Top2Boxes = Category „Rather agree“ + „Completely agree“

Figure 7-92: General attitudes towards the Internet by segment (Sweden)

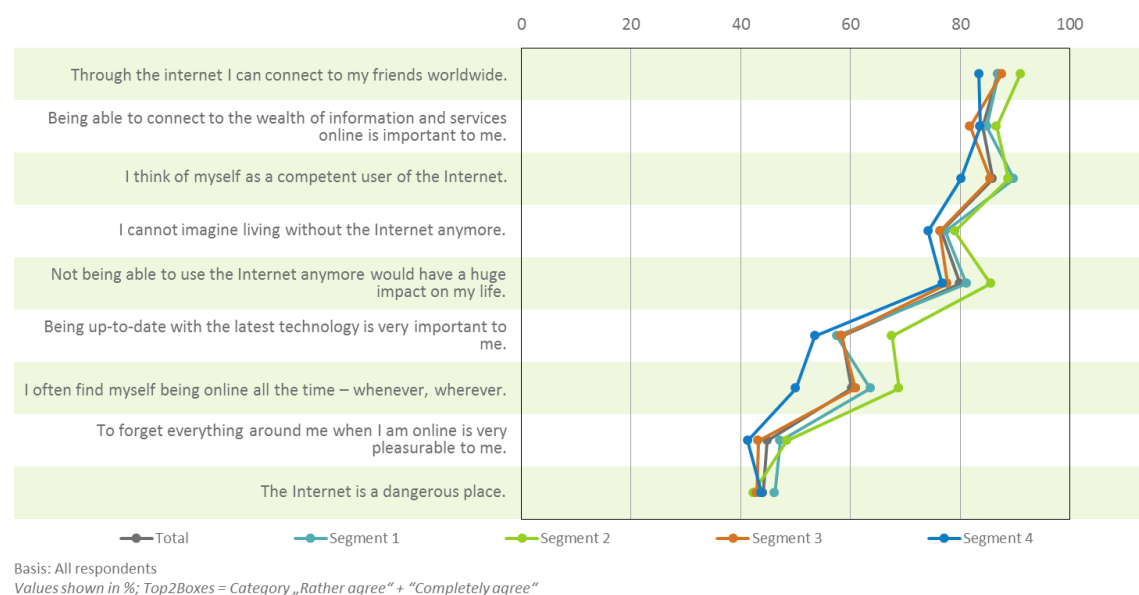


Figure 7-93 to Figure 7-96 show attitudes towards network neutrality in general per segment and country. Attitudes towards network neutrality found within consumer segments differ by country, thus a straight-forward interpretation of consumer segments' profiles across countries seems to not be appropriate. Yet, some important differences between segments can be observed across all test areas. Consumers of segment 3 are least likely to be of the opinion that “everybody should have the right to receive all the content and applications that are offered online”. With the exception of Croatia, this is also the case for the item “Internet providers are socially responsible to provide everyone with the same quality of access to the Internet”. Consumers of segment 3 score substantially lower on this item in the Czech Republic, Greece, and Sweden. In contrast, consumers of segments 1 and 2 are more likely to agree with these statements.

With respect to items that reflect positive associations with restrictions to Internet access (“every Internet provider should be free to decide to which Internet applications and services he wants to give users access to”; “prioritising certain applications above others has a positive effect on innovation”), there are no global patterns across countries. In Croatia, these statements are more often agreed upon by consumers of segment 3. In the Czech Republic, this is the case for consumers of segment 3. In Greece, consumers of segment 4 are more likely to be in favour of these statements. In Sweden, consumers of segment 3 more often agree with the statement “every Internet provider should be free to decide to which Internet applications and services he wants to give users access to”, while differentiation between segments is low in terms of the statement “prioritising certain applications above others has a positive effect on innovation”.

Figure 7-93: Attitudes towards network neutrality by segment (Croatia)

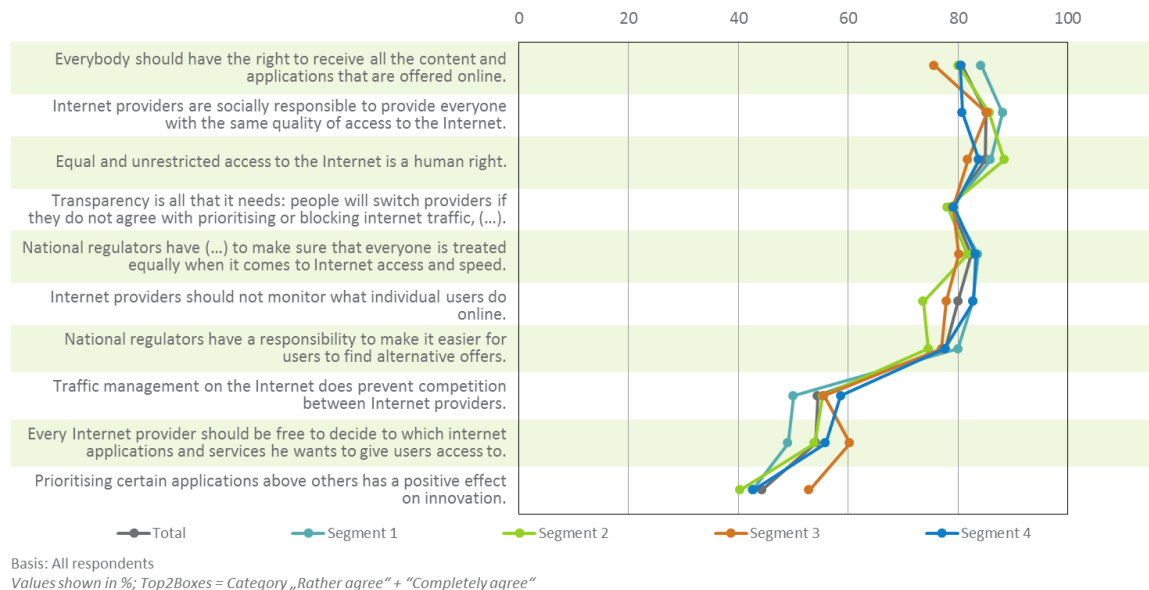


Figure 7-94: Attitudes towards network neutrality by segment (Czech Republic)

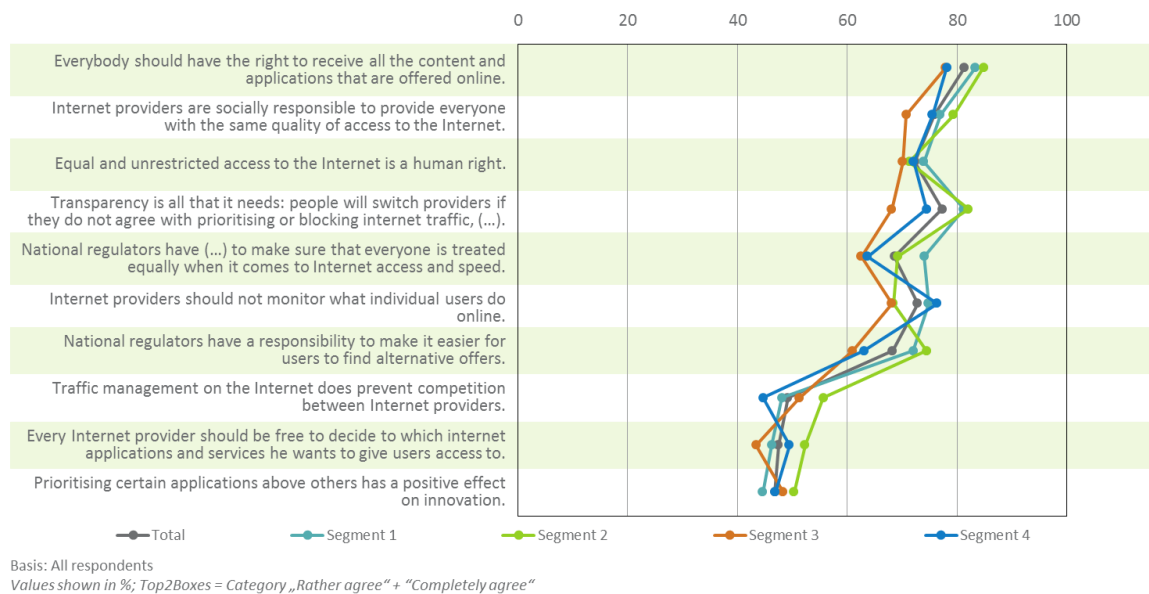


Figure 7-95: Attitudes towards network neutrality by segment (Greece)

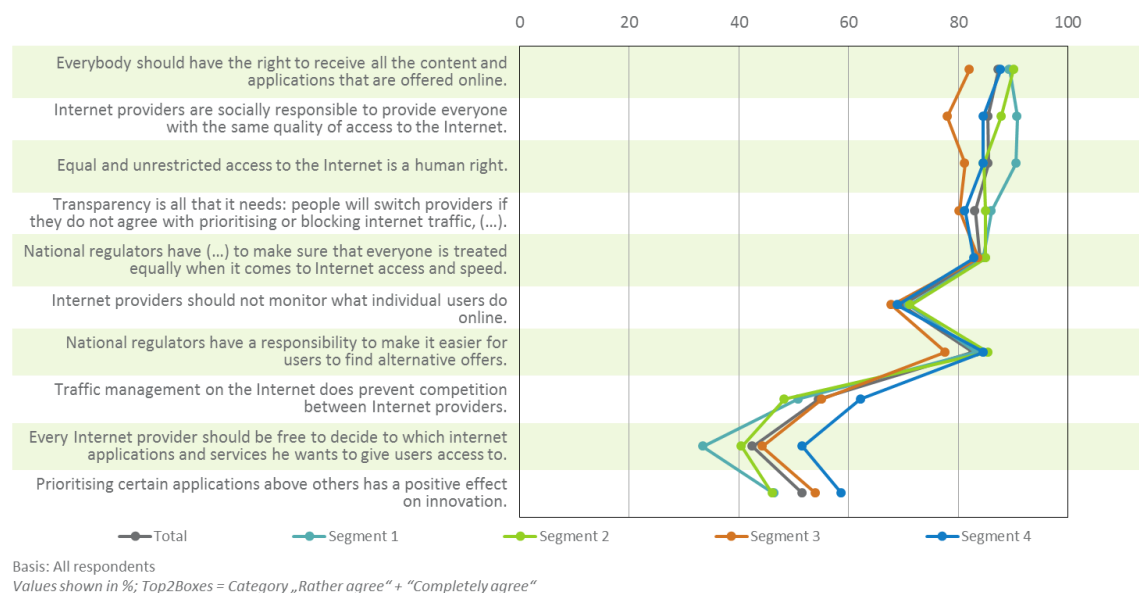
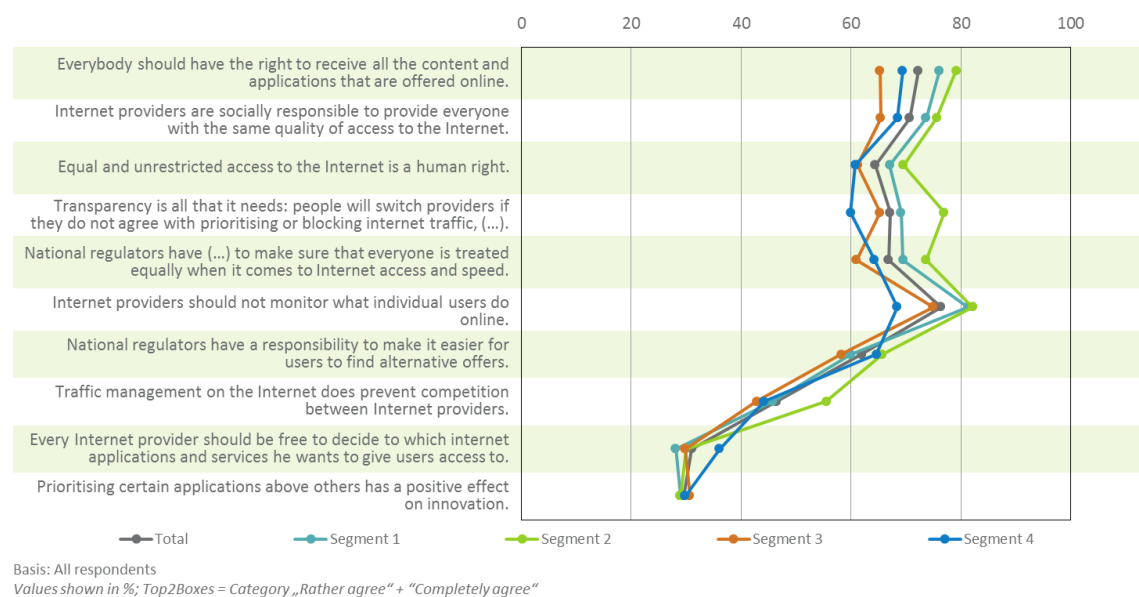


Figure 7-96: Attitudes towards network neutrality by segment (Sweden)



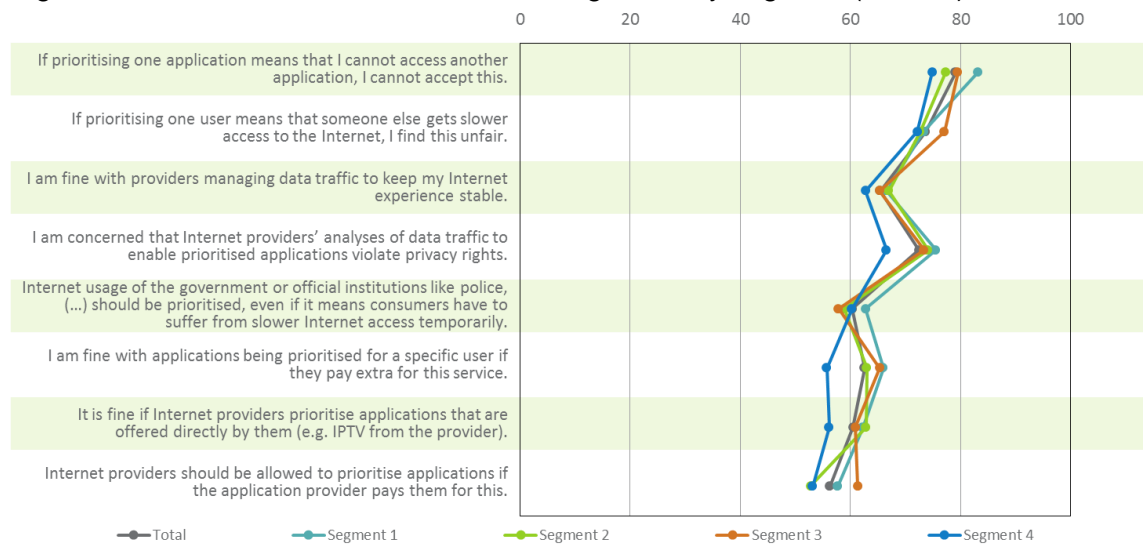
Attitudes towards traffic management by segments are shown in Figure 7-97 to Figure 7-100. In Greece, attitude measures with respect to traffic management show only minor differences between consumer segments. In Sweden, consumers of segment 3 are least likely to agree upon the item “If prioritising one user means that someone else gets slower access to the Internet, I find this unfair”. Consumers of segment 4 are most often in agreement with the item “Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily”. In contrast, consumers of segment 1 tend to agree least likely with statements that reflect general acceptance of traffic management measures (“I am fine with applications being prioritised for a specific user if they pay extra for this service”; It is fine if Internet

providers prioritise applications that are offered directly by them [i.e. IPTV from the provider]”; “Internet providers should be allowed to prioritise applications if the application provider pays them for this”). Yet, findings do not provide stable patterns across countries and rather reveal country-specific attitudes within consumer segments.

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Results show country-specific differences between segments rather than global patterns that may be interpreted in terms of global characterizations of segments. In Croatia, consumers of segment 4 score substantially lower on items that reflect acceptance of traffic management (“I am fine with applications being prioritised for a specific user if they pay extra for this service”; “It is fine if Internet providers prioritise applications that are offered directly by them [i.e. IPTV from the provider]”). In the Czech Republic, consumers of segments 1 and 2 score higher on items that reflect rejection of traffic management measures (“If prioritising one application means that I cannot access another application, I cannot accept this”; “If prioritising one user means that someone else gets slower access to the Internet, I find this unfair”). Interestingly, consumers of this same segment were also more likely to accept traffic management measures if they are offered a personal trade-off (“I am fine with providers managing data traffic to keep my Internet experience stable”). In Greece, attitude measures with respect to traffic management show only minor differences between consumer segments. In Sweden, consumers of segment 3 are least likely to agree with the item “If prioritising one user means that someone else gets slower access to the Internet, I find this unfair”. Consumers of segment 4 are most often in agreement with the item “Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily”. In contrast, consumers of segment 1 tend to agree least likely upon statements that reflect general acceptance of traffic management measures (“I am fine with applications being prioritised for a specific user if they pay extra for this service”; “It is fine if Internet providers prioritise applications that are offered directly by them [i.e. IPTV from the provider]”; “Internet providers should be allowed to prioritise applications if the application provider pays them for this”). Yet, findings do not provide stable patterns across countries and rather reveal country-specific attitudes within consumer segments.

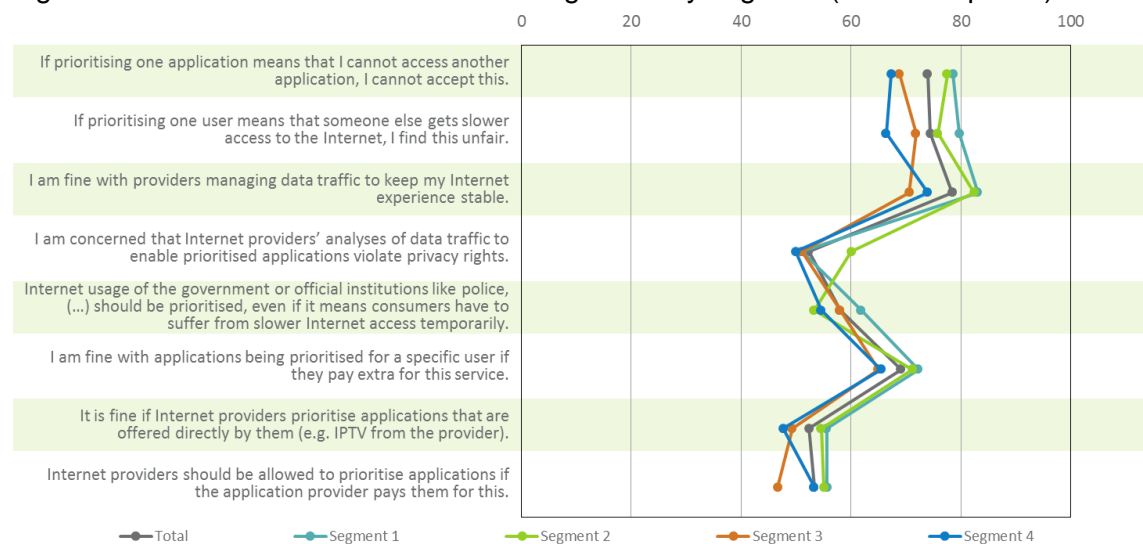
Figure 7-97: Attitudes towards traffic management by segment (Croatia)



Basis: All respondents

Values shown in %; Top2Boxes = Category „Rather agree“ + „Completely agree“

Figure 7-98: Attitudes towards traffic management by segment (Czech Republic)



Basis: All respondents

Values shown in %; Top2Boxes = Category „Rather agree“ + „Completely agree“

Figure 7-99: Attitudes towards traffic management by segment (Greece)

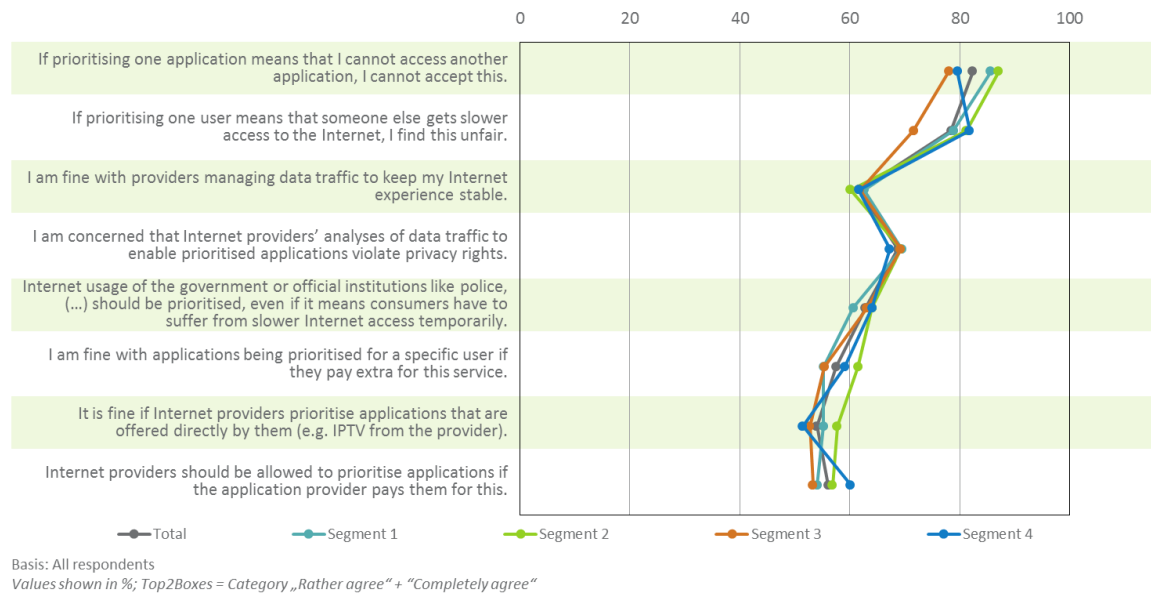
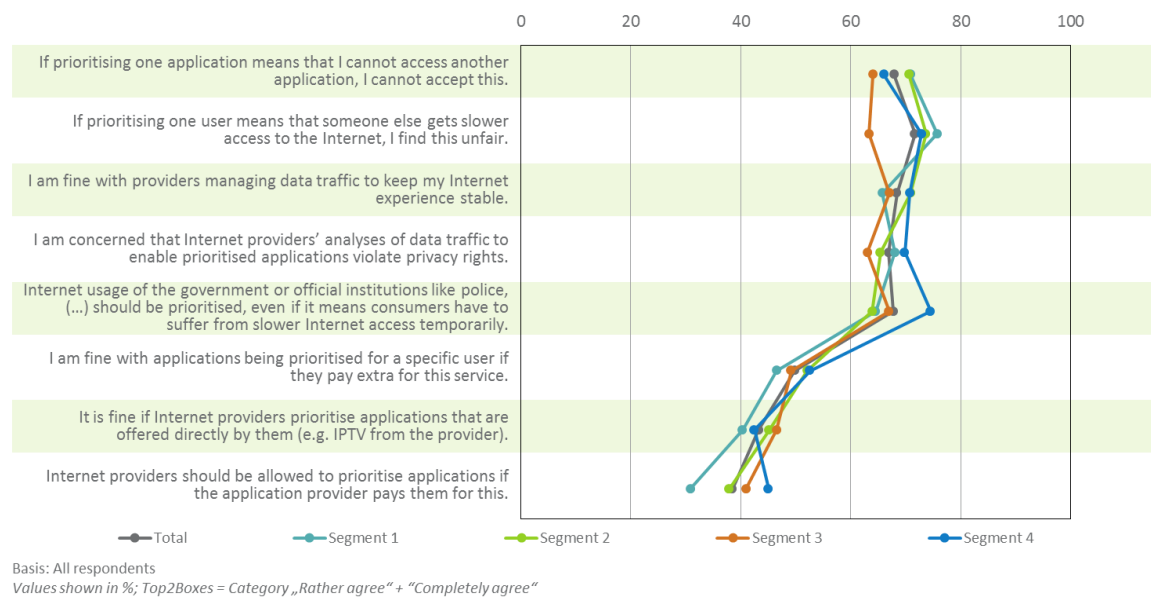


Figure 7-100: Attitudes towards traffic management by segment (Sweden)



With respect to switching likelihood due to traffic management, differences between segments are clear-cut across all countries. In general, consumers of segments 1 and 2 would be more likely to switch providers if they were confronted with measures of traffic management (see Figure 7-101 to Figure 7-104). Differences between segments are most pronounced in Sweden, while consumers' segments are least differentiated in Greece. There are minor country-specific deviations from this pattern with respect to application-related traffic management measures. In Croatia, consumers of segment 2 are least likely to switch providers in case of restricted access to online gaming applications compared to other segments. In the Czech Republic, switching likelihood due to restricted access to VoIP applications is lowest for consumers of segment 1.

Figure 7-101: Switching likelihood due to traffic management by segment (Croatia)

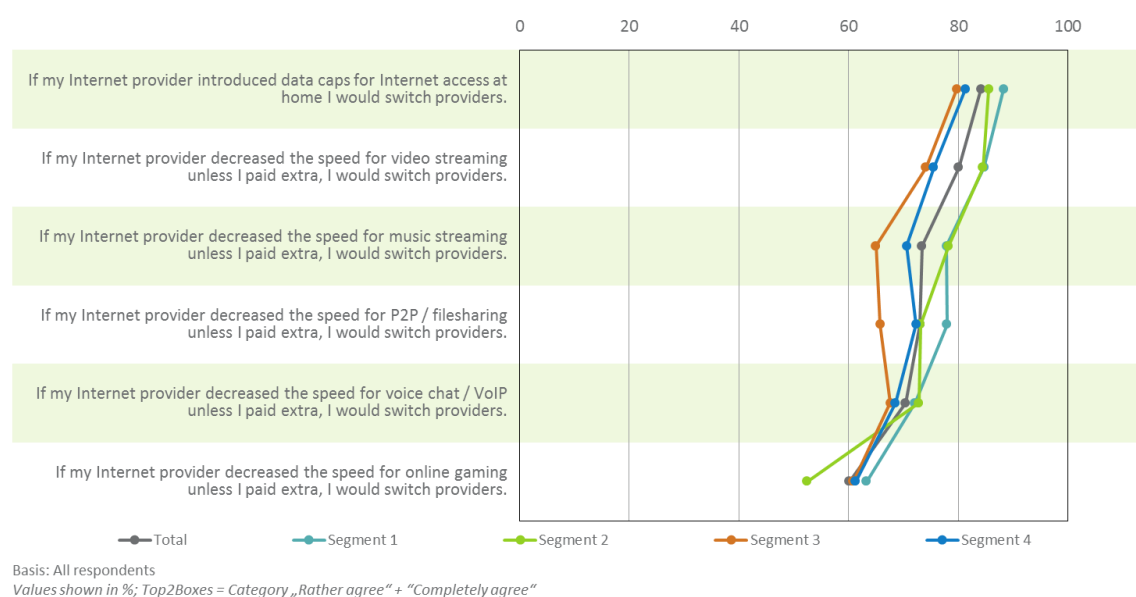


Figure 7-102: Switching likelihood due to traffic management by segment (Czech Republic)

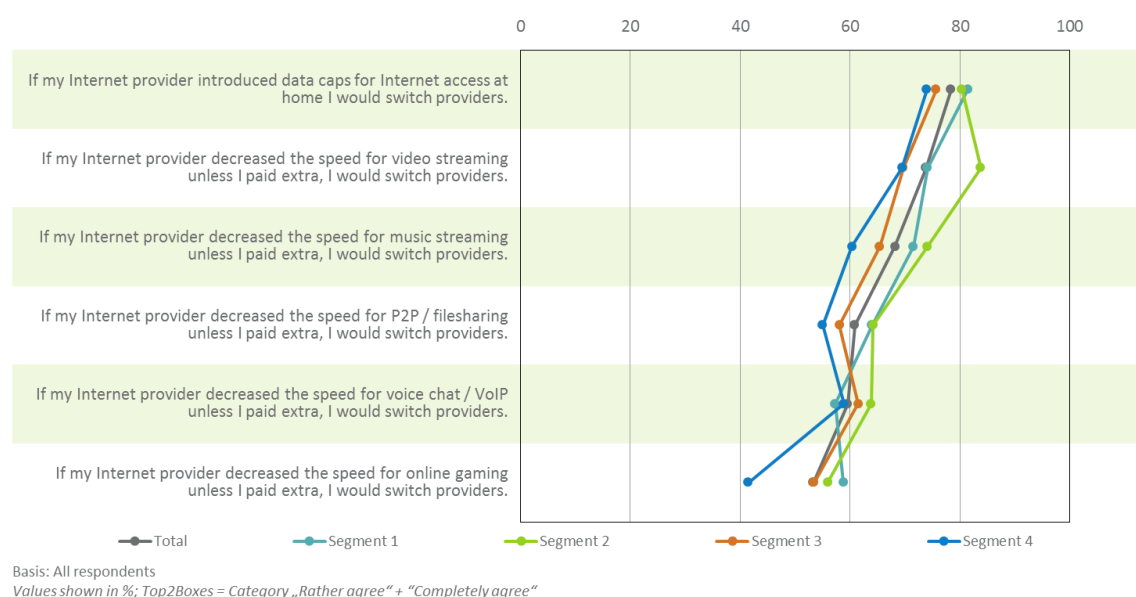


Figure 7-103: Switching likelihood due to traffic management by segment (Greece)

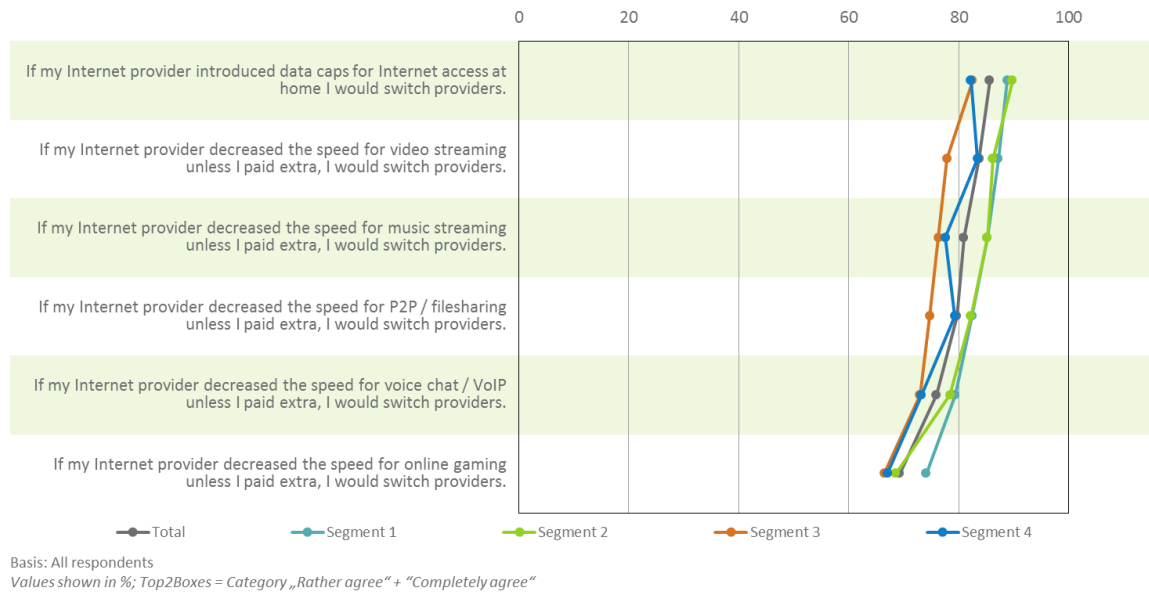
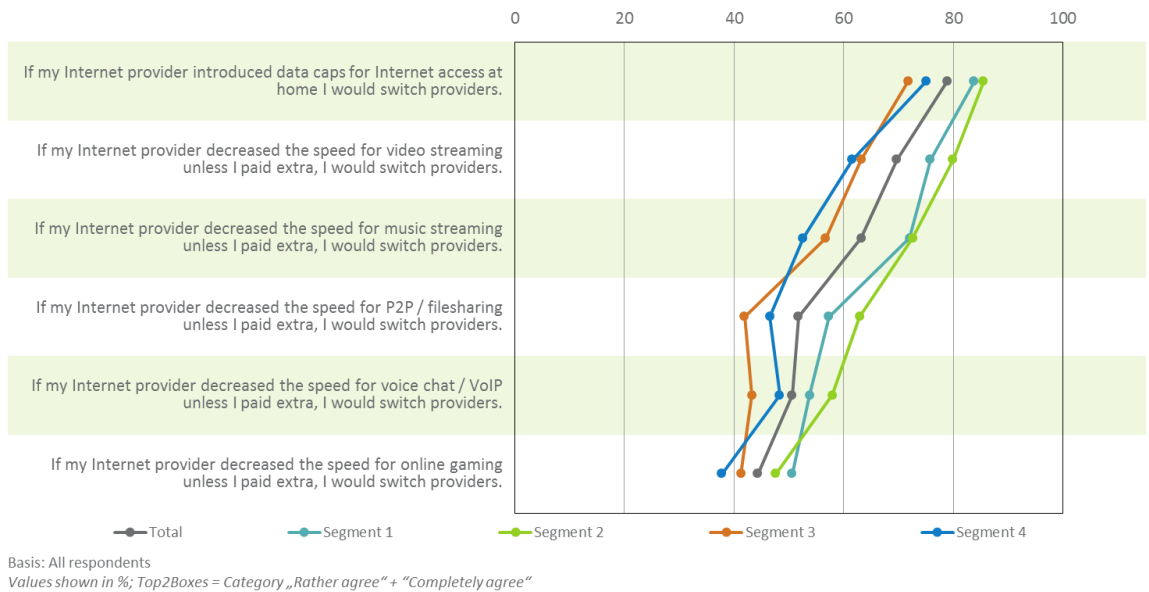


Figure 7-104: Switching likelihood due to traffic management by segment (Sweden)



7.3.5.6 Overall characterization of consumer segments

In Sections 7.3.5.1 to 7.3.5.5, 4 distinctive consumer segments have been defined and characterized by preferences, socio-demographic variables, usage behaviour, and attitudinal aspects. Subsequently, findings are summarised and brief consumer profiles will be given for ease of interpretation.

Consumers of segment 1 may be best described as *active multimedia users*. Network neutrality-related attributes (i.e. unrestricted access to specific Internet applications) are of high importance to these consumers. Especially, the accessibility of online gaming and video streaming applications are important to these consumers. Compared to other consumer segments, performance-related attributes such as download speed, bundled services, and data cap are less important. Price does play a less important role, yet distinguishes them from consumers of segment 2 (to whom price is even less important). Consumers of segment 1 are mostly middle-aged heavy users of the Internet. They are online at-home relatively frequently and long. They use Internet applications (especially applications such as video streaming, music streaming, VoIP, and P2P / File sharing) more often. Usage of the Internet is predominantly driven by private purposes. In line with unrestricted access to specific Internet applications being important, these consumers are more likely to switch providers in case of violations of network neutrality.

Consumers of segment 2 may be labelled as *dynamic private and business users*. Similar to consumers of segment 1, they place comparably high importance on the accessibility of specific Internet applications (especially P2P / File sharing and video streaming). Additionally, performance-related attributes such as download speed, bundled services, and data cap are important to this consumer segment. Of all segments identified, price is least important to these consumers. Consumers of segment 2 are predominantly male and of younger age. They are heavy users with respect to the frequency and the duration of at-home usage of the Internet. In addition, these consumers use Internet applications such as music and video streaming, P2P / File sharing, IPTV, or VoIP more often than the average respondent. They use the Internet for private and business purposes more often than other consumers. Consumers of segment 2 are more likely to have positive associations with the Internet in general. As the importance of network neutrality-related attributes is high, switching likelihood due to violations of network neutrality is higher among these consumers.

Consumers of segment 3 can be described as *conservative brand users*. Within this segment, performance-related attributes (download speed, bundled services, and data cap) are of high importance. This is also the case for brand and price. These attributes are more important to customers of segment 3 than for consumers of other segments: Segment 3 (brand) and respectively consumers of segments 1 and 2 (price). Network neutrality-related attributes are of comparably lower importance. Consumers of segment 3 are of a higher age and show less pronounced usage behaviour of at-home Internet (i.e. lower frequency and duration of usage). Usage rates of specific Internet applications are mediocre in comparison. Usage of the Internet is predominantly driven by private purposes. Attitudinal measures that reflect the social meaning of access to the Internet are least pronounced among consumers of segment 3. In addition, they are less likely to switch providers in case of violations of network neutrality.

Consumers of segment 4 are *pragmatic average users*. Of all segments identified, price is most important to these consumers. With respect to the importance of other attributes, both network neutrality-related attributes and performance-related attributes are of lower importance than among consumers of other segments. The distribution of

gender shows a small yet idiosyncratic surplus of women. Compared to other segments, consumers are older. Frequency of usage of at-home Internet as well as frequency of usage of out of home Internet are lower than among other consumer groups. Duration of usage of at-home Internet is low as well. Additionally, consumers of segment 4 use specific Internet applications less often. Usage of the Internet is mainly driven by private purposes. With respect to general attitudes, consumers of this segment are the most sceptical. Eventually, they are less likely to switch providers due to network neutrality violations than consumers of segments 1 and 2.

7.3.6 Market efficiency

Based on the conjoint results, the attractiveness of existing Internet offers on the local markets was examined. Information about current market offers was provided by the national regulatory authorities of Croatia, the Czech Republic, Greece, and Sweden. The utilities of these offers were calculated on the basis of the part-worth utilities reported in section 7.3.2. In consequence, only those characteristics tested within conjoint analysis could be considered.

Analysis was performed using Sawtooth SMRT software. If existing offers showed characteristics not directly tested within conjoint analysis but were within the range of tested attribute levels, these characteristics were simulated by interpolation of values; e.g. a price point k may be given a numeric value v by considering the lower price point i with the numeric value m tested and the upper price point j tested:

$$v = \frac{m + (k - j)}{j - i}$$

If existing offers showed characteristics not directly tested within conjoint analysis and were outside the range of tested attribute levels, these offers could not be considered¹⁸⁷. The only criterion for consideration of market offers was suitability with respect to parameters given by the conjoint design. Other criteria such as market shares were not considered.

As part-worth utilities do not reflect an absolute value of utility, a reference offer was simulated for comparison. For all markets tested the respective optimal offer in terms of attractiveness was simulated (i.e. the combination of the most attractive attribute levels per country)¹⁸⁸. The utilities of the simulated market offers were then transformed as the ratio of the most attractive offer. The most attractive offer was defined as 100%, utilities of existing market offers were transformed in relation to this threshold. It has to be kept in mind that results do not reflect absolute utilities but utilities relative to the most attractive offer possible. Therefore, a value of zero does not reflect that an offer has not any utility to consumers at all.

¹⁸⁷ Minor deviations up to 0.10 in terms of extrapolated numeric values were accepted.

¹⁸⁸ As preferences of consumers of different segments (as identified in Section 7.3.5) with respect to the most attractive levels of attributes hardly differ, the optimal product for the overall market (per test area) was chosen.

Figure 7-105 shows relative utilities of market offers in Croatia. In total, 43 of 62 offers could be considered for analysis. Of the offers analysed, 3 offers reach about two-thirds of the attractiveness of the reference offer. For another 4 offers shares in attractiveness of more than 60% can be reported. The vast majority of offers do not have half the attractiveness of the optimal offer to respondents.

Figure 7-105: Relative utilities of market offers in Croatia

Reference	Hrvatski Telekom; 150Kn; 100MBit/s; Internet, telephone and TV; 1 month contract duration; no data cap; all applications can be used normally	100
Offer 50	B.net; 169.91 Kn; 12 MBit/s; Internet and TV, 24 months contract duration; no data cap; all applications can be used normally	68
Offer 54	B.net; 162.91 Kn; 12 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	67
Offer 47	B.net; 146 Kn; 20 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	66
Offer 51	B.net; 219.91 Kn; 20 MBit/s; Internet and TV, 24 months contract duration; no data cap; all applications can be used normally	62
Offer 55	B.net; 212.91 Kn; 20 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	61
Offer 58	B.net; 230.53 Kn; 12 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	61
Offer 8	Hrvatski Telekom; 162.23 Kn; 10 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	61
Offer 21	Hrvatski Telekom; 195 Kn; 10 MBit/s; Internet and telephone; 24 months contract duration; 1 GB data cap; all applications can be used normally	54
Offer 19	Hrvatski Telekom; 165 Kn; 4 MBit/s; Internet and telephone; 24 months contract duration; 1 GB data cap; all applications can be used normally	50
Offer 3	Hrvatski Telekom; 204.43 Kn; 20 MBit/s; Internet only; 24 months contract duration; 1 GB data cap; all applications can be used normally	47
Offer 59	B.net; 280.53 Kn; 20 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	46
Offer 28	Hrvatski Telekom; 219 Kn; 4 MBit/s; Internet, telephone and TV; 24 months contract duration; 1 GB data cap; all applications can be used normally	44
Offer 45	Hrvatski Telekom; 345 Kn; 102 MBit/s; Internet, telephone and TV; 24 months contract duration; 250GB data cap; all applications can be used normally	42
Offer 44	Hrvatski Telekom; 315 Kn; 41 MBit/s; Internet, telephone and TV; 24 months contract duration; 250 GB data cap; all applications can be used normally	42
Offer 7	Hrvatski Telekom; 162.23 Kn; 4 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	42
Offer 11	Hrvatski Telekom; 206.43 Kn; 10 MBit/s; Internet only; 24 months contract duration; 1 GB data cap; all applications can be used normally	42
Offer 22	Hrvatski Telekom; 268 Kn; 20 MBit/s; Internet and telephone; 24 months contract duration; 1 GB data cap; all applications can be used normally	41
Offer 6	Hrvatski Telekom; 233.73 Kn; 20 MBit/s; Internet only; 24 months contract duration; 15 GB data cap; all applications can be used normally	40
Offer 43	Hrvatski Telekom; 321 Kn; 102 MBit/s; Internet and telephone; 24 months contract duration; 250GB data cap; all applications can be used normally	40
Offer 42	Hrvatski Telekom; 291 Kn; 41 MBit/s; Internet and telephone; 24 months contract duration; 250 GB data cap; all applications can be used normally	38
Offer 26	Hrvatski Telekom; 271 Kn; 10 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	36
Offer 24	Hrvatski Telekom; 275.95 Kn; 10 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	36
Offer 10	Hrvatski Telekom; 176.43 Kn; 4 MBit/s; Internet only; 24 months contract duration; 1 GB data cap; all applications can be used normally	36
Offer 9	Hrvatski Telekom; 265.23 Kn; 20 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	35
Offer 41	Hrvatski Telekom; 306.23 Kn; 102 MBit/s; Internet only; 24 months contract duration; 250GB data cap; all applications can be used normally	35
Offer 40	Hrvatski Telekom; 276.23 Kn; 41 MBit/s; Internet only; 24 months contract duration; 250GB data cap; all applications can be used normally	34
Offer 20	Hrvatski Telekom; 241 Kn; 4 MBit/s; Internet and TV 24 months contract duration; no data cap; all applications can be used normally	33
Offer 14	Hrvatski Telekom; 246.39 Kn; 10 MBit/s; Internet only; 24 months contract duration; 15 GB data cap; all applications can be used normally	33
Offer 34	Hrvatski Telekom; 275 Kn; 4 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	31
Offer 23	Hrvatski Telekom; 245.95 Kn; 4 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	30
Offer 29	Hrvatski Telekom; 321.46 Kn; 10 MBit/s; Internet, telephone and TV; 24 months contract duration; 1 GB data cap; all applications can be used normally	30
Offer 12	Hrvatski Telekom; 279.43 Kn; 20 MBit/s; Internet only; 24 months contract duration; 1 GB data cap; all applications can be used normally	29
Offer 13	Hrvatski Telekom; 216.39 Kn; 4 MBit/s; Internet only; 24 months contract duration; 15 GB data cap; all applications can be used normally	28
Offer 31	Hrvatski Telekom; 299.95 Kn; 4 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	27
Offer 17	Hrvatski Telekom; 287.38 Kn; 10 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	27
Offer 27	Hrvatski Telekom; 344 Kn; 20 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	25
Offer 25	Hrvatski Telekom; 348.95 Kn; 20 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	24
Offer 16	Hrvatski Telekom; 257.38 Kn; 4 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	23
Offer 15	Hrvatski Telekom; 319.39 Kn; 20 MBit/s; Internet only; 24 months contract duration; 15 GB data cap; all applications can be used normally	20
Offer 35	Hrvatski Telekom; 377.46 Kn; 10 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	18
Offer 37	Hrvatski Telekom; 329 Kn; 4 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	17
Offer 32	Hrvatski Telekom; 402.41 Kn; 10 MBit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	15
Offer 18	Hrvatski Telekom; 360.38 Kn; 20 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	9

Basis: Respondents in Croatia

Values shown in %

Figure 7-106 shows relative shares in attractiveness of existing market offers in the Czech Republic. Of 111 market offers provided by the national regulation authority, a total of 45 were considered for analysis¹⁸⁹. In the Czech Republic, 13 offers reach at least two-thirds of the attractiveness of the optimal offer. Another 12 offers have at least half of the attractiveness of the reference offer. Compared to the Croatian results, a greater number of market offers fit to a larger extent to consumers' preferences (as tested in the conjoint analysis).

189 In the Czech Republic, 33 offers of local Internet providers were listed. Due to consistency, these offers were not considered for analysis.

Figure 7-106: Relative utilities of market offers in the Czech Republic

Reference	O2 Czech Republic; 300 Kč; 100 Mbit/s; Internet, telephone and TV; 12 months contract duration; no data cap; all applications can be used normally	100
Offer 105	O2 Czech Republic; 399 Kč; 20 Mbit/s; Internet, telephone and TV; 12 months contract duration; no data cap; all applications can be used normally	80
Offer 107	O2 Czech Republic; 499 Kč; 40 Mbit/s; Internet, telephone and TV; 12 months contract duration; no data cap; all applications can be used normally	75
Offer 26	RIO media; 349 Kč; 20 Mbit/s; Internet and Telephone; 24 months contract duration; no data cap; all applications can be used normally	70
Offer 12	UPC Česká republika; 499 Kč; 40 Mbit/s; Internet and TV; 12 months contract duration; no data cap; all applications can be used normally	70
Offer 25	RIO media; 399 Kč; 20 Mbit/s; Internet and Telephone; 0 months contract duration; no data cap; all applications can be used normally	70
Offer 10	UPC Česká republika; 299 Kč; 5 Mbit/s; Internet and TV; 12 months contract duration; no data cap; all applications can be used normally	69
Offer 95	O2 Czech Republic; 499 Kč; 20 Mbit/s; Internet and TV; 12 months contract duration; no data cap; all applications can be used normally	68
Offer 28	RIO media; 449 Kč; 60 Mbit/s; Internet and Telephone; 24 months contract duration; no data cap; all applications can be used normally	68
Offer 102	O2 Czech Republic; 304 Kč; 2 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	68
Offer 4	UPC Česká republika; 449 Kč; 40 Mbit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	68
Offer 18	UPC Česká republika; 349 Kč; 5 Mbit/s; Internet, telephone and TV; 12 months contract duration; no data cap; all applications can be used normally	67
Offer 20	UPC Česká republika; 549 Kč; 40 Mbit/s; Internet, telephone and TV; 12 months contract duration; no data cap; all applications can be used normally	67
Offer 27	RIO media; 499 Kč; 60 Mbit/s; Internet and Telephone; 0 months contract duration; no data cap; all applications can be used normally	67
Offer 97	O2 Czech Republic; 599 Kč; 40 Mbit/s; Internet and TV; 12 months contract duration; no data cap; all applications can be used normally	63
Offer 93	O2 Czech Republic; 349 Kč; 2 Mbit/s; Internet and TV; 12 months contract duration; no data cap; all applications can be used normally	62
Offer 32	RIO media; 475 Kč; 20 Mbit/s; Internet and TV; 24 months contract duration; no data cap; all applications can be used normally	61
Offer 31	RIO media; 525 Kč; 20 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	60
Offer 34	RIO media; 575 Kč; 60 Mbit/s; Internet and TV; 24 months contract duration; no data cap; all applications can be used normally	58
Offer 33	RIO media; 625 Kč; 60 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	58
Offer 92	O2 Czech Republic; 404 Kč; 2 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	56
Offer 104	O2 Czech Republic; 657 Kč; 20 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	55
Offer 30	RIO media; 649 Kč; 100 Mbit/s; Internet and Telephone; 24 months contract duration; no data cap; all applications can be used normally	55
Offer 29	RIO media; 699 Kč; 100 Mbit/s; Internet and Telephone; 0 months contract duration; no data cap; all applications can be used normally	54
Offer 1	UPC Česká republika; 400 Kč; 5 Mbit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	53
Offer 106	O2 Czech Republic; 758 Kč; 40 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	50
Offer 3	UPC Česká republika; 649 Kč; 40 Mbit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	48
Offer 36	RIO media; 775 Kč; 100 Mbit/s; Internet and TV; 24 months contract duration; no data cap; all applications can be used normally	45
Offer 35	RIO media; 825 Kč; 100 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	45
Offer 94	O2 Czech Republic; 757 Kč; 20 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	43
Offer 40	RIO media; 775 Kč; 60 Mbit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	43
Offer 39	RIO media; 825 Kč; 60 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	42
Offer 9	UPC Česká republika; 599 Kč; 5 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	42
Offer 11	UPC Česká republika; 799 Kč; 40 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	41
Offer 38	RIO media; 725 Kč; 20 Mbit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	40
Offer 37	RIO media; 775 Kč; 20 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	40
Offer 17	UPC Česká republika; 649 Kč; 5 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	40
Offer 19	UPC Česká republika; 849 Kč; 40 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	40
Offer 96	O2 Czech Republic; 858 Kč; 40 Mbit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	39
Offer 46	RIO media; 875 Kč; 60 Mbit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	34
Offer 44	RIO media; 825 Kč; 20 Mbit/s; Internet, telephone and TV; 24 months contract duration; no data cap; all applications can be used normally	32
Offer 43	RIO media; 875 Kč; 20 Mbit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	31
Offer 89	O2 Czech Republic; 499 Kč; 20 Mbit/s; Internet only; 24 months contract duration; 20 GB data cap; P2P, VoIP and video streaming slowed down	0
Offer 91	O2 Czech Republic; 599 Kč; 40 Mbit/s; Internet only; 24 months contract duration; 25 GB data cap; P2P, VoIP and video streaming slowed down	0
Offer 88	O2 Czech Republic; 749 Kč; 20 Mbit/s; Internet only; 0 months contract duration; 20 GB data cap; P2P, VoIP and video streaming slowed down	0
Offer 90	O2 Czech Republic; 849 Kč; 40 Mbit/s; Internet only; 0 months contract duration; 25 GB data cap; P2P, VoIP and video streaming slowed down	0

Basis: Respondents in the Czech Republic

Values shown in %

Figure 7-107 shows relative shares in utility for Greek market offers. All offers (29) provided by the national regulatory authority were considered for analysis. 3 offers show at least two-thirds of the attractiveness of the optimal offer. Another 5 offers reach 60% and more of the attractiveness of the reference offer. Eventually, 13 existing offers have half of the attractiveness of the optimal offer as tested within the conjoint design.

Figure 7-107: Relative utilities of market offers in Greece

Reference	OTE; 17 €; 100 MBit/s; Internet, telephone and TV; 12 months contract duration; no data cap; all applications can be used normally	100
Offer 14	forthnet; 17,9 €; 24 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	68
Offer 16	forthnet; 24,9 €; 24 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	68
Offer 25	hellas online (hol); 25 €; 24 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	67
Offer 22	hellas online (hol); 19 €; 24 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	65
Offer 13	forthnet; 19,9 €; 24 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	65
Offer 26	hellas online (hol); 23 €; 24 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	65
Offer 15	forthnet; 27,9 €; 24 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	63
Offer 23	hellas online (hol); 17 €; 24 MBit/s; Internet only; 24 months contract duration; no data cap; all applications can be used normally	63
Offer 20	forthnet; 34,9 €; 50 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	57
Offer 21	hellas online (hol); 24,7 €; 24 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	56
Offer 18	forthnet; 27,9 €; 50 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	55
Offer 6	OTE; 26,9 €; 24 MBit/s; Internet only; 18 months contract duration; no data cap; all applications can be used normally	55
Offer 5	OTE; 28,9 €; 24 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	54
Offer 29	hellas online (hol); 32 €; 50 MBit/s; Internet and telephone; 24 months contract duration; no data cap; all applications can be used normally	54
Offer 7	OTE; 37,9 €; 24 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	54
Offer 8	OTE; 35,9 €; 24 MBit/s; Internet and telephone; 18 months contract duration; no data cap; all applications can be used normally	54
Offer 24	hellas online (hol); 34 €; 24 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	54
Offer 19	forthnet; 37,9 €; 50 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	53
Offer 17	forthnet; 29,9 €; 50 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	53
Offer 9	OTE; 41,9 €; 30 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	50
Offer 10	OTE; 39,9 €; 30 MBit/s; Internet and telephone; 18 months contract duration; no data cap; all applications can be used normally	50
Offer 28	hellas online (hol); 40 €; 50 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	49
Offer 12	OTE; 44,9 €; 50 MBit/s; Internet and telephone; 18 months contract duration; no data cap; all applications can be used normally	46
Offer 11	OTE; 46,9 €; 50 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	46
Offer 2	OTE; 21,9 €; 4 MBit/s; Internet only; 18 months contract duration; no data cap; all applications can be used normally	45
Offer 1	OTE; 24,9 €; 4 MBit/s; Internet only; 12 months contract duration; no data cap; all applications can be used normally	43
Offer 3	OTE; 32,9 €; 4 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	42
Offer 4	OTE; 30,9 €; 4 MBit/s; Internet and telephone; 18 months contract duration; no data cap; all applications can be used normally	42
Offer 27	hellas online (hol); 49,2 €; 50 MBit/s; Internet and telephone; 12 months contract duration; no data cap; all applications can be used normally	38

Basis: Respondents in Greece

Values shown in %

Relative shares in utility of existing market offers in Sweden are shown in Figure 7-108. 54 offers were provided by the Swedish national regulatory authority; a total of 43 offers were considered for analysis. For 5 offers, a utility share of at least 70% of the most attractive offer possible can be reported. Another 9 offers show utility shares of 60% and higher. In addition, 13 offers are at least half as attractive as the optimal offer in Sweden.

Figure 7-108: Relative utilities of market offers in Sweden

Reference	Telia; 190 kr; 100 MBit/s; Internet, telephone and TV; 1 month contract duration; no data cap; all applications can be used normally	100
Offer 39	TELE2; 299 kr; 100 MBit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	81
Offer 35	TELE2; 299 kr; 100 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	75
Offer 22	Telia; 468 kr; 100 MBit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	73
Offer 2	Telia; 379 kr; 100 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	72
Offer 38	TELE2; 229 kr; 10 MBit/s; Internet and TV; 0 months contract duration; no data cap; all applications can be used normally	70
Offer 26	TELE2; 309 kr; 24 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	67
Offer 27	TELE2; 339 kr; 30 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	65
Offer 34	TELE2; 229 kr; 10 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	63
Offer 28	TELE2; 409 kr; 60 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	63
Offer 19	Telia; 488 kr; 30 MBit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	62
Offer 15	Telia; 439 kr; 30 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	61
Offer 20	Telia; 548 kr; 60 MBit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	60
Offer 16	Telia; 499 kr; 60 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	60
Offer 21	Telia; 418 kr; 10 MBit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	60
Offer 1	Telia; 329 kr; 10 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	59
Offer 10	Telia; 199 kr; 50 MBit/s; Internet only; 0 months contract duration; 10 GB data cap; all applications can be used normally	59
Offer 25	TELE2; 279 kr; 8 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	59
Offer 31	TELE2; 359 kr; 24 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	58
Offer 32	TELE2; 389 kr; 30 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	56
Offer 7	Telia; 449 kr; 30 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	56
Offer 8	Telia; 508 kr; 60 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	55
Offer 12	Telia; 399 kr; 50 MBit/s; Internet only; 0 months contract duration; 40 GB data cap; all applications can be used normally	54
Offer 33	TELE2; 459 kr; 60 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	54
Offer 47	TELE2; 349 kr; 40 MBit/s; Internet only; 0 months contract duration; 30 GB data cap; all applications can be used normally	53
Offer 45	TELE2; 199 kr; 40 MBit/s; Internet only; 0 months contract duration; 12 GB data cap; all applications can be used normally	52
Offer 18	Telia; 458 kr; 8 MBit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	52
Offer 14	Telia; 409 kr; 8 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	51
Offer 30	TELE2; 329 kr; 8 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	49
Offer 11	Telia; 299 kr; 50 MBit/s; Internet only; 0 months contract duration; 20 GB data cap; all applications can be used normally	49
Offer 24	TELE2; 259 kr; 2 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	48
Offer 49	telenor; 199 kr; 20 MBit/s; Internet only; 0-24 months contract duration; 4 GB data cap; all applications can be used normally	48
Offer 46	TELE2; 249 kr; 40 MBit/s; Internet only; 0 months contract duration; 20 GB data cap; all applications can be used normally	47
Offer 6	Telia; 418 kr; 8 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	46
Offer 17	Telia; 398 kr; 2 MBit/s; Internet, telephone and TV; 0 months contract duration; no data cap; all applications can be used normally	45
Offer 13	Telia; 349 kr; 2 MBit/s; Internet and telephone; 0 months contract duration; no data cap; all applications can be used normally	45
Offer 50	telenor; 299 kr; 50 MBit/s; Internet only; 0-24 months contract duration; 8 GB data cap; all applications can be used normally	44
Offer 5	Telia; 358 kr; 2 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	39
Offer 29	TELE2; 309 kr; 2 MBit/s; Internet only; 0 months contract duration; no data cap; all applications can be used normally	39
Offer 51	telenor; 399 kr; 50 MBit/s; Internet only; 0-24 months contract duration; 12 GB data cap; all applications can be used normally	34
Offer 52	telenor; 398 kr; 20 MBit/s; Internet and telephone; 0-24 months contract duration; 4 GB data cap; all applications can be used normally	33
Offer 53	telenor; 498 kr; 50 MBit/s; Internet and telephone; 0-24 months contract duration; 8 GB data cap; all applications can be used normally	30
Offer 54	telenor; 598 kr; 50 MBit/s; Internet and telephone; 0-24 months contract duration; 12 GB data cap; all applications can be used normally	20
Offer 48	TELE2; 699 kr; 40 MBit/s; Internet only; 0 months contract duration; 60 GB data cap; all applications can be used normally	20

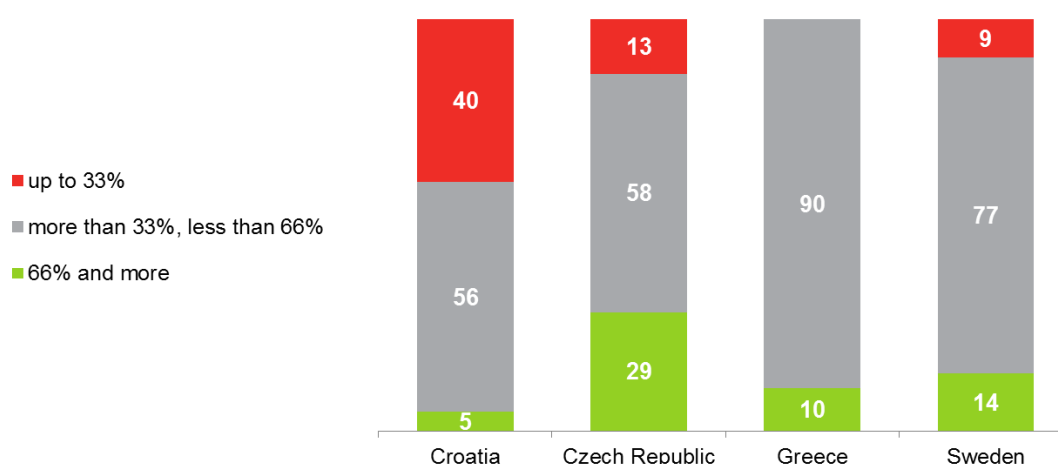
Basis: Respondents in Sweden

Values shown in %

In sum, test areas show different shares of offers with relative utility scores compared to the most attractive offer. Figure 7-109 presents for each test areas the respective

shares of offers that provide at least 66% of the utility of the most attractive offer, maximum 33% of the most attractive offer's utility, and the share for offers with utility scores in between. Czech Republic has the highest share of offers that reach at least 66% of utility of the most attractive offer. 29% of analysed offers in the Czech Republic provide a utility score of 66% and more. This share is substantially higher than in any other test area. It is more than twice as high as in Sweden, nearly three times higher than in Greece, and nearly six times higher than in Croatia.

Figure 7-109: Shares of offers with relative utility scores compared to the most attractive offer per test area



Greece shows the highest share of offers with a utility score which is higher than 33% and lower than 66% of the most attractive offer. 90% of analysed offers in Greece fall in this utility score class – substantially more than in Sweden and even over one and a half times more than in the Czech Republic or in Croatia. The analysis for Greece furthermore reveals that none of the Greek offers provides a utility score lower than 33%. Greece is the only test area without offers in this utility score class. Offers with a utility score lower than 33% exist in Sweden and the Czech Republic, but their share is relatively small (9% and 13%, respectively). The situation in Croatia, however, differs substantially as 40% of analysed offers provide a utility of less than 33% of the most attractive offer.

The above results should be interpreted carefully. They provide substantial indication as to the degree that offers in the test areas reach the utility of the most attractive offer. Such degree – represented by the share of offers that fall into a high, middle, and low utility score class – appears as a meaningful measure to inform about the overall dimensions of offers that, utility-wise, come close to the most attractive offer, that show substantial distance in utility from the most attractive product, or that provide only little utility in reference of the most attractive product. It is, however, of utter importance to note that even offers in the low utility score class are by no means to be understood as “bad” offers. The analysis does not imply that such offers are of low quality, nor shall their sheer existence in a market be interpreted as a sign that the respective market is inefficient.

The key to successful interpretation of this analysis is in understanding that the utilities calculated allow us to show the distance to the utility of a fictitious offer. The most attractive offer is constructed from the attributes considered in the conjoint choice experiment, whereas each attribute is configured according to the respective attribute level to which consumers assigned most utility. This means that the most attractive offer is an idealistic offer. It reflects consumers' preferences; it does not reflect the preferences of ISPs, nor does it give any indication at all whether ISPs would find it commercially viable to bring this offer to market. Readers are therefore advised to interpret the above analysis as a consumer-centred research outcome.

The same advice applies with respect to the inclusion of non-Internet products in a bundle. The most attractive offer in all test areas includes a 3-play bundle of Internet, telephone and TV. Although the analysis focuses on illustrated efficiency in relation to the characteristics of the Internet access services offered, not the bundling of TV or telephone, it is important to include bundled products in the analysis. Bundles were part of the conjoint analysis and they represent an important part of the market. Since the study, overall, is consumer-oriented, it is relevant to include bundles as an element of the consumer choice, even if parts of the bundle (TV, telephone) may not relate to Internet access.

7.4 Summary

This chapter set out to present the results of the survey. First, descriptive results were detailed. Second, the chapter focussed on the analytical results addressing the major research objectives of the present study. This section briefly summarises the major insights gained from the survey in the four test areas: Croatia, Czech Republic, Greece and Sweden.

Considering the sample characteristics as presented at the start of this chapter clearly shows that the sample achieved a good coverage across all parts of the relevant populations¹⁹⁰ in the respective test areas. Thus, screening criteria and quotas can be considered to have been successfully implemented. The resulting sampling proved representative for the relevant population and only minor weighting had to be performed.

As regards Internet access characteristics, it was found that in the test areas incumbents still have strong footholds in the respective markets. The sample shows good coverage of the different ISPs present in the respective test areas and thus allows for meaningful analyses. Download speeds¹⁹¹ were in line with expectations drawn from the market data collected to prepare the preceding focus group discussions. On average, Croatian consumers have the slowest Internet access, whilst Swedish

¹⁹⁰ The relevant sub-population for the present study is the population with Internet access at home and people who at least were involved in selecting the ISP for this access once. These two criteria have been screened for. In addition, quotas were applied for the individual sub-groups of this population characterized by variables such as age, gender and income level.

¹⁹¹ "Up to" speeds as agreed in the contract purchased by respondents.

consumers have the highest download speeds and are likely to profit from high quality of experience. Greece and the Czech Republic fall in between the latter two test areas. For the Czech Republic, it should be noted that a large share of at home Internet access is provided via local WiFi networks and therefore is very likely not even coming close to the “up to” speeds promised in the contract. Also, this Internet access appears to be vulnerable to adverse weather conditions. As regards bundling products, it was found that only in the Czech Republic and Sweden do 1play products (Internet access only) play a significant role in the market. Otherwise, 2play and 3play bundles clearly dominate. In line with expectations, the results indicate that monthly prices paid by consumers increase with the number of products bought in a bundle. In part, this drives the differences in average price levels in the four test areas. However, they also reflect the income situation and willingness-to-pay for Internet access in the test areas. On average, respondents from the Czech Republic spend the least, whilst Swedish consumers pay the most for their Internet access at home. Apart from Greece, where switching has increased recently due to the financial crisis, consumers across test areas are very loyal to their ISPs. Around half of the respondents in each test area have been with the same ISP for at least 4 years. Also, a large part of respondents consider themselves “unlikely to switch”. Commonly, this is due to good satisfaction with their current provider.

Most respondents share positive attitudes towards the Internet. The items referring to the ability to connect to the wealth of information and service online as well as to friends worldwide register most positively with respondents. Few can actually imagine living without the Internet anymore. Around half of respondents enjoy forgetting everything around them and immersing themselves in the online world of the Internet. Roughly the same share of respondents find that the Internet is a dangerous place. These attitudes by and large echo the focus group results and are further reflected by the fact that around 90% of respondents across all test area report to be online at home almost every day. Average duration of usage differs more strongly. Interestingly, the Czechs claim to spend the most time on the Internet per day and the Swedes the least. This result is surprising in light of the market environment in these countries as well as the insights gained in the focus group discussions. However, it may actually be the case that whilst Czechs use the Internet very consciously, they also have a better or perhaps exaggerated perception of how much time they actually spend online per day. In Sweden, instead the Internet has become an integral part of consumers’ lives. Offline and online lives blur more and more. Consequently, it is possible that Swedes actually spend significantly more time online than the consumers in the other test areas, but do not register this consciously anymore. The most common applications used online are typical activities such as e-mailing, browsing, reading news, social networks and video streaming. Thus, they reflect well the attitudes towards the Internet investigated elsewhere in the questionnaire. Music streaming is significantly more important in Sweden, whilst VoIP has a surprisingly low level of usage there. This may be attributed to high income¹⁹² levels and consequently little necessity to save money on calls in

192 Other factors such as applicable tariffs and market structure may influence the substitutability of VoIP and traditional telephony in addition to income levels.

Sweden as compared to the other three test areas. Across all test areas, the Internet is used for both business and private purposes.

Interestingly, respondents in the Czech Republic gave the highest satisfaction ratings, despite the fact that in the focus groups participants often complained about poor quality services. However they also stated that they were used to a bad quality service and were aware that they could purchase a better, more expensive solution, but preferred to stay with a low-cost option; hence their satisfaction could be a result of the price that they are paying. Despite the generally high levels of satisfaction, disruptions to the Internet access service do occur in all test areas. By and large, the majority of disruptions last only a few seconds up to a few minutes. Severe disruptions lasting a day or more are scarce. These results of the survey are broadly in line with findings from the focus groups.

The survey on switching finds that respondents across all test areas are loyal to their current ISPs. Consistently, more than half of respondents consider themselves unlikely to switch. Commonly, this is due to satisfaction with their current provider. It should be noted that a substantial share of respondents feel that they do not really have a choice of ISPs.

In sum, the results of the descriptive analysis are broadly in line with expectations. This speaks for the validity of the sample and thus the results.

The information package forms an integral part of the present research project. It is described in depth in Section 6.7. About half of the participants in the survey, the test group, saw the information package. The other half of participants, the control group, did not see it. In order to measure the educational effect of the information package, eight questions were introduced into the survey. The results demonstrate clearly that the information package has had the intended effect. Participants in the test group provided consistently, in the majority of questions statistically significantly, more correct answers than participants in the control group. The effect became most visible in questions on traffic management, which had emerged in the focus group discussions as a particularly difficult to understand, since highly technical, topic.

The information package showed the intended educational effect but it did not show any significant effect on consumers' purchase behaviour for stationary Internet at home as investigated by means of an adaptive conjoint analysis (ACA). The ACA determined respondents' part-worth utilities of ten product attributes for Internet access at home. Differences in part-worth utilities for the test group and for the control group, respectively, were only marginal. This insight is highly interesting. It gives strong indication that consumers who were educated on traffic management before do not per se change the way they choose an Internet access product. The relative relevance of analysed product attributes appears to be independent from how well consumers understand traffic management.

It has been equally interesting to learn from the conjoint analysis that part-worth utilities do not vary significantly across test areas. Similar patterns with respect to the attributes of fixed Internet offers have emerged across all countries. *Price* is the most important

attribute in all countries accounting for about 20% of respondents' decisions made in the conjoint analysis. When interpreting the relative importance of price in comparison to different attributes one should keep in mind that the chosen ACA method tends to underestimate the relevance of price in most empirical studies¹⁹³.

The second most important attributes driving the purchase choice decision of consumers consists of *download speed*, *data cap*, and *video streaming*. These attributes are each roughly half as important as price as their influence on a purchase choice ranges between 11% and 13% each. Out of these three product attributes, data cap and video streaming both relate to network neutrality: the data cap included zero-rated products and the video streaming offered different levels of normal (unmanaged), prioritised, slowed down, and blocked access. These two network neutrality-related attributes alone thus constitute relevant purchase choice drivers.

Download speed is slightly more important in Sweden than in Croatia. The Czech Republic and Greece fall in between. The accessibility of video streaming is slightly more important in the Czech Republic. Also, Czechs are more attuned to the accessibility of online gaming applications than respondents in other countries. This means that, in the Czech Republic, online gaming reaches close in relative importance to the group of second most important attributes, while online gaming determines an attribute that belongs to the third group of importance in the other test areas.

This third group covers *bundle*, *P2P*, *VoIP*, *brand*, and *contract duration*. They form a group of attributes with lesser importance in consumers' decisions than the other attributes analysed. Bundles are more important to Greeks than to Czechs and Swedes, Croatians fall in between. The accessibility of P2P / File sharing applications, VoIP applications, and an ISP's brand are almost equally important with only minor deviations across countries. Overall, minimum contract duration is least important across all countries.

The in-depth analysis of these attributes revealed further relevant insight. With respect to the attributes price and download speed, findings are in line with expectations. Lower price levels are preferred over higher price levels in general. Higher rates of download speed are preferred over lower rates of download speed across all countries. In general, rates up to 100 MBit/s are about twice as attractive as rates up to 10 MBit/s.

With respect to different characteristics of data cap, offers without data cap are clearly preferred over those containing any type of data cap. As this is the economically most favourable option from a respondent's perspective and as well as the most common configuration of already existing offers, this finding is not surprising. In line with rational thinking, data cap options of 50 GB per month are preferred over 10 GB options.

193 Reasons for ACA underestimating the relevance of price may be that respondents (a) perceive other attributes than price not being independent from each other and thus these attributes may count multiple times in respondents' preferences or (b) have difficulties in differentiating large numbers of attributes resulting in more similar relevance for all attributes. Due to this bias, other techniques (i.e. Choice Based Conjoint) should be applied when pricing issues are main focus. See Pinnell, J. (1994): Multistage Conjoint Methods to Measure Price Sensitivity. Paper presented at the Advanced Research Techniques Forum, Beaver Creek, CO.

Notably, offers including data cap options of 50 GB reach only about 60% to 75% of the attractiveness of offers not including a data cap.

Bundled services are preferred over stand-alone Internet offers in general. Bundled services including Internet, telephone, and TV are the most attractive across all countries. Yet, regarding preferences with respect to other bundled services, differences between countries are found. In Croatia, bundled services including Internet, telephone, and TV are clearly preferred over bundles including Internet and TV. Bundles including Internet and telephone are ranked third. In Greece, bundles including Internet, telephone, and TV are also most attractive by far. Preferences for bundles including Internet and TV versus services including Internet and telephone are not distinct. Both types of bundled services are equally attractive in Greece. In The Czech Republic and in Sweden, bundles including Internet, telephone, and TV are most attractive. Other than in Croatia and Greece, the growth in utility against the second ranked bundled service (Internet and TV) is less distinct. Bundles including Internet and TV are preferred over those including Internet and telephone.

The preference structure reported for all applications-oriented (video streaming, VoIP, P2P) attributes shows surprising results. Unrestricted, not prioritised, access to those applications is typically most attractive across all countries. This implies that normal usage is most attractive¹⁹⁴. Part-worth utilities decrease somewhat for prioritised access, and they decrease substantially for restricted accessibility of video streaming applications. Blocked access is clearly least preferable.

The analysis of part-worth utilities of the levels of the attribute brand reveals that Hrvatski Telekom is the most attractive ISP in Croatia. In the Czech Republic, O2 Czech Republic is most likely preferred. OTE is the most attractive ISP in Greece, being about four times as attractive as forthnet ranked second. In Sweden, highest ranked Telia is twice as attractive as local Internet providers. Regarding the question of whether customers show systematically higher preferences for their current ISP, the analysis of the respective part-worth utilities shows clear preferences for their current ISP. This supports the results gained in the items on why respondents are unlikely to switch. The most important reason there is also “satisfied with current ISP”.

Regarding minimum contract duration, shorter contract durations are more attractive in Croatia and Sweden, whereas a contract duration of twelve months is preferred over the shortest contract duration tested (one month) in the Czech Republic and in Greece. Across all countries, the maximum contract duration of 24 months is least attractive.

The results of the focus group discussions revealed that network neutrality and deviations from this principle can be a very emotional topic for consumers once they have learned about the effects this may have on their own quality of experience, the quality of experience of others or the wider economic environment. In order to reflect this in the survey, several questions addressing these issues were added to the

¹⁹⁴ Note that the best-effort option (i.e. normal usage) was labelled “can be used normally” in order to ensure respondents’ understanding.

questionnaire. The first two item batteries revolved around the immediate effects of traffic management on one's or other customers' own quality experience. For the first item "If prioritising one application means that I cannot access another application, I cannot accept this." there is on average the highest level of agreement. The ratings for the item "If prioritising one user means that someone else gets slower access to the Internet, I find this unfair." are similar across test areas. In all countries, around three fourths of respondents agree with this statement. Czech respondents differ statistically significantly from the other test areas for the following item "I am concerned that Internet providers' analyses of data traffic to enable prioritised applications violate privacy rights." They are much less concerned about ISPs analysing their data than respondents in the other test areas.

For the item "Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily", Swedish respondents show the highest agreement. In total, 39% of them completely agree with this statement. This is far more than in all the other test areas: Croatia (25%); Czech Republic (22%); Greece (25%).

For the item "I am fine with applications being prioritised for a specific user if they pay extra for this service", Swedes show the least agreement. Only half of them agree with this statement. Again, this reflects the Swedish focus group results well. Czech respondents to the survey show the highest agreement with this item. This may echo the generally more unstable Internet access in this test area as compared to other test areas. Swedish respondents also show the lowest agreement with the following two items "It is fine if Internet providers prioritise applications that are offered directly by them (e.g. IPTV from the provider)." and "Internet providers should be allowed to prioritise applications if the application provider pays them for this." Thus, Swedish consumers appear opposed to prioritisation of applications and content independently from who pays for this prioritisation and which application or content is prioritised.

Overall, the average agreement ratings for the network neutrality-oriented items were found to show some significant differences between the four test areas as depicted in the discussions in the above. Interestingly, the information package did not cause a comparably strong effect on respondents' stated attitudes towards network neutrality. In Croatia, agreement levels for respondents with and without prior information about network neutrality and its effects are almost perfectly similar. Even in the responses from the other test areas, only the difference in Swedish responses "Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily." reaches statistical significance at the 5% level.

The second item set referred to more general aspects of network neutrality deliberately going beyond the immediate sphere of respondents. Considering agreement levels across test areas, they appear to follow a common thread with Sweden usually showing the lowest agreement with the items and Greece or Croatia in turn showing the highest agreement. Within this thread, however, for some items, statistically significant differences emerge between test areas. Just as for the other item set, the information

package did not make an actual difference to respondents' attitude towards the statements.

The first item "Everybody should have the right to receive all the content and applications that are offered online." triggered the highest levels of agreement amongst the respondents in the test areas on average. Around half of consumers in the test areas are likely to completely agree with this statement. This underlines the results emerging from the focus group discussions namely that consumers understand the Internet as a fundamentally free and open environment, where they themselves can make decisions about what applications they want to use and what kind of content they want to engage with. The second item "Internet providers are socially responsible to provide everyone with the same quality of access to the Internet." shows fewer commonalities amongst the four test areas. Levels of agreement are higher in Greece and Croatia (both 85%) than in the Czech Republic and Sweden with 76% and 71% of respondents agreeing respectively.

The third item "Equal and unrestricted access to the Internet is a human right." shows a very similar pattern. Again, more than half of the respondents from Croatia (58%) and Greece (55%) agree completely with this statement, whilst in the Czech Republic (37%) and Sweden (37%) less than half of respondents feel the same way. Also the fourth item "Transparency is all that it needs: people will switch providers if they do not agree with prioritising or blocking Internet traffic, as long as they are informed that it takes place." triggered high levels of agreement with respondents. It addresses the idea that consumers will switch if they do not agree with the traffic management practices of their ISP. In Greece, 83% agree with this statement. This is statically significantly more than in all the other test areas.

The next item "National regulators have a responsibility to make sure that everyone is treated equally when it comes to Internet access and speed." is one of two items within this set that refers to the role of national regulators. It refers directly to their involvement in network neutrality issues. As it emerged from the focus groups, consumers generally lack the technical knowledge to express their wishes in technical or economic terms, however, as the first three items of this set also reflect, they have strong preconceptions about the nature of the Internet as a highly democratic medium that everyone who wishes ought to have (unrestricted) access to. The responses to this item indicate that consumers in the four test areas are likely to want their national regulator to ensure equal access to the Internet and its applications and content.

Online privacy had not been emphasised particularly in the focus group discussions, however, it has been a latent theme underlying many of the discussions. Consumers do not like the idea of being spied on or seeing their data being used for advertising and other purposes. Thus, it is not surprising that there is a generally high level of agreement with the item "Internet providers should not monitor what individual users do online." In all test areas, consistently 70% or more respondents agree with this statement.

The seventh item "National regulators have a responsibility to make it easier for users to find alternative offers." was the second item of this set that addresses the role of NRAs.

In particular Greek consumers appear to agree strongly with this statement. Here, 83% of respondents and thus statistically significantly more than in the other three test areas agree with this statement.

The consistently high percentages of non-response for the item “Traffic management on the Internet does prevent competition between Internet providers.” – Croatia: 18%; Czech Republic: 26%; Greece: 18% and Sweden: 36% – indicate that respondents had great difficulties in evaluating this statement. As the focus group results indicate, consumers find it very difficult to assess the wider economic impact of traffic management. Thus, the survey results for this item further underpin this finding.

For the penultimate item “Every Internet provider should be free to decide to which Internet applications and services he wants to give users access to.” It is probably more relevant to consider the percentage of respondents not agreeing with this statement. In Greece (50%) and Sweden (49%), there is strong opposition from consumers to the idea that ISPs can control which applications and services consumers can access. In the other two test areas, fewer respondents oppose this idea.

The item “Prioritising certain applications above others has a positive effect on innovation.” appears to be similar to the item “Traffic management on the Internet does prevent competition between Internet providers.” above. Again, there is a large percentage of non-response across all test areas: Croatia: 12%; Czech Republic: 24%; Greece: 11% and Sweden: 30%. In line with the focus group results, the Swedes appear to be the only ones that feel prioritisation could have a potentially harmful effect on innovation. Here, only 30% of respondents agree with the statement.

In order to identify distinguishable consumer groups, post hoc market segmentation was conducted based on the conjoint results as input data. Segmentation was conducted across all countries to derive stable segments valid for all countries. Preference-based segmentation of consumers has led to a four segment solution. These four different consumer segments represent homogenous consumer groups with largely similar preferences. Results show a clear dichotomy with respect to the relative importance of network neutrality-related attributes across segments. For consumers in segments 1 and 2, the accessibility of P2P / File sharing, VoIP, and video streaming is more important than for those in segments 3 and 4. With respect to the accessibility of online gaming, this is the case for segment 1. Clearly, consumers of segments 1 and 2 place more importance on the accessibility of specific Internet applications. Within this dichotomy, another important distinction has to be made. Consumers in segments 3 and 4 are more likely to be driven by price resulting in higher relative importance values than the segments 1 and 2. These findings are stable across all four test areas.

This dichotomy of segments that are clearly distinguishable by the importance of network neutrality-related attributes and price may be further split up by taking more performance-orientated attributes into account. Segments placing higher importance on network neutrality-related attributes (i.e. segments 1 and 2) as well as segments placing higher importance on price (i.e. segments 3 and 4) can each be differentiated into one segment that is more performance-driven and another segment that is more price sensitive. When comparing segment 1 and segment 2, consumers of the first are more

price sensitive. The attribute price is more important to consumers of segment 1 than to consumers of segment 2. On the contrary, the attributes download speed, bundle services, and data cap are more important to consumers of segment 2. This pattern is also found when comparing segments 3 and 4. Consumers of segment 4 are driven more by price than those of segment 3. Consumers in segment 4 attach the highest importance to price compared to all other segments. In contrast, the attributes download speed, bundle services, and data cap are more important to consumers in segment 3.

Consumers of segment 1 may be best described as *active multimedia users*. Network neutrality-related attributes (i.e. unrestricted access to specific Internet applications) are of high importance to these consumers. The accessibility of online gaming and video streaming applications is especially important to these consumers. Compared to other consumer segments, performance-related attributes such as download speed, bundled services, and data cap are less important. Price plays a less important role, yet distinguishes them from consumers of segment 2 (to whom price is even less important). Consumers of segment 1 are usually middle-aged heavy users of the Internet. They are online at-home relatively frequently and long. They use Internet applications (especially applications such as video streaming, music streaming, VoIP, and P2P / File sharing) more often. Usage of the Internet is predominantly driven by private purposes. In line with unrestricted access to specific Internet applications being important, these consumers are more likely to switch providers in case of violations of network neutrality.

Consumers of segment 2 may be labelled as *dynamic private and business users*. Similar to consumers of segment 1, they place comparably high importance on the accessibility of specific Internet applications (especially P2P / File sharing and video streaming). Additionally, performance-related attributes such as download speed, bundled services, and data cap are important to this consumer segment. Of all segments identified, price is least important to these consumers. Consumers of segment 2 are predominantly male and of younger age. They are heavy users with respect to the frequency and the duration of at-home usage of the Internet. In addition, these consumers use Internet applications such as music and video streaming, P2P / File sharing, IPTV, or VoIP more often than the average respondent. They use the Internet for private and business purposes more often than other consumers. Consumers of segment 2 are more likely to have positive associations with the Internet in general. As the importance of network neutrality-related attributes is high, switching likelihood due to violations of network neutrality is higher among these consumers.

Consumers of segment 3 can be described as *conservative brand users*. Within this segment, performance-related attributes (download speed, bundled services, and data cap) are of high importance. This is also the case for brand and price—these attributes are more important to customers of segment 3 than for consumers of other segments. Segment 3 consumers (brand) and respectively consumers of segments 1 and 2 (price). Network neutrality-related attributes are of comparably lower importance. Consumers of segment 3 are of higher age and show less pronounced usage behaviour of at-home Internet (i.e. lower frequency and duration of usage). Usage rates of specific Internet applications are mediocre in comparison. Usage of the Internet is predominantly driven

by private purposes. Attitudinal measures that reflect the social meaning of access to the Internet is least pronounced among consumers of segment 3. In addition, they are less likely to switch providers in case of violations of network neutrality.

Consumers of segment 4 are *pragmatic average users*. Of all segments identified, price is most important to these consumers. With respect to the importance of other attributes, both network neutrality-related attributes and performance-related attributes are of lower importance than among consumers of other segments. The distribution of gender shows a small yet idiosyncratic surplus of women. Compared to other segments, consumers are older. Frequency of usage of at-home Internet as well as frequency of usage of out of home Internet are lower than among other consumer groups. Duration of usage of at-home Internet is low as well. Additionally, consumers of segment 4 use specific Internet applications less often. Usage of the Internet is mainly driven by private purposes. With respect to general attitudes, consumers of this segment are the most sceptical. Ultimately, they are less likely to switch providers due to network neutrality violations than consumers of segments 1 and 2.

Based on the conjoint results, the attractiveness of existing Internet offers on the local markets was examined. Information about current market offers were provided by the national regulatory authorities of Croatia, the Czech Republic, Greece, and Sweden. The utilities of these offers were calculated on basis of the part-worth utilities reported in Section 7.2.2. As part-worth utilities do not reflect an absolute value of utility, a reference offer was simulated for comparison. For all markets tested the respective optimal offer in terms of attractiveness was simulated (i.e. the combination of the most attractive attribute levels per country). The utilities of the simulated market offers were then transformed as the ratio of the most attractive offer. The most attractive offer was defined as 100%, utilities of existing market offers were transformed in relation to this threshold.

For Croatian, 43 of 62 offers could be considered for analysis. Of the offers analysed, 3 offers reach about two-thirds of the attractiveness of the reference offer. For another 4 offers shares in attractiveness of more than 60% can be reported. The vast majority of offers do not have half the attractiveness of the optimal offer to respondents. For the Czech Republic, out of 111 market offers provided by the national regulation authority, a total of 45 were considered for analysis. 13 offers reach at least two-thirds of the attractiveness of the optimal offer. Another 12 offers have at least half of the attractiveness of the reference offer. Compared to the Croatian results, a greater number of market offers fit to a larger extent to consumers' needs preferences (as tested in the conjoint analysis). For Greece, all 29 offers reported by the national regulatory authority were considered for analysis. 3 offers show at least two-thirds of the attractiveness of the optimal offer. Another 5 offers reach 60% and more of the attractiveness of the reference offer. 13 existing offers have half of the attractiveness of the optimal offer as tested within the conjoint design. Finally, for Sweden, 54 offers were provided by the Swedish national regulatory authority, and a total of 43 offers were considered for analysis. For 5 offers, a utility share of at least 70% of the most attractive offer possible can be reported. Another 9 offers show utility shares of 60% and higher. In addition, 13 offers are at least half as attractive as the optimal offer in Sweden.

8 Discussion of Implications

8.1 Introduction

This project set out to gain an in-depth understanding of:

- How consumers valued aspects of network neutrality and;
- The degree to which consumers' value attribution was addressed by Internet Access Products (IAPs) offered on the market by Internet Service Providers (ISPs).

Furthermore, the study design intended to anticipate interactions between consumers and suppliers, which facilitates an understanding of the resulting market dynamics.

In line with these overarching aims as well as the tender specifications, specific research objectives were developed that structured the study:

- Drawing a list of test areas
 - xi. To identify relevant data sets that offer variables that allow robust categorisation of countries.
 - xii. To identify an appropriate methodology to select test areas.
 - xiii. To identify the specific test areas.
- Exploring consumers' understanding and conceptualisation of network neutrality
 - xiv. To investigate the electronic communication market environment and specifically existing IAS offerings in the test areas.
 - xv. To investigate Internet consumer behaviour in the test areas focussing on usage patterns, the role that Internet plays in consumers' lives and their attitudes to network neutrality.
 - xvi. To explore consumers' Internet usage patterns, perceptions of the test area's electronic communications market as well as their understanding and conceptualisation of network neutrality.
- Explaining consumers' choices of IAS offerings
 - xvii. To investigate consumers' socio-demographic and other relevant characteristics.
 - xviii. To investigate consumers' Internet usage patterns.
 - xix. To investigate the effect of individual IAS offerings attributes on consumers' choice.
 - xx. To make an assessment of the degree to which electronic communication markets in the test areas work efficiently.

As the literature review revealed the research objectives addressed in this project have largely not yet been approached in published research. Thus, the present study adds significant value to the academic discourses on consumer behaviour, purchase choices for Internet access services and, of course, network neutrality. For the first time, a multi-national study focussed on a wide range of perspectives on consumers' evaluation of network neutrality. In the selection of test areas, particular care was taken to achieve a sample representative of the 36 countries represented in BEREC that also is likely to have enough variance across the selection variables to allow for meaningful results. Selection criteria referred to supply and demand side variables of the electronic communication markets of BEREC countries.

The focus group discussions in the present project had primarily explorative character and set out to develop an information package to be used in the survey. Next to the information package, the focus group discussions also intended to generate insights that enable development of the questionnaire for the following survey and within this, in particular, the attributes and levels for the analysis of consumer's preferences in the conjoint analysis. The implications regarding these major objectives of the focus group discussions are discussed in detail in Section 6 of this report. However, there are also novel results emerging from the focus groups that merit discussion here.

The same is true for the survey. Also, here, results regarding the core objective of the survey within the study have been presented and discussed in depth throughout the respective chapters and sections.

It should be noted that in both primary research phases (i.e. focus groups and survey) significant, and sometimes striking, differences between the test areas have been identified. They have been discussed in-depth in the respective sections and will only be highlighted in the discussion if they bear particular weight for the overarching themes captured here. Consequently, the following paragraphs focus on such overarching themes that transcend the three broad research phases and reprise the results from the individual research phases only very briefly wherever necessary. Two such themes can be drawn from the results of the study:

1. The role of the consumer within network neutrality
2. The drivers of consumers' purchase decision criteria

The discussion is structured along these two broad themes.

8.2 The role of the consumer within network neutrality

The first overarching theme that requires further discussion arises from the insights gathered in the focus groups and the survey. It refers to the role of the consumer within the topic of network neutrality. It builds on the underpinning assumption of consumers acting rationally and responsively that underlies many debates relating to consumer rights, consumer protection or labelling, for example of food products. The role that consumers play within the topic of network neutrality was found in this study to be linked to consumers' experience and concept of the Internet.

8.2.1 Consumer information should relate to applications and content

For consumers, the Internet is primarily about access to, reliability and quality of, content and applications. Just how the data is transported is of secondary concern to them unless they experience any resulting consequence directly.

The focus groups showed that consumers have a rather rudimentary grasp of how the Internet works, about the principle of network neutrality and deviation from it by means of traffic management. Notably, Greek consumers differed in this particular respect¹⁹⁵. Thus, commonly, for consumers, the Internet is their gate to access content and applications. This is also how they appear to conceptualise the Internet. The role of ISPs remains somewhat unclear with consumers. Consequently, it is also not surprising that they quickly moved to debates on broader issues such as democracy, freedom of speech, equality and so forth when referring to issues they link to the topic of network neutrality and traffic management.

The insight that consumers define the Internet in terms of the applications and content that they can access and in terms of the quality they experience has important implications. It implies that consumer information about network neutrality should adopt and reflect consumers' understanding. Consumer information should therefore address the relation to access to applications and content. It should not primarily address technicalities of data transport. This applies both to consumer information from NRAs and advertising by ISPs.

8.2.2 Network neutrality issues should be addressed among informed stakeholders

Traffic management may indeed affect consumers' access to content and application as well as quality of experience. However, drawing on the focus groups results, consumers appear unlikely to attribute, in particular, minor disruptions, such as slow loading of websites, stuttering of video stream or unclear VoIP transmission, to traffic management. Rather, they will attribute such disruptions to problems with their own devices, lack of skills to configure them correctly or peak time shortages in server capacity.

Consequently, issues arising from adverse effects of traffic management are unlikely to be resolved within the relationship of consumers and ISPs. This insight suggests that one should not rely on consumers to resolve network neutrality issues. The research indicates that there is a role for NRAs to play in working with informed stakeholders – such as ISPs, content and application providers, and consumer organisations – to resolve any network neutrality issue. It is important to add that the research did not imply any immediate need to address specific network neutrality issues. The study did not intend to investigate the incidence of network neutrality issues. That said, neither the focus group discussions nor the survey pointed to widely experienced network

¹⁹⁵ See focus group results for Greece – Section 6.4.

neutrality issues. The above implication should be understood in this context, namely in the sense that, should at some point a need to resolve network neutrality issues emerge, this should take place among informed stakeholders.

8.2.3 Clear objectives should guide consumer information

The above discussion of consumer information raises questions about the effect of education. It is a widely-held view that increasing transparency about network neutrality and traffic management practices by giving consumers (fair and neutral) information affects consumer behaviour. Our study is the first that tests this idea with regard to network neutrality and consumers' purchase choice criteria. This was the rationale behind introducing an according experimental manipulation¹⁹⁶ into the survey. Half of respondents in each test area saw an information package in the form of a short animated video. The video explained what traffic management is, informed on traffic management's different purposes, and also highlighted potential motivations of ISPs to introduce traffic management. All information was presented in a balanced and neutral manner, framing traffic management neither positively nor negatively.

It was found that the test and control groups of respondents differed markedly in their knowledge about how the Internet works in general and traffic management practices in particular. Thus, we can be sure that the manipulation as such did work. However, there was almost no measurable effect on purchase choice criteria. In fact, the results were very similar across all attributes tested in the conjoint analysis. A noticeable, but in practice negligible trend is that respondents in the control group placed a little more importance on price than respondents in the test group.

As regards network neutrality-related attributes, we observed practically no differences between the relative relevance of these attributes for the two groups of respondents. In Croatia, accessibility to online gaming applications was slightly more important to those in the control group than those in the test group. In the Czech Republic, the accessibility of VoIP and online gaming applications was a little more important in the test group than in the control group. Yet the differences are marginal. In Greece and in Sweden, the information package had no effect on the perceived importance of network neutrality-related attributes.

This finding is very interesting in the specific debate on network neutrality, but also bears importance for other related fields of policy making. In our case, both the focus group discussions and the survey found that there are strong preconceptions about the nature of the Internet and thus attitudes towards network neutrality. It has been highlighted that the individual's quality of experience and unrestricted access to content and applications are seen as non-negotiable by consumers. Consequently, it is not surprising that transparency about how the Internet works and the rationale behind, as well as effects of, traffic management alone had little, if any, effect on consumers'

196 The term "experimental manipulation" refers to presenting information on network neutrality (i.e. the information package) to one half of the sample (test group) while not giving this information to the other half (control group).

behaviour. If a noticeable change in consumer behaviour had been our objective for this study, we would have had to test different (persuasive) framings for the information package. In fact, this represents a major avenue for future research that is relevant to policy makers, NRAs, ISPs and content and application providers alike. Although for different reasons, all these stakeholders ought to be interested to understand which persuasive messages are likely to resonate with consumers given their strong pre-existing attitudes towards the issue.

8.3 The drivers of consumers' purchase decision criteria

The preceding section has already pointed out that the information package did, by and large, not have a significant effect on the part-worth utilities of individual attributes measured in the conjoint analysis. Overall, price was the most important attribute in all test areas. Price accounted for about 20% of respondents' decisions made in the conjoint analysis. However, it is important to recognise that this is the first study that shows, by means of a conjoint experiment, that attributes relating to network neutrality actually have a pronounced effect within consumers' purchase decisions. In particular, data caps (with and without zero-rating) and the ability to stream videos online have a strong impact on the attractiveness of ISPs' products.

8.3.1 Consumers care about network neutrality-related attributes in their choice

As regards product attributes that are relevant for consumers' purchase decisions, network neutrality-related attributes scored relatively prominently. The product attributes download speed, data cap, and video streaming determine the second most important purchase decision criteria after price. Data cap and video streaming are both attributes with relation to network neutrality – data cap via zero-rating and video streaming via attribute levels of normal (unmanaged), prioritised, slowed down, and blocked access.

The insight that network neutrality-related attributes have an influence on consumers' choice is surprising. This result differs fundamentally from existing (previous) studies. What really sets this study apart from previous studies is the qualitative research that preceded the quantitative survey and conjoint experiment. The qualitative insights most probably set the right path for the quantitative research. It shaped the way the survey questionnaire, as well as the product attributes for the conjoint experiment, were presented to participants. We discussed already how important wording and addressing consumers on the level of their access to applications and content (as opposed to the level of data transport) is. We believe that adhering to this approach, which was driven by the qualitative insights, paid off. We therefore believe that network neutrality would have been found in previous studies to play a much more prominent role had it been presented to consumers in a way that resonated with them.

The insight of network neutrality's relative importance in consumers' choice has a number of relevant implications. It means that ISPs need to understand in depth what consumers are willing to pay for. The initial analysis of willingness-to-pay presented in this study may provide a first glimpse on the value consumers assign to network

neutrality-related attributes in IAS offers. New products will need persuasion to be successful.

The detailed analysis of the data cap product attribute raises, in addition, the question if, and to which extent, zero-rating is attractive for stationary Internet access at home. Zero-rating has almost no effect on consumer preferences. What counted, overall, was the volume at which data is capped. The comparison of data cap options at 50 GB and at 10 GB with the no data cap option shows a characteristic decrease in utility for 50 GB options versus the no data cap option and for 10 GB options versus 50 GB options. The detailed analysis of these options reveals that zero-rating does not lead to substantially increased product attractiveness as long as the monthly allowance is set at a data volume which consumers presumably would not reach (the case of 50GB). However, zero-rating of a consumer's favourite video streaming, VoIP or P2P / file sharing application adds substantially to the attractiveness of an IAS product if case data is capped at a data volume that consumers are likely to surpass (the case of 10GB). This finding has non-trivial consequences. For instance, it will be interesting to know which combination of data cap and zero-rating may offer most value to consumers, whether there are combinations that lead to consumer dynamics in the market for IAS, and whether this would have significant effects on competition and innovation.

8.3.2 Fairness is important to consumers

Consumers subscribe to the idea that some data can or, in some cases even, should be prioritised, either for an extra payment or due to reasons of urgency. On the other hand, consumers do not want prioritisation to take place at the expense of anybody else's and in particular not their own quality of Internet access. Consumers show thus a pronounced sensitivity for fairness when it comes to network neutrality. They consider potential effects of traffic management not only on themselves, but also, on others. In this context, consumers consider a societal perspective in addition to personal benefits..

This finding is supported by the focus group discussions, which revealed that network neutrality and deviations from this principle can be a very emotional topic for consumers once they have learned about the effects this may have on their own quality of experience, the quality of experience of others or the wider economic environment. Also the survey results reinforce consumers' preference for fairness. When confronted with statements on the immediate effects of traffic management on one's or other customers' own quality experience, consumers across all test areas showed on average the highest agreement with the statement "If prioritising one application means that I cannot access another application, I cannot accept this.". Similar patterns were found for the statement "If prioritising one user means that someone else gets slower access to the Internet, I find this unfair." In all test areas, around three fourths of respondents agree with this statement.

Consumers' pronounced desire for fairness implies that ISPs need to understand in depth what consumers are willing to accept. Our research suggests that consumers are in principle open to (the effects of) traffic management, but they draw a line when someone's benefit is to the detriment of someone else. Fairness understood in this way

defines what consumers would probably perceive as reasonable traffic management. It will be important for ISPs to contain traffic management effects that impair the experience of a consumer to a minimum. In this context, ISPs may risk the dissatisfaction of consumers if they used prioritisation on congested links. In situations of scarce (network) resources, it follows naturally that someone who receives more essentially takes these extra resources from someone else. The resulting key questions are, of course, just how sensitive consumers really are to violations of what they consider fair, whether they would actually attribute the reason for a violation with their ISP's behaviour, and if they translated any dissatisfaction into action (for instance, switched to another provider). The study of these questions deserves further attention from research as the respective insights may help define consumer-driven, clear-cut boundaries between reasonable and unreasonable traffic management.

8.3.3 Is there a preference for best-effort Internet?

The attributes related to the levels of access to different Internet applications (video streaming, VoIP, P2P, online gaming) were featured in the questionnaire in a way to not exclude one another. Consequently, the most rational behaviour for any respondent would have been to show a preference for prioritised service across all four applications at the lowest price. In this light, the consistent preference for normal access across all applications is surprising and merits further discussion. It should be noted that the relative part-worth utility of normal access was usually slightly larger than the one of prioritised access, but significantly larger than the one for restricted access. Blocked access was always, clearly, the least preferred level.

First, it may be argued that respondents did not understand the meaning of the specific attribute levels. If this had been the case, one would have expected the part-worth utilities of respondents, who had seen the information package, to differ from those of the ones who had not seen it. As it was shown in the above, part-worth utilities did not differ. Consequently, there is no indication that there was an issue with respondents' comprehension of the attributes themselves.

Having ruled out a fundamental methodological problem, several other explanations seem possible. Given that this is the first study researching consumers' preferences for network neutrality related attributes in depth, all these explanations should be interpreted with care.

A first potential explanation is that normal access, referring essentially to the best effort Internet as consumers know it in their respective country, should be understood as a must-be quality¹⁹⁷. In light of the focus group results indicating that unrestricted access

¹⁹⁷ This refers to Kano's theory of customer satisfaction. A must-be quality describes an attribute that is essential to the product's use, but is commonly not mentioned in any customer satisfaction survey, because it is so fundamental. An example that is typically used is a leaking milk carton or a butcher's shop that is not clean. No one would opt to purchase such a carton or any meat from this butcher. Nonetheless, these are attributes that are not mentioned unprompted as they are all too obvious. Note that in our survey by mentioning the specific level we did prompt respondents.

to any content or applications is the core characteristic of the Internet and is often equated to network neutrality, this explanation seems sensible. Whilst this is a convincing explanation for the substantial drop in part-worth utility for the restricted and blocked access levels as well as the importance of normal access, it fails to fully explain why normal is consistently more preferred than prioritised access.

This aspect may be better explained by consumers' concept of fairness as regards network neutrality that transpired from the focus group discussions. Consumers appear to find it fair that certain government, disaster relief or security relevant applications are prioritised on the Internet. Some groups, also, were interested in purchasing prioritised services. However, no one was really in favour of receiving such prioritised services at the expense of other consumers. This underlying construct could be an explanation for the observed preference patterns.

Another explanation, in particular in the at home usage situation that has been investigated in this study is that consumers are simply unfamiliar with the benefits that a prioritised access to a specific application may bring them. Such offers are very rare at the moment as is the research of the specific market environment in the test areas showed. As the Internet is primarily an experience good¹⁹⁸, the actual benefit can only be experienced after the purchase. Consequently, the consumer may have quite simply opted for the most familiar option being doubtful about the actual benefit of prioritised access. This explanation is supported by the fact that most respondents were quite satisfied with their current Internet access service.

Whilst consumers are not familiar with network neutrality related attributes for at home Internet access, such attributes are already widespread in the out of home usage situation and within this mostly in contracts for mobile Internet access via 3G and 4G networks. Thus, one may expect that consumers familiar with such options from their mobile Internet access may act differently. When the results of the survey for the network neutrality related attributes are split by respondents with and without mobile Internet access, we do not find much evidence to support this explanation. There are no significant differences for the attributes referring to access. Nonetheless, it should be noted that there are some noticeable differences as regards data caps (incl. zero-rating), which is in line with expectations as this is the most common network neutrality related attribute in mobile Internet access contracts.

Finally, it may be argued that respondents accounted already for the long-term effects of the prioritised level such as less innovation or foreclosure on the Internet. Given the small role such arguments played in the focus groups discussions and also the fact that part worth utilities did not differ between respondents who had seen the information package and those had not, this explanation seems unlikely.

In sum, to answer the key underlying question "Do consumers actually prefer the best-effort Internet, or do they rather prefer the Internet they know over an Internet they have

198 An experience good describes a good whose actual quality a consumer can only learn about by using or consuming it.

not yet experienced?” more research has to be undertaken. This research needs to address all the possible explanations outlined in the above. As it seems unlikely that one study could test all the explanations at once, the most relevant starting point appears to be a study that can investigate consumers’ preferences for normal (unmanaged) and quality-differentiated access to Internet applications based on actual experience. Such a study could measure consumers’ satisfaction with different experiences, investigate the impact on purchase choices (in comparison of ex ante and ex post purchase choices), and it could provide in-depth results on the trade-offs consumers would be willing to make. Most importantly, it would contribute to the discussion on whether network neutrality should be understood as a must-be quality for consumers.

8.3.4 Personal characteristics appear to drive purchase choice criteria

Despite clear-cut differences in the perception of products with and without deviations from network neutrality across test areas in the focus groups, part-worth utilities show little differences across test areas. This is even more surprising given the sometimes fundamental differences in the market environment of the markets for electronic communication in the test areas. So, if it is not the market environment that drives differences in consumer perceptions, attitudes and purchase decision criteria, what is it?

The research presented in the above offers an answer in the form of the four consumer segments that were identified from the preference patterns in the conjoint analysis. As these four segments were built from the choice data, it is not surprising that they show significant differences in their choices. However, they also shed light on what may actually drive these differences, namely both socio-demographic variables and attitudes towards the Internet – or, as we called it in the focus groups, the role of the Internet in one’s life.

These underlying variables appear by and large consistently attached to the respective segments across test areas. This clearly highlights that such underlying variables actually drive choices, not the market environment. However, the market environment is very likely to shape the size of such segments in each country.

8.3.5 Traffic management exposes a trade-off for ISPs

Consumer segments also show marked differences in their attitudes to network neutrality and traffic management. This implies that there is actually a part of the market that would respond to offers including deviations from network neutrality. At the same time, there is also a part of the market that would be inclined to switch if ISPs were to introduce deviations from network neutrality.

It will be of interest to NRAs to understand the impact these findings have on the incentives for ISPs and the issues they may face in the way they structure and price their various offers. Furthermore, it will be of interest to NRAs to understand the impact

that these consumer preferences might have on the market environment and the choices made by ISPs.

In particular, these findings mean that ISPs are likely facing a trade-off here. On the one hand, they may gain additional revenue from consumers who purchase prioritised services. On the other hand, they are likely to lose consumers who oppose such measures – or they would have to incentivise them strongly through a discount on their monthly price (provided that applicable regulation in the respective market would allow that). The trade-off to consider for each ISP would be dependent on the level of market power and the possibilities for consumers to easily switch in the different local markets.

It is difficult to foresee if offering services with differentiated quality would really pay off for ISPs overall. This is particularly true as capex and opex may increase considerably (especially opex due to an increased – frequent, near real-time, and possibly down to the level of individual consumers – need of changes to data forwarding policies in an ISP's network). It has been a principle for the Internet thus far to keep complexity as much as possible to the edges, i.e. the hosts connected to the Internet on both sides of a data communication. An increased need for quality-differentiated services, and therefore an increased need for managed network elements (routers and switches) that are exposed to frequent data forwarding policies may not only be costly, it may even lead to unstable networks. At some level of traffic management, management complexity and the complexity to anticipate effects of even small changes to the network as such may be beyond control. Thus, in essence, traffic management may expose both opportunities and risks to ISPs.

Interestingly, many participants in the focus groups had strong doubts about whether ISPs would actually be able to meet their preferences even though they were inclined to purchase products with prioritisation of specific services. At least within the range of the attributes we covered in this research, we can tell that there is a certain share of consumers in the market that would respond to accordingly configured offers. In essence, this means that standardisation of such offers is likely to work in this market just as it works in other markets, for instance for automobiles. (Some) consumers are ready to accept standardised offers that include traffic management-based services even if they are not highly individualised.

Having said that, it is crucial to note that current market offers for “at home” Internet access include such attributes less often than offers for “out of home” Internet access¹⁹⁹. If ISPs intend to capture this market – for which we concluded in the above that it presents both opportunities and risks – this implies a need for them to develop meaningful and effective tools to communicate to consumers the merits of quality-differentiated services. It should be added that the feasibility of service quality-differentiated services will also depend on the network neutrality regulation in the respective market.

¹⁹⁹ BEREC's 2012 traffic management investigation revealed that every fifth offer in fixed networks had restrictions, compared to every third offer in mobile.

9 Avenues for Future Research

So far, from the results of this study, we see the following issues to be addressed in future research:

From the results, we have clearly seen that although market environment plays a role for the size of consumer segments, its' impact on the actual underlying drivers for purchase decision criteria appears to be small. This leads to the following potential future research avenues:

- Replicate research in additional test areas (countries). Ideally, these test areas should be selected based on consumer behaviour-relevant indicators instead of market environment indicators as has happened in the present study. From these sets of countries, test areas should represent the most extreme cases in order to best understand the effects of the drivers.
- Involvement has been established in consumer behaviour research as one the major drivers of purchase decision criteria. To extend the theme of switching, inherent in this study, it should be understood how a particular kind of involvement, namely purchase involvement (i.e. the motivation and ability of consumers to engage with the purchase), influences consumers' inclination to switch providers. Such research is likely to throw a new light on issues that already have been researched extensively – however, so far, usually from a very economic perspective rather than a true consumer behaviour perspective. It is likely to help NRAs in their efforts to understand the process of switching better and to promote switching in specific markets more efficiently.
- Another important aspect of switching, as highlighted in the survey, is satisfaction with one's current ISP. With new variants of "at home" Internet access likely to emerge in the near future, one has to gain an understanding of what are the factors that drive satisfaction (some indications can be drawn from this study) and what are likely drivers of satisfaction with such novel offers in the market.

The results show that a neutral information package has only very limited effects on purchase decision criteria and attitudes towards network neutrality:

- This indicates that also other variations of information packages and their effects should be tested. In particular, NRAs may profit from an understanding of how positive or negative framing of the issues may influence consumers in their decisions and attitudes. Within that it would be particularly interesting to learn whether positive or negative framing have the stronger effect. This will have implications on how ISPs are likely to communicate offers that contain attributes which depend on traffic management. Consequently, NRAs can address such issues with scientific authority.

The present work has focused primarily on the "at home" usage situation. Whilst network neutrality-relevant restrictions occur in Internet access at home, these restrictions are more often found in the "out of home" usage situation. Thus, this

research should be replicated in the latter context to capture effects there and compare them with the “at home” usage situation. Given that consumers are more familiar with e.g. data caps (and potentially zero-rated) attributes in the “out of home” environment, we would assume that results differ. For instance, when investigating reasons for the observed consumer preference for normal (unmanaged) access to specific applications, a possible explanation could be tested, namely whether consumers are aware of the effects of more frequent deviations from network neutrality while using the Internet out of home, and therefore do not want to experience these effects in their at-home Internet usage too.

Annex

A Relevant Indicators on Internet Supply and Demand

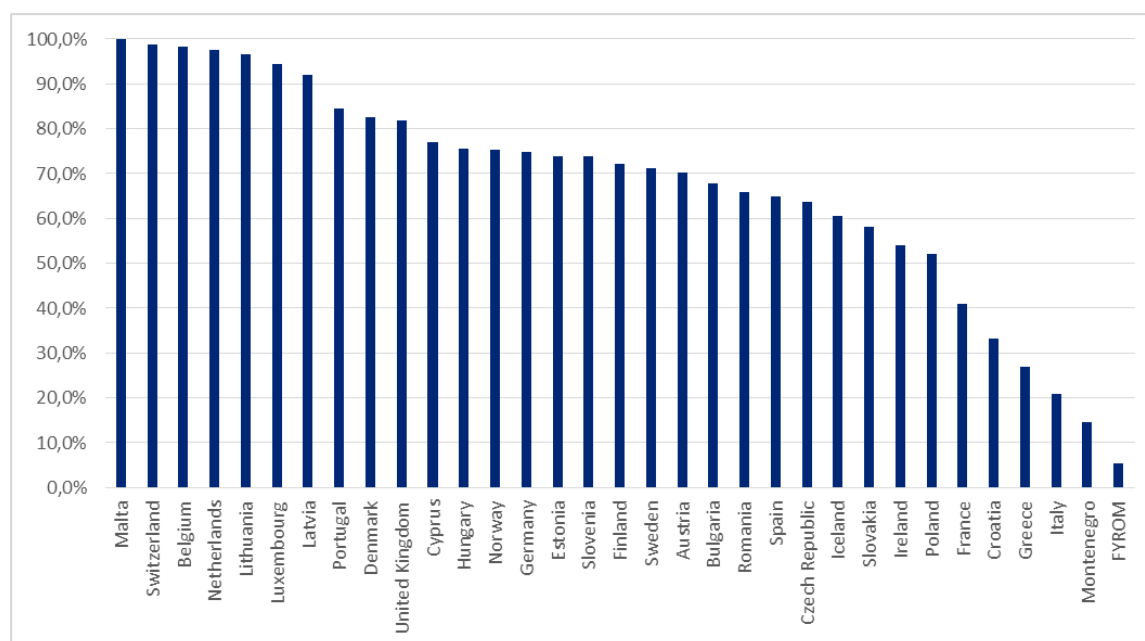
A.1 Fixed Internet supply

This section presents the fixed Internet supply landscape according to coverage, speed, prices, operators and network neutrality incidents.

A.1.1 Coverage

The DAE Scoreboard provides data on NGA broadband coverage, as a percentage of households, for 2013. As shown in Figure A-1, NGA coverage ranges from 100% in Malta to 20,8% in Italy. FYROM and Montenegro, not covered in this dataset, provided data points of 5.3 and 14.7 respectively, The NGA coverage is greater than 50% in 27 countries. Finally, the average NGA broadband coverage as a percentage of households for the countries presented in Figure A-1 is 67,2%.

Figure A-1: NGA broadband coverage/availability (as a % of households) in 2013

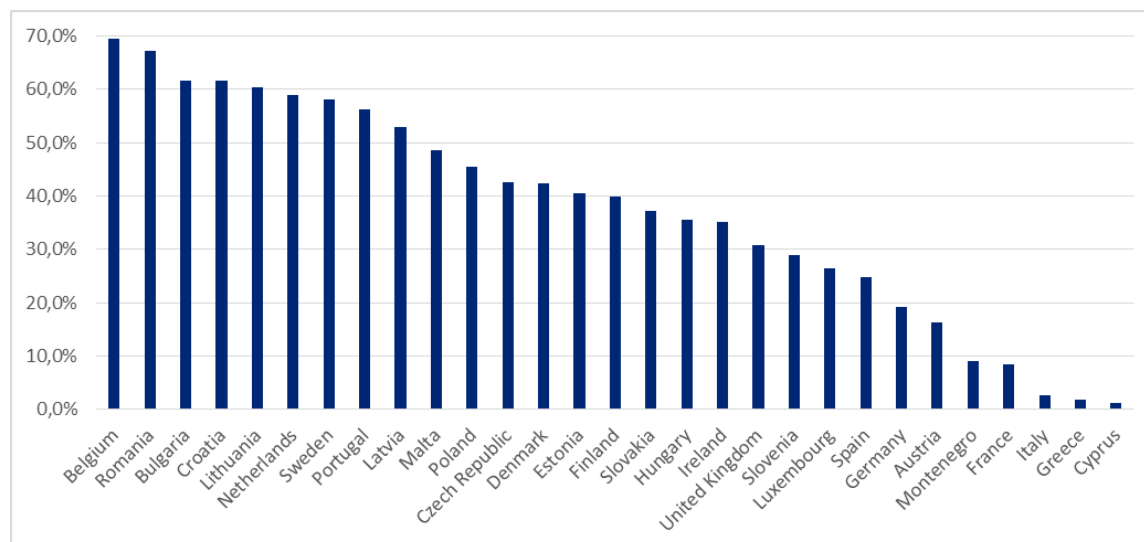


Source: DAE Scoreboard

The DAE Scoreboard also provides data on NGA (FTTH, FTTB, VDSL, Cable Docsis 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions for 2014. As shown in Figure A-2, NGA coverage ranges from 69,5% in Belgium to 1,2% in Cyprus. For Montenegro the study team received a value of 9%.

The average NGA broadband coverage as a percentage of total fixed broadband subscriptions is 37,3%.

Figure A-2: NGA (FTTH, FTTB, VDSL, Cable Docsis 3.0 and other NGA) subscriptions as a percentage of total fixed broadband subscriptions in 2014



Source: DAE Scoreboard

Other indicators collected for coverage are displayed in the table below. These indicators were discarded since they largely overlap or provide measures with a low explanatory value for the cluster analysis (in terms of variance and standard deviation). Coverage of NGA was selected given the forward looking nature of the study.

Table A-1: Fixed Internet supply indicators - coverage

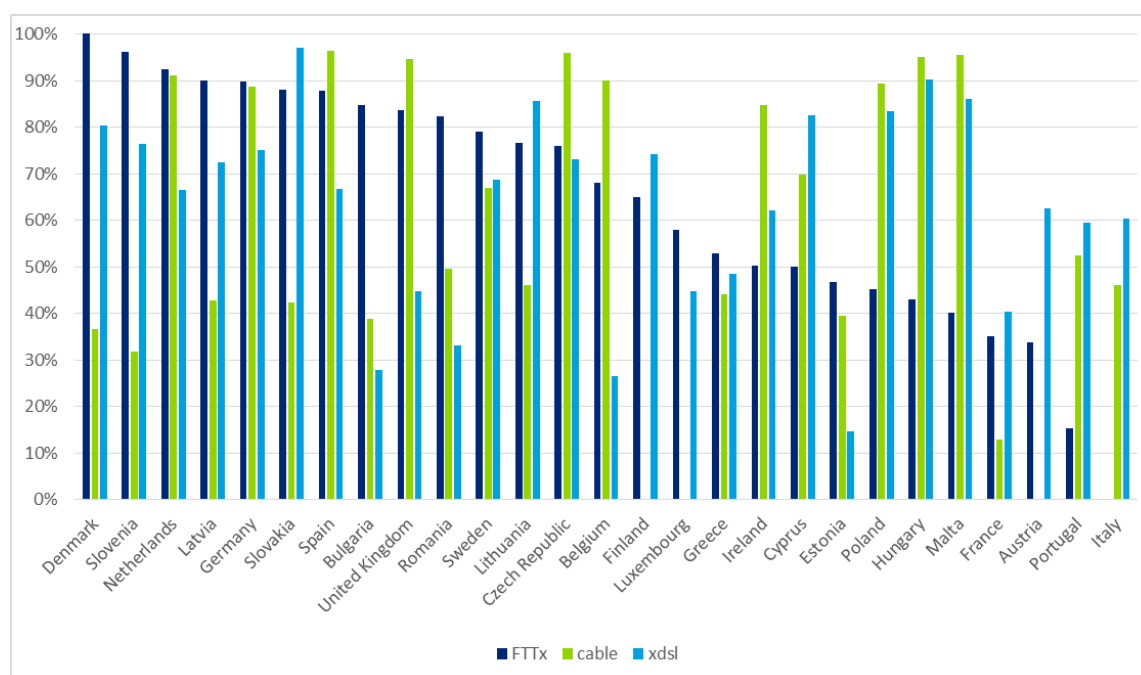
Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
EUROSTAT	2012	Percentage of households, Standard fixed broadband coverage (from 2011)	27	93.7	75.0	8.7
DAE Scoreboard	2013	Standard fixed broadband coverage/availability (as a % of households)	31	90.7	509.1	22.6
EUROSTAT	2012	NGA fixed broadband coverage (from 2011), Percentage of households	27	63.7	464.8	21.6
DAE Scoreboard	2014	NGA (FTTH, FTTB, VDSL, Cable Docsis 3.0 and other NGA) subscriptions as a % of total fixed broadband subscriptions, January 2014	29	37.3	413.3	20.3
DAE Scoreboard	2013	NGA broadband coverage/availability (as a % of households)	33	64.7	647.6	25.4

A.1.2 Speed

The DAE Scoreboard provides data on the actual download speed of fixed broadband subscriptions (Cable, FTTx, xdsl), as a percentage of advertised speed, for 2012. As shown in Figure A-3, speed for:

- **FTTx** speed (as a percentage of advertised speed) ranges from 105% in Denmark to 15% in Portugal; whereas the average speed is 67%;
- **Cable** speed (as a percentage of advertised speed) ranges from 96% in the Czech Republic and Spain to 13% in France, whereas the average speed is 64%;
- **Xdsl** speed (as a percentage of advertised speed) ranges from 97% in Slovakia to 15% in Estonia, whereas the average speed is 63%.

Figure A-3: Actual download speed of fixed broadband subscriptions for 2012



Source: DAE Scoreboard

Other indicators collected for speed are displayed in the table below. These indicators were discarded since they are taken from the OECD and have less coverage (25 out of 36 countries).

Table A-2: Fixed Internet supply indicators - speed

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2012	Actual download speed of fixed broadband subscriptions	26	59.3	908.4	30.1
DAE Scoreboard	2012	Actual download speed of fixed broadband subscriptions	26	66.7	531.9	23.1
DAE Scoreboard	2012	Actual download speed of fixed broadband subscriptions	27	63.1	442.9	21.0
OECD	2012	5a. Average and median advertised download speeds (Mbit/s), September 2012	25	44,926.1	686190246.6	26195.2
OECD	2012	5a. Average and median advertised download speeds (Mbit/s), September 2012	25	23,557.4	147073724.0	12127.4
OECD	2012	5c. Fastest average connection offered by incumbent and non-incumbent operators, logarithmic scale, September 2012	25	207,744.0	66953589760.0	258753.9
OECD	2012	5c. Fastest average connection offered by incumbent and non-incumbent operators, logarithmic scale, September 2012	25	131,905.9	41992215026.1	204920.0
OECD	2012	5d. Broadband advertised speed ranges, all technologies, logarithmic scale, September 2012	25	4,040.6	18840442.5	4340.6
OECD	2012	5d. Broadband advertised speed ranges, all technologies, logarithmic scale, September 2012	25	229,017.6	66434124554.2	257748.2
OECD	2012	5d. Broadband advertised speed ranges, all technologies, logarithmic scale, September 2012	25	224,977.0	66768960616.0	258396.9
OECD	2012	5d. Broadband advertised speed ranges, all technologies, logarithmic scale, September 2012	25	229,017.6	66434124554.2	257748.2

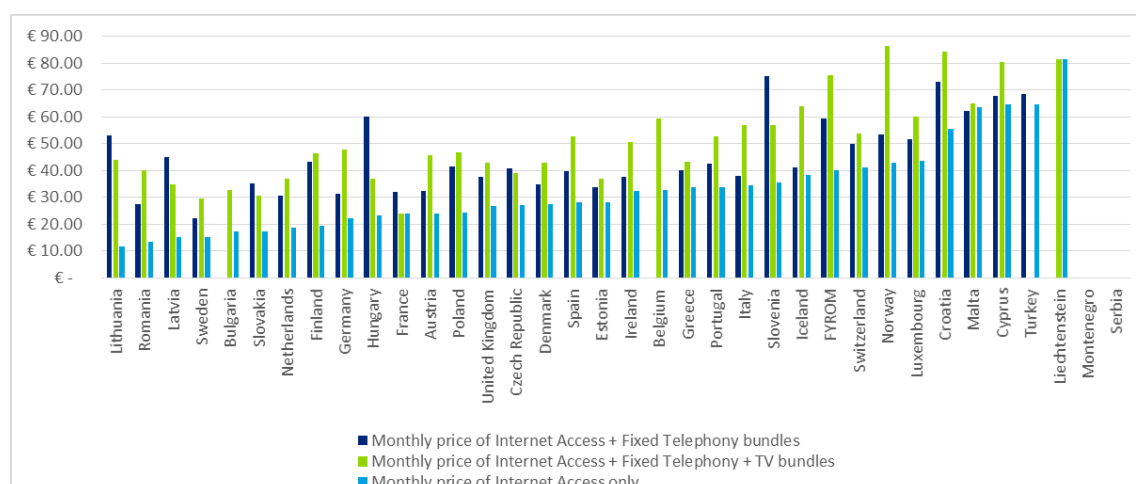
A.1.3 Prices

The DAE Scoreboard provides data on the monthly price (minimum EUR/PPP) of standalone Internet access, as well as bundles of Internet access and fixed telephony and Internet access, fixed telephony and TV for 30 to 100 Mbps.

As shown in Figure A-4, prices for:

- **Internet Access only** ranges from €11,53 in Lithuania to €81.52 in Liechtenstein, the average price is €32,96;
- **Internet Access + Fixed Telephony bundles** ranges from €22,25 in Sweden to €75.25 in Slovenia, the average price is €45,19.
- **Internet Access + Fixed Telephony + TV bundles** ranges from €23,77 in France to €86.24 in Norway, the average price is €50,96.

Figure A-4: Fixed Internet supply prices (30 to 100 Mbps) in 2014²⁰⁰



Source: DAE Scoreboard

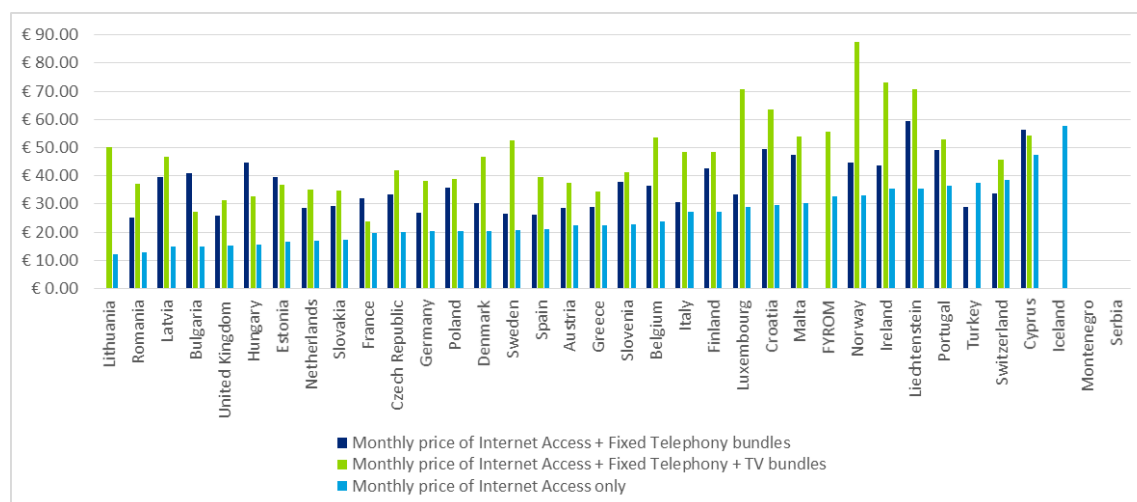
The DAE Scoreboard also provides data on the monthly price (minimum EUR/PPP) of standalone Internet access, as well as bundles of Internet access and fixed telephony and Internet access, fixed telephony and TV for 12 to 30 Mbps.

²⁰⁰ Missing data for 2014 was replaced with values for previous years: Monthly price of Internet Access + Fixed Telephony bundles: LT (2011), Iceland (2012); Monthly price of Internet Access + Fixed Telephony + TV bundles: Iceland (2011).

As shown in Figure A-5, prices for:

- **Internet access only** ranges from €12,01 in Lithuania to €57.86 in Iceland, the average price is €25,51;
- **Internet access + Fixed Telephony bundles** ranges from €25,32 in Romania to €59.25 in Liechtenstein, the average price is €36,63;
- **Internet access + Fixed Telephony + TV bundles** ranges from €23,77 in France to €87.57 in Norway, the average price is €47,05.

Figure A-5: Fixed Internet supply prices (12 to 30 Mbps) in 2014²⁰¹



Source: DAE Scoreboard

Other indicators collected for prices are displayed in the table below. For the pricing data from the DAE Scoreboard we have selected the price indicators for standalone Internet and the two bundles with a preference for the 30-100 speed range (the data for speed above 100Mbps covers less countries). The OECD data was not selected as it covers less countries.

²⁰¹ Missing data for 2014 was replaced with values for previous years: Monthly price of Internet Access + Fixed Telephony bundles: Bulgaria (2013); Monthly price of Internet Access + Fixed Telephony + TV bundles: Lithuania (2011); Monthly price of Internet Access only: Iceland (2012).

Table A-3: Fixed Internet supply indicators - prices

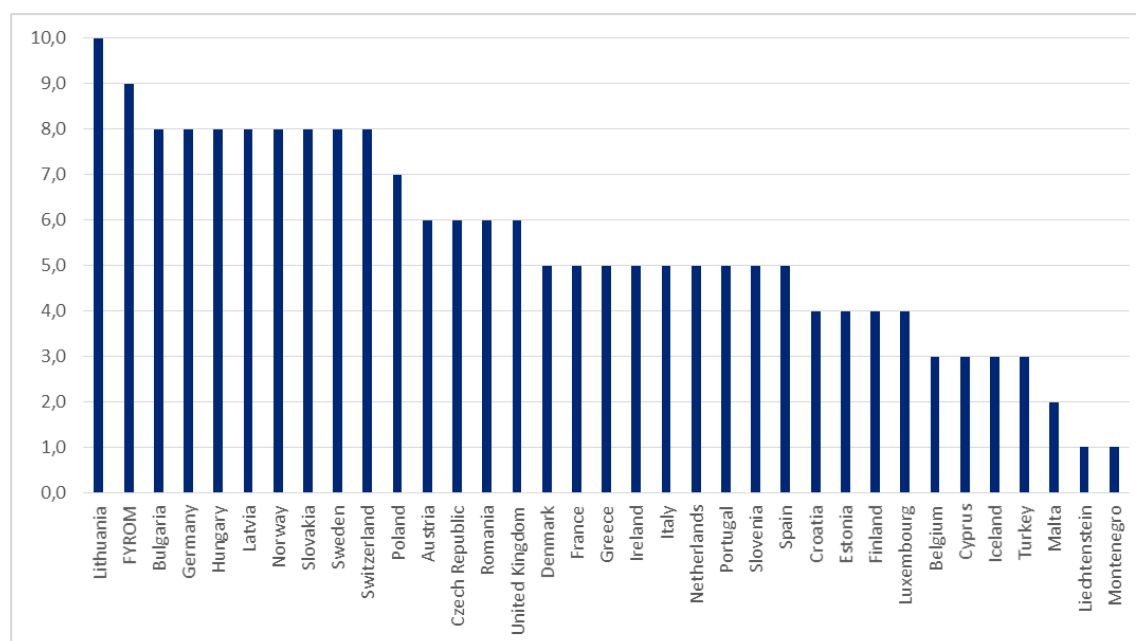
Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony bundles (100 Mbps)	17	€73.44	1185.0	34.4
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony bundles (12-30 Mbps)	31	€36.63	82.6	9.1
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony bundles (30-100 Mbps)	31	€45.19	188.8	13.7
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony bundles (8-12 Mbps)	31	€39.99	151.7	12.3
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony + TV bundles (100 Mbps)	23	€69.93	868.0	29.5
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony + TV bundles (12-30 Mbps)	32	€47.05	200.5	14.2
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony + TV bundles (30-100 Mbps)	33	€50.96	264.2	16.3
DAE Scoreboard	2014	Monthly price of Internet Access + Fixed Telephony + TV bundles (8-12 Mbps)	29	€53.16	312.0	17.7
DAE Scoreboard	2014	Monthly price of Internet Access only (100 Mbps)	28	€58.65	1274.5	35.7
DAE Scoreboard	2014	Monthly price of Internet Access only (12-30 Mbps)	34	€25.51	103.7	10.2
DAE Scoreboard	2014	Monthly price of Internet Access only (30-100 Mbps)	34	€32.96	269.1	16.4
DAE Scoreboard	2014	Monthly price of Internet Access only (8-12 Mbps)	33	€26.49	99.9	10.0
OECD	2012	4c. Broadband subscription prices ranges per megabit per second of advertised speed, with line charges, Sept. 2012, USD PPP	25	\$0.47	0.1	0.3
OECD	2012	4c. Broadband subscription prices ranges per megabit per second of advertised speed, with line charges, Sept. 2012, USD PPP	25	\$23.46	672.1	25.9
OECD	2012	4e. Fixed Broadband basket High 1: 6 GB, 0.250 Mbit/s and above, Sept. 2012	25	\$28.48	71.4	8.4
OECD	2012	4f. Fixed Broadband basket Low 2: 6 GB, 2.5 Mbit/s and above, Sept. 2012	25	\$29.12	70.3	8.4
OECD	2012	4g. Fixed Broadband basket High 2: 18 GB, 2.5 Mbit/s and above, Sept. 2012	25	\$30.47	108.8	10.4

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
OECD	2012	4h. Fixed Broadband basket Low 3: 11 GB, 15 Mbit/s and above, Sept. 2012	25	\$33.32	102.9	10.1
OECD	2012	4i. Fixed Broadband basket High 3: 33 GB, 15 Mbit/s and above, Sept. 2012	25	\$34.29	140.1	11.8
OECD	2012	4j. Fixed Broadband basket Low 4: 14 GB, 30 Mbit/s and above, Sept. 2012	25	\$41.18	192.0	13.9
OECD	2012	4k. Fixed Broadband basket High 4: 42 GB, 30 Mbit/s and above, Sept. 2012	25	\$41.71	202.9	14.2
OECD	2012	4l. Fixed Broadband basket Low 5: 18 GB, 45 Mbit/s and above, Sept. 2012	25	\$47.96	234.8	15.3
OECD	2012	4m. Fixed Broadband basket High 5: 54 GB, 45 Mbit/s and above, Sept. 2012	25	\$48.26	237.5	15.4

A.1.4 Operators

The BIAC study provides data on the number of Internet service providers covering at least 90% of the market for 2012. As shown in Figure A-6, the number of service providers ranges 10 in Lithuania to one in Liechtenstein. Data for this indicator was provided by FYROM and Montenegro of 9 and 1 respectively. On average, countries have five to six Internet service providers.

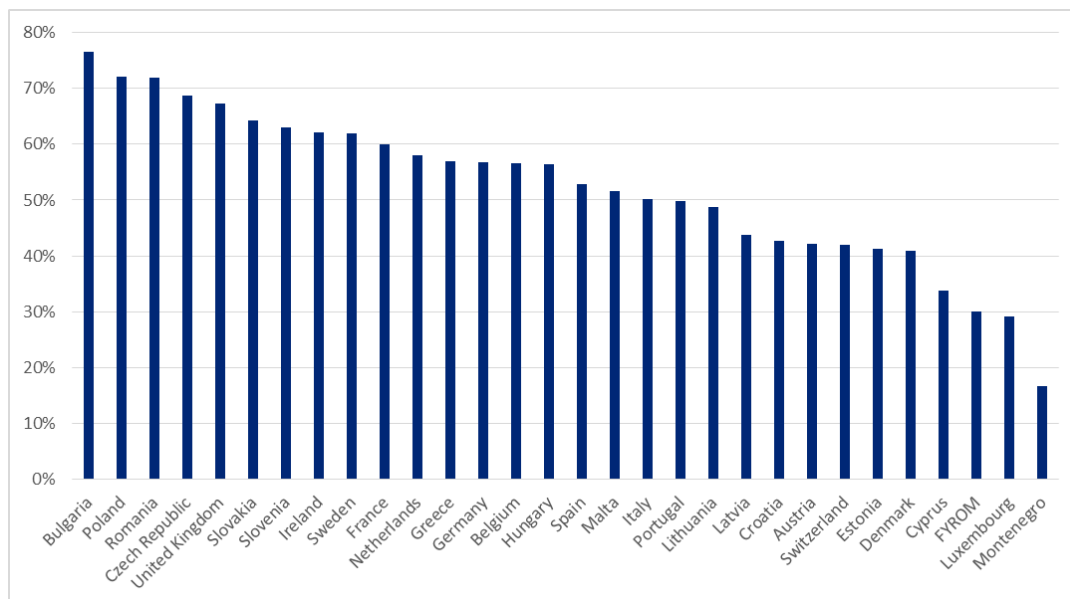
Figure A-6: Number of ISPs covering at least 90% of the market in 2012



Source: BIAC study

The DAE Scoreboard provides data on new entrants' market share in fixed broadband subscriptions for 2013. As shown in Figure A-7, the market share ranges from 77% in Bulgaria to 19.4% in Finland. Data was provided for this indicator by FYROM, Montenegro and Switzerland of 30, 16.7 and 42 respectively. The average market share is 51%. Furthermore, the market share of new entrants is greater than 50% in 18 countries.

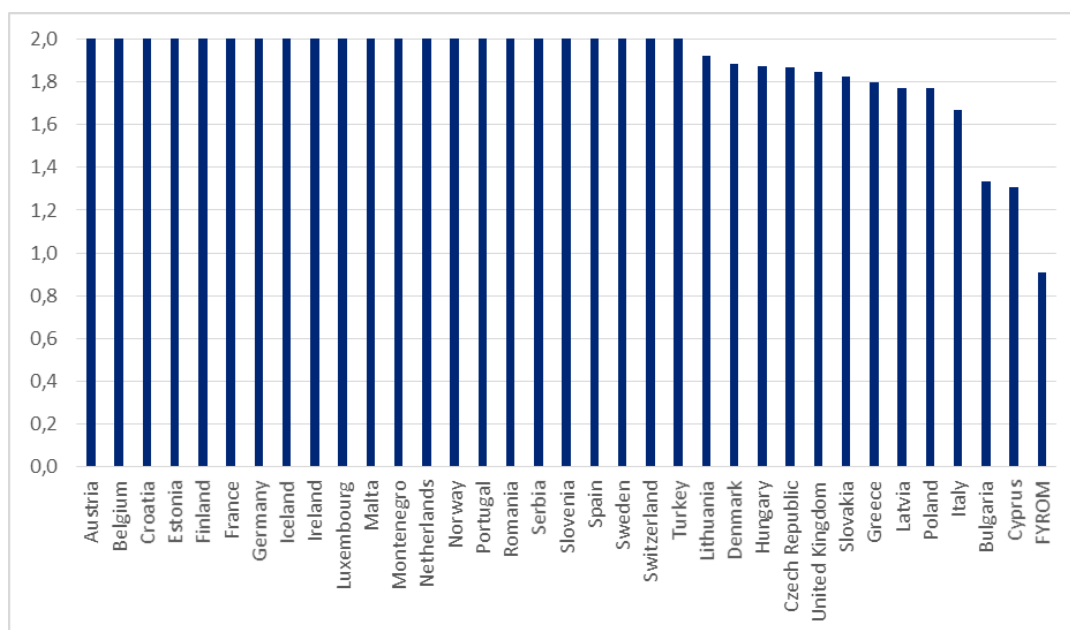
Figure A-7: New entrants' share in fixed broadband subscriptions in 2013



Source: DAE Scoreboard

The World Economic Forum provides data on Internet and telephony competition for 144 different countries for 2013. As shown in Figure A-8, competition levels are very high in the BEREC countries. Competition levels range from 2, the maximum value, to 0,9 in FYROM. The average competition level is 1,9 and only three countries have competition levels which are below 1,5.

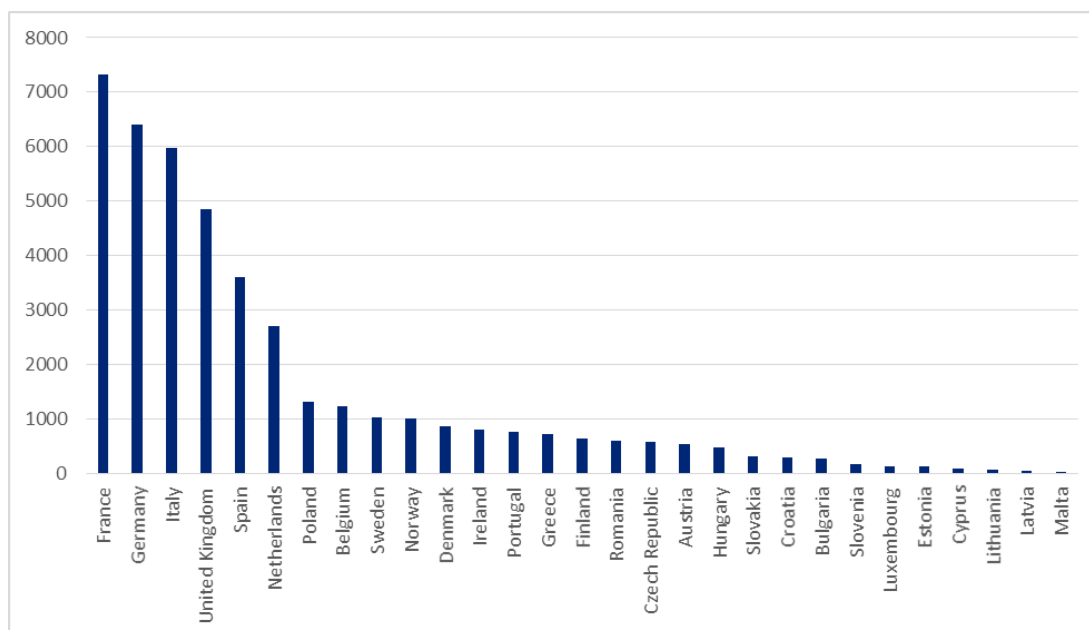
Figure A-8: Internet & telephony competition in 2013, 0–2 (best)



Source: World Economic Forum

The DAE Scoreboard and EUROSTAT provide data on the electronic communications sector investment for 2012. As shown in Figure A-9, investments range from €7317 million in France to €34 million euros in Malta, with the average investment being of €1487 million. High investments are however concentrated in a limited number of countries – France, Germany, Italy, the UK, Spain, and the Netherlands – whereas investments in the remaining 23 other countries were lesser than €1487 million.

Figure A-9: Electronic communications sector investment in 2012



Source: DAE Scoreboard, EUROSTAT

Other indicators collected for operators are displayed in the table below. Some indicators overlap (such as the EUROSTAT data on new entrant's market share and indicators on revenues and investments). The World Economic Forum on competition have a very low explanatory value for the cluster analysis. Given the difference in scale of the indicators on investments and revenues these indicators are also not suitable for the cluster analysis, in addition these figures provide a snapshot in a certain year and may not have much explanatory value for the market structure overall. The indicator on main fixed-line operator from the ITU ICT Eye portal is binary (Yes/No values) and as such will not be used for further cluster analysis, new entrant's market share is a better and more relevant indicator in this respect. Indicators on operator's market shares for DSL cover a similar aspect and are further discarded.

Table A-4: Fixed Internet supply indicators - operators

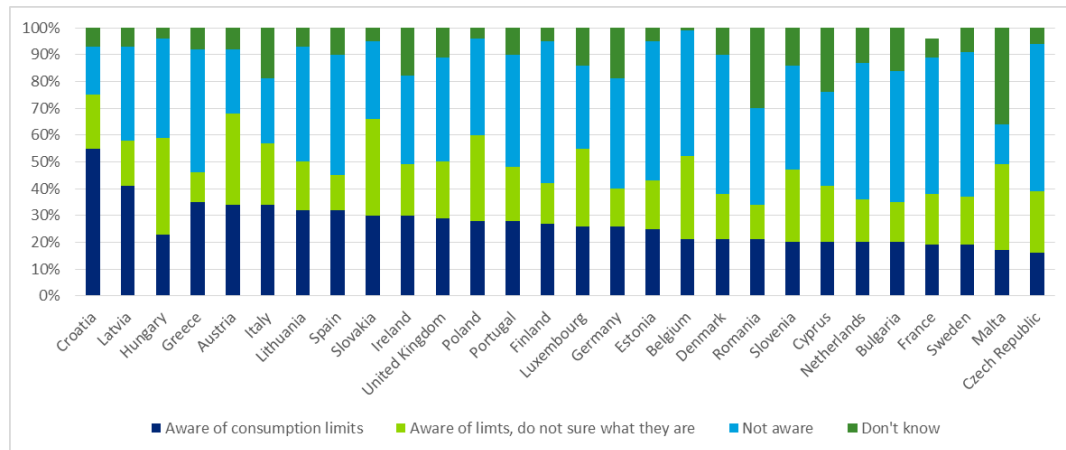
Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
BIAC study	2012	Number of ISPs covering at least 90% of the market	35	5.5	5.0	2.2
World Economic Forum	2013	4.03 Internet & telephony competition, 0–2 (best)	35	1.9	0.1	0.2
ITU - ICT Eye	2012	Main fixed-line operator 100% state-owned	30			
DAE Scoreboard	2013	New entrants' share in fixed broadband subscriptions	31	51.2	219.6	14.8
DAE Scoreboard	2014	DSL subscriptions - operator market shares (VDSL included) (Incumbent)	28	76.0	365.7	19.1
DAE Scoreboard	2014	DSL subscriptions - operator market shares (VDSL included) (New entrants)	23	29.2	293.2	17.1
EUROSTAT	2012M12	New entrants' share in fixed broadband subscriptions	26	54.5	140.0	11.8
DAE Scoreboard	2012	Electronic communications sector revenues, 2012 (Mobile)	28	€ 5,366.59	58029707.2	7617.7
DAE Scoreboard	2012	Electronic communications sector revenues, 2012 (Fixed)	28	€ 4,952.98	65139727.7	8070.9
DAE Scoreboard	2012	Electronic communications sector revenues, 2012 (Pay TV)	28	€ 770.72	1924081.7	1387.1
DAE Scoreboard	2012	Electronic communications sector revenues, 2012 (Other)	28	€ 528.67	2008126.8	1417.1
DAE Scoreboard	2012	Electronic communications sector revenues, 2012 (Total)	28	€ 11,618.95	298286928.8	17271.0
DAE Scoreboard	2012	Electronic communications sector investment, 2012 (Mobile)	28	€ 432.12	462280.2	679.9
DAE Scoreboard	2012	Electronic communications sector investment, 2012 (Fixed)	28	€ 489.18	698141.9	835.5
DAE Scoreboard	2012	Electronic communications sector investment, 2012 (Other)	28	€ 127.22	80955.1	284.5
DAE Scoreboard	2012	Electronic communications sector investment, 2012 (Total)	29	€ 1,486.29	4135695.6	2033.6

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2012	Telecom investment as a % of revenue, 2012	28	15.2	11.2	3.3
DAE Scoreboard	2012	Telecom revenue growth, 2012	28	-2.7	21.2	4.6
DAE Scoreboard	2012	Telecom investment growth, 2011-2012	28	9.2	689.9	26.3
EUROSTAT	2011	Revenues of telecommunications sector	27	€ 12,081.07	300840806.9	17344.8
EUROSTAT	2011	Investments of telecommunications sector in networks	27	€ 1,548.37	4716011.1	2171.6
EUROSTAT	2011	Investments of telecommunications sector in networks as percentage of revenues	27	14.3	13.6	3.7

A.1.5 Network neutrality incidents

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the awareness of data consumption limits of Internet connections for 2014. As shown in Figure A-10, awareness of data consumption limits ranges from 55% in Croatia to 16% in the Czech Republic, with an average of 27%.

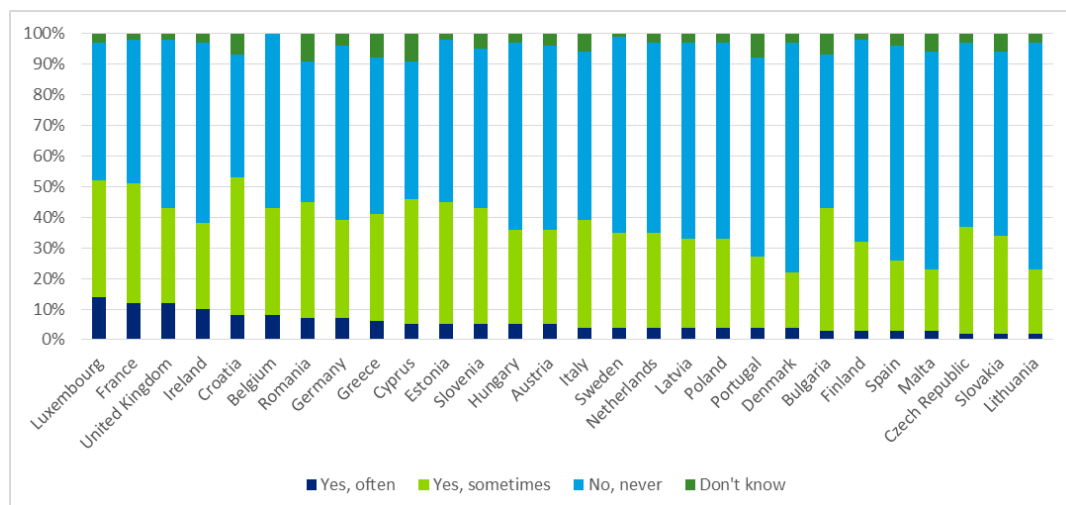
Figure A-10: Awareness of data consumption limits of Internet connections in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the difficulty of accessing online content and applications due to insufficient speed or downloading capacity for 2014. As shown in Figure A-11, respondents 'often' having difficulties ranges from 14% in Luxembourg to 2% in Lithuania, with an average of 5,5%.

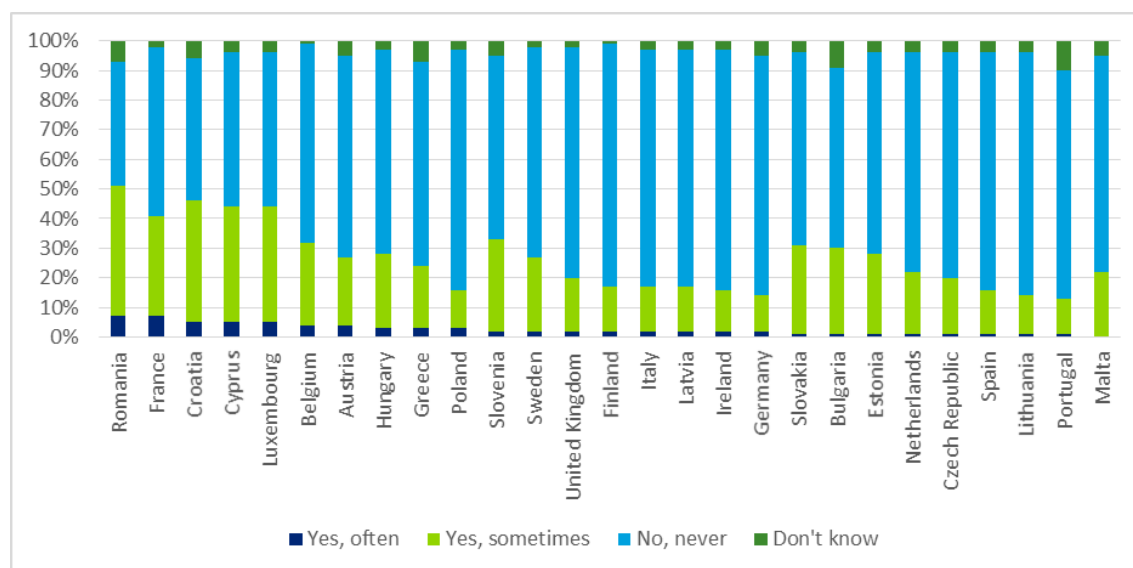
Figure A-11: Difficulties experiences due to insufficient speed in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the number of cases in which users experienced any kind of blocking of online content or applications for 2014. As shown in Figure A-12, regular blocks ('Yes, often') range from 7% in Romania to 0% in Malta, with an average of 2,6% whereas occasional blocking ('Yes, sometimes') is reported more frequently (23.7% on average).

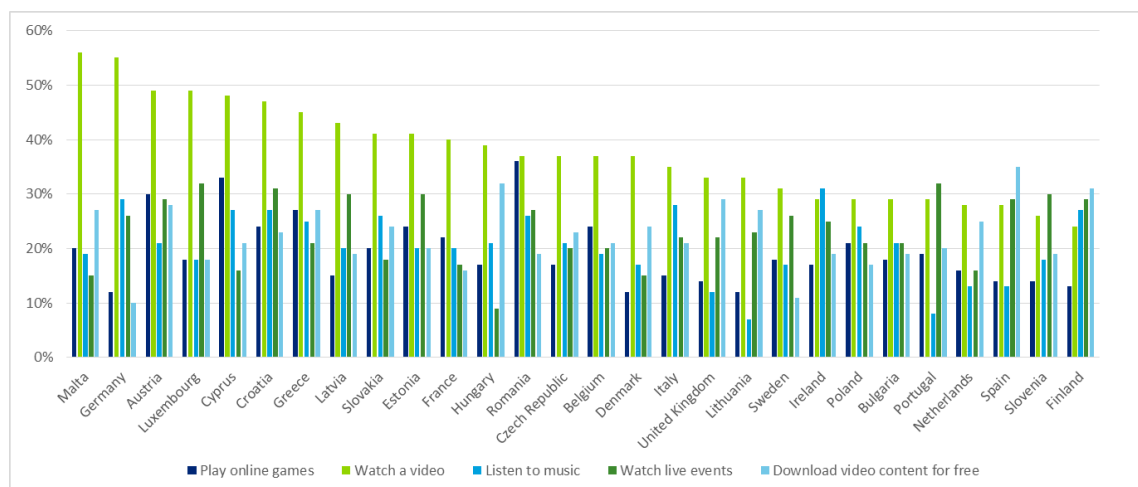
Figure A-12: Blocking of online content or applications in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey also provides data on the types of content and applications for which users experienced Internet blocking for 2014. As shown in Figure A-13, 38% of users experienced online blocking when watching a video, with data ranging from 56% in Malta to 24% in Finland, whereas 23% experienced blocking while watching live events, with data ranging from 32% in Luxembourg to 9% in Hungary.

Figure A-13: Experience of Internet blocking in 2014



Source: Eurobarometer

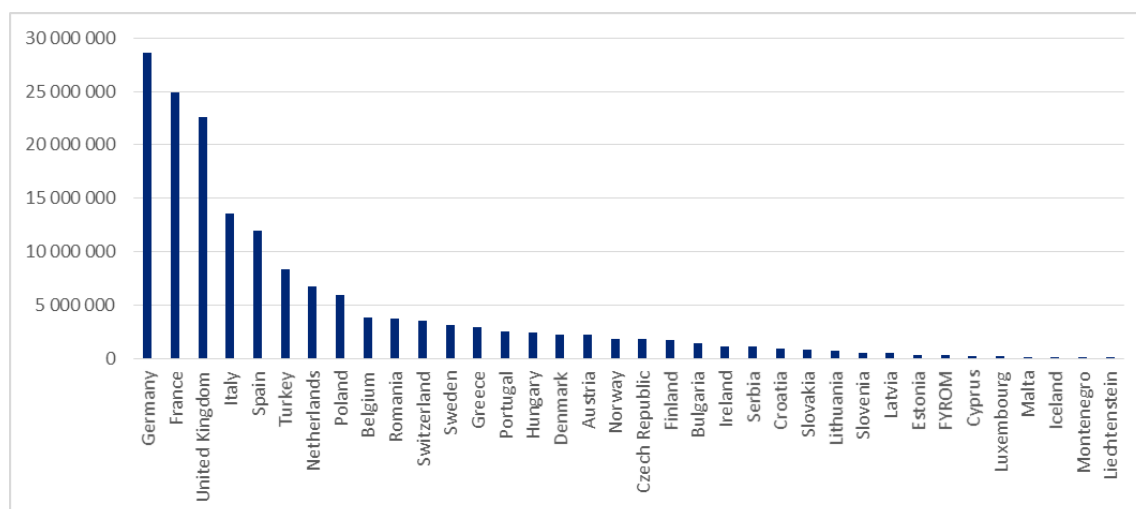
A.2 Fixed Internet Demand

This section presents the fixed Internet demand landscape according to Internet penetration, speed, type of subscription, Internet use, devices and switching behaviour.

A.2.1 Internet penetration

ITU provides data on fixed broadband subscriptions for 2013. As shown in Figure A-14 these range from 28,6 million in Germany to 12000 in Liechtenstein, whereas the average number of subscriptions is 4,5 million.

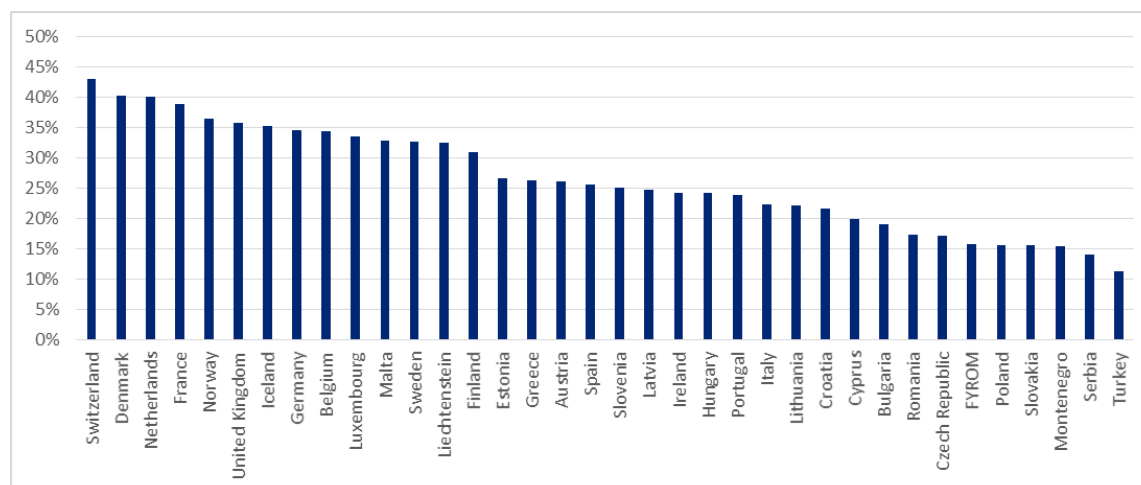
Figure A-14: Fixed (wired)-broadband subscriptions in 2013



Source: ITU - ICT Eye

ITU provides data on fixed broadband subscriptions per 100 inhabitants for 2013. As shown in Figure A-15, broadband subscriptions range 43% in Switzerland to 11% in Turkey, with the average broadband subscription being of 26,4%.

Figure A-15: Fixed (wired)-broadband subscriptions per 100 inhabitants in 2013



Source: ITU - ICT Eye

Other indicators collected for Internet penetration are displayed in the table below. Broadband penetration rates were also collected from the DAE Scoreboard, Eurostat, OECD and the World Economic Forum, these datasets however do not have the coverage that the ITU dataset provides (which covers all 36 countries in scope). The broadband subscriptions per inhabitant are chosen instead of the broadband subscriptions per household. The actual number of broadband subscriptions collected from the same sources will not be used in the cluster analysis as these are of a different scale.

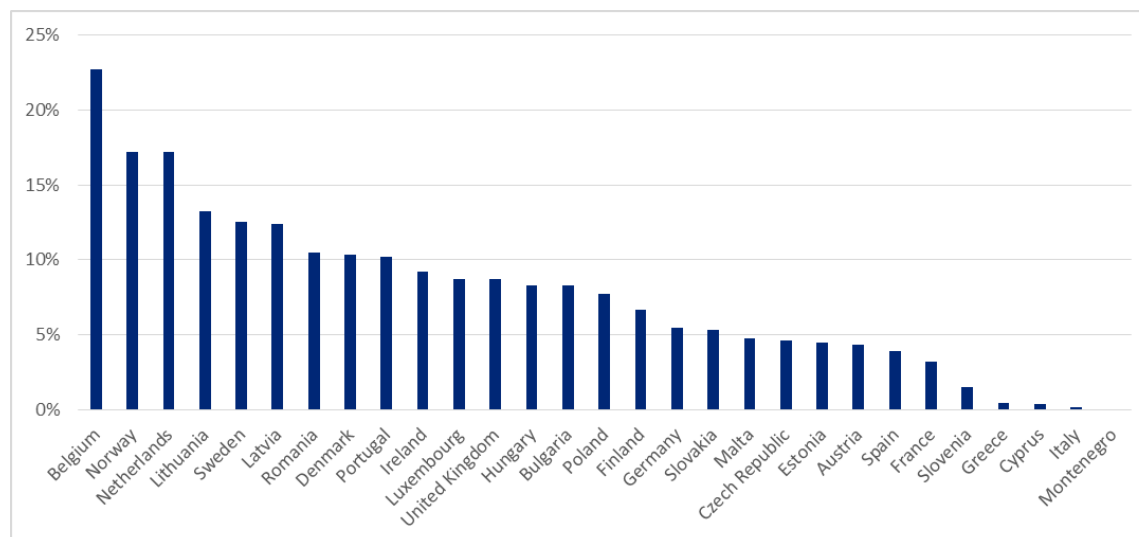
Table A-5: Fixed Internet demand indicators – Internet penetration

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2014	Fixed broadband subscriptions, January 2014	28	5,397,904.8	58576778226199.2	7653546.8
EUROSTAT	2012M12	Fixed broadband subscriptions	27	5,364,603.0	56507368185998.0	7517138.3
ITU - ICT Eye	2013	Fixed (wired)-broadband subscriptions	36	4,528,550.1	49681223181267.4	7048490.8
OECD	2013	1c (1). Total number of fixed (wired) broadband subscriptions, by country, millions, June 2013	25	6,042,586.3	60167139024245.6	7756748.0
DAE Scoreboard	2013	Fixed broadband penetration (subscriptions as a % of population), January 2014	28	28.3	37.9	6.2
EUROSTAT	2012M12	Per 100 inhabitants, Fixed broadband penetration Year: 2012M12	27	27.4	39.8	6.3
ITU - ICT Eye	2013	Fixed (wired)-broadband subscriptions per 100 inhabitants	36	26.4	73.8	8.6
World Economic Forum	2013	6.05 Fixed broadband Internet subscriptions/100 pop.	35	27.3	163.7	12.8
EUROSTAT	2013	Households with Internet access, percentage of households	32	75.8	173.6	13.2
EUROSTAT	2013	Households having access to the Internet, by type of connection % of all households	32	72.5	139.6	11.8
ITU - ICT Eye	2012	Households with Internet access at home (%)	35	73.1	206.3	14.4
ITU - ICT Eye	2013	Proportion of households with Internet access at home	35	74.3	206.4	14.4
OECD	2010	2a. Households with broadband access (1), 2000-10 Percentage of all households	25	64.0	184.0	13.6

A.2.2 Speed

The DAE Scoreboard provides data on fast broadband (at least 30Mbps) penetration, in terms of subscriptions as a percentage of the population, for 2014. As shown in Figure A-16, the data ranges from 23% in Belgium to less than 0,1% in Italy, with an average of 9,4%.

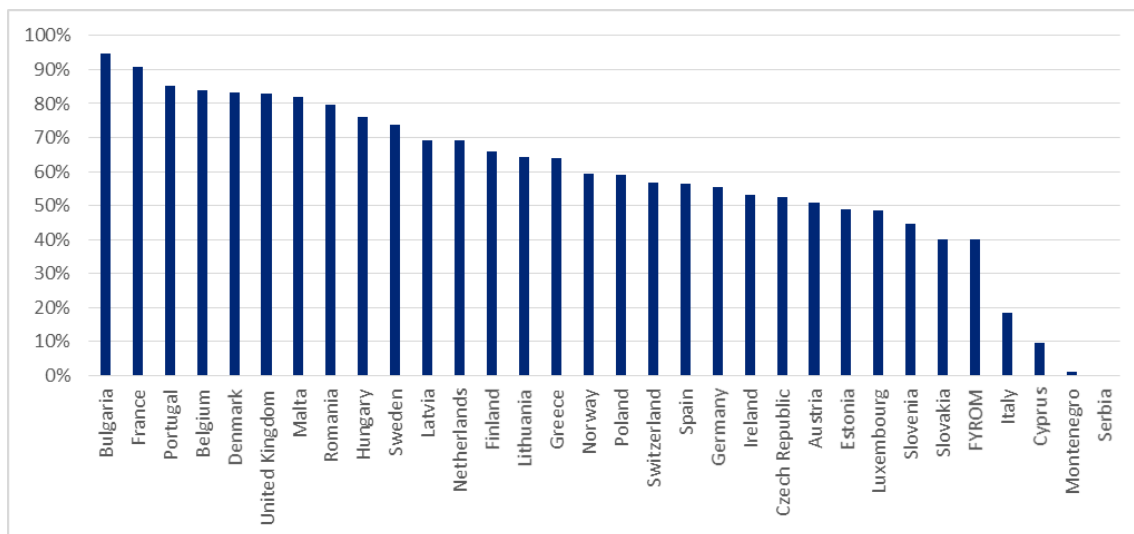
Figure A-16: Fast broadband penetration in 2014



Source: DAE Scoreboard

The DAE Scoreboard also provides data on the share of fixed broadband subscriptions for which the advertised speed is greater than 10 Mbps for 2014. As shown in Figure A-17, broadband subscriptions that are quicker than 10 Mbps range from 95% in Bulgaria to less than 9,7% in Cyprus. FYROM, Montenegro, Norway and Switzerland provided additional values for this indicator of 40%, 1,1%, 59,5%, 56,9% respectively. The average is 60%. Furthermore, over 50% of fixed broadband subscriptions are quicker than 10 Mbps in 23 countries.

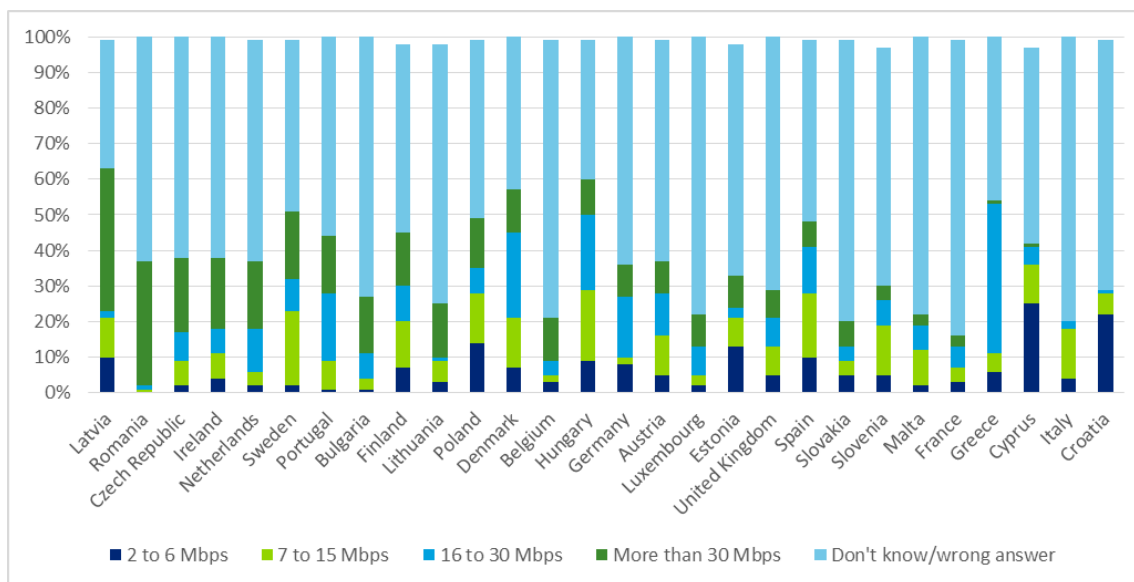
Figure A-17: Share of fixed broadband subscriptions in 2014



Source: DAE Scoreboard

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the maximum download speed of broadband Internet subscriptions for 2014. As shown in Figure A-18, an average of 11,9% of consumers have a maximum download speed of subscriptions which is greater than 30 Mbps.

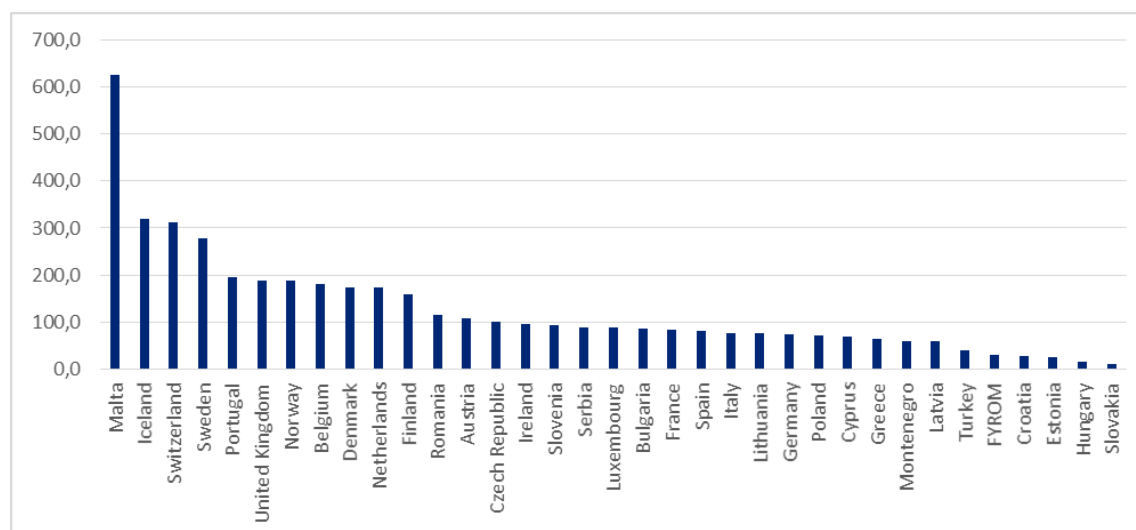
Figure A-18: Maximum download speed of subscriptions for 2014



Source: Eurobarometer

ITU provides data on the Internet bandwidth per user for 2013. As shown in Figure A-19, the data ranges from 625,8 kb/s per user in Malta to 11, 5 kb/s per user in Slovakia, with an average of 127 kb/s.

Figure A-19: Internet bandwidth, kb/s per user in 2013



Source: ITU

Other indicators collected for speed are displayed in the table below. Most indicators stem from the DAE Scoreboard which provides penetration rates for different categories of speed ranges, these indicators largely overlap. The indicator with the largest coverage is the indicator on the share of fixed broadband subscriptions ≥ 10 Mbps (advertised download speed), which is selected as the most relevant for the cluster analysis. The DAE Scoreboard also provides penetration rates by technology, given the overlap between penetration rates these indicators will not be considered for the cluster analysis. OECD data is discarded for the cluster analysis given the limited coverage. The Eurobarometer indicators stems from a consumer survey, preference is given for other indicators that stem from data reported by countries.

Table A-6: Fixed Internet demand indicators – speed

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2014	Fast broadband (at least 30Mbps) penetration (subscriptions as a % of population), January 2014, Basic	27	21.0	45.2	6.7
DAE Scoreboard	2014	Fast broadband (at least 30Mbps) penetration (subscriptions as a % of population), January 2014, At least 30Mbps	30	9.4	116.4	10.8
DAE Scoreboard	2014	Fast broadband (at least 30Mbps) penetration (subscriptions as a % of population), January 2014, Broadband penetration	27	28.6	37.6	6.1
DAE Scoreboard	2014	Ultrafast broadband (at least 100Mbps) penetration (subscriptions as a % of population), January 2014, Below 100 Mbps	27	26.3	42.0	6.5
DAE Scoreboard	2014	Ultrafast broadband (at least 100Mbps) penetration (subscriptions as a % of population), January 2014, At least 100 Mbps	27	2.2	6.6	2.6
DAE Scoreboard	2014	Ultrafast broadband (at least 100Mbps) penetration (subscriptions as a % of population), January 2014, Broadband penetration	27	28.6	37.6	6.1
DAE Scoreboard	2014	Fixed broadband subscriptions by speed, January 2014, Above 144 Kbps and below 2 Mbps	27	3.3	19.0	4.4
DAE Scoreboard	2014	Fixed broadband subscriptions by speed, January 2014, 2 Mbps and above and below 10 Mbps	27	33.6	389.4	19.7
DAE Scoreboard	2014	Fixed broadband subscriptions by speed, January 2014, 10 Mbps and above	27	63.0	410.6	20.3
DAE Scoreboard	2014	Fixed broadband subscriptions by speed (Digital Agenda categories), January 2014, Above 144 Kbps and below 30 Mbps	27	73.1	295.0	17.2
DAE Scoreboard	2014	Fixed broadband subscriptions by speed (Digital Agenda categories), January 2014, 30 Mbps and above and below 100 Mbps	27	18.9	189.7	13.8
DAE Scoreboard	2014	Fixed broadband subscriptions by speed (Digital Agenda categories), January 2014, 100 Mbps and above	27	8.0	86.8	9.3
DAE Scoreboard	2013	Share of fixed broadband subscriptions >= 10 Mbps - Advertised download speed, bb_speed10	31	60.0	490.8	22.2

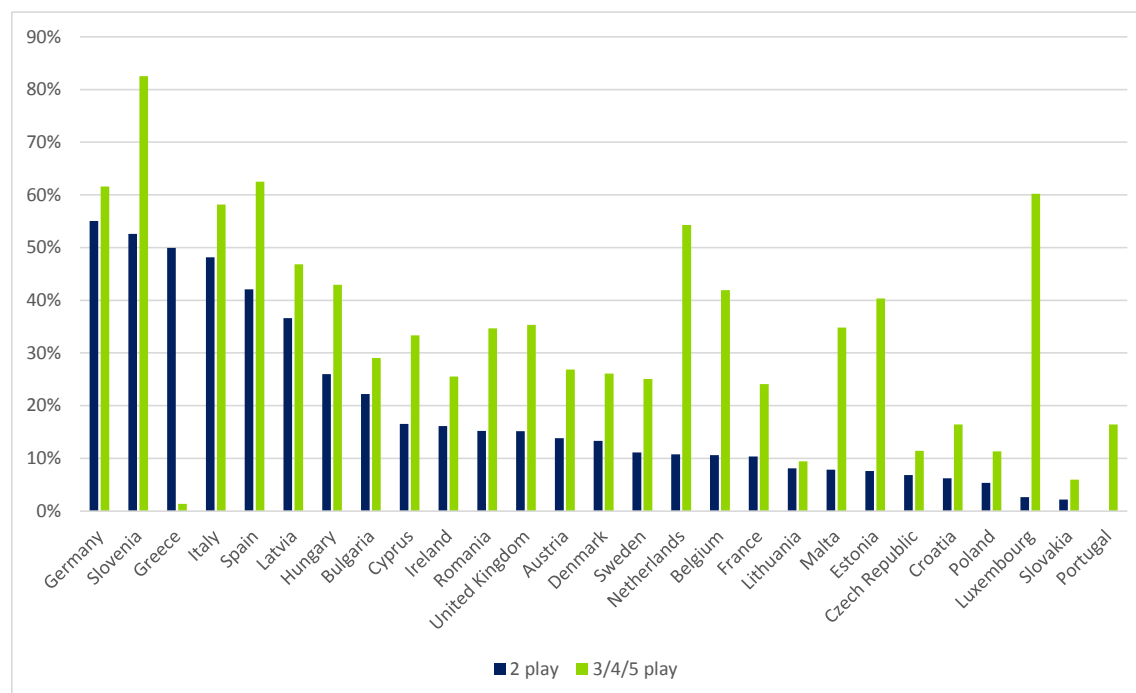
Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2013	Share of fixed broadband subscriptions >= 100 Mbps - Advertised download speed, bb_speed100	28	9.7	156.1	12.5
DAE Scoreboard	2013	Share of fixed broadband subscriptions >= 2 Mbps - Advertised download speed, bb_speed2	27	96.7	19.0	4.4
DAE Scoreboard	2013	Share of fixed broadband subscriptions >= 30 Mbps - Advertised download speed, bb_speed30	28	26.3	294.1	17.1
DAE Scoreboard	2013	Number of fixed broadband subscriptions (lines). Maximum advertised download speed at least 10 but below 30 Mbps, speed_10I30	28	36.1	316.0	17.8
DAE Scoreboard	2013	Number of fixed broadband subscriptions (lines). Maximum advertised download speed at least 2 but below 10 Mbps, speed_2I10	28	33.4	376.5	19.4
DAE Scoreboard	2013	Number of fixed broadband subscriptions (lines). Maximum advertised download speed at least 30 but below 100 Mbps, speed_30I100	28	19.9	212.1	14.6
DAE Scoreboard	2013	Number of fixed broadband subscriptions (lines). Maximum advertised download speed above 100 Mbps, speed_ge100	28	8.7	94.9	9.7
DAE Scoreboard	2013	Number of fixed broadband subscriptions (lines). Maximum advertised download speed below 2 Mbps, speed_I2	28	4.9	86.0	9.3
ITU (World Economic Forum)	2013	3.03 Int'l Internet bandwidth, kb/s per user, 3.03 Int'l Internet bandwidth, kb/s per user	35	127.0	13278.9	115.2
DAE Scoreboard		Fixed broadband subscriptions, TOTAL_FBB	28	21,011,402.4	893153194761838.0	29885668.7
DAE Scoreboard	2014	DSL subscriptions share in fixed broadband, January 2014, DSL lines % (VDSL included)	28	56.3	543.1	23.3
DAE Scoreboard	2014	Cable broadband subscriptions (DOCSIS 3.0 included), January 2014, Cable lines (DOCSIS 3.0 included)	28	966,351.2	1740126451570.1	1319138.5
DAE Scoreboard	2014	Cable broadband subscriptions share in fixed broadband (DOCSIS 3.0 included), January 2014, Cable lines %	28	21.5	201.4	14.2

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2014	Fixed broadband subscriptions - technology market shares, January 2014, Cable modem % (DOCSIS 3.0 included)	28	21.5	201.4	14.2
DAE Scoreboard	2014	Fixed broadband subscriptions - technology market shares, January 2014, FTTH/B %	28	14.8	280.8	16.8
DAE Scoreboard	2014	Fixed broadband subscriptions - technology market shares, January 2014, Other %	28	7.4	117.4	10.8
OECD	2013	1d (1). OECD Fixed (wired) broadband subscriptions per 100 inhabitants, by technology, June 2013, DSL	25	18.1	56.5	7.5
OECD	2013	1d (1). OECD Fixed (wired) broadband subscriptions per 100 inhabitants, by technology, June 2013, Cable	25	6.7	23.0	4.8
OECD	2013	1d (1). OECD Fixed (wired) broadband subscriptions per 100 inhabitants, by technology, June 2013, Fibre/LAN	25	3.1	9.9	3.2
OECD	2013	1d (1). OECD Fixed (wired) broadband subscriptions per 100 inhabitants, by technology, June 2013, Other	25	0.3	0.9	0.9
OECD	2013	1d (1). OECD Fixed (wired) broadband subscriptions per 100 inhabitants, by technology, June 2013, Total	25	28.2	72.2	8.5
OECD	2013	1l. Percentage of fibre connections in total broadband among countries reporting fibre subscribers, June 2013, Percentage of fibre connections in total broadband	25	0.1	0.0	0.1
EUROBAROMETER	2014	QB9 - Maximum download speed of subscriptions, less than 2Mbps	28	0.8	0.8	0.9
EUROBAROMETER	2014	QB9 - Maximum download speed of subscriptions, 2 to 6 Mbps	28	6.4	34.9	5.9
EUROBAROMETER	2014	QB9 - Maximum download speed of subscriptions, 7 to 15 Mbps	28	8.9	29.6	5.4
EUROBAROMETER	2014	QB9 - Maximum download speed of subscriptions, 16 to 30 Mbps	28	9.5	74.0	8.6
EUROBAROMETER	2014	QB9 - Maximum download speed of subscriptions, More than 30 Mbps	28	11.9	88.3	9.4
EUROBAROMETER	2014	QB9 - Maximum download speed of subscriptions, Don't know/wrong answer	28	62.4	167.6	12.9

A.2.3 Types of subscription

The DAE Scoreboard provides data on double play and triple to quintuple play bundle penetration for 2013. As shown in Figure A-20, two play bundle penetration ranges from 55% in Germany to 0% in Portugal, with an average of 19%. Triple to quintuple play bundle penetration ranges from 83% in Slovenia to 1% in Greece, with an average of 34%.

Figure A-20: Bundled offer penetration in 2013

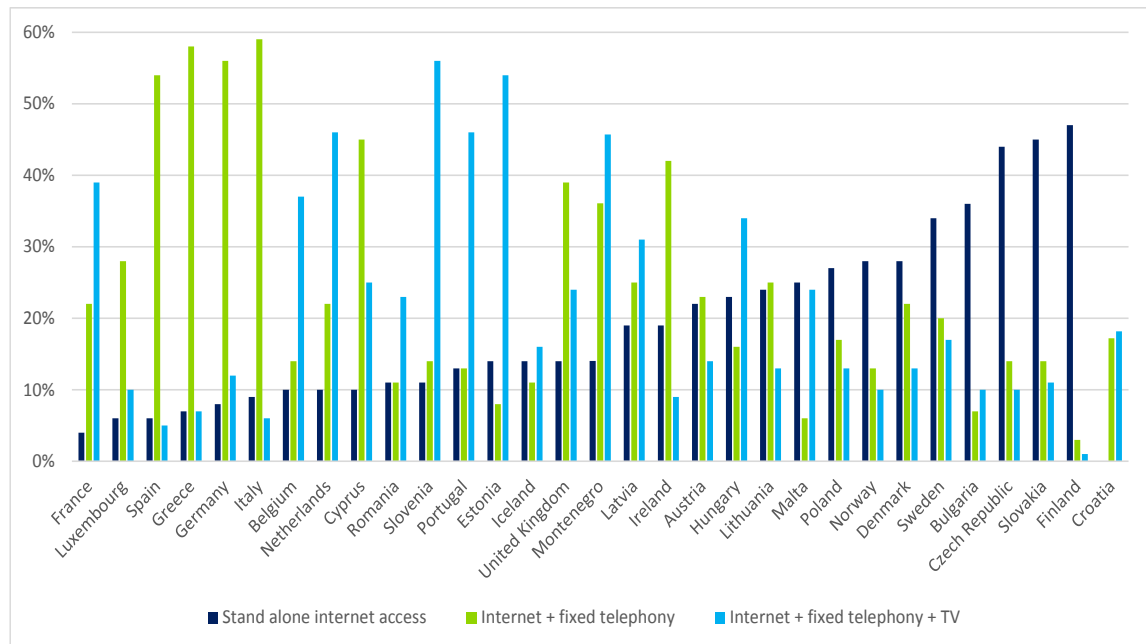


Source: DAE Scoreboard

The Consumers, Health and Food Executive Agency (CHAFEA) also provides data on the penetration of types of bundled offers. As shown in Figure A-21, the data for:

- **Stand-alone Internet access** ranges from 4% in France to 47% in Finland, with an average of 19,4%. Stand-alone Internet access is particularly prevalent in Croatia, Slovakia and Finland;
- **Internet and fixed telephony** ranges from 3% in Finland to 59% in Italy, with an average of 24,3%. These types of bundles are particularly prevalent in Spain, Greece, Germany and Italy;
- **Internet, fixed telephony and TV** ranges from 1% in Finland to 56% in Slovenia, with an average of 21,9%. These types of bundles are particularly prevalent in Slovenia, Estonia, the Netherlands and Portugal.

Figure A-21: Bundled offer penetration



Source: CHAFAA

Other indicators collected for type of subscription are displayed in the table below. The DAE Scoreboard data on the bundled offer penetration is not considered for the cluster analysis as it is essentially the sum of 2 play and 3/4/5 play which includes mobiles phone subscriptions whereby the sum can reach above 100% in certain cases. The DAE Scoreboard indicator on 2 play is therefore preferred, this indicator is also preferred over the indicator over the Eurobarometer indicator on communication services included in a combined package, as this indicator includes any package. In addition, the CHAFAA indicators stem from a consumer survey, while the DAE Scoreboard data on bundled offers stems from data submitted by countries, therefore the latter is preferred for the cluster analysis.

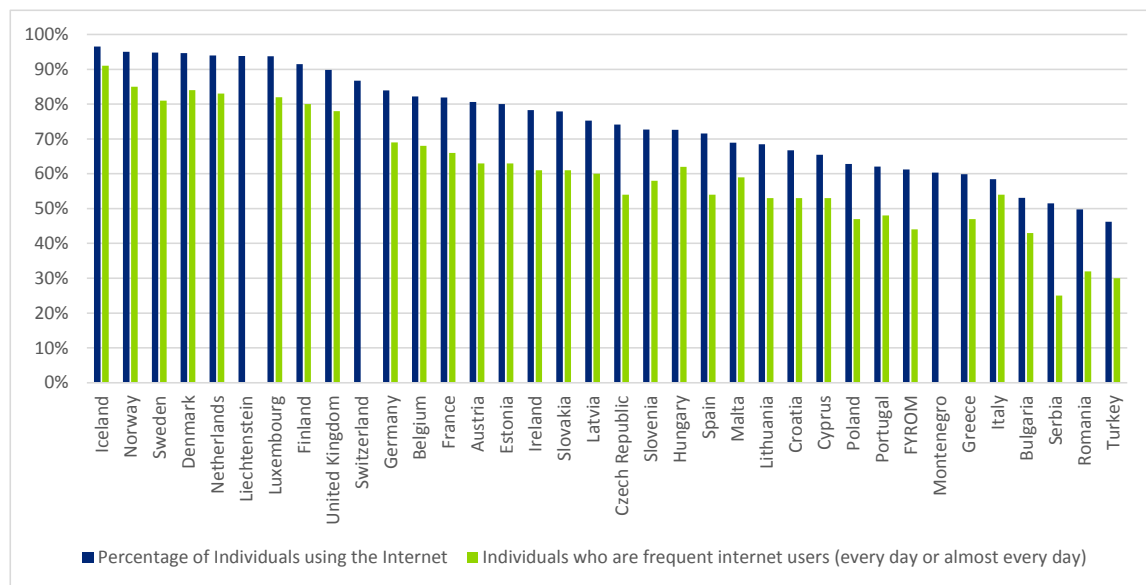
Table A-7: Fixed Internet demand indicators – type of subscription

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2013	Bundled offer penetration (subscriptions/population), July 2013	30	51.0	969.2	31.1
DAE Scoreboard	2013	Double play and triple play penetration (subscriptions/population), July 2013, 2 play	27	19.0	270.2	16.4
DAE Scoreboard	2013	Double play and triple play penetration (subscriptions/population), July 2013, 3/4/5 play	27	34.0	386.7	19.7
EUROBAROMETER	2014	Combined package with more than one communications service included	28	44.7	236.3	15.4
CHAFEA	2012	Internet + fixed telephony	31	24.3	255.9	16.0
CHAFEA	2012	Internet + fixed telephony + TV	31	21.9	232.6	15.3
CHAFEA	2012	Internet + TV	29	14.4	64.1	8.0
CHAFEA	2012	Internet + fixed telephony + mobile Internet	29	2.9	3.9	2.0
CHAFEA	2012	Internet + fixed telephony + mobile telephony + TV	29	5.3	51.7	7.2
CHAFEA	2012	Internet + mobile telephony	29	3.0	6.1	2.5
CHAFEA	2012	Internet + fixed telephony + mobile telephony	29	3.2	31.6	5.6
CHAFEA	2012	Internet + fixed telephony + mobile Internet + TV	29	3.1	6.2	2.5
CHAFEA	2012	Internet + mobile Internet	29	2.1	6.0	2.5
CHAFEA	2012	Other package	29	1.2	1.0	1.0
CHAFEA	2012	Standalone Internet access	30	19.4	144.7	12.0
CHAFEA	2012	Any bundle package	29	80.4	148.7	12.2

A.2.4 Internet use and digital skills

ITU provides data on the percentage of individuals using the Internet, whereas Eurostat provides data on the number of individuals which are frequent users (every day or almost every day) for 2013. As shown in Figure A-22, the percentage of individuals using the Internet ranges from 96,5% in Iceland to 46,3% in Turkey, with an average of 74,9%, whereas the percentage of individuals which are frequent users ranges from 91% in Iceland to 30% in Turkey²⁰².

Figure A-22: Internet use in 2013

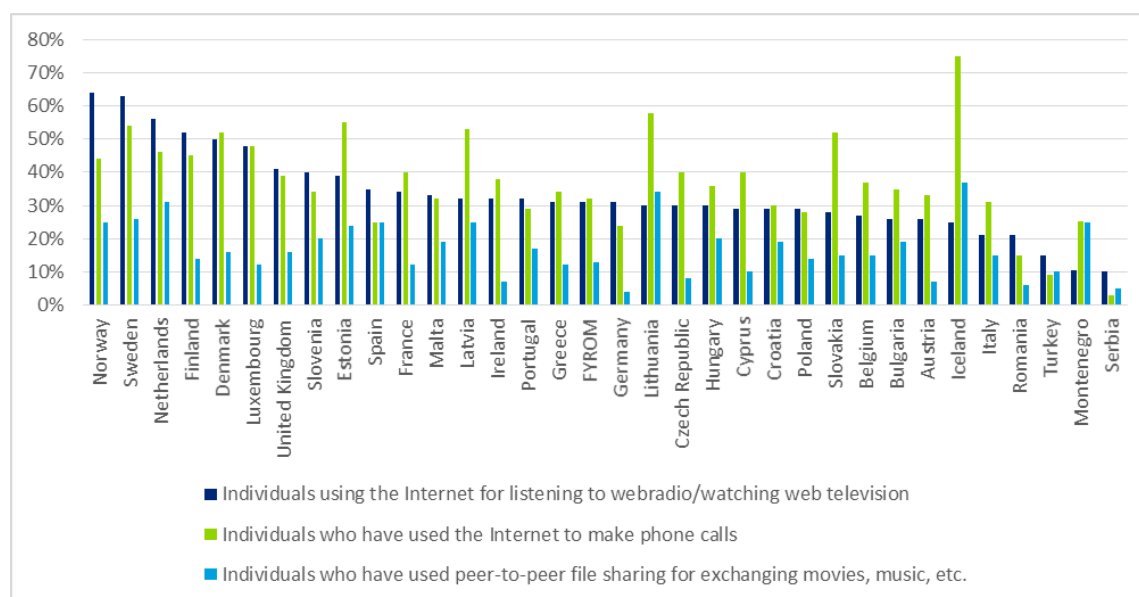


Source: ITU - ICT Eye, Eurostat

EUROSTAT also provides data on the type of Internet use for 2012 and 2013. Figure A-23 reveals that the average number of individuals using the Internet for listening to web radio/watching web television, to make phone calls, and which used peer-to-peer file sharing for exchanging movies and music for is respectively 33%, 37% and 17%.

²⁰² Note that Eurostat also provides a value for Serbia that is included in this dataset, however this value is for latest available year (2009).

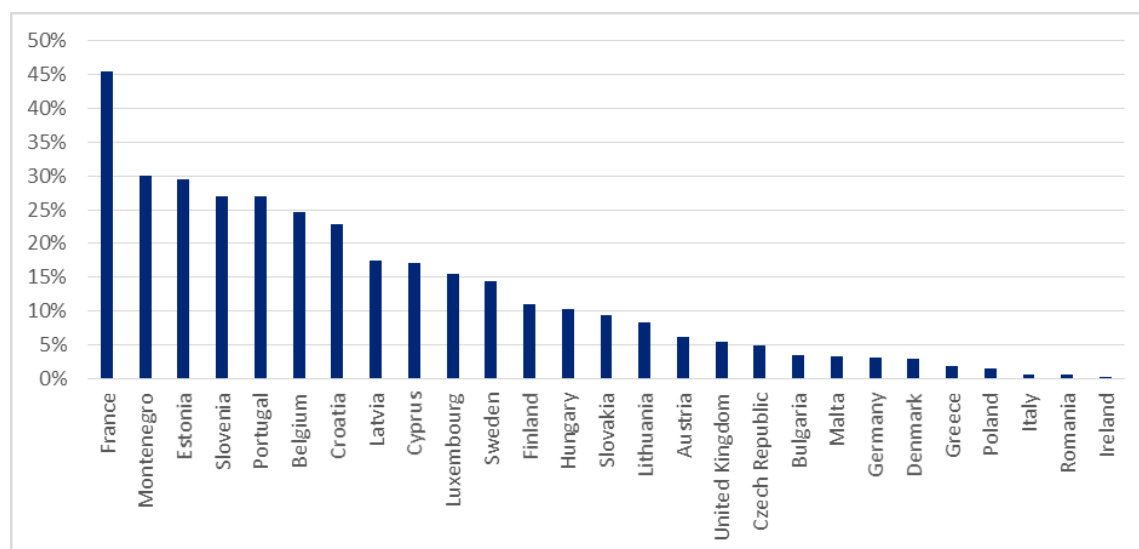
Figure A-23: Internet use: web radios/watching web TV in 2012, phone calls in 2013, peer-to-peer file sharing in 2013



Source: EUROSTAT

The DAE Scoreboard provides data on household penetration of different broadcasting services, and notably IPTV for 2013. Figure A-24 reveals that the IPTV penetration ranges from 45% in France to less than 1% in Ireland and Italy. Additional data was provided by Montenegro at 31%. The average is 13%. IPTV penetration is greater than 25% in five countries (France, Montenegro, Estonia, Slovenia and Portugal).

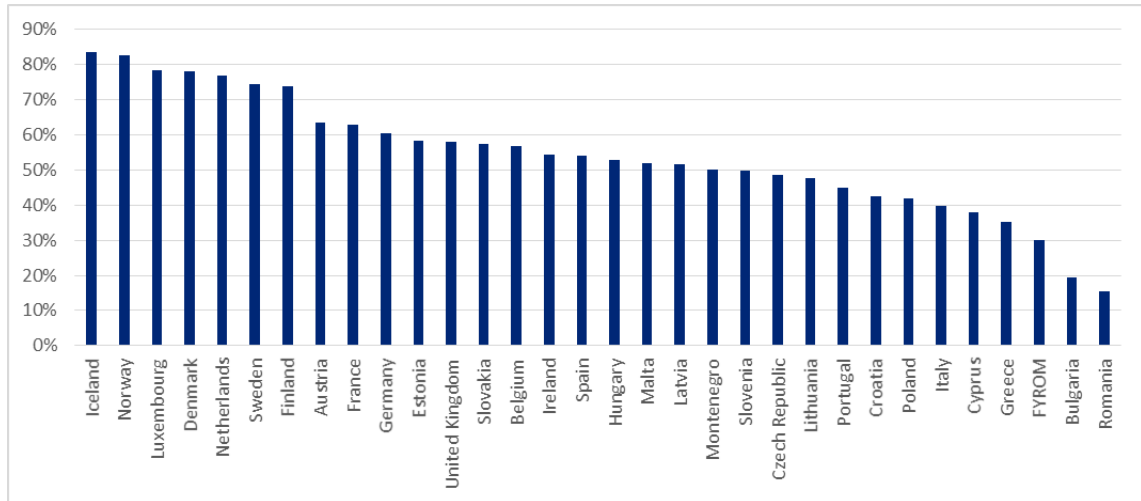
Figure A-24: Household penetration of different broadcasting services, IPTV in 2013



Source: DAE Scoreboard

The DAE Scoreboard also provides data on digital skills. As shown in Figure A-25, the percentage of people with basic digital skills ranges from 83% in Iceland to 15% in Romania, with an average of 54%. Furthermore, in 19 countries, the percentage of people with basic or above digital skills is between above 50%.

Figure A-25: Individuals with basic or above basic digital skills



Source: DAE Scoreboard

Other indicators collected for Internet use and Digital skills are displayed in the table below. The ITU data on individuals using the Internet has the highest coverage, covering all 36 countries in scope. A number of indicators on frequency of Internet use were identified from Eurostat whereby frequent use is considered most relevant for this study. Concerning the type of use the content/applications that are relevant in the light of this study have been selected, others (such as sending emails, using search engines, etc. are not further considered. Eurostat also provides indicators on the location of use (at home, work or in education), these are not further considered for the cluster analysis.

Table A-8: Fixed Internet demand indicators – Internet use and digital skills

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
ITU - ICT Eye	2013	Percentage of Individuals using the Internet	36	74.9	210.4	14.5
DAE Scoreboard	2013	Individuals who are frequent Internet users (every day or almost every day)	33	61.5	221.6	14.9
EUROSTAT	2013	Individuals frequently using the Internet, % of individuals aged 16 to 74	33	60.3	264.8	16.3
EUROSTAT	2013	Individuals regularly using the Internet, % of individuals aged 16 to 74	33	70.6	251.7	15.9
EUROSTAT	2013	Internet use: never, percentage of individuals	33	22.3	200.1	14.1
EUROSTAT	2013	Individuals - Internet use, Individuals who used the Internet more than a year ago or never used it	33	24.3	216.9	14.7
EUROSTAT	2013	Individuals - Internet use, Last Internet use: in last 3 months	33	73.8	244.1	15.6
EUROSTAT	2013	Individuals - Internet use, Last Internet use: in last 12 months	33	75.5	216.7	14.7
EUROSTAT	2013	Individuals using the Internet, by place of use, % of individuals aged 16 to 74, Internet access at home	33	70.0	298.4	17.3
EUROSTAT	2013	Individuals using the Internet, by place of use, % of individuals aged 16 to 74, Internet access at place of work	33	32.6	191.8	13.8
EUROSTAT	2013	Individuals using the Internet, by place of use % of individuals aged 16 to 74 Internet access at place of education	33	11.0	27.1	5.2
EUROSTAT	2013	Individuals using the Internet, by place of use, % of individuals aged 16 to 74, Internet access at other places	33	19.9	141.0	11.9
EUROSTAT	2011	Individuals having accessed the Internet at home % of individuals having used the Internet in the last 3 months All Individuals	33	91.8	42.2	6.5

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
EUROSTAT	2011	Individuals having accessed the Internet only at home % of individuals having used the Internet in the last 3 months All Individuals	33	37.9	68.3	8.3
EUROSTAT	2011	Individuals having accessed the Internet at work % of individuals having used the Internet in the last 3 months All Individuals	33	41.0	76.8	8.8
DAE Scoreboard	2013	Household penetration of different broadcasting services	27	12.7	134.5	11.6
DAE Scoreboard	2013	Individuals ordering content or software that were delivered or upgraded online	31	13.3	120.0	11.0
DAE Scoreboard		Diversification index for the activities realised online by Internet users	31	11.9	5.7	2.4
EUROSTAT	2013	Individuals using the Internet for sending/receiving e-mails % of individuals aged 16 to 74	33	64.4	314.5	17.7
EUROSTAT	2012	Individuals using the Internet for playing or downloading games, images, films or music, % of individuals aged 16 to 74	33	36.7	131.1	11.5
EUROSTAT	2012	Individuals using the Internet for listening to web radio/watching web television, % of individuals aged 16 to 74	34	33.2	158.2	12.6
EUROSTAT	2013	Individuals using the Internet for participating in social networks, % of individuals aged 16 to 74	31	47.0	124.6	11.2
EUROSTAT	2012	Individuals using the Internet for uploading self created content, % of individuals aged 16 to 74	33	26.2	133.1	11.5
EUROSTAT	2013	Individuals using the Internet for downloading software % of individuals aged 16 to 74	33	23.6	135.5	11.6
EUROSTAT	2013	Individuals' level of Internet skills , Individuals who have used a search engine to find information, Percentage of individuals	33	73.0	227.2	15.1
EUROSTAT	2013	Individuals' level of Internet skills, Individuals who have sent an email with attached files, Percentage of individuals	33	61.8	245.9	15.7

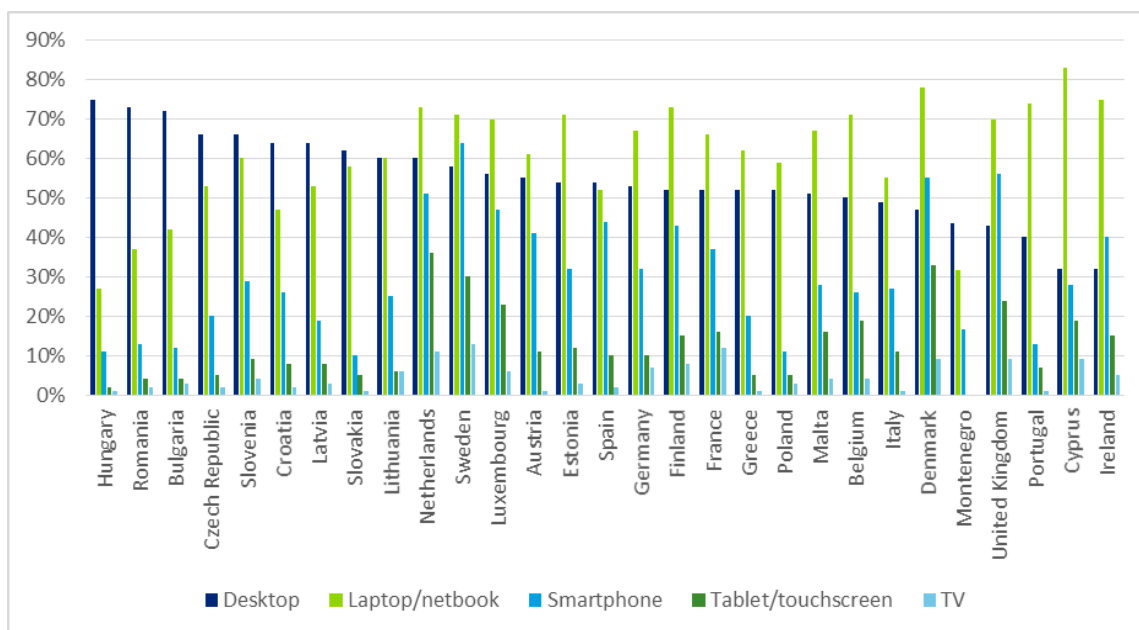
Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
EUROSTAT	2013	Individuals' level of Internet skills, Individuals who have posted messages to chat rooms, newsgroups or an online discussion forum, Percentage of individuals	33	36.6	141.6	11.9
EUROSTAT	2013	Individuals' level of Internet skills, Individuals who have used the Internet to make phone calls, Percentage of individuals	34	37.4	198.2	14.1
EUROSTAT	2013	Individuals' level of Internet skills, Individuals who have used peer-to-peer file sharing for exchanging movies, music, etc., Percentage of individuals	34	17.0	65.8	8.1
EUROSTAT	2010	Individuals using a laptop via wireless connection to access the Internet, % of individuals aged 16 to 74	33	17.4	132.2	11.5
DAE Scoreboard	2012	Individuals with basic or above basic digital skills	32	54.1	280.9	16.8
DAE Scoreboard	2012	Individuals with low or no digital skills	30	45.0	278.9	16.7

A.2.5 Devices

The Eurobarometer provides data on the devices used to connect to the Internet for 2013. As shown in Figure A-26, the use of:

- **Desktops** ranges for 75% in Hungary to 32% in Ireland, with an average of 54,7%;
- **Laptops/netbooks** ranges from 83% in Cyprus to 27% in Hungary, with an average of 60,9%;
- **Smartphones** ranges from 64% in Sweden to 10% in Slovakia, with an average of 30,2%;
- **Tablets/touchscreens** ranges from 36% in the Netherlands to 2% in Hungary; with an average of 13,1%;
- **TV** ranges from 13% in Sweden to 1% in Portugal, Italy, Greece, Austria, Slovakia, and Hungary, with an average of 4,8%.

Figure A-26: Devices used to connect to the Internet in 2013



Source: DAE Eurobarometer

Other indicators collected for devices are displayed in the table below. Much of the data from Eurostat is from 2010 and therefore not recent enough. Data on households with a computer are not considered here as the relevant indicator is Internet access which is already covered.

Table A-9: Fixed Internet demand indicators – devices

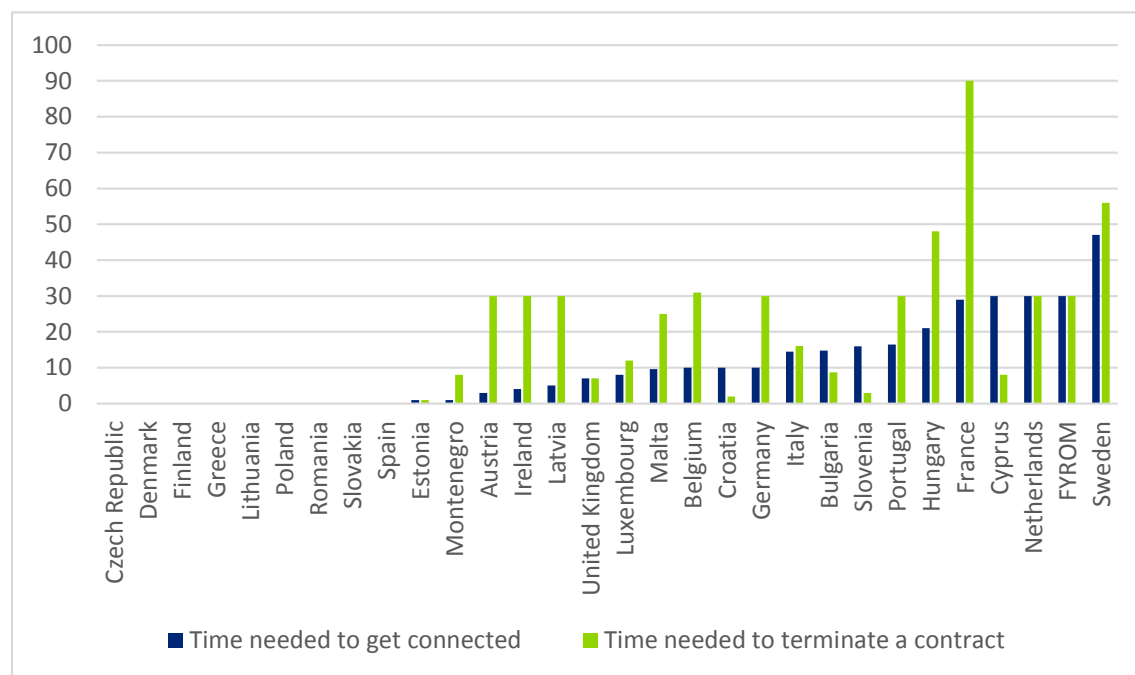
Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, Laptop/netbook	29	60.9	186.1	13.6
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, Desktop	29	54.7	112.5	10.6
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, Smartphone	29	30.2	221.7	14.9
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, Tablet/touchscreen	28	13.1	80.5	9.0
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, TV	28	4.8	12.9	3.6
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, Other (SPONT)	28	0.3	0.3	0.5
Eurobarometer - CYBER SECURITY	2013	Devices used to connect to the Internet, Don't know	28	0.1	0.1	0.3
EUROSTAT	2013	Individuals used a portable computer or a handheld device to access Internet	32	42.7	317.4	17.8
EUROSTAT	2013	Individuals used a laptop, notebook, netbook or tablet computer to access Internet	32	25.1	156.4	12.5
EUROSTAT	2010	Device for Internet access: desktop or portable computer, Total, desktop or portable computer - Percentage of households	33	64.5	276.8	16.6
EUROSTAT	2010	Device for Internet access: desktop or portable computer, Total, desktop or portable computer - Percentage of households with Internet access at home	33	97.4	11.4	3.4
EUROSTAT	2010	All Individuals, Individuals using selected mobile devices to access the Internet - Percentage of individuals who used Internet in the last 3 months	32	35.7	181.0	13.5

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
EUROSTAT	2010	All Individuals, Individuals using selected mobile devices to access the Internet - Percentage of individuals	32	25.7	186.6	13.7
EUROSTAT	2010	Device for Internet access: handheld computer, Total, handheld computer - Percentage of households	32	2.3	5.4	2.3
EUROSTAT	2010	Device for Internet access: handheld computer, Total, handheld computer - Percentage of households with Internet access at home	33	3.2	6.0	2.5
EUROSTAT	2010	Device for Internet access: TV set with Internet device, Total, TV set with Internet device - Percentage of households	32	4.3	28.5	5.3
EUROSTAT	2010	Device for Internet access: TV set with Internet device, Total, TV set with Internet device - Percentage of households with Internet access at home	32	5.7	35.3	5.9
World Economic Forum	2013	6.03 Households w/ personal computer, %, 6.03 Households w/ personal computer, %	35	75.1	173.6	13.2
ITU - ICT Eye	2013	Proportion of households with a Computer	35	75.9	176.1	13.3
ITU - ICT Eye	2012	Percentage of individuals using a Computer	34	72.4	244.2	15.6

A.2.6 Switching behaviour

The DAE Scoreboard provides data on switching behaviour and awareness for 2014. As shown in Figure A-27, the average time needed to get connected ranges from 0 days 47 days, with an average of 10 to 11 days, whereas the average time needed to terminate a contract ranges from 0 days 90 days, with an average of 17-18 days.

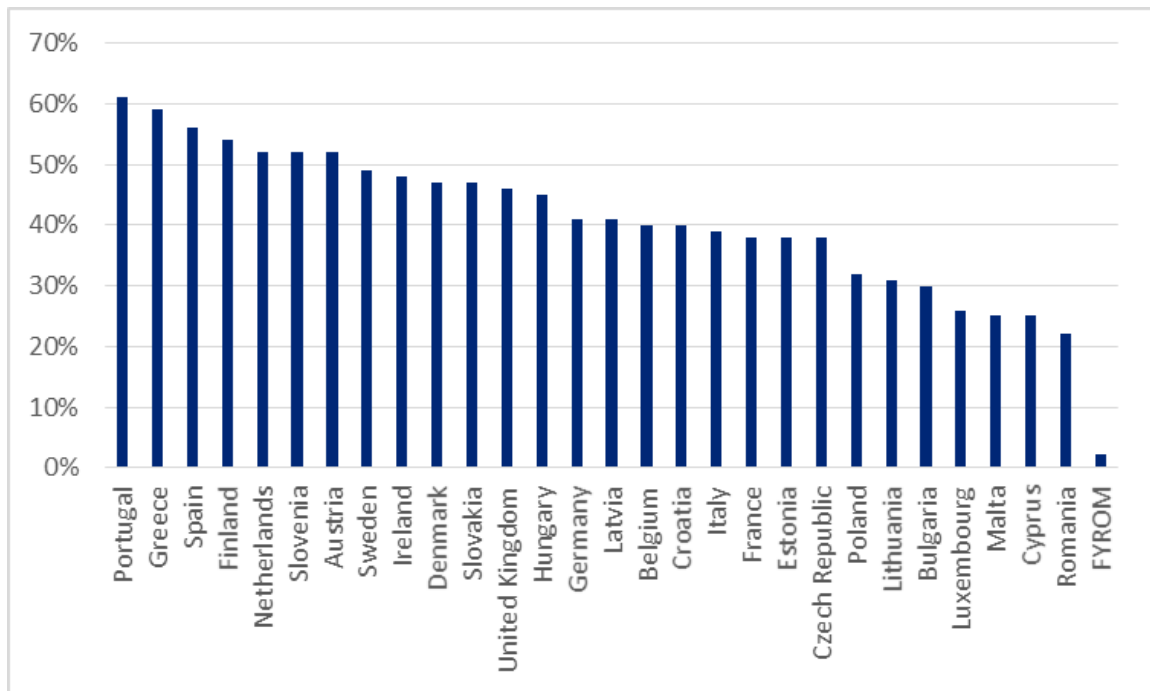
Figure A-27: Time needed to terminate a contract/get connected in at major fixed broadband operators in 2014



Source: DAE Scoreboard

The 2014 eCommunications and telecoms single market Eurobarometer provides data on the percentage of households that switched their Internet service providers. As shown in Figure A-28, the data ranges from 61% in Portugal to 22% in Romania. FYROM provided additional data for this indicator of 2,2%. The average (including the additional data) is 40,6%.

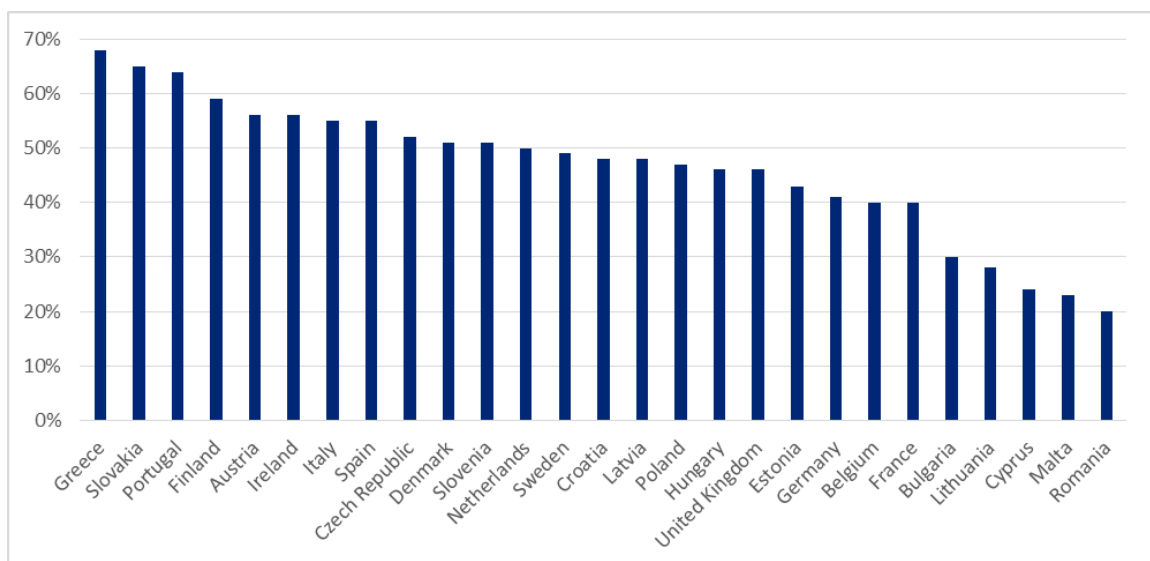
Figure A-28: Percentage of households that switched their ISP



Source: 2014 eCommunications and telecoms single market Eurobarometer; NRA FYROM

The eCommunications and telecoms single market Eurobarometer also provides data on the percentage of households that switched their bundle providers. As shown in Figure A-29, the data ranges from 68% in Greece to 20% in Romania, with an average of 45%.

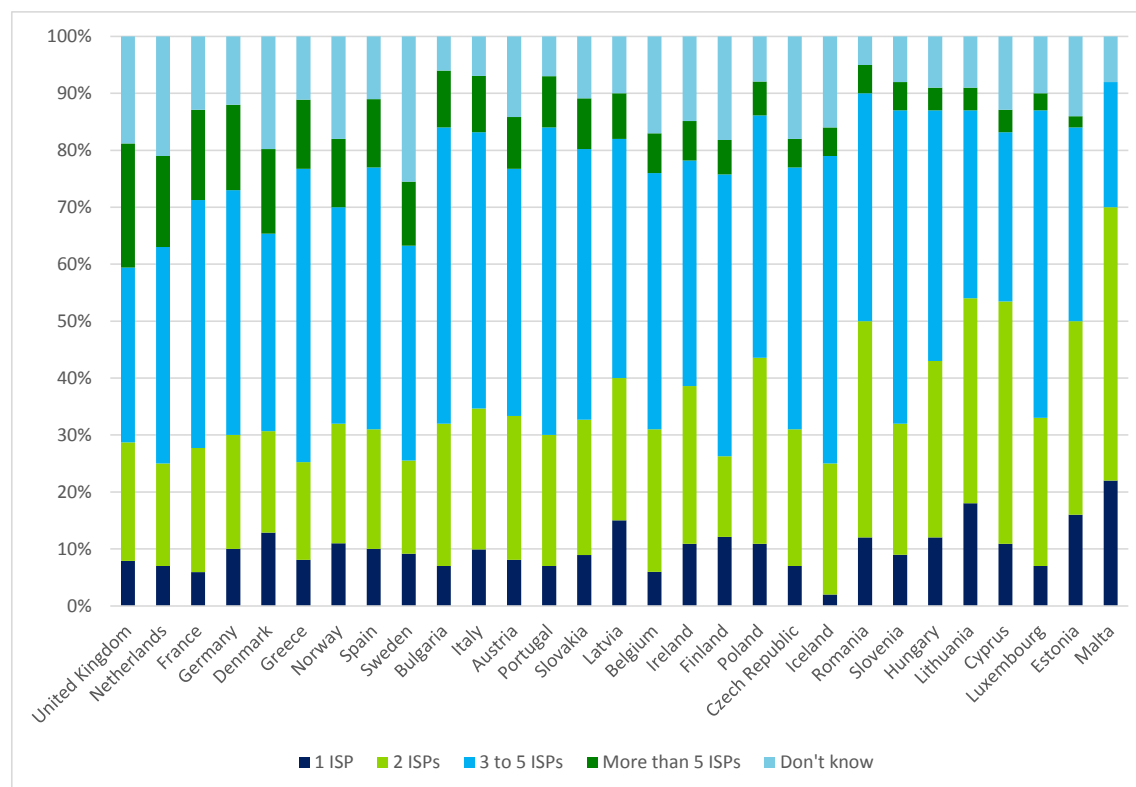
Figure A-29: Percentage of households that switched their bundle provider



Source: 2014 eCommunications and telecoms single market Eurobarometer

The Consumers, Health and Food Executive Agency also provides data on the number of providers offering Internet access in a given area. As shown in Figure A-30, the number of service providers available to consumers varies considerably.

Figure A-30: Number of providers offering Internet access in respondents' area



Source: CHAFAEA

Other indicators collected for devices are displayed in the table below. The Eurobarometer also provide consumer's switching behaviour for mobile telephone, fixe line telephone and TV, Internet is however the relevant indicator for this study. The Eurobarometer data is most recent, data provided by CHAFAEA on switching behaviour is therefore not further considered.

Table A-10 Fixed Internet demand indicators – switching behaviour

Source	Year	Indicator description	Coverage	Average	Variance	Standard Deviation
DAE Scoreboard	2014	Time needed to terminate a contract \ get connected in at major fixed broadband operators, January 2014	30	17.3	435.4	20.9
DAE Scoreboard	2014	Time needed to terminate a contract \ get connected in at major fixed broadband operators, January 2014	30	10.8	142.0	11.9
EUROBAROMETER	2014	Percentage of households that switched their ISP, Bundles	27	46.5	155.1	12.5
EUROBAROMETER	2014	Percentage of households that switched their ISP, Mobile telephone	27	43.7	124.8	11.2
EUROBAROMETER	2014	Percentage of households that switched their ISP, Internet	28	41.1	157.9	12.6
EUROBAROMETER	2014	Percentage of households that switched their ISP, Fixed line telephone	27	32.1	202.6	14.2
EUROBAROMETER	2014	Percentage of households that switched their ISP, Television	27	31.4	142.7	11.9
CHAFEA	2011	Percentage of households that switched their ISP, Percentage of households that switched their ISP	28	8.9	25.6	5.1
CHAFEA	2012	Number of providers offering Internet access in respondents' area, 1 ISP	29	10.1	15.5	3.9
CHAFEA	2012	Number of providers offering Internet access in respondents' area, 2 ISPs	29	25.8	61.3	7.8
CHAFEA	2012	Number of providers offering Internet access in respondents' area, 3 to 5 ISPs	29	42.8	64.7	8.0
CHAFEA	2012	Number of providers offering Internet access in respondents' area, More than 5 ISPs	29	8.6	24.1	4.9
CHAFEA	2012	Number of providers offering Internet access in respondents' area, Don't know	29	12.9	24.9	5.0

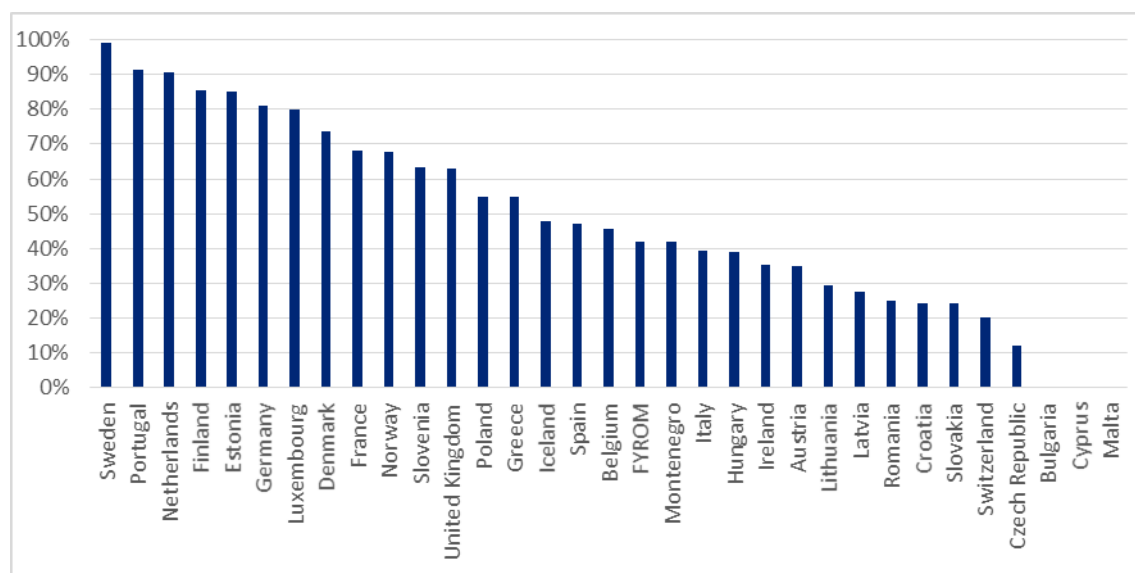
A.3 Mobile Internet supply indicators

This section presents the mobile Internet supply landscape according to coverage, operators, speed and caps.

A.3.1 Coverage

The DAE Scoreboard provides data on 4G mobile broadband coverage. As shown in Figure A-31, the average 4G mobile broadband coverage (as a % of households) ranges from 99% in Sweden to 0% in Bulgaria, Cyprus and Malta, with an average of 48,3%.

Figure A-31: 4G mobile broadband (LTE) coverage

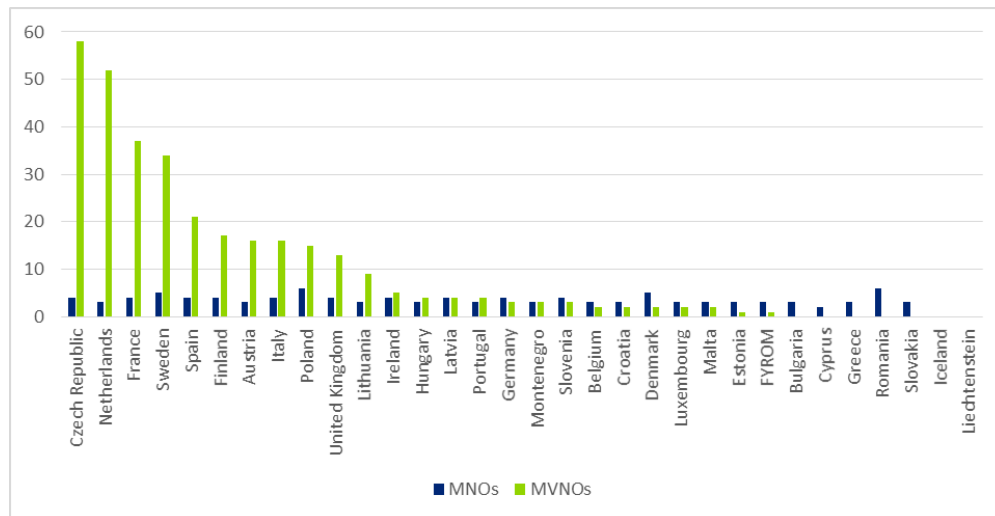


Source: DAE Scoreboard

A.3.2 Operators

The DAE Scoreboard provides data on the number of mobile operators per country. As show in Figure A-32, the number of mobile network operators (MNOs) ranges from 6 in Poland to 2 in Cyprus, whereas the number of mobile virtual network operators (MVNOs) ranges from 58 in the Czech Republic to 0 in Romania, Bulgaria, Cyprus Greece and Slovakia.

Figure A-32: Number of mobile operators

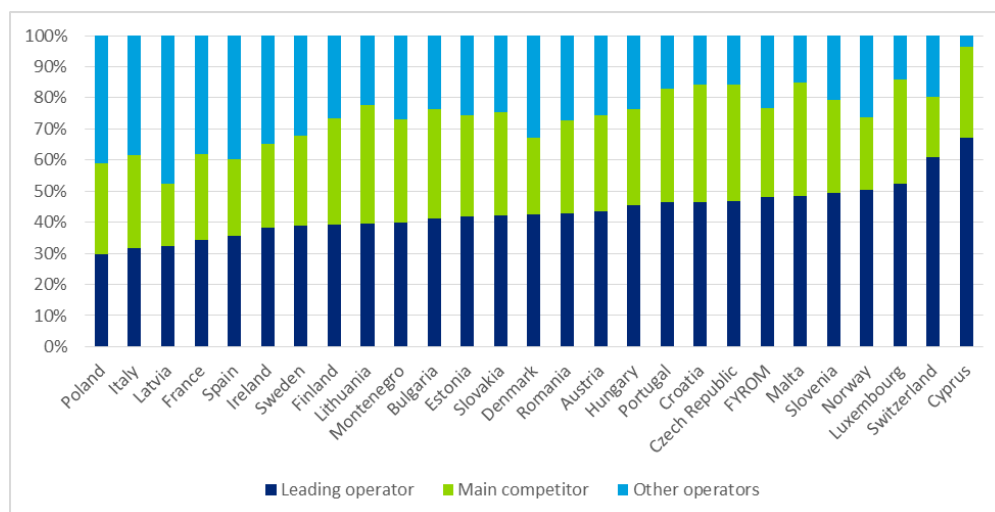


Source: DAE Scoreboard

The DAE Scoreboard provides data on the market share of mobile operators for 2013. As shown in Figure A-33, the share of:

- **Leading operators** ranges from 30% in Poland to 67.1% in Cyprus, with an average of 43.6%;
- **Main competitors** ranges from 20% in Switzerland to 37.4% in the Czech Republic, with an average of 30%;
- **Other operators** ranges from 3.4% in Cyprus to 47.5% in Latvia, with an average of 26%.

Figure A-33: Market share of mobile operators in 2013

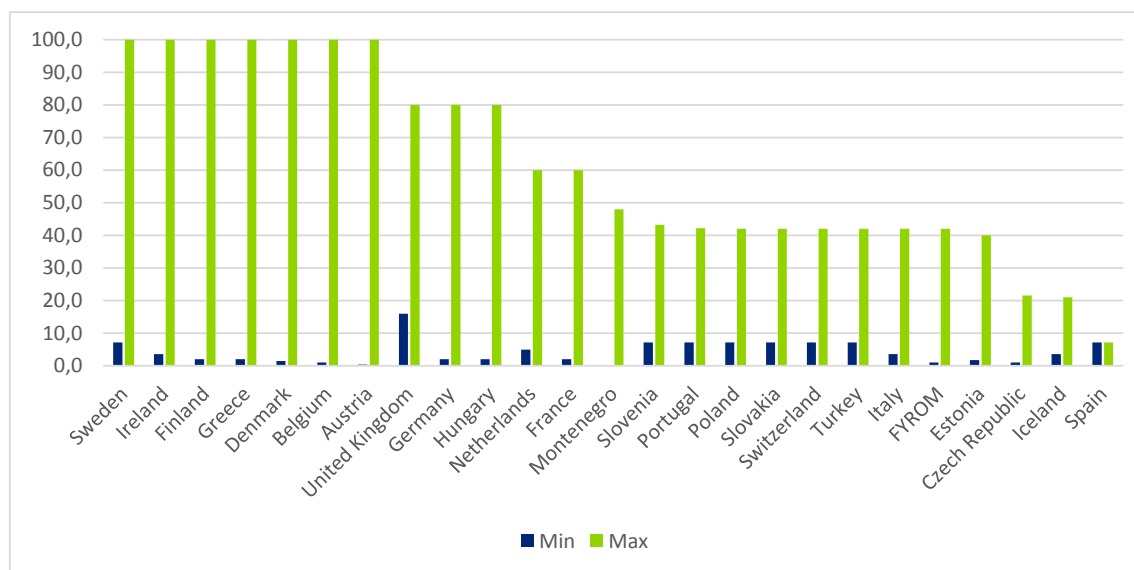


Source: DAE Scoreboard

A.3.3 Speed

The OECD provides data on Internet speed for 2012. As shown in Figure A-34, the maximum mobile broadband advertised speed ranges from 100 Mbps in Sweden, Ireland, Finland, Greece, Denmark, Belgium and Austria to 7,2 Mbps in Spain, whereas the minimum advertised speed ranges from 16,0 Mbps in the UK to 0,1 Mbps in Montenegro.

Figure A-34: Mobile broadband advertised speed ranges in 2012

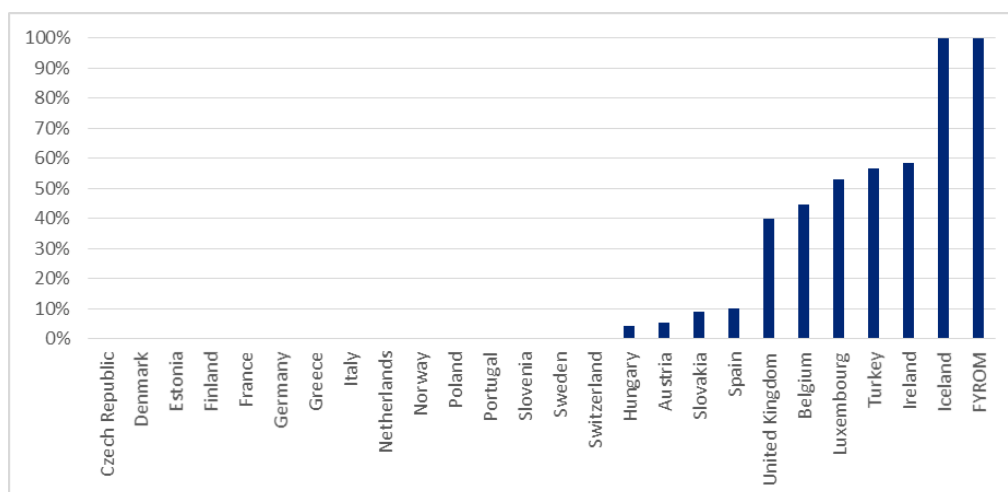


Source: OECD

A.3.4 Caps

The OECD provides data on the prevalence of explicit bit/data caps for 2012. As shown in Figure A-35, operators in 11 countries include explicit bit/data caps in their offers. Among these countries, the average cap is of 50%.

Figure A-35: Explicit bit caps in 2012

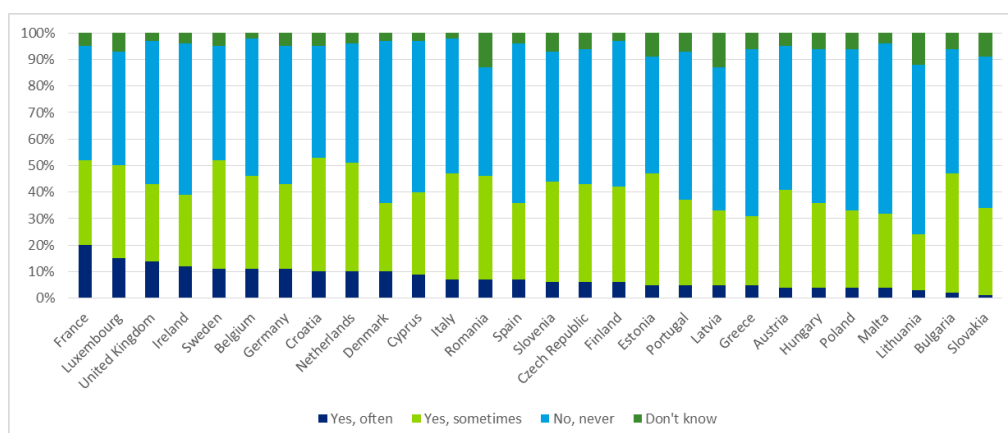


Source: OECD

A.3.5 Network neutrality incidents

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the difficulty of accessing online content and applications due to insufficient speed or downloading capacity on mobile for 2014. As shown in Figure A-36, regular difficulty of accessing online content and application ('Yes often') ranges from 20% in France to 1% in Slovakia.

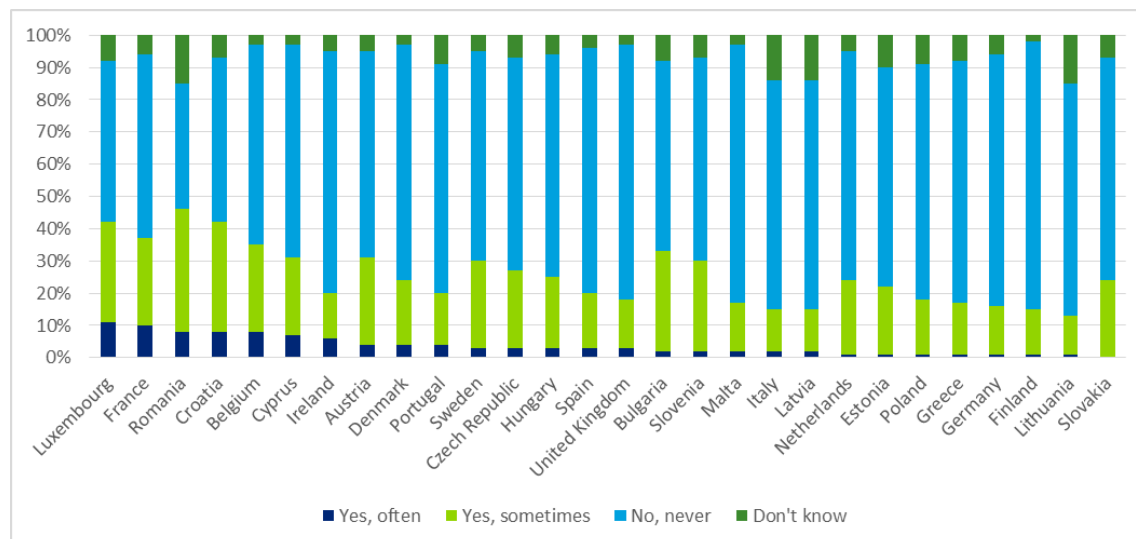
Figure A-36: Difficulty of accessing online content or applications on mobile in 2014



Source: Eurobarometer

The Eurobarometer on eCommunications and Telecom Single Market household survey provides data on the number of cases in which users experienced any kind of blocking of online content or applications on mobile for 2014. As shown in Figure A-37, regular blocks ('Yes, often') range from 11% in Luxembourg to 0% in Slovakia.

Figure A-37: Blocking of online content or applications on mobile in 2014



Source: Eurobarometer

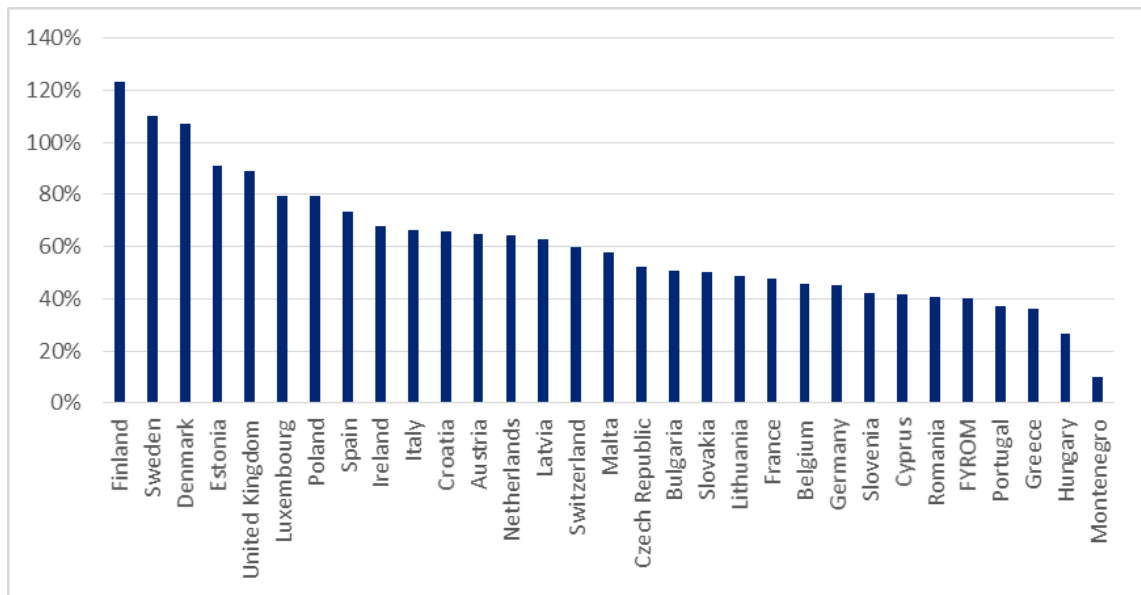
A.4 Mobile Internet demand indicators

This section presents the mobile Internet demand landscape according to Internet penetration, subscriptions and Internet use.

A.4.1 Internet penetration

The DAE Scoreboard and the World Economic Forum provide data on mobile broadband penetration. As shown in Figure A-38, the data ranges from 123% in Finland to 13% in Montenegro, with an average of 60%. Broadband penetration is greater than 50% in 19 countries.

Figure A-38: Mobile broadband penetration

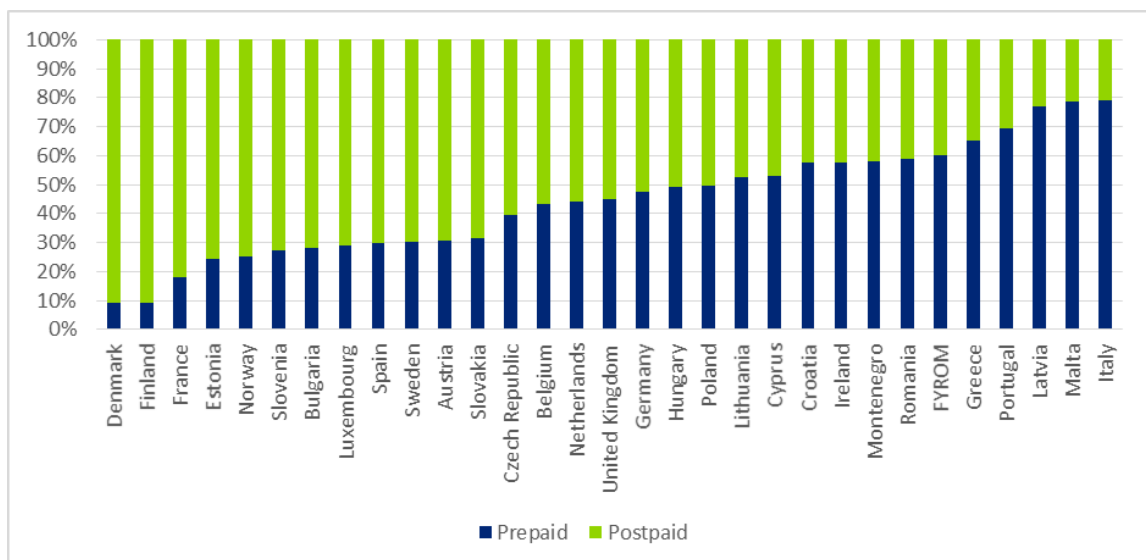


Source: DAE Scoreboard

A.4.2 Subscriptions

The DAE Scoreboard provides data on the types of mobile subscriptions. As shown in Figure A-39, prepaid subscriptions range from 9% in Denmark to 79% in Italy, with an average of 44.4%.

Figure A-39: Types of mobile subscriptions



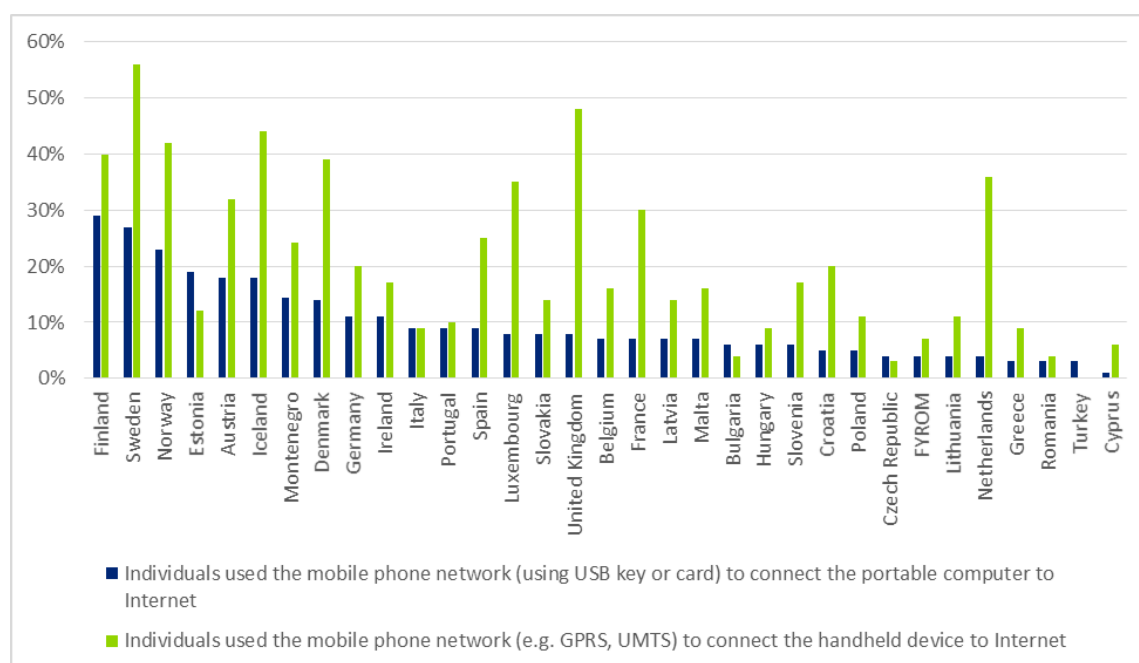
Source: DAE Scoreboard

A.4.3 Internet use

EUROSTAT provides data on Internet use, and in particular on the percentage of individuals which used the mobile phone network (using USB key or card) to connect a portable computer to Internet and the percentage of individuals which used the mobile phone network (e.g. GPRS, UMTS) to connect a handheld device to Internet.

Figure A-40 shows that the data range from 29% in Finland to 1% in Cyprus, with an average of 10% for the former, and 56% in Sweden to 3% in the Czech Republic, with an average of 21% for the latter.

Figure A-40 - Mobile Internet use



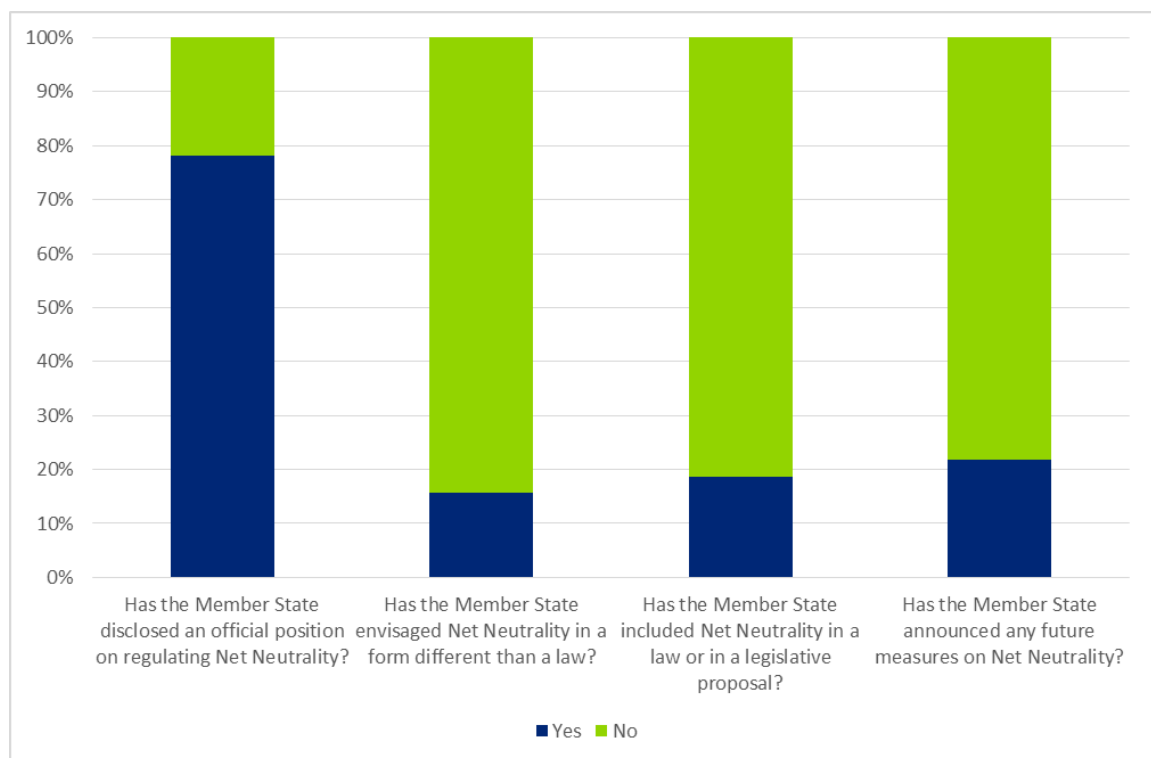
Source: EUROSTAT

The Internet landscape is therefore highly diverse in each of the countries, as shown by the graphs presented in this section. This diversity justifies the need for the creation of groups of countries with similar characteristics in order to analyse what consumers use the Internet for and what matters to them regarding the characteristics of their Internet access.

A.5 Policy on network neutrality

The Open Forum Academy provides data on the laws and measures which have been adopted regarding network neutrality. As shown in in Figure A-41, close to 20% (6 countries) have included network neutrality in a law or legislative proposal while most countries have not, and are not planning, to adopt any specific laws/measures on network neutrality. Note that to date, the only countries in scope where network neutrality is covered in existing legislation the Netherlands and Slovenia. However, more than 70% of countries have disclosed on official position on regulating network neutrality.

Figure A-41: Network neutrality



Source: Open Forum Academy

B Additional Information for Focus Group Moderators

Focus group moderators will be provided with additional information going beyond the discussion guide presented in the above. The additional information is supposed to help moderators develop a further going understanding of relevant topics while preparing focus groups. Three thematic areas are of special importance for a moderator to comprehend as related topics play a key role in the focus groups. These are the functioning of the Internet, network neutrality, and the overall electronic communications market environment in the respective test area. The subsequent Sections present the additional information compiled for moderators in the areas mentioned.

B.1 Functioning of the Internet

The Internet allows electronic devices to communicate by exchanging arbitrary digital data. A set of common technical rules ensures that this works no matter where or how an electronic device connects to the Internet. Common technical rules are essential for the functioning of the Internet since it is organized as a network of networks. This means that two communicating electronic devices are likely to reside in different networks. The respective two networks are in turn likely to have no direct connection to another.

The common technical rules of the Internet therefore provide in essence a solution to two problems: First, all devices connected to the Internet receive a unique address by which they can be reached from every other connected device. Second, routing algorithms ensure that data destined for a valid address finds a path across networks into the network where the receiving device resides. The universal requirement for all electronic devices – sending, receiving as well as data forwarding intermediate devices – to follow these common technical rules allows the Internet to reach global connectivity. It is able to connect all sorts of different devices and to let them communicate across all sorts of different networks irrespective of a network's size or technology.

This description for the functioning of the Internet facilitates the formulation of the respective verbal concept:

The Internet allows electronic devices to communicate by exchanging arbitrary digital data. It is not one, but a combination of many networks. A set of common technical rules ensures that data exchanges work, no matter where or how an electronic device connects to the Internet.

Two major rules exist. First, every device connected to the Internet has got an individual address. Thus, it can be identified and reached. Second, rules exist that manage the pathway data take from sender to receiver through the different networks.

The verbal concept is intentionally kept short to the very core of what makes the Internet. Focus group participants will be confronted with it, and they will also discuss a number of related questions. In order to support focus group moderators with additional

information, these questions and a proposal for short and to-the-point answers are listed subsequently:

- How do you think the Internet works? The Internet works as a network of networks. It defines a set of common rules that specify how each device connecting to it can be reached and how data finds its way to a destination on its path across the interconnected networks that form the Internet.
- Who operates the Internet? In essence, the operators of those networks which interconnect to form the Internet as well as the operators of the infrastructure where network interconnection takes place. A less strict perspective would include further operating entities without which the Internet would not be useful to most users, e.g. operators of the so-called root servers which are essential for a functioning resolution of domain names to Internet addresses.
- Who pays for the Internet? Consumers and businesses pay for access to the Internet and often for their data traffic as well. Content and application providers pay primarily based on their data traffic volumes which flows from/to their data centres to/from the Internet. Operators pay for network infrastructure, its operation, and – depending on the specific agreement – for exchanging data traffic with other networks.
- Who makes the Internet? In the sense of who builds and runs the Internet, the answer is essentially the same as in the question of who operates the Internet. In the sense of who creates the rules that define the Internet, however, a wide range of bodies should be mentioned that develop Internet standards and that engages in Internet governance. Prominent examples include IETF (Internet Engineering Task Force), IANA (Internet Assigned Numbers Authority), ICANN (Internet Corporation for Assigned Names and Numbers), and W3C (World Wide Web Consortium).
- What rules apply to the Internet? The very core of these rules touches on addressing and routing. Rules are specified as protocols – the mentioned rules are addressed in the Internet standard for the Internet Protocol (IP). As more protocols were (and still are being) added to the collection of Internet standards, there is now an embracing Internet protocol stack that covers all relevant aspects, such as how data transport or Internet applications like e-mail work.

There are numerous resources that will provide relevant additional information for focus group moderators. An Internet search for “How does the Internet work?” will reveal many helpful links, such a very illustrative article²⁰³ on the famous website HowStuffWorks. There is also a wealth of highly informative online videos that can give a focus group moderator important background information on the functioning of the Internet. A good start is Aaron Titus’ video “How the Internet Works in 5 Minutes”²⁰⁴. For those moderators who appreciate a more entertaining, less technical (albeit more

203 Jonathan Strickland (2010): How does the Internet work?

<http://computer.howstuffworks.com/internet/basics/internet.htm>.

204 http://youtu.be/7_LPdtKXPc.

time-consuming) approach will enjoy Andrew Blum's TED talk "What is the Internet, really?"²⁰⁵

A whitepaper²⁰⁶ by Rus Shuler is another great source to develop a better understanding of the functioning of the Internet. In Internet measures, the article is very old (it was last updated in 2002). It is nonetheless still valid, and it has been used for years in schools and universities as an introductory, easy-to-understand reference to explain the Internet. A copy of the first parts of the whitepaper is inserted below. In order to distinguish clearly from the remainder of this Section, the whitepaper excerpt is marked by a grey-coloured background.

[...]

Where to Begin? Internet Addresses

Because the Internet is a global network of computers each computer connected to the Internet **must** have a unique address. Internet addresses are in the form **nnn.nnn.nnn.nnn** where nnn must be a number from 0 - 255. This address is known as an IP address. (IP stands for Internet Protocol; more on this later.)

The picture below illustrates two computers connected to the Internet; your computer with IP address 1.2.3.4 and another computer with IP address 5.6.7.8. The Internet is represented as an abstract object in-between. (As this paper progresses, the Internet portion of Diagram 1 will be explained and redrawn several times as the details of the Internet are exposed.)

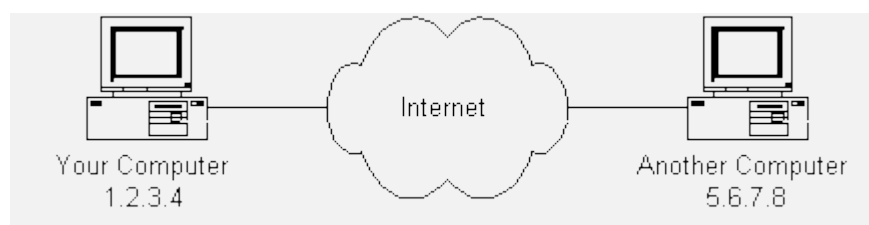


Diagram 1

If you connect to the Internet through an Internet Service Provider (ISP), you are usually assigned a temporary IP address for the duration of your dial-in session. If you connect to the Internet from a local area network (LAN) your computer might have a permanent IP address or it might obtain a temporary one from a DHCP (Dynamic Host Configuration Protocol) server. In any case, if you are connected to the Internet, your computer has a unique IP address.

[...]

Protocol Stacks and Packets

²⁰⁵ http://youtu.be/XE_FPEFpHt4.

²⁰⁶ Rus Shuler (2005): How Does the Internet Work?
http://theshulers.com/whitepapers/internet_whitepaper/index.html.

So your computer is connected to the Internet and has a unique address. How does it 'talk' to other computers connected to the Internet? An example should serve here: Let's say your IP address is 1.2.3.4 and you want to send a message to the computer 5.6.7.8. The message you want to send is "Hello computer 5.6.7.8!". Obviously, the message must be transmitted over whatever kind of wire connects your computer to the Internet. Let's say you've dialed into your ISP from home and the message must be transmitted over the phone line. Therefore the message must be translated from alphabetic text into electronic signals, transmitted over the Internet, then translated back into alphabetic text. How is this accomplished? Through the use of a **protocol stack**. Every computer needs one to communicate on the Internet and it is usually built into the computer's operating system (i.e. Windows, Unix, etc.). The protocol stack used on the Internet is referred to as the TCP/IP protocol stack because of the two major communication protocols used. The TCP/IP stack looks like this:

Protocol Layer	Comments
Application Protocols Layer	Protocols specific to applications such as WWW, e-mail, FTP, etc.
Transmission Control Protocol Layer	TCP directs packets to a specific application on a computer using a port number.
Internet Protocol Layer	IP directs packets to a specific computer using an IP address.
Hardware Layer	Converts binary packet data to network signals and back. (E.g. ethernet network card, modem for phone lines, etc.)

If we were to follow the path that the message "Hello computer 5.6.7.8!" took from our computer to the computer with IP address 5.6.7.8, it would happen something like this:

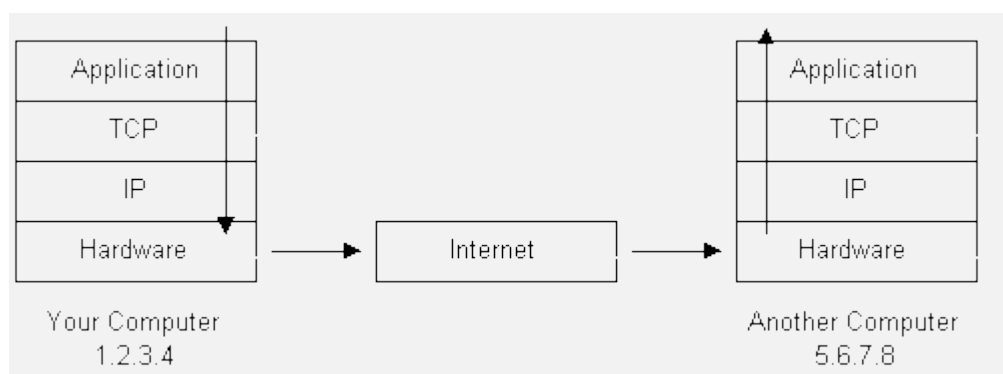


Diagram 2

1. The message would start at the top of the protocol stack on your computer and work its way downward.

2. If the message to be sent is long, each stack layer that the message passes through may break the message up into smaller chunks of data. This is because data sent over the Internet (and most computer networks) are sent in manageable chunks. On the Internet, these chunks of data are known as **packets**.
3. The packets would go through the Application Layer and continue to the TCP layer. Each packet is assigned a **port number**. Ports will be explained later, but suffice to say that many programs may be using the TCP/IP stack and sending messages. We need to know which program on the destination computer needs to receive the message because it will be listening on a specific port.
4. After going through the TCP layer, the packets proceed to the IP layer. This is where each packet receives its destination address, 5.6.7.8.
5. Now that our message packets have a port number and an IP address, they are ready to be sent over the Internet. The hardware layer takes care of turning our packets containing the alphabetic text of our message into electronic signals and transmitting them over the phone line.
6. On the other end of the phone line your ISP has a direct connection to the Internet. The ISP's **router** examines the destination address in each packet and determines where to send it. Often, the packet's next stop is another router. More on routers and Internet infrastructure later.
7. Eventually, the packets reach computer 5.6.7.8. Here, the packets start at the bottom of the destination computer's TCP/IP stack and work upwards.
8. As the packets go upwards through the stack, all routing data that the sending computer's stack added (such as IP address and port number) is stripped from the packets.
9. When the data reaches the top of the stack, the packets have been re-assembled into their original form, "Hello computer 5.6.7.8!"

Networking Infrastructure

So now you know how packets travel from one computer to another over the Internet. But what's in-between? What actually makes up the Internet? Let's look at another diagram:

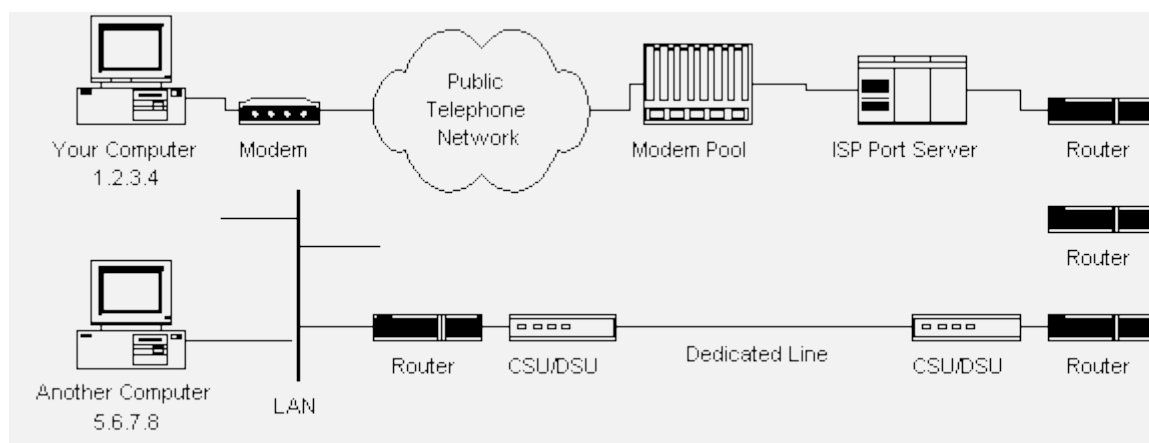


Diagram 3

Here we see Diagram 1 redrawn with more detail. The physical connection through the phone network to the Internet Service Provider might have been easy to guess, but beyond that might bear some explanation.

The ISP maintains a pool of modems for their dial-in customers. This is managed by some form of computer (usually a dedicated one) which controls data flow from the modem pool to a backbone or dedicated line router. This setup may be referred to as a port server, as it 'serves' access to the network. Billing and usage information is usually collected here as well.

After your packets traverse the phone network and your ISP's local equipment, they are routed onto the ISP's backbone or a backbone the ISP buys bandwidth from. From here the packets will usually journey through several routers and over several backbones, dedicated lines, and other networks until they find their destination, the computer with address 5.6.7.8. But wouldn't it would be nice if we knew the exact route our packets were taking over the Internet? As it turns out, there is a way...

Check It Out - The Traceroute Program

If you're using Microsoft Windows or a flavor of Unix and have a connection to the Internet, here is another handy Internet program. This one is called **traceroute** and it shows the path your packets are taking to a given Internet destination. Like ping, you must use traceroute from a command prompt. In Windows, use `tracert www.yahoo.com`. From a Unix prompt, type `traceroute www.yahoo.com`. Like ping, you may also enter IP addresses instead of domain names. Traceroute will print out a list of all the routers, computers, and any other Internet entities that your packets must travel through to get to their destination.

If you use traceroute, you'll notice that your packets must travel through many things to get to their destination. Most have long names such as `sjc2-core1-h2-0-0.atlas.digex.net` and `fddi0-0.br4.SJC.globalcenter.net`. These are Internet routers that decide where to send your packets. Several routers are shown in Diagram 3, but only a few. Diagram 3 is meant to show a simple network structure. The Internet is much more complex.

Internet Infrastructure

The Internet backbone is made up of many large networks which interconnect with each other. These large networks are known as **Network Service Providers** or **NSPs**. Some of the large NSPs are UUNet, CerfNet, IBM, BBN Planet, SprintNet, PSINet, as well as others. These networks **peer** with each other to exchange packet traffic. Each NSP is required to connect to three **Network Access Points** or **NAPs**. At the NAPs, packet traffic may jump from one NSP's backbone to another NSP's backbone. NSPs also interconnect at **Metropolitan Area Exchanges** or **MAEs**. MAEs serve the same purpose as the NAPs but are privately owned. NAPs were the original Internet interconnect points. Both NAPs and MAEs are referred to as Internet Exchange Points

or IXs. NSPs also sell bandwidth to smaller networks, such as ISPs and smaller bandwidth providers. Below is a picture showing this hierarchical infrastructure.

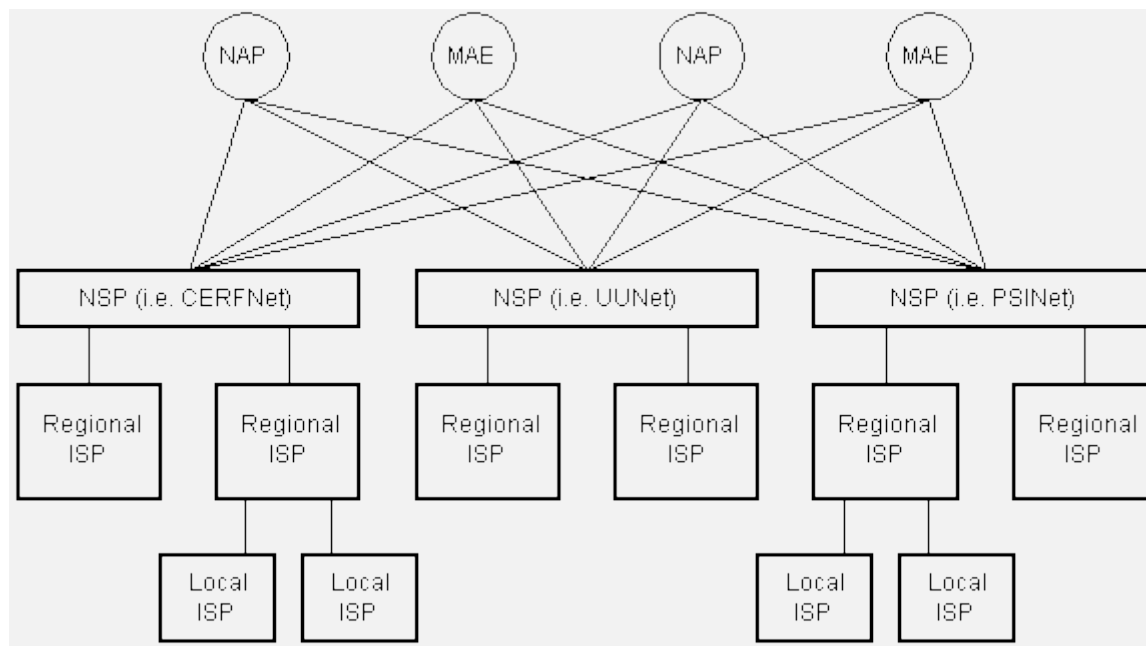


Diagram 4

This is not a true representation of an actual piece of the Internet. Diagram 4 is only meant to demonstrate how the NSPs could interconnect with each other and smaller ISPs. None of the physical network components are shown in Diagram 4 as they are in Diagram 3. This is because a single NSP's backbone infrastructure is a complex drawing by itself. Most NSPs publish maps of their network infrastructure on their web sites and can be found easily. To draw an actual map of the Internet would be nearly impossible due to its size, complexity, and ever changing structure.

The Internet routing hierarchy

So how do packets find their way across the Internet? Does every computer connected to the Internet know where the other computers are? Do packets simply get 'broadcast' to every computer on the Internet? The answer to both the preceding questions is 'no'. No computer knows where any of the other computers are, and packets do not get sent to every computer. The information used to get packets to their destinations are contained in routing tables kept by each router connected to the Internet.

Routers are packet switches. A router is usually connected between networks to route packets between them. Each router knows about its sub-networks and which IP addresses they use. The router usually doesn't know what IP addresses are 'above' it. Examine Diagram 5 below. The black boxes connecting the backbones are routers. The larger NSP backbones at the top are connected at a NAP. Under them are several sub-networks, and under them, more sub-networks. At the bottom are two local area networks with computers attached.

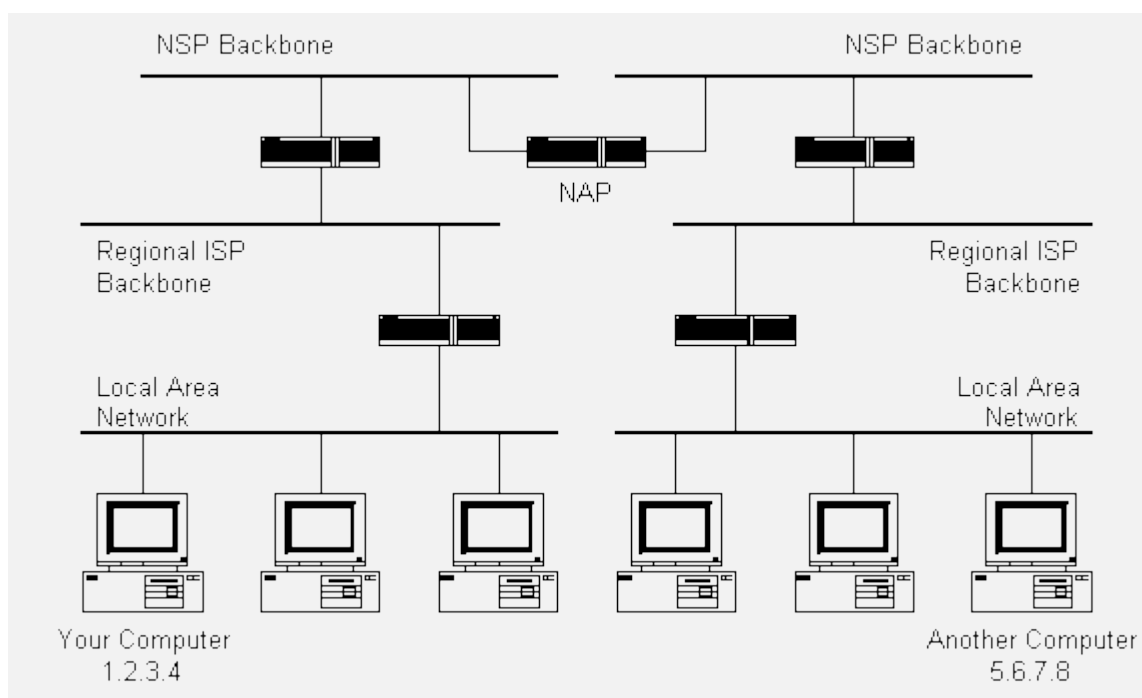


Diagram 5

When a packet arrives at a router, the router examines the IP address put there by the IP protocol layer on the originating computer. The router checks its routing table. If the network containing the IP address is found, the packet is sent to that network. If the network containing the IP address is not found, then the router sends the packet on a default route, usually up the backbone hierarchy to the next router. Hopefully the next router will know where to send the packet. If it does not, again the packet is routed upwards until it reaches a NSP backbone. The routers connected to the NSP backbones hold the largest routing tables and here the packet will be routed to the correct backbone, where it will begin its journey 'downward' through smaller and smaller networks until it finds its destination.

Domain Names and Address Resolution

But what if you don't know the IP address of the computer you want to connect to? What if the you need to access a web server referred to as *www.anothercomputer.com*? How does your web browser know where on the Internet this computer lives? The answer to all these questions is the **Domain Name Service** or **DNS**. The DNS is a distributed database which keeps track of computer's names and their corresponding IP addresses on the Internet.

Many computers connected to the Internet host part of the DNS database and the software that allows others to access it. These computers are known as DNS servers. No DNS server contains the entire database; they only contain a subset of it. If a DNS server does not contain the domain name requested by another computer, the DNS server re-directs the requesting computer to another DNS server.

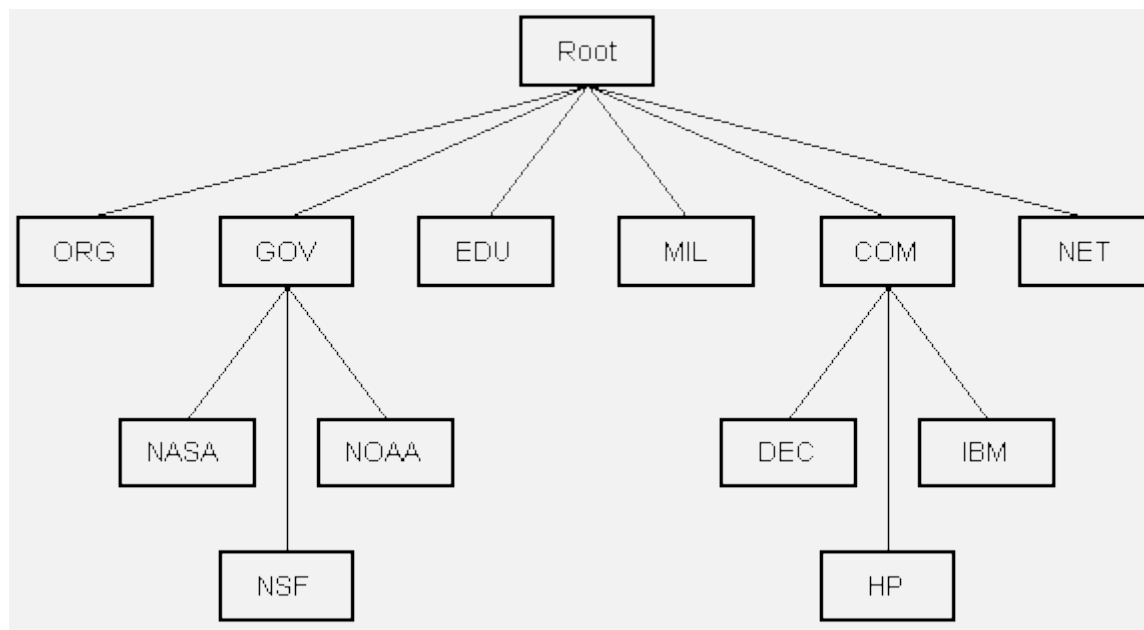


Diagram 6

The Domain Name Service is structured as a hierarchy similar to the IP routing hierarchy. The computer requesting a name resolution will be re-directed 'up' the hierarchy until a DNS server is found that can resolve the domain name in the request. Figure 6 illustrates a portion of the hierarchy. At the top of the tree are the domain roots. Some of the older, more common domains are seen near the top. What is not shown are the multitude of DNS servers around the world which form the rest of the hierarchy.

When an Internet connection is setup (e.g. for a LAN or Dial-Up Networking in Windows), one primary and one or more secondary DNS servers are usually specified as part of the installation. This way, any Internet applications that need domain name resolution will be able to function correctly. For example, when you enter a web address into your web browser, the browser first connects to your primary DNS server. After obtaining the IP address for the domain name you entered, the browser then connects to the target computer and requests the web page you wanted.

B.2 Network Neutrality

The following verbal concept explains network neutrality:

Network neutrality means that all data in a network is treated in equal terms. Equal treatment refers to the standard behaviour of how data is forwarded in a network towards its destination. The standard behaviour for equal treatment is that all data is forwarded according to the same rules.

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination

thereof. Specific forwarding rules may apply permanently, within certain time periods (e.g. during peak times), or dynamically in response to particular situations in a network. Specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

This verbal concept is intentionally kept short. It does not indicate in detail potential effects that a deviation from network neutrality might have to consumers (i.e. to end-users that use the Internet for private, not-for-business purposes). A list of potential network neutrality effects noticeable by consumers has been compiled as shown subsequently:

- A specific application is permanently inaccessible, while other applications are accessible.
- A specific application is inaccessible at some times, while other applications remain accessible.
- A specific application permanently suffers from poor quality, while other applications run in good quality.
- A specific application suffers from poor quality at some times, while other applications remain to run in good quality.
- A specific application permanently runs in good quality, while other applications with similar functionality vary quality-wise.
- Specific content is permanently inaccessible, while other content is accessible.
- Specific content is inaccessible at some times, while other content remains accessible.
- Applications or content from a specific provider are permanently inaccessible, while applications or content from other providers are accessible.
- Applications or content from a specific provider are inaccessible at some times, while applications or content from other providers remain accessible.
- Applications from a specific provider permanently suffer from poor quality, while applications from other providers run in good quality.
- Applications from a specific provider suffer from poor quality at some times, while applications from other providers remain to run in good quality.
- Applications from a specific provider run in good quality, while applications from other providers with similar functionality vary quality-wise.
- Communications from a specific person are permanently not delivered, while communications from other persons arrive well.
- Communications from a specific person are not delivered at some times, while communications from other persons arrive well at the same time.

- Communications to a specific person are permanently not delivered, while communications to other persons arrive well.
- Communications to a specific person are not delivered at some times, while communications to other persons arrive well at the same time.

It is important to note that the above effects may be the result of traffic management practices, but such an effect may also emerge for a different reason. The effect alone does not allow precise attribution of its reason. The list of effects has been compiled in such a way that it is comprehensive and that it keeps different sub-cases clearly separated. This should give a moderator valuable background information. The resulting list may, however, overwhelm participants in focus groups. This is why a shorter list for presentation to the participants has been consolidated as follows:

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.
- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.
- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.
- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

Concrete examples may help strengthen the understanding of a network neutrality effect. The following list presents examples for each of the above effects. As these examples are meant to support moderators the examples are listed for the longer list of effects, not according to the shortened list for participants. It should be noted that mentioning of any specific application by its name is meant to be exemplary, typically for the type of application that it represents.

- A specific application is permanently inaccessible, while other applications are accessible.
 - WhatsApp cannot be used, while Facebook Messenger can be used. [applications of similar functionality]
 - WhatsApp cannot be used, while Netflix can be used. [applications of different functionality]
- A specific application is inaccessible at some times, while other applications remain accessible.
 - Netflix cannot be used during peak hours (e.g. from 7 to 9 pm), while WhatsApp can be used. [applications with different bandwidth requirements]
 - Netflix cannot be used during peak hours (e.g. from 7 to 9 pm), while the digital TV service by the Internet access provider can be used. [Over-the-

top best-effort applications versus specialised service with guaranteed quality]

- A specific application permanently suffers from poor quality, while other applications run in good quality.
 - Skype calls are of poor quality, while Viber calls are of good quality. [applications of similar functionality]
 - P2P file sharing is slow, while Spotify runs smoothly. [applications of different functionality]
- A specific application suffers from poor quality at some times, while other applications remain to run in good quality.
 - FaceTime video calls are of poor quality during peak hours (e.g. from 7 to 9 pm), while Skype audio calls run smoothly. [applications with different bandwidth requirements]
 - Online games suffer from lags, while web surfing is quick. [application with different interactivity requirements]
- A specific application permanently runs in good quality, while other applications with similar functionality vary quality-wise.
 - Spotify runs smoothly, while Deezer has quality problems at some times. [Over-the-top applications turned into de facto specialised services with guaranteed quality by partnership versus over-the-top best-effort applications]
 - Spotify runs smoothly, while Deezer has quality problems or even stops working towards the end of the month. [application-specific exempts from data caps]
- Specific content is permanently inaccessible, while other content is accessible.
 - A website with malware is permanently inaccessible, while other websites are accessible.
 - A website with copyrighted videos is permanently inaccessible, while other websites are accessible.
- Specific content is inaccessible at some times, while other content remains accessible.
 - Websites with adult-oriented material are inaccessible during the hours when the kids are at home, while other websites are accessible.
- Applications or content from a specific provider are permanently inaccessible, while applications or content from other providers are accessible.
 - Google search cannot be used, while Baidu can be used.
- Applications or content from a specific provider are inaccessible at some times, while applications or content from other providers remain accessible.
 - Netflix cannot be used during peak hours (e.g. from 7 to 9 pm), while the digital TV service by the Internet access provider can be used.
- Applications from a specific provider permanently suffer from poor quality, while applications from other providers run in good quality.
 - Netflix is of poor quality, while the digital TV service by the Internet access provider runs smoothly.
- Applications from a specific provider suffer from poor quality at some times, while applications from other providers remain to run in good quality.

- YouTube videos are of poor quality during peak hours (e.g. from 7 to 9 pm), while videos streamed from a portal run by the Internet access provider are of good quality. [Over-the-top best-effort applications versus specialised service with guaranteed quality]
- Applications from a specific provider run in good quality, while applications from other providers with similar functionality vary quality-wise.
 - Netflix runs smoothly, while Hulu suffers from poor quality at some times.
- Communications from a specific person are permanently not delivered, while communications from other persons arrive well.
 - E-mails from a sender are always discarded as spam, while e-mails from other senders are delivered.
- Communications from a specific person are not delivered at some times, while communications from other persons arrive well at the same time.
 - An e-mail from a sender is discarded as it is found to contain a virus, while e-mails from other senders are delivered.
- Communications to a specific person are permanently not delivered, while communications to other persons arrive well.
 - E-mails to a recipient are always discarded as spam, while e-mails to other recipients are delivered.
- Communications to a specific person are not delivered at some times, while communications to other persons arrive well at the same time.
 - An e-mail to a recipient is discarded as it is found to contain a virus, while e-mails to other recipients are delivered.

It may be the case that there is an option for a customer to pay in order to circumvent or alter an effect. For instance, a blocked service may become available for a monthly price. Or a customer may be able to pay for guaranteed quality and, thus, for improved quality of experience.

A report²⁰⁷ from BEREC²⁰⁸ provides an embracing analysis of the (economic) effects that may result from deviations from network neutrality. As the report highlights, some of these effects may be beneficial, whilst other effects may be harmful. This is enormously important an aspect given that the network neutrality debate is a very heated, emotional one where different stakeholders tend to raise a fairness debate, but present only a one-sided view on the effects of traffic management and the respective data differentiation practices.

Some of these effects consider potential impact on innovation and competition in the Internet ecosystem. It is relevant for moderators to understand wider ranging implications. It may be that a focus group participant brings such topics into the discussion. If this is the case moderators should allow the topic in the discussion and

207 BEREC (2012): Differentiation practices and related competition issues in the scope of net neutrality. BoR (12) 132,

http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/1094-berec-report-on-differentiation-practices-and-related-competition-issues-in-the-scope-of-net-neutrality.

208 Body of European Regulators for Electronic Communications (BEREC). For further information see <http://berec.europa.eu/>.

explore how far participants' understanding of such complex net neutrality effects is developed. Moderators are, however, not expected to raise innovation- and competition-oriented topics actively. The discussion guide thus does not include a specific question.

An excerpt of the BEREC report is provided below. It is meant for focus group moderators to substantially extend their ability to anticipate further reaching effects. In order to distinguish clearly from the remainder of this Section, the report excerpt is marked by a grey-coloured background.

In the light of the lively 'net neutrality' debate, this report aims at assessing the impact on users of the differentiation practices described above that are or may be conducted by ISPs²⁰⁹ providing the users with internet access.

From an economic analysis point of view, differentiation practices are commonly seen as a positive outcome of the functioning of a market, as they tend to increase the diversity of offers on the market and the adequacy of the supply to the demand of the users, resulting in higher welfare for users. Nevertheless, it can be that the functioning of the market results in the implementation of some differentiation practices that have a negative impact. This could happen, in particular, because both the incentives for the ISP and the evaluation by the users do not (or do not sufficiently) take into account indirect effects and medium- or longer-term effects, i.e. externalities or so-called network effects.

In view of these considerations, it appears helpful and useful to conduct a more detailed assessment of the impact of different differentiation practices on the users. Assessing the 'impact' means evaluating whether the implementation of this practice results in an increase, stagnation or decrease of the welfare of users.

As the internet consists of several entities which are linked by various interactions, several direct and indirect mechanisms may have an impact on users' welfare. In this section, we review these mechanisms (or 'effects') in order to set up the list of topics that have to be examined when assessing the overall impact of a selected practice on the user.

Direct (short-term) effects on users

This section is about the effects that directly and immediately impact the welfare of the user.

First, users can be directly affected by differentiation practices. Any measure that changes either price or quality of services delivered to users, which limits or enlarges their choice, which restricts or enforces their ability to use the internet access service etc. is likely to have an immediate, either positive or negative, impact on users' welfare.

²⁰⁹ Internet Service Provider.

In order to be a concern for the purposes of this report, users need to be harmed by the behaviour; this means that the intensity of the impact should be evaluated. For instance, if an application that did not have very many active users was blocked then immediate impact might be relatively limited. However, the fact that the application has been blocked would have an impact on the ability of other users to ever select this application. A measure that reduces the choice available to users could thus have a negative impact on welfare. The impact of a practice also depends on the number of users that are potentially affected.

As a consequence, the availability of alternative offers allowing for the use of that application (by the same provider or alternative providers), among others, is likely to reduce the impact, as the user may change offer or switch provider. In such a case, the incentives to switch, namely the perception by the user of the negative impact incurred by the blocking, nevertheless have to be assessed against the switching costs.

Beyond these specific effects, one of the internet's strengths lies in network effects: each user benefits from the growing number of users, as it creates new possible connections. Differentiation practices, especially straight blocking, tend to exclude some users from the network, by limiting the proportion of services they can access, and may have a chilling impact on the global community of internet users.

Finally, it should be noticed that the user is not always fully able to determine what specific features he needs from an internet access service, especially on a forward-looking basis. Internet services often evolve; the way they are delivered may be quite diverse even between two services of same nature; and the recommendation of applications or uses by other users is usual.

In addition to these direct impacts, some indirect mechanisms may involve ISPs and CAPs²¹⁰ before affecting users.

Indirect (medium- and long-term) effects on users through the evolution of electronic communication services market conditions

This section is about the effects that have an impact on ISPs, either immediately or over time, and that then have an impact on the user in the medium or the long term.

Differentiation practices could be initiated by one or several ISPs which can make new stream of revenues, for example, from prioritising contents (and slowing down others) or extracting value from a content provider by charging it for access to its users. In certain circumstances, these practices might have an impact on competition. A decrease in the level of competition is expected to harm the users' interest, by reducing their choice and possibly allowing higher prices and/or lower quality, while a higher intensity of competition is expected to positively affect users' welfare. Nevertheless, this question of distortion of competition between ISPs on retail internet access markets is neither specific to differentiation practices nor key in the net neutrality debate, as these markets

²¹⁰ Content and Application Provider.

are broadly competitive in Europe and no operator is in a position to extract sufficiently more value from a user to distort competition.

On a longer timescale, beyond an adequate level of competition, a sufficient incentive to invest is needed for ISPs to foster the development of broadband infrastructures (that is next-generation access networks). Differentiation practices, such as charging users or CAPs for a better quality of service, may help operators to develop their revenues. Insofar as these additional earnings may contribute to the funding of networks (i.e. they correspond to reasonable and sustainable business models covering the costs of the infrastructure) they would have a positive effect on the long-term users' interest which have to be compared with other, possibly negative, effects.

Indirect (medium- and long-term) effects on users through the evolution of content and applications market conditions

This section is about the effects that have an impact on CAPs, either immediately or over time, and that then have an impact on the user in the medium or the long term.

As far as CAPs are concerned, differentiation practices convey the risk of distorting or reducing the intensity of competition between application and content providers. It is generally acknowledged that users' welfare is higher when they benefit from a greater choice. It also has to be noted that the internet's growth and success is largely related to its specificities as an open platform:

- universal connectivity, which means that any end-point of the network can access any other end-point;
- the separation of the network and application layers, which guarantees that all applications are, by default, accessible in similar conditions;

which have the following consequences, among others:

- low entry cost, which allows almost every person or company to start accessing and distributing information;
- innovation without permission and from the edge, which means that new applications can be tested and made available on the internet without any barrier or prerequisite negotiation (so-called garage economy).

Furthermore, differentiation practices may have different impacts depending on the size of the CAP. The introduction of different tariffs or technical conditions (e.g. different QoS schemes) could be seen as an entry barrier for some CAPs, such as new and/or small providers and non-profit offers. There is a risk that this may negatively affect users' welfare. Whether or not that is likely to be the case depends on several factors that are difficult to envisage given the absence of concrete examples of this type of practices. For example, it could be that all CAPs would have to pay, in order to avoid too low quality, and this may be a problem for not-for-profit services. On the other hand, an increased contribution to funding from the CAP side could result in lower tariffs set by ISPs for connectivity services delivered to users. It appears that the effect of such practices, which are already partly implemented in some cases, is not easily measurable.

Any practice that challenges these specificities may affect the internet's strengths and may lower (or increase) its interest for users. This question of the impact of the practices of ISPs on the markets of content, applications and services is key in the debate on net neutrality.

From a long-term perspective, the intensity of innovation could well depend on the permanence of the open platform aspects. Dividing the internet into several separate networks, increasing entry costs, differentiating quality depending on applications, introducing innovation control or sending any signal that makes these perspectives credible may make innovation harder and result in a lower growth of new applications.

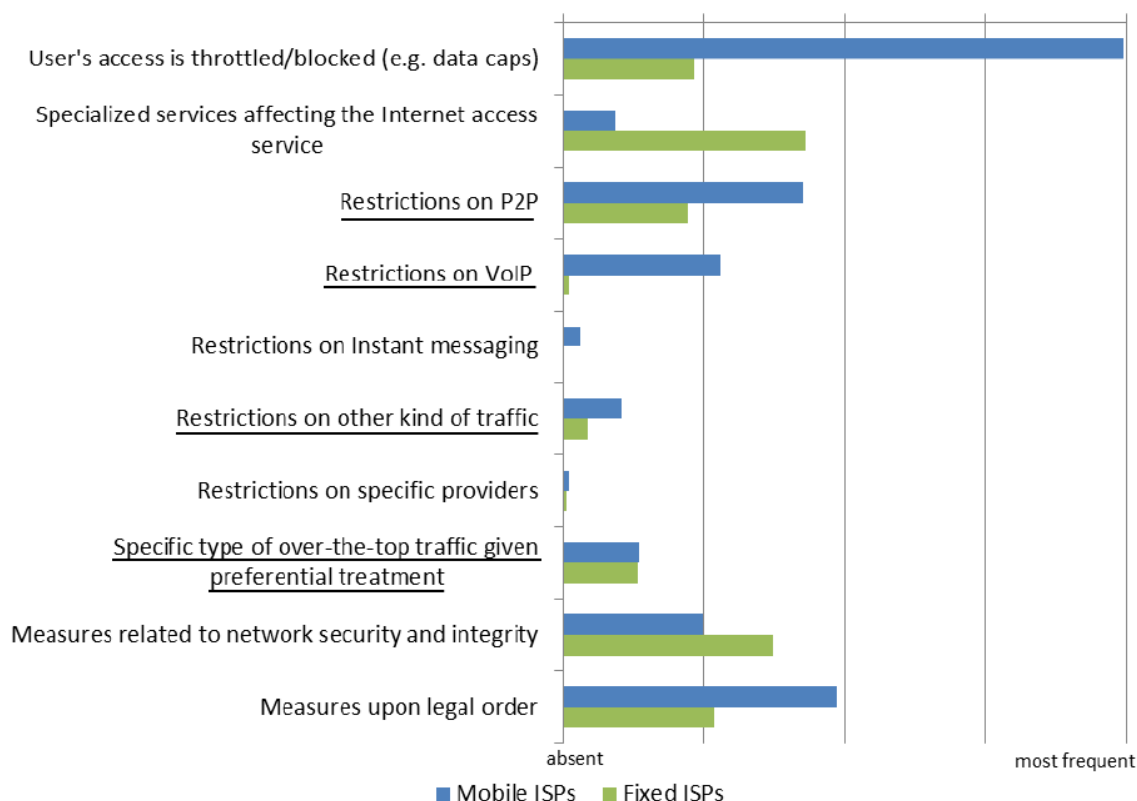
However, it can also be argued that a reasonable differentiation of performance offered by operators to CAPs could spur the development of quality-dependent innovations. The interest of users greatly lies in the preservation of the internet's openness and neutrality, but allowing a sensible level of differentiation may not necessarily be harmful as long as the performance of the best-effort service is maintained.

While one can reason about the effects that may result from deviations from network neutrality, it is equally important to know how often traffic management practices are actually employed. BEREC has led a comprehensive fact-finding process on that question among European providers of Internet access service. The respective results are presented in detail in a dedicated report²¹¹. The below figure is taken from that report. It shows the frequency of various restrictions for both mobile and fixed Internet access networks in Europe.

²¹¹ BEREC (2012): A view of traffic management and other practices resulting in restrictions to the open Internet in Europe. BoR (12) 30, http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/45-berec-findings-on-traffic-management-practices-in-europe.

The diversity of measures reported by ISPs

Relative frequency of ISP reporting some level of restriction



A summary of the traffic management investigation findings is provided in another BEREC report²¹². It is copied below. In order to distinguish it clearly from the remainder of this Section, it is marked by a grey-coloured background.

[...] BEREC found that application-specific restrictions are not widespread, except for some specific practices, mainly on mobile networks. At the same time, however, the investigation revealed a great diversity of experiences among national markets.

Specific practices, such as the blocking or throttling of peer-to-peer traffic or VoIP, can create concerns for end users. BEREC has found that they occur more often in mobile networks than in fixed networks, and that, while at least 60% of customers do not face any such restrictions, at least 20% of mobile Internet users in Europe do experience some form of restriction on their ability to access VoIP services. Beyond blocking and throttling, a variety of other differentiation practices are in use, including the introduction of data caps or of billing policies that distinguish between applications accessed using the Internet access service. On fixed networks, the provision of specialised services with some form of quality of service (QoS) control, separate to Internet access services, is quite common, in particular for voice services (VoIP) and linear TV (IPTV).

²¹² BEREC (2012): Summary of BEREC positions on net neutrality. BoR (12) 146, http://berec.europa.eu/files/document_register_store/2012/12/BoR_%2812%29_146_Summary_of_BEREC_positions_on_net_neutrality2.pdf.

Furthermore, the response to these practices from other market participants, in particular how end users factor these practices into their switching decisions, still requires further exploration by BEREC.

As some traffic management practices may be beneficial while others may be harmful, it is essential to determine a level of acceptance with respect to such practices. This is directly related to the often discussed fairness aspect of a traffic management practice and its potential effect. Policy jargon endorses this aspect by the question of what may constitute reasonable traffic management or a reasonable deviation from network neutrality. BEREC presents in the same report cited before four criteria to assess 'reasonableness'. The respective excerpt from the report is copied below. It is again marked by a grey-coloured background.

- (i) **Non-discrimination between players.** The practice is done on a non-discriminatory basis among all CAPs.
- (ii) **End-user control.** It is an important indicator of reasonableness when the practice is applied on the request of users at the edge, who can control and deactivate it. The level of control is deemed higher when the user does not incur costs for removing a restriction.
- (iii) **Efficiency and proportionality.** The measures should be limited to what is necessary to fulfil the objective, in order to minimise possible side effects. The intensity of the practice, such as frequency and reach, is also important when assessing its impact.
- (iv) **Application agnosticism.** As long they are able to achieve a similar effect, BEREC expresses a general preference for 'application-agnostic' practices. This reflects the fact that the decoupling of the network and application layers is a characteristic feature of the open Internet, and has enabled innovation and growth.

B.3 Electronic Communications Market in Test Area

Moderators of focus groups will receive background information on the electronic market matching the test area in which the respective focus group is performed. Since the set of test areas to be selected depends on the outcome of the cluster analysis performed in Stage A, test area-specific background information cannot yet be provided in the present report. The test areas have been determined very recently. The collection of information on electronic communications markets for Czech Republic, Croatia, Greece, and Sweden will start immediately after submitting this report. Section 2.2.1 explains how this background information is planned to be investigated and collected. It is important to note that we plan for close cooperation with local NRAs in the test areas in order to allow for robust and critically assessed information.

C Focus Groups

C.1 Composition of the Focus Groups

C.1.1 Croatia

Croatia:	Age	Gender	Number of persons in household	Educational background	Occupation	Kind of internet access	Responsible for the choice of the provider	Use of internet at home	Internet experience	Household income per month before tax
Group 1										
1.	21	female	4	medium	student	stationary & mobile	cooperation with another person	work and private	expert	9,000 - 11,000 HRK
2.	33	female	3	high	not working	stationary & mobile	cooperation with another person	private	expert	7,000 - 9,000 HRK
3.	49	female	4	medium	working	stationary & mobile	cooperation with another person	work and private	expert	9,000 - 11,000 HRK
4.	22	male	3	medium	student	stationary & mobile	sole decision maker	private	expert	7,000 - 9,000 HRK
5.	30	male	3	high	working	stationary & mobile	sole decision maker	work and private	expert	less than 12,000 HRK
6.	53	female	2	high	working	stationary & mobile	sole decision maker	work and private	expert	5,000 - 7,000 HRK
7.	31	male	1	high	working	stationary & mobile	sole decision maker	work and private	expert	5,000 - 7,001 HRK
8.	50	male	4	medium	working	stationary & mobile	sole decision maker	private	expert	do not want to disclose
9.	55	male	5		working	stationary & mobile	sole decision maker	work and private	expert	do not want to disclose
10.	36	female	1	high	working	stationary & mobile	sole decision maker	work and private	expert	do not want to disclose
Group 2										
1.	36	male	3	medium	working	stationary & mobile	sole decision maker	work and private	expert	9,000 - 11,000 HRK
2.	38	female	3	medium	working	stationary & mobile	sole decision maker	private	participant with medium expertise	7,000 - 9,000 HRK
3.	57	female	5	medium	retired	only stationary	cooperation with another person	private	participant with little expertise	less than 12,000 HRK
4.	21	female	4	medium	student	stationary & mobile	cooperation with another person	private	participant with medium expertise	2,900 - 5,000 HRK
5.	36	male	3	medium	working	stationary & mobile	sole decision maker	work and private	participant with medium expertise	5,000 - 7,000 HRK
6.	54	female	4	high	working	stationary & mobile	sole decision maker	private	participant with medium expertise	9,000 - 11,000 HRK
7.	30	male	1	medium	working	only stationary	sole decision maker	private	participant with little expertise	2,900 - 5,000 HRK
8.	30	male	2	medium	working	stationary & mobile	sole decision maker	private	participant with medium expertise	9,000 - 11,000 HRK
Group 3										
1.	59	male	4	medium	retired	only stationary	cooperation with another person	private	participant with little expertise	7,000 - 9,000 HRK
2.	22	male	2	medium	student	stationary & mobile	cooperation with another person	private	participant with medium expertise	2,900 - 5,000 HRK
3.	36	female	4	high	working	stationary & mobile	cooperation with another person	work and private	participant with medium expertise	9,000 - 11,000 HRK
4.	51	female	4	high	working	stationary & mobile	sole decision maker	work and private	expert	9,000 - 11,000 HRK
5.	18	female		medium	pupil	stationary & mobile	cooperation with another person	private	participant with little expertise	2,900 - 5,000 HRK
6.	50	male	5	medium	working	stationary & mobile	sole decision maker	private	expert	7,000 - 9,000 HRK
7.	26	female	6	medium	working	stationary & mobile	cooperation with another person	private	participant with medium expertise	less than 12,000 HRK
8.	47	male	4	medium	working	only stationary	sole decision maker	private	participant with little expertise	less than 12,000 HRK

C.1.2 Czech Republic

Czech Republic:										
	Age	Gender	Number of persons in household	Educational background	Occupation	Kind of internet access	Responsible for the choice of the provider	Use of internet at home	Internet experience	Household income per month before tax
Group 1										
1.	20	male	4	low	student	only stationary	cooperation with another person	private	expert	1,000 - 1,500 EUR
2.	53	female	1	medium	working	only stationary	sole decision maker	work and private	expert	1,000 - 1,500 EUR
3.	34	male	1	low	working	only stationary	sole decision maker	work and private	expert	500 - 1,000 EUR
4.	27	female	1	medium	working	only stationary	cooperation with another person	work and private	expert	500 - 1,000 EUR
5.	35	male	4	low	working	only stationary	cooperation with another person	work and private	expert	1,500 - 2,000 EUR
6.	30	female	3	medium	working	only stationary	cooperation with another person	private	expert	1,000 - 1,500 EUR
7.	36	female	1	low	working	only stationary	sole decision maker	private	expert	less than 500 EUR
8.	51	female	1	low	working	only stationary	sole decision maker	work and private	expert	less than 500 EUR
9.	25	male	2	medium	not working	stationary & mobile	sole decision maker	private	expert	500 - 1,000 EUR
Group 2										
1.	38	male	1	low	working	only stationary	sole decision maker	private	participant with medium expertise	less than 500 EUR
2.	57	male	3	low	working	only stationary	cooperation with another person	private	participant with medium expertise	1,500 - 2,000 EUR
3.	28	female	2	medium	working	only stationary	cooperation with another person	private	expert	500 - 1,000 EUR
4.	58	female	2	low	working	only stationary	cooperation with another person	private	participant with little expertise	500 - 1,000 EUR
5.	24	male	3	medium	not working	only stationary	cooperation with another person	work and private	expert	1,000 - 1,500 EUR
6.	30	male	1	medium	not working	only stationary	cooperation with another person	work and private	expert	500 - 1,000 EUR
7.	35	female	3	low	working	only stationary	sole decision maker	work and private	participant with medium expertise	500 - 1,000 EUR
8.	38	male	5	low	working	only stationary	sole decision maker	work and private	participant with medium expertise	1,500 - 2,000 EUR
9.	51	female	3	medium	working	only stationary	cooperation with another person	work and private	participant with medium expertise	1,000 - 1,500 EUR
10.	45	female	3	low	working	only stationary	sole decision maker	private	participant with medium expertise	1,000 - 1,500 EUR
Group 3										
1.	20	male	2	low	working	stationary & mobile	sole decision maker	private	participant with medium expertise	500 - 1,000 EUR
2.	42	female	2	low	not working	only stationary	sole decision maker	private	participant with little expertise	less than 500 EUR
3.	45	female	2	low	working	only stationary	sole decision maker	private	participant with medium expertise	500 - 1,000 EUR
4.	52	female	2	medium	working	stationary & mobile	sole decision maker	private	expert	500 - 1,000 EUR
5.	34	male	2	medium	working	stationary & mobile	sole decision maker	work and private	expert	2,000 - 2,500 EUR
6.	23	female	1	low	working	only stationary	sole decision maker	private	expert	500 - 1,000 EUR
7.	45	female	3	low	working	only stationary	sole decision maker	work and private	participant with little expertise	500 - 1,000 EUR
8.	26	male	2	medium	not working	only stationary	sole decision maker	private	expert	less than 500 EUR
9.	51	male	4	medium	working	only stationary	cooperation with another person	work and private	participant with medium expertise	1,500 - 2,000 EUR
10.	55	female	2	low	working	only stationary	cooperation with another person	private	participant with medium expertise	1,500 - 2,000 EUR

C.1.3 Greece

Greece:										
	Age	Gender	Number of persons in household	Educational background	Occupation	Kind of internet access	Responsible for the choice of the provider	Use of internet at home	Internet experience	Household income per month before tax
Group 1										
1.	28	female	4	high	working	stationary & mobile	sole decision maker	work and private	expert	2,100 - 2,500 EUR
2.	43	female	4	medium	working	only stationary	sole decision maker	work and private	expert	1,200 - 1,500 EUR
3.	48	female	6	high	working	only stationary	sole decision maker	private	expert	more than 2,500 EUR
4.	32	female	2	high	working	stationary & mobile	sole decision maker	work and private	expert	1,800 - 2,100 EUR
5.	31	male	1	medium	working	stationary & mobile	sole decision maker	work and private	expert	600 - 1,200 EUR
6.	28	male	2	high	working	stationary & mobile	cooperation with another person	work and private	expert	1,500 - 1,800 EUR
7.	42	male	4	high	working	only stationary	cooperation with another person	work and private	expert	1,800 - 2,100 EUR
8.	49	male	4	high	working	only stationary	sole decision maker	work and private	expert	1,800 - 2,100 EUR
9.	27	male	4	high	working	only stationary	sole decision maker	work and private	expert	1,200 - 1,500 EUR
Group 2										
1.	34	male	4	high	working	stationary & mobile	sole decision maker	work and private	expert	2,100 - 2,500 EUR
2.	53	female	4	high	working	only stationary	sole decision maker	work and private	participant with medium expertise	more than 2,500 EUR
3.	25	male	4	high	student	stationary & mobile	cooperation with another person	private	expert	2,100 - 2,500 EUR
4.	51	female	5	high	working	only stationary	cooperation with another person	private	participant with little expertise	1,200 - 1,500 EUR
5.	39	male	1	high	working	stationary & mobile	sole decision maker	private	participant with little expertise	1,200 - 1,500 EUR
6.	33	female	3	high	not working	only stationary	cooperation with another person	private	participant with medium expertise	1,200 - 1,500 EUR
7.	39	male	4	high	working	stationary & mobile	sole decision maker	private	expert	1,500 - 1,800 EUR
8.	46	male	4	high	working	only stationary	sole decision maker	private	participant with medium expertise	1,500 - 1,800 EUR
Group 3										
1.	28	male	3	high	working	only stationary	sole decision maker	work and private	expert	more than 2,500 EUR
2.	51	male	2	high	working	only stationary	sole decision maker	work and private	expert	1,500 - 1,800 EUR
3.	24	female	3	high	not working	stationary & mobile	cooperation with another person	private	participant with medium expertise	1,500 - 1,800 EUR
4.	39	female	2	high	working	only stationary	cooperation with another person	work and private	participant with medium expertise	1,500 - 1,800 EUR
5.	49	male	5	high	working	only stationary	sole decision maker	work and private	participant with medium expertise	more than 2,500 EUR
6.	38	male	3	high	working	only stationary	sole decision maker	private	participant with little expertise	1,500 - 1,800 EUR
7.	42	female	4	high	working	only stationary	sole decision maker	private	participant with little expertise	1,200 - 1,500 EUR
8.	28	male	4	high	working	only stationary	sole decision maker	private	participant with medium expertise	1,200 - 1,500 EUR

C.1.4 Sweden

<u>Sweden:</u>										
	Age	Gender	Number of persons in household	Educational background	Occupation	Kind of internet access	Responsible for the choice of the provider	Use of internet at home	Internet experience	Household income per month before tax
Group 1										
1.	25	male		2 high	working, student	only stationary	cooperation with another person	private	expert	25000 SEK
2.	28	male		2 high	working	only stationary	cooperation with another person	private	expert	60000 SEK
3.	46	female		3 high	working	stationary & mobile	sole decision maker	work and private	expert	67000 SEK
4.	47	female		4 high	working	only stationary	cooperation with another person	private	expert	35000 SEK
5.	53	female		1 high	working	only mobile	sole decision maker	work and private	expert	33000 SEK
6.	68	male		2 low	retired	only stationary	cooperation with another person	private	expert	38000 SEK
7.	58	female		1 medium	working	only stationary	sole decision maker	private	expert	26000 SEK
Group 2										
1.	27	male		3 medium	working	only stationary	cooperation with another person	work and private	participant with medium expertise	45000 SEK
2.	30	female		2 high	student	only stationary	sole decision maker	work and private	expert	15000 SEK
3.	37	male		4 high	working	only stationary	cooperation with another person	work and private	participant with medium expertise	54000 SEK
4.	10	male		4 high	working	only stationary	cooperation with another person	work and private	participant with medium expertise	67000 SEK
5.	50	female		1 medium	working	only mobile	sole decision maker	private	participant with little expertise	25000 SEK
6.	54	male		2 high	working	only stationary	cooperation with another person	work and private	expert	110000 SEK
7.	65	female		2 high	working	only stationary	cooperation with another person	private	expert	42000 SEK
8.	69	female		1 high	working	only stationary	sole decision maker	work and private	expert	26000 SEK
Group 3										
1.	28	male		2 medium	working	only stationary	sole decision maker	work and private	expert	70000 SEK
2.	30	female		1 high	student	only mobile	sole decision maker	work and private	participant with medium expertise	15000 SEK
3.	35	female		1 high	working, student	only stationary	sole decision maker	work and private	participant with medium expertise	20000 SEK
4.	46	male		4 medium	working	only stationary	cooperation with another person	private	participant with little expertise	55000 SEK
5.	47	male		5 high	working	only stationary	cooperation with another person	private	expert	63000 SEK
6.	48	male		2 high	working	only stationary	sole decision maker	work and private	expert	50000 SEK
7.	66	female		1 low	retired	only stationary	sole decision maker	private	participant with medium expertise	do not want to disclose

C.2 Discussion Guide

C.2.1 English Discussion Guide as Agreed with BEREC

[Please note that this final version of the discussion guide also reflects some last minute changes suggested by some of the drafters. Changes are marked in red and deleted text is shown as cancelled. Independent from whether we managed to integrate these changes on short notice into the translation or not, they were always discussed in depth with moderators in the test areas prior to the focus group discussions. Also, it should be noted that there was an extensive briefing and debriefing performed with the moderators in all test areas by Dr. Anna Schneider and Dr. René Arnold of the study team.]

Topics:

Topics	minutes
(1) Introduction	15
(2) Personal Internet usage	25
(3) Decision criteria for choice of Internet provider and contract	30
(4) Network Neutrality	40
(5) Final comments / Conclusion	10
	120

Discussion Guide: Network Neutrality

(1) Introduction
minutes

15

General introduction of focus group procedure – explaining:

- Duration
- Communication rules
- Data protection
- Interest in opinions – no right or wrong answers
- Invitation to open and lively discussion of topics

Good evening and thanks for being on time everyone. My name is ... and I will be moderating the session tonight.

Just a few points before we start. This evening's discussion is a very informal session - I am here to hear your thoughts and opinions. We will have two hours to discuss aspects of the Internet and how you use it.

There are no right or wrong answers. All I am interested in is your personal opinion. So please be as open and honest as possible. Also, the more you have to say, the better!

Please be so kind to check that your mobile devices are turned off.

As we do a number of these discussions we are recording all of them to be able to look at them at a later stage. The recordings are only used for analysis and are deleted afterwards.

This research is being conducted by YouGov plc in accordance with the MRS Code of Conduct. Under MRS rules, all information you give will be kept strictly confidential.

☒ Introduction of participants

- For a start, I would like you all to introduce yourselves so we all know who we are talking with.
 - Tell us your first name,
 - age,
 - occupation,
 - your personal status and anything else you would like the others to know about you.

Thanks everyone.

(2) Personal Internet usage

25 minutes

This section has the aim to explore and discuss the relevance and the personal usage of the Internet.

I have already given away that we will talk about the Internet today. Before we start talking about certain topics and aspects, I would like to know what you associate with the term “Internet”.

(Moderator: Please write the word INTERNET vertically on flipchart)

☒ **Associations/ flip chart game**

- Please tell me for every letter of the word something that you associate with the Internet (e.g. I= ideas, innovations etc., N= networks, new, etc.).
- Now you can also tell me terms that start with other letters but that are linked to the Internet

Moderator: Collect all associations on flip chart

☒ **Private usage in detail**

Thinking of your private usage – using the Internet:

- Please walk me through a typical day’s interaction with the Internet.... Please describe when and where you use the Internet and which kinds of services on the Internet you use or which kinds of websites you visit, what types of devices do you use?

Moderator: If used in very different situations explore the differences regarding the emotional situations, the mood: how do you feel when you do.... And how do you feel then...?

- Supporting questions:
 - How often do you use the Internet?
 - When do you use the Internet?
 - What do you use the Internet for?
 - Do you use the Internet for fun? Do you use the Internet for work?
 - Where do you use the Internet?
 - Where in the house? Where do you sit? (on the couch, at the desk, in the bath?)

- When using it, do you use it whilst doing something else (second screen during watching TV, is it always on?) or do you purpose use it and concentrate on using it at the time?
- What are the devices you use (at home) for going on the Internet? (Smartphones, tablets, cameras, notebooks, e-books, PCs etc.)
- Which device do you use for what? Do you use your devices differently? How?

✕ Personal relevance

- What relevance has the Internet for you personally? What role does the Internet play in your life? *Moderator: emotional and social as well as rational aspects are of interest*
 - Is it a source of information? Maybe the major source of information... Free Information, free expression,...
 - Is it used for simplification/organisation of daily life (banking, shopping, government operations, eg. tax declarations)
 - Entertainment (watch TV / Films (legally / illegally), play games, etc.)
 - Connection with friends and family (social networks, Skype, FaceTime, Viber, etc.)
 - Finding new friends, partners
 - Self-Representation / Self Image (Facebook, Xing, LinkedIn, blogs, etc.)
 - Are there aspects you particularly like about the Internet? What do you like about it?
 - Are there aspects that you particularly dislike? If yes, which ones?
- If you hadn't got the Internet anymore – what would you miss most? Please explain.
- These ones of you who are living together with other people (family/roommates): What relevance has the Internet for the different members of the household?
 - Are there differences? Which ones? (Maybe not so important for parents but very important for the children?).
 - Who could live without the Internet, who could not? How come?

- What are the other members of the household using it for?

☒ Experience of disruptions

- Can you describe any recent situation you had trouble with your Internet connection / access – or when the Internet was not working properly or in an unexpected way? (Please explain)!
- What exactly happened? *(Moderator: Make sure that problem is well defined, important: at this point it's about rather "minor" and "short" problems, not about problems based on longer distortions of connectivity e.g. switching suppliers)*
 - What do you think went wrong? Where do you see the reasons for these disruptions (e.g. using an out-of-date device, slow connection due to... high level of Internet traffic/ slow provider/ download restrictions etc.)?
 - How did you experience it? How did you feel about it? (major disruption vs small problem, annoyance vs tolerance)
 - How did this situation make you feel? (helpless, vulnerable, angry, sad, etc.)

☒ Experience of major disruptions

- Can you define in your own terms, what constitutes a minor as compared to a major disruption of the Internet?
- Do you remember recent situations when you had no Internet several days in a row?
 - How did you deal with it?
 - Are you aware of the reason (technical problems with own devices, change of provider, electricity cuts, others)?
 - How long have you been without Internet?
 - How did you experience this? (As major disruption in your live or not a problem at all?)
 - How did this situation make you feel? (helpless, vulnerable, angry, sad, etc.)

☒ The functioning of the Internet:

- So far we talked a lot about your personal usage of the Internet as well as the importance of the Internet in your daily lives. Now I'm wondering: How does the Internet work actually?

- Please imagine that I'm a child right now. And some of us know, children are questioning a lot. So please explain the Internet in your own words and feel free to explain it in a very symbolic and figurative language.

Moderator: Please show the following questions written on a flipchart to support participants, please take care that analogies are used (e.g. Internet is a spider web that connects people)

- How do you think the Internet works?
 - Who operates the Internet?
 - Who pays for the Internet?
 - Who makes the Internet?
 - What rules apply to the Internet?
- Thank you. Now I would like to hand out a paper in which we described the functioning of the Internet. Please indicate your first name on top of the paper. Please read carefully and mark the passages you find difficult to understand with red color and the passages you find easy to understand in green.

Moderator: Please hand out paper to every participant, make clear that all papers are marked, so that a connection to every participant could be made during analysis.

The Internet allows electronic devices to communicate by exchanging arbitrary digital data. It is not one, but a combination of many networks. A set of common technical rules ensures that data exchanges work, no matter where or how an electronic device connects to the Internet.

Two major rules exist. First, every device connected to the Internet has got an individual address. Thus, it can be identified and reached. Second, rules exist that manage the pathway data take from sender to receiver through the different networks.

- Did that explanation surprise you?
 - What was different than expected?
 - What was easy or hard to understand?
 - Do you have further questions? (Moderator: please find below answers to questions discussed. Only read our explanations if certain aspects aren't understood correctly.)

- **How do you think the Internet works?** *The Internet works as a network of networks. It defines a set of common rules that specify how each device connecting to it can be reached and how data finds its way to a destination on its path across the interconnected networks that form the Internet.*
- **Who operates the Internet?** *In essence, the operators of those networks which interconnect to form the Internet as well as the operators of the infrastructure where network interconnection takes place. A less strict perspective would include further operating entities without which the Internet would not be useful to most users, e.g. operators of the so-called root servers which are essential for a functioning resolution of domain names to Internet addresses.*
- **Who pays for the Internet?** *Consumers and businesses pay for access to the Internet and often for their data traffic as well. Content and application providers pay primarily based on their data traffic volumes which flows from/to their data centres to/from the Internet. Operators pay for network infrastructure, its operation, and – depending on the specific agreement – for exchanging data traffic with other networks.*
- **Who makes the Internet?** *In the sense of who builds and runs the Internet, the answer is essentially the same as in the question of who operates the Internet. In the sense of who creates the rules that define the Internet, however, a wide range of bodies should be mentioned that develop Internet standards and that engages in Internet governance. Prominent examples include IETF (Internet Engineering Task Force), IANA (Internet Assigned Numbers Authority), ICANN (Internet Corporation for Assigned Names and Numbers), and W3C (World Wide Web Consortium).*
- **What rules apply to the Internet?** *The very core of these rules touches on addressing and routing. Rules are specified as protocols – the mentioned rules are addressed in the Internet standard for the Internet Protocol (IP). As more protocols were (and still are being) added to the collection of Internet standards, there is now an embracing Internet protocol stack that covers all relevant aspects, such as how data transport or Internet applications like e-mail work.*

(3) Decision criteria for choice of Internet provider and contract 30 minutes

This section has the aim to explore decision criteria for the choice of the Internet provider. What are relevant aspects when looking at Internet provider? What are major criteria which criteria seem less important? What does a good contract look like? How does the choice process look like? Is this process accompanied by high or low involvement?

Particular focus will be on gaining insights into anchor points regarding the proposal process as well as the identification of problems or potential for excessive demands.

☒ Internet provider

Thank you. Now I we're on a slightly different topic. I would like to ask **each** of you:

- Which Internet provider are you with?
 - How much do you pay each month to your Internet provider?
 - Since when have you been with this provider? (Moderator: please make notes, information is important for further discussion!)
- How many options have you had (how many potential providers and contract-options have been available at that time)?
- What are your contract details with regard to technical data (download speed, volume, upload speed, duration of contract?) Do you remember?
- If you should rate you provider on an overall basis: What mark would you give your provider – if 1 would be very good and 6 unsatisfactory?
 - Are there aspects that you particularly like about your provider? Which ones (e.g. stability of connection, brand image)?
 - Are there aspects that you particularly dislike about your provider? Which ones (e.g. slow connection, interruptions, costs, long waiting times etc.)?

Moderator: If aspects about network neutrality are mentioned spontaneously, please explore!

- What do you think, does your choice of provider / contract has an influence on your Internet usage experience?

☒ @ Participants who have not changed their provider/contract within the last 12 months:

- Do you plan to change your provider/contract within the next 12 months?
- IF YES: How come?
- IF NOT: Why do you intend to stay with your provider/keep your contract?

☒ @ Participants who have changed their provider or their contract within the last 12 months:

- What were the reasons for you to change your provider/contract? Why did you change your provider/contract?

- When you remember changing your provider/contract: How did you experience this process?
- Was it easy or did you find it hard to choose a new provider/contract?
 - IF IT WAS HARD: What in particular was hard about it? What did you find demanding?
- How did you inform yourself – was it easy or hard to get the information you needed?
 - Please explain
 - What did you do then?
 - Which information wasn't reachable for you, even after a long searching process?
- How did you feel when changing your provider/contract? Where you convinced about your choice? (Feeling competent or insecure?)

☒ **Imagined change of provider:**

- Please imagine that you had to change to a new provider tomorrow. How would you go about it? What would you do?
- Where would you inform yourself? (e.g. Internet portals, websites of providers, recommendations of friends)
- What would you do then?
- Looking at new providers: Which aspects would be particularly important to you? Explore further (*Moderator: the following aspects are of importance – please make sure that all aspects are mentioned – if not, name those missing and let them discuss (short):*)
 - Price
 - Brand
 - Upload and download-speed
 - Bundle with other services (e.g. telephony, TV, mobile, etc.)
 - Promotion (e.g. free router, no switching charge, free iPad, special offers, etc.)
 - Service (e.g. hot/helpline, shop nearby with personnel to talk to, etc.)

- Content (e.g. IPTV, TV on demand with special content, music streaming, etc.)
 - Duration of contract and termination fees
- If you compare it to the past – are other criteria more important, now, when choosing a new provider? IF YES, which are these? Why did they become more important?
 - Looking into the future: Do you see aspects that will gain importance or loose importance? Why is this your opinion?
- Moderator: If aspects of network neutrality are mentioned, please explore*

(4) Network Neutrality

40 minutes

This section's topic is network neutrality. It has to be probed if network neutrality is a known term, how and with which words it is described, how it is perceived, which meanings it carries and which aspects are of personal relevance to the respondents.

⊗ **Network Neutrality** - spontaneous reactions and understanding of participants

Thank you. Now I would like to talk about another aspect of the Internet. I have written down a term on the flip chart that I would like to discuss with you: **Network Neutrality**

Moderator: Please show term on flipchart and collect associations on flipchart

- Please tell me everything that comes into your mind when you hear this term (associations)?
- Does it mean something to you? IF YES, what does it mean to you?
- How would you explain the term network neutrality to a friend who has not heard about it?

⊗ **Network Neutrality** - reactions on definition

Thank you. Now I would like to read out a definition of the term network neutrality.

Moderator: Read out definition exactly:

Network neutrality means that all data in a network is treated in equal terms. Equal treatment refers to the standard behaviour of how data is forwarded in a network

towards its destination. The standard behaviour for equal treatment is that all data is forwarded according to the same rules.

- After our previous discussion: Was this definition of network neutrality surprising for you?
 - What was different?
 - What was easy or hard to understand?
- Please try to describe the term network neutrality in your own words.
 - How would you explain it to a child?

✉ **Aspects of Network Neutrality – mind set and understanding of participants**

- Please tell me aspects that come to mind when thinking of “network neutrality”.
 - Are there examples, when the Internet didn’t work as has to be expected when keeping the definition of network neutrality in mind?
- Please remember the discussion we had earlier today. When it came up to unexpected effects you may have experienced when using the Internet (e.g. apps didn’t work properly while other applications worked well). Could this be somehow related to network neutrality?

Moderator: Please collect all aspects/examples

✉ **Network Neutrality aspects - reactions on definition**

- Thank you. Now I would like to hand out a paper in which we prepared a short text about effects a deviation from network neutrality could lead to. Also you’ll find a list with aspects that could have had an effect on your Internet usage experience. Please read carefully and mark the passages you find difficult to understand with red colour and the passages you find easy to understand in green. Please indicate your first name on top of the paper.

Moderator: Please hand out paper to every participant, make clear that all papers are marked, so that a connection to every participant could be made during analysis.

Hand Out for Participants

A deviation from network neutrality consequently means that data is forwarded in a network according to a set of rules that is specific to the sender, destination, type of application, application provider, type of content, content provider – or a combination thereof. Specific forwarding rules may apply permanently, within certain time periods

(e.g. during peak times), or dynamically in response to particular situations in a network. Specific forwarding rules may apply to everyone or to some users in a network. Implementing specific forwarding rules requires a network operator to manage data traffic in a network. On one hand, traffic management may mean that data is not forwarded at all. This would result in the blocking of the respective sender, destination, type of application, application provider, type of content, and/or content provider. On the other hand, traffic management may mean that data is forwarded with a higher or lower priority, that it is slowed down, or that it is forwarded with a certain guaranteed quality. These practices would result in changed expectations on the quality that a user experiences when consuming the respective application or content.

- A specific application, specific content, or the applications/content from a specific provider are permanently or at some times inaccessible, while other applications, other content, or applications/content from other providers are accessible.
- A specific application, specific content, or the applications/content from a specific provider suffer permanently or at some times from poor quality, while other applications, other content, or applications/content from other providers are of good quality.
- A specific application, specific content, or the applications/content from a specific provider are permanently of good quality, while other applications, other content, or applications/content from other providers vary quality-wise.
- Communications from or to a specific person are permanently or at some times not delivered, while communications from or to other persons arrive well.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

- Have some of these aspects of network neutrality been relevant for you in the past?
 - Please give examples of how these different aspects affected your personal Internet usage experiences.
- Where did you originally see the cause for these effects? (e.g. slow download speed – that was attributed to out-of-date device instead of to providers download restrictions)
- Please try to describe these aspects of network neutrality in your own words.
 - How would you explain it to a child?
- Do you see any analogies?

⊗ Fairness of Network Neutrality

- Could you imagine situations in which you would prefer any regulation?
- When? How?

Moderator: please make sure that discussion covers both positive and negative effects of NN regulation (isn't only about negative effects). State that regulations (can) have positive effects as well: please explain and support with examples

- What do you think: Is network neutrality fair if you think of your personal usage behaviour/needs? (Discussion of examples, e.g. blocking and/or throttling Skype, prioritized service)
- Do you find it reasonable that regulation requires network neutrality from providers of Internet access?

⊗ Importance of Network Neutrality for choice of provider/contract

Moderator: Please show again list with aspects on flipchart

- How relevant are these aspects of network neutrality for you when choosing a provider/contract?
- How important are they by comparison to the other aspects that you mentioned before (e.g. price, brand image, duration of contract etc.)
- Do you find it reasonable to pay more for network neutrality?
 - Why? Or why not?
- If blocking and/or throttling are allowed would you be prepared to pay more if some of these network neutrality aspects would be part of your contract?
 - For which of the aspects and how come?
 - How much more would you pay?
- ~~(Would you be prepared to pay more if some of these network neutrality aspects would be part of your contract?~~
 - ~~For which of the aspects and how come?~~
 - ~~How much more would you pay?)~~

(5) Final comments / Conclusion

10 minutes

This part is meant to give everybody in the group the chance to give a final statement or a personal conclusion.

We are at the end of an exciting discussion. At last, I would like to ask each of you to give us your personal conclusion on this matter.

Thank you very much for your time and participation. It has been really interesting and insightful to hear your thoughts on this topic. I hope you enjoyed the session as much as I did. Thanks again!

C.2.2 Translation into Croatian

Teme:

Teme	minuta
(1) Uvod	15
(2) Osobno korištenje Interneta	25
(3) Kriterij donošenja odluka pri izboru i ugovaranju pružatelja usluga Interneta	30
(4) Mrežna neutralnost	40
(5) Finalni komentari / Zaključak	10
	120

Vodič za diskusiju: Mrežna neutralnost

(1) Uvod	15 minuta
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Općeniti uvod u tijek fokus grupe - pojasniti:

- trajanje
- pravila komunikacije

- zaštita podataka
- zanimaju nas mišljenja – nema točnih i netočnih odgovora
- pozvati ispitanike da se otvore i uključe u živu diskusiju tema

Dobar dan i hvala na pravovremenom dolasku. Moje ime je... i vodit ću našu diskusiju danas.

Samo par napomena na početku. Današnja diskusija je vrlo neformalna – zanimaju me Vaša mišljenja i stavovi. U iduća dva sata razgovarat ćemo o raznim aspektima Interneta i načinu kako ga koristimo.

Nema točnih i netočnih odgovora. Mene samo zanimaju Vaši osobni stavovi. Stoga Vas molim da budete čim otvoreniji i iskreniji. Također, što nam više želite reći, tim bolje!

Ljubazno Vas molimo i da isključite Vaše mobilne telefone.

Obzirom da ćemo provesti niz ovakvih diskusija, sve će biti snimane kako bismo ih mogli ponovo pogledati kasnije [i prisjetiti se svih važnih detalja koje ćemo od Vas čuti]. Snimke će biti korištene samo za analizu i kasnije će biti obrisane.

Istraživanje provodimo mi, agencija Valicon, u suradnji s vanjskim partnerom YouGov.plc te prema pravilima istraživačke struke. Prema tim strukovnim pravilima, sve informacije koje nam date će biti držane kao strogo povjerljive.

☒ Predstavljanje ispitanika

- Za početak, zamolit ću Vas da se predstavite kako bismo svi znali s kime razgovaramo.
 - Recite nam prvo svoje ime,
 - dob,
 - zanimanje,
 - osobni status i sve ostalo što želite s nama podijeliti o sebi.

Hvala svima.

(2) Osobno korištenje Interneta

25 minuta

Cilj ove cjeline je istražiti i prodiskutirati važnost i osobno korištenje Interneta.

Već sam spomenula temu naše današnje diskusije. Prije nego krenemo razgovarati o određenim temama i aspektima, zanima me što povezujete uz pojam "Internet".

(Moderator: Napiši riječ INTERNET okomito na flipchart)

☒ **Asocijacije/flipchart igra**

- Recite mi molim Vas za svako slovo ove riječi neku asocijaciju koju povezujete s pojmom "Internet" (npr. I= ideje, inovacije itd., N= novost, itd.).
- Sada mi možete reći i druge pojmove koje počinju i nekim drugim slovima, ali ih povezujete uz Internet

Moderator: Zapiši sve asocijacije na flipchart

☒ **Detaljno o osobnom korištenju**

Razmislite malo o Vašem osobnom korištenju Interneta:

- Molim Vas provedite me s Vašom dnevnom rutinom interakcije s Internetom.... Molim Vas opišite gdje i kada koristite Internet i koji tip usluga na Internetu koristite ili koji tip web stranica posjećujete, koje tipove uređaja koristite?

Moderator: Ako se koristi u vrlo različitim situacijama, ispitaj razlike u emocijama, osjećajima: kako se osjećate kada.... A kako se osjećate kada...?

- Pomoćna pitanja:
 - Koliko često koristite Internet?
 - Kada koristite Internet?
 - U koje sve svrhe koristite Internet?
 - Koristite li Internet za zabavu? Koristite li Internet za posao?
 - Gdje koristite Internet?
 - Gdje točno u kući? Gdje sjedite? (na kauču, za stolom, u kadi?)
 - Koristite li Internet dok radite nešto drugo (npr. na posebnom ekranu dok gledate TV, je li uvijek uključen?) ili ga koristite samo namjenski i koncentrirate se u tom trenutku samo na korištenje Interneta?
 - Koje uređaje koristite (kod kuće) za Internet? (Smartphone, tablet, kamere, prijenosna ili stolna računala, e-readere itd.)
 - Koje uređaje koristite za što? Koristite li uređaje na drugačiji način? Kako?

☒ **Osobna važnost**

- Koliko važnost ima Internet danas za Vas osobno? Koju ulogu igra u Vašem životu?
Moderator: zanimaju nas emocionalni i društveni, te racionalni aspekti
 - Je li Internet izvor informacija? Možda i glavni izvor informacija... besplatno informiranje, besplatno izražavanje,...
 - Koristite li ga za pojednostavljivanje/organizaciju svakodnevnog života (bankarstvo, shopping, ispunjavanje obveza prema državi, npr. prijava poreza)
 - zabava (gledanje TVa/filmovi (bilo legalno ili ilegalno), igranje igara, itd.)
 - Komunikacija s prijateljima i obitelji (društvene mreže, Skype, FaceTime, Viber, itd.)
 - nalaženje novih prijatelja, partnera
 - Predstavljanje sebe (Facebook, Xing, LinkedIn, blogovi, itd.)
 - Ima li nekih karakteristika koje Vam se kod Interneta posebno sviđaju? Što točno?
 - Ima li nekih karakteristika koje Vam se kod Interneta posebno ne sviđaju? Ako da, koje su to?

- Zamislite da više nemate Internet – što bi Vam najviše nedostajalo? Molim Vas, pojasnite.

- Vi koji živite s drugim ukućanima (obitelji/cimerima): Koju važnost ima Internet za različite ukućane?
 - Postoje li razlike? Koje? (Možda nije toliko važan odraslima/roditeljima, koliko djeci?).
 - Tko bi mogao živjeti bez Interneta, tko ne? Zašto?
 - Za što ga koriste ostali ukućani?

☒ **Iskustvo sa smetnjama na Internetu**

- Možete li sada opisati neko svoje nedavno iskustvo kada ste imali problema s Vašom Internet konekcijom/pristupom – ili kada Internet nije radio kako treba ili je pak bilo nekih neočekivanih smetnji? (Molim Vas, pojasnite)!
- Što se točno dogodilo? (*Moderator: Pazite da je problem dobro pojašnjen, važno: u ovom trenu razgovaramo samo o “manjim” i “kraćim” problemima, ne o problemima koja uključuju duže nekorištenje Interneta, npr. promjena operatera*)
 - Što mislite da je pošlo po krivu? Što mislite da su bili razlozi tih smetnji (npr. korištenje zastarjelog uređaja, spora konekcija zbog... velik Internet promet/spora veza operatera/restrikcije kod download-a itd.)?
 - Kako ste iskusili te smetnje? Što ste u tom trenutku osjećali? (velike smetnje vs. manji problemi, muka vs. toleriranje)
 - Kako ste se u toj situaciji osjećali? (bespomoćno, ranjivo, ljuto, tužno, itd.)

☒ **Iskustvo sa većim problemima**

- Možete li svojim riječima opisati što podrazumijevate pod manjim, a što pod većim smetnjama na Internetu?
- Sjećate li se nekog nedavnog iskustva kada niste imali Internet po nekoliko dana?
 - Kako ste se nosili s time?
 - Zna li koji je bio razlog (tehnički problem s uređajima, promjena operatera, nedostupnost struje, nešto drugo)?
 - Koliko ste dugo bili bez Interneta?
 - Kako ste iskusili tu situaciju? (kao veću smetnju u važem životu ili Vam uopće nije predstavljalo problem?)
 - Kako ste se u toj situaciji osjećali? (bespomoćno, ranjivo, ljuto, tužno, itd.)

☒ **Funkcioniranje Interneta:**

- Do sada smo dosta razgovarali o Vašem osobnom korištenju Interneta i njegovoj važnosti u Vašem svakodnevnom životu. Sada me zanima: kako Internet zapravo radi?
- Molim Vas, zamislite sada da sam dijete. A kao što znamo, djeca znaju postavljati dosta pitanja. Stoga Vas molim da mi Vašim vlastitim riječima i osjećajima, može i na vrlo simboličan i figurativan način, pojasnite što je Internet.

Moderator: Pokaži napisana sljedeća pitanja na flipchart-u, kao pomoć ispitanicima, i pazi da budu korištene i analogije (npr. Internet je paukova mreža koja povezuje ljude)

- Kako po Vašem mišljenju radi/funkcionira Internet?
 - Tko njime upravlja?
 - Tko plaća Internet?
 - Tko „proizvodi“ Internet?
 - Koja se pravila primjenjuju na Internetu?
- Hvala. Sada ću Vam podijeliti papire na kojima je opisano funkcioniranje Interneta. Molimo Vas da napišete svoje ime na vrh papira. Molim Vas da pažljivo pročitate u označite crvenom bojom odlomke koji su Vam teži za razumjeti a zelenom bojom one koje lakše razumijete.

Moderator: Daj svakom ispitaniku papir i pazi da je svaki papir označen, tako da se može napraviti poveznica sa svakim ispitanikom tijekom analize.

Internet omogućuje elektroničkim uređajima da komuniciraju putem razmjene arbitrarnih (dodijeljenih, proizvoljnih) digitalnih podataka. To nije jedna, već je kombinacija više mreža. Set zajedničkih tehničkih pravila osigurava da je razmjena podataka moguća, bez obzira gdje je i na koji način elektronički uređaj spojen na Internet.

Dva su glavna pravila. Prvo, svaki uređaj spojen na Internet ima svoju individualnu adresu kako bi se mogao identificirati i dosegnuti. Drugo, postoje pravila koja upravljaju prolaskom podataka od pošiljatelja do primatelja kroz različite mreže.

- Je li Vas to pojašnjenje iznenadilo?
 - Što je bilo drugačije od onoga što ste očekivali?
 - Je li bilo jednostavno ili teško za razumjeti?
 - Imate li nekih daljih pitanja? (*Moderator: u nastavku su priloženi odgovori na ranije postavljena pitanja. Pročitaj naša pojašnjenja samo ako neki aspekti nisu bili pravilno shvaćeni.*)
 - **Kako po Vašem mišljenju radi/funkcionira Internet?** Internet radi kao mreža više mreža. Ima definiran set zajedničkih pravila koja specificiraju na koji se način svaki uređaj spaja kako bi ga se moglo doseći i kako bi podatak pronašao svoj put do destinacije kroz međusobno povezane mreže koje čine Internet.
 - **Tko njime upravlja?** U biti, operateri tih međusobno povezanih mreža koje čine Internet kao i operateri infrastrukture putem koje se to međusobno povezivanje

odvija. Manje striktan pristup bi uključio i druge upravljačke subjekte bez kojih Internet ne bi bio koristan većini korisnika, npr. operateri takozvanih „root-servera“ koji su ključni za funkcionalno rješavanje naziva domena za Internet adrese.

- **Tko plaća Internet?** Korisnici i tvrtke plaćaju pristup Internetu a često i podatkovni promet. Pružatelji sadržaja i aplikacija plaćaju većinom na osnovu volumena podatkovnog prometa koji teče između njihovih podatkovnih centara i Interneta. Operateri plaćaju mrežnu infrastrukturu, njeno funkcioniranje, i – ovisno o pojedinom ugovoru – podatkovni promet s drugim mrežama.
- **Tko „proizvodi“ Internet?** U pogledu toga tko „gradi“ i upravlja Internetom, odgovor je u biti isti kao kod operatera koji upravljaju Internetom. Međutim, u pogledu pravila koja definiraju Internet, moramo spomenuti čitav niz tijela koja razvijaju Internet standarde i koja su uključena u upravljanje Internetom. Istaknuti primjeri obuhvaćaju IETF (Internet Engineering Task Force), IANA (Internet Assigned Numbers Authority), ICANN (Internet Corporation for Assigned Names and Numbers) i W3C (World Wide Web Consortium).
- **Koja se pravila primjenjuju na Internetu?** Srž ovih pravila odnosi se na adresiranje i (pre)usmjeravanje. Pravila su specificirana kao protokoli – spomenuta pravila se prema standardima Interneta nazivaju Internet Protokoli (IP). Kako se sve više protokola dodavala (i još se dodaju) zbirki Internet standarda, sada postoji opsežno „skladište/knjižnica“ Internet protokola koji pokrivaju sve važne aspekte, kao npr. kako se podaci prenose ili kako Internet aplikacije poput e-maila rade.

(3) Kriterij donošenja odluka pri izboru i ugovaranju pružatelja usluga Interneta 30 minuta

Cilj ove cjeline je istražiti kriterije odlučivanja pri izboru i ugovaranju pružatelja usluga Interneta. Koji su važni aspekti kada se traži operater Internet usluga (Internet operater)? Koji su glavni kriteriji, a koji su manje važni? Kako bi dobar ugovor trebao izgledati? Kako izgleda proces izbora? Prati li taj proces visoka ili niska uključenost?

Poseban fokus će biti stavljen na sakupljanje uvida oko polazišnih točaka pri procesu ponude, kao i na identifikaciju problema ili potencijal za veće potrebe.

Internet operater

Hvala. Sada ćemo razgovarati o malo drugačijoj temi. Željela bih pitati **svakoga** od Vas:

- Usluge kojih pružatelja Internet usluga koristite?

- Koliko plaćate Vašem pružatelju Internet usluga?
- Koliko dugo koristite njegove usluge? (Moderator: vodi bilješke, informacija je važna za dalju diskusiju!)
- Koliko ste opcija imali na izbor (među koliko ste potencijalnih pružatelja usluga i vrsta ugovora u to vrijeme mogli birati)?
- Koji su detalji Vašeg ugovora u pogledu tehničkih podataka (brzina download-a, količina, brzina upload-a, trajanje ugovora)? Sjećate li se toga?
- Ako biste ocjenjivali svog na nekom generalnom nivou: Koju ocjenu biste svom operateru dali – ako bi 1 bilo vrlo dobro a 6 nezadovoljavajuće?
 - Ima li nekih karakteristika koje Vam se kod Vašeg operatera posebno sviđaju? Koje točno (npr. stabilnost veze, brand image)?
 - Ima li nekih karakteristika koje Vam se kod Vašeg operatera posebno ne sviđaju? Koje točno (npr. spora veza, troškovi, dugo vrijeme čekanja, itd.)?

Moderator: ako se spontano spomene Mrežna neutralnost, istraži detaljnije!

- Što mislite, ima li Vaš odabir operatera/ugovora utjecaj na Vaše iskustvo korištenja Interneta?

✉ @ Ispitanici koji NISU mijenjali operatera/ugovor u zadnjih 12 mjeseci:

- Planirate li promijeniti operatera/ugovor u idućih 12 mjeseci?
- AKO DA: Kako to?
- AKO NE: Zašto namjeravate ostati kod svog operatera/zadržati postojeći ugovor?

✉ @ Ispitanici koji JESU mijenjali operatera/ugovor u zadnjih 12 mjeseci:

- Koji su bili razlozi promjene Vašeg operatera/ugovora? Zašto ste ga/ih mijenjali?
- Kada se prisjetite promjene svog operatera/ugovora: kakvo je bilo Vaše iskustvo u tom procesu?
- Je li bilo jednostavno ili teško odabrati novog operatera/ugovor?
 - AKO JE BILO TEŠKO: Što je pri tome bilo posebno teško? Što ste smatrali zahtjevnim?

- Na koji ste se način informirali – Je li bilo jednostavno ili teško doći do informacije koja Vam je bila potrebna?
 - Molim pojasnite.
 - Što ste tada napravili?
 - Koja Vam informacija nije bila dostupna, čak ni nakon dužeg traženja?
- Kako ste se osjećali pri promjeni svog operatera/ugovora? Jeste li bili uvjereni u svoj izbor? (osjećali se kompetentno ili nesigurno?)

✉ **Imaginarna promjena operatera:**

- Zamislite da sutra morate promijeniti svog operatera. Kako biste tome pristupili? Što biste napravili?
- Gdje biste se informirali? (npr. Internet portali, web stranice operatera, preporuke prijatelja)
- Što biste tada napravili?
- Promatrajući nove operatere: Koji bi Vam aspekti bili posebno važni?
Istražite dalje (*Moderator: sljedeći su aspekti važni – pazi da svi budu navedeni – AKO NE, potaknite o onima koji nedostaju i prodiskutirajte (kratko):*)
 - cijena
 - brand
 - brzina upload-a i download-a
 - paketi usluga (npr. fiksna/mobilna telefonija, TV, itd.)
 - promocija (npr. besplatni router, bez naplaćivanja promjena, besplatni iPad, posebne ponude, itd.)
 - usluga (npr. telefonski kontakt centar, prodajno mjesto blizu Vas s osobljem s kojim možete porazgovarati, itd.)
 - sadržaj (npr. IPTV, „TV na zahtjev“ (TVoD) s posebnim sadržajima, streaming muzike, itd.)
 - trajanje ugovora i penali (naknade za raskid)
- ako usporedite s nekim prijašnjim vremenom – jesu li sada, kada biste birali novog operatera, važni neki drugi kriteriji? AKO DA, koji su to? Zašto su postali važniji?

- Gledajući u budućnost: Mislite li da će neki aspekti dobiti ili izgubiti na važnosti? Zašto to mislite?

Moderator: ako se spomenu aspekti Mrežne neutralnosti, istraži detaljnije

(4) Mrežna neutralnost

40 minuta

Tema ove cjeline je mrežna neutralnost. Treba se ispitati je li termin Mrežna neutralnost poznat, kako je i kojim riječima on opisan, kako je percipiran, koja značenja nosi i koji aspekti su od osobne važnosti ispitanicima.

☒ **Mrežna neutralnost - spontane reakcije i razumijevanje ispitanika**

Hvala. Sada želim s Vama razgovarati o još jednom aspektu Interneta.

Napisala sam termin o kojem bih s Vama željela porazgovarati na flipchart:

Mrežna neutralnost

Moderator: Pokaži termin na flipchart-u i zapiši sve asocijacije.

- Molim Vas navedite mi sve asocijacije koje Vam padnu na pamet kada čujete taj termin?
- Znači li Vam što? AKO DA, koje značenje ima za Vas?
- Kako biste pojasnili termin Mrežna neutralnost prijatelju koji za taj pojam nije čuo?

☒ **Mrežna neutralnost - reakcije na definiciju**

Hvala. Sada bih Vam željela pročitati definiciju pojma Mrežna neutralnost.

Moderator: pročitaj definiciju točno kako je napisana:

Mrežna neutralnost znači da su svi podaci u mreži tretirani ravnopravno. Ravnopravan tretman podataka se odnosi na uobičajenu proceduru kako se podaci prenose kroz mrežu do njihove destinacije. Uobičajena procedura ravnopravnog tretmana bi značila da se svi podaci prenose prema istim pravilima.

- Nakon naše prethodne diskusije: Je li Vas iznenadila ova definicija Mrežne neutralnosti?
 - Što je bilo drugačije?
 - Je li bilo jednostavno ili teško za razumjeti?
- Molim Vas da pokušate sada opisati Mrežnu neutralnost vlastitim riječima.

- Kako biste to pojasnili djetetu?

✉ **Aspekti Mrežne neutralnosti – razmišljanja i razumijevanje ispitanika**

- Koji Vam aspekti, karakteristike padnu napamet kada pomislite na “Mrežnu neutralnost”.
 - Imate li neke primjere, imajući u vidu ovu definiciju Mrežne neutralnosti, kada Internet nije radio kako treba?
- Molim Vas prisjetite se naše ranije diskusije. U trenutcima kada ste možda iskusili neke neočekivane smetnje pri korištenju Interneta (npr. neke aplikacije nisu radile kako treba dok druge jesu), bi li to možda moglo na neki način imati veze s Mrežnom neutralnosti?

Moderator: pokušaj sakupiti sve aspekte i primjere

✉ **Aspekti Mrežne neutralnosti – reakcije na definiciju**

- Hvala. Sada ću Vam podijeliti papire na kojima smo pripremili kratak tekst o učincima koje odstupanja od Mrežne neutralnosti mogu imati. Također ćete naći i listu aspekata koji su mogli imati utjecaj na Vaše iskustvo korištenja Interneta. Molim Vas da pažljivo pročitate u označite crvenom bojom odlomke koji su Vam teži za razumjeti a zelenom bojom one koje lakše razumijete. Molimo Vas da napišete svoje ime na vrh papira.

Moderator: Daj svakom ispitaniku papir i pazi da je svaki papir označen, tako da se može napraviti poveznica sa svakim ispitanikom tijekom analize.

Za ispitanike:

Odstupanje od Mrežne neutralnosti posljedično znači da se podaci prenose kroz mrežu prema setu pravila koja su specifična za pošiljatelja, destinaciju, tip aplikacije, pružatelja aplikacije, tip sadržaja, pružatelja sadržaja – ili kombinaciju njih. Specifična pravila prijenosa podataka mogu važiti stalno, u nekim vremenskim periodima (npr. tijekom perioda zagušenja) ili dinamično u ovisnosti o specifičnim situacijama u mreži. Specifična pravila prijenosa podataka mogu važiti za sve ili samo za neke korisnike mreže. Implementacija specifičnih pravila prijenosa podataka zahtjeva od mrežnog operatera da upravlja podatkovnim prometom unutar svoje mreže. S jedne strane, upravljanje podatkovnim prometom može značiti da podaci nisu prenošeni svima. To bi rezultiralo blokiranjem određenog pošiljatelja, destinaciju, tip aplikacije, pružatelja aplikacije, tip sadržaja i/ili pružatelja sadržaja. S druge strane, upravljanje podatkovnim prometom može značiti da su podaci prenošeni uz veću ili manju prioritetnost, da je prijenos usporen, ili da su podaci preneseni uz određenu garantiranu kvalitetu. Takva praksa bi rezultirala u promjenjivoj kvaliteti koju korisnik dobiva pri korištenju određene aplikacije ili sadržaja.

- Određena aplikacija, određen sadržaj ili aplikacija/sadržaj određenog pružatelja su trajno ili povremeno nedostupne, dok su druge aplikacije, drugi sadržaji ili aplikacije/sadržaji drugih pružatelja dostupne.
- Određena aplikacija, određen sadržaj ili aplikacija/sadržaj određenog pružatelja pati od trajno ili povremeno slabije kvalitete, dok su druge aplikacije, drugi sadržaji ili aplikacije/sadržaji drugih pružatelja dobre kvalitete.
- Određena aplikacija, određen sadržaj ili aplikacija/sadržaj određenog pružatelja su trajno ili povremeno dobre kvalitete, dok druge aplikacije, drugi sadržaji ili aplikacije/sadržaji drugih pružatelja imaju promjenjivu kvalitetu.
- Komunikacija od ili prema određenoj osobi trajno ili povremeno nije moguća/ne može biti realizirana, dok je komunikacija od ili prema drugih osoba u redu.

Gore navedene posljedice mogu biti rezultat upravljanja podatkovnim prometom u mreži, ali se isto tako mogu pojaviti iz nekih drugih razloga. Samu posljedicu nije moguće jednoznačno pripisati nekom razlogu.

- Jesu li Vam neki od gornjih aspekata Mrežne neutralnosti bili bliski u prošlosti?
 - Molim Vas da date primjere kako su razni ovi aspekti utjecali na Vaše osobno iskustvo korištenja Interneta.
- Što ste Vi odmah pomislili da su mogli biti razlozi tih posljedica? (npr. manja brzina Interneta – koja je bila pripisana zastarjelom uređaju umjesto restrikcijama operatera za brzinu downloada)
- Molim Vas da pokušate pojasniti te aspekte Mrežne neutralnosti vlastitim riječima.
 - Kako biste to pojasnili djetetu?
- Vidite li nekih analogija?

✉ Kvaliteta Mrežne neutralnosti

- Možete li zamisliti situacije u kojima bi Vam više odgovarala neka od tih regulacija?
- Kada? Na koji način?

Moderator: pazi da diskusija pokriva i pozitivne i negativne učinke regulacije mrežne neutralnosti. Istakni da ta regulacija (može) imati i pozitivne posljedice: malo pojasni i potkrijepi primjerima.

- Što mislite: Kakva je Mrežna neutralnost ako pomislite na Vaše osobno ponašanje/potrebe? (diskusija o primjerima, npr. blokiranje ili usporavanje brzine Skype-a, prioritetnost usluge)
- Da li smatrate razumnim da regulacija zahtjeva mrežnu neutralnost od pružatelja usluga Interneta?

✉ **Važnost Mrežne neutralnosti za odabir operatera/ugovora**

Moderator: prikaži opet listu s važnim karakteristikama na flipchart-u

- Koliko su Vam važni ovi aspekti Mrežne neutralnosti kada odabirete operatera/ugovor?
- U kojoj mjeri su oni važni ako ih usporedimo s ostalim aspektima koje ste naveli ranije (npr. cijena, brand image, trajanje ugovora, itd.)
- Da li smatrate razumnim plaćati više za mrežnu neutralnost?
 - Zašto? Ili zašto ne?
- Ako su blokiranje i usporavanje brzine dozvoljeni, biste li bili spremni platiti više ako su neki od aspekata mrežne neutralnosti uključeni u Vaš ugovor?
 - Za koje od tih aspekata i zašto?
 - Koliko više biste bili spremni platiti?

(5) Finalni komentari / Zaključak

10 minuta

U ovom dijelu bi svatko u grupi imao priliku dati neki finalni komentar ili zaključak.

Na kraju smo ove zanimljive diskusije. Samo bih željela pitati još svakoga od Vas da date neki svoj konačni zaključak na ovu našu današnju temu.

Hvala puno na Vašem vremenu i sudjelovanju. Bilo je vrlo zanimljivo i korisno čuti Vaša mišljenja o našoj temi. Nadam se da ste uživali kao i ja. Još jednom hvala!

C.2.3 Translation into Czech

Témata:

Témata	minut
(1) Úvod	15
(2) Osobní využívání Internetu	25
(3) Rozhodovací kritéria pro volbu poskytovatele Internetu a smlouvy	30
(4) Síťová neutralita	40
(5) Závěrečné poznámky / závěr	10
CELKEM	120

Scénář diskuse: síťová neutralita

(1) Úvod	15 minut
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Obecný úvod do procedury skupinové diskuse - vysvětlujeme:

- trvání
- pravidla komunikace
- ochrana údajů
- zájem o názory - nejsou správné nebo špatné odpovědi
- výzva k otevřené a živé diskusi na daná témata

Dobrý večer, děkuji vám všem za dochvilnost. Jmenuji se ... a budu dnešní diskusi moderovat.

Než začneme, ráda bych zmínila několik věcí. Tato diskuse je velmi neformální – jsem tu proto, abych vyslechla vaše myšlenky a názory. Máme dvě hodiny na diskusi týkající se Internetu a způsobů, jakými jej využíváte. Neexistují správné nebo špatné odpovědi. Zajímají mě pouze vaše osobní názory. Buďte tedy prosím tak otevření a upřímní, jak je jen možné. A čím více toho můžete sdělit, tím lépe!

Buďte prosím tak laskaví a zkontrolujte, zda jsou vaše mobilní zařízení vypnuta.

Vzhledem k tomu, že těchto diskusí pořádáme několik, je všechny nahráváme na videozáznam, abychom je mohli později přepsat a detailně analyzovat. Nahrávky jsou pořizovány výhradně za účelem přepisu a analýzy a posléze jsou smazány.

Tento výzkum realizován pro společnost YouGov v souladu s etickým kodexem Market Research Society. Podle pravidel MRS budou všechny informace, které poskytnete, přísně důvěrné.

Představení účastníků

- Na začátek bych ráda, abyste se všichni představili, abychom všichni věděli, s kým hovoříme.
 - sdělte nám vaše křestní jméno,
 - věk,
 - zaměstnání,
 - váš rodinný stav a cokoliv dalšího, co o sobě chcete ostatním sdělit.

Děkuji vám.

(2) Osobní využívání Internetu

25 minut

Tato část má za cíl prozkoumat význam a osobní využívání Internetu.

Už jsem prozradila, že se dnes budeme bavit o Internetu. Než začneme diskutovat o konkrétních tématech a názorech, ráda bych se dozvěděla, co si asociujete s pojmem „Internet“.

(Moderátor: Napište prosím na flipchart svisle slovo INTERNET)

Asociace/ hra s flipchartem

- Řekněte mi prosím ke každému písmenu tohoto slova něco, co si s Internetem spojujete (např. I = informace, inovace atd., N = novinky, nástroj atd.)
- Nyní mi také můžete říct další výrazy, které začínají jinými písmeny, ale jsou spojené s Internetem

Moderátor: Napište všechny asociace na flipchart

☒ **Osobní využití podrobně**

Když se zamyslíte nad svým osobním využíváním Internetu:

- popište mi prosím typickou denní interakci s Internetem... Popište, kdy a kde používáte Internet, jaké druhy služeb využíváte nebo jaké druhy stránek navštěvujete, jaká používáte zařízení?

Moderátor: pokud je Internet využíván ve velmi rozdílných situacích, prozkoumejte rozdíly vyplývající z emočních stavů nebo nálad: jak se cítíte, když... ? A jak se cítíte, když potom...?

- Doplnující otázky:
 - Jak často používáte Internet?
 - Kdy používáte Internet?
 - K čemu používáte Internet?
 - Používáte jej pro zábavu? Používáte jej pro práci?
 - Kde používáte Internet?
 - Kde v domě? Kde sedíte? (na gauči, u stolu, ve vaně?)
 - Když jej používáte, děláte přitom ještě něco jiného (například máte zapnutou televizi, kterou sledujete?) nebo jej využíváte účelově a soustředíte se pouze na tuto činnost? Na jakých zařízeních (doma) Internet používáte? (chytré telefony, tablety, fotoaparáty, notebooky, čtečky e-knih, stolní počítače atd.)
 - K čemu používáte které zařízení? Používáte svá zařízení různým způsobem? Jak?

☒ **Osobní význam**

- Jaký význam má Internet pro vás osobně? Jakou roli hraje Internet ve vašem životě?

Moderátor: podstatné jsou jak emocionální a sociální aspekty, tak racionální

- Je to zdroj informací? Možná hlavní zdroj informací? Svoboda informací, svoboda vyjádření...?
-
- Využíváte jej pro zjednodušení/uspořádání denního života (bankovníctví, nákupy, kontakt s veřejnou správou, např. daňové přiznání)
- Zábava (sledování televize/filmů [legální/nelegální], hraní her atd.)
- Spojení s přáteli a rodinou (sociální sítě, Skype, FaceTime, Viber atd.)

- Hledání nových přátel, partnerů
 - Osobní prezentace / osobní image (Facebook, Xing, LinkedIn, blogy atd.)
 - Jsou nějaké vlastnosti, které se vám na Internetu zvlášť líbí? Co se vám na něm líbí?
 - Jsou nějaké vlastnosti, které se vám zvlášť nelíbí? Pokud ano, jaké?
- Kdybyste už neměli přístup na Internet, co by vám nejvíc chybělo? Prosím vysvětlete.
 - Ti z vás, kteří žijí společně s dalšími osobami (rodina/spolubydlící): Jaký význam má Internet pro jednotlivé členy vaší domácnosti?
 - Jsou zde rozdíly? Jaké? (Možná méně důležité pro rodiče, ale velmi důležité pro děti?)
 - Kdo by dokázal žít bez Internetu a kdo ne? Jak to?
 - K čemu jej používají ostatní členové domácnosti?

☒ Zkušenosti s výpadky

- Můžete popsat jakoukoliv nedávnou situaci, kdy jste měli problémy s vaším Internetovým připojením/přístupem, nebo kdy Internet nefungoval správně nebo fungoval neočekávaným způsobem? (Prosím vysvětlete).
- Co přesně se stalo? *(Moderátor: zajistěte, aby byl problém řádně definován; důležité: v tomto momentě jde spíše o „menší“ a „krátké“ výpadky, ne o problémy založené na delším přerušení připojení, např. změně poskytovatele)*
 - Kde podle vás nastala chyba? V čem vidíte důvod těchto výpadků (např. používání zastaralého zařízení, pomalé připojení kvůli...? (např. vysokému zatížení sítě / pomalému poskytovateli / omezení rychlosti stahování atd.)?
 - Jak jste to prožívali? Jak jste se kvůli tomu cítili? (velký problém vs. malý problém, rozčilení vs. tolerance)
 - Jaké pocity ve vás tato situace vyvolala? (bezmoc, zranitelnost, zlost, smutek atd.)

☒ Zkušenosti s velkými výpadky

- Můžete vlastními slovy definovat, co podle vás představuje menší výpadek ve srovnání s větším výpadkem Internetu?
- Pamatujete si nedávnou situaci, kdy jste neměli přístup na Internet několik dní v kuse?
 - Jak jste se s tím vyrovnali?
 - Znáte důvod (technické problémy s vlastními zařízeními, změna poskytovatele, výpadek elektřiny, jiné)?
 - Jak dlouho jste byli bez Internetu?
 - Jak jste tuto situaci prožívali? (Jako velké narušení vašeho života nebo jako žádný problém?)
 - Jaké pocity ve vás tato situace vyvolala? (bezmoc, zranitelnost, zlost, smutek atd.)

☒ **Fungování Internetu:**

- Zatím jsme hodně mluvili o vašem osobním využívání Internetu a o důležitosti Internetu pro váš denní život. Teď by mě zajímalo: jak vlastně Internet funguje?
- Teď si prosím představte, že jsem dítě. A jak někteří z nás vědí, děti se hodně vyptávají. Zkuste tedy vysvětlit Internet vlastními slovy a nebojte se pro vysvětlení použít velmi symbolické a obrazné výrazy.

Moderátor: Prosím ukažte následující otázky napsané na flipchartu, abyste podpořili účastníky, zajistěte použití různých přirovnání (např. Internet je pavoučí síť, která propojuje lidi)

- Jak si myslíte, že Internet funguje?
- Kdo provozuje Internet?
- Kdo platí za Internet?
- Kdo vytváří Internet?
- Jakými pravidly se Internet řídí?
- Děkuji vám. Nyní bych vám ráda rozdala papíry, na nichž je popsáno fungování Internetu. Napište na horní okraj své křestní jméno. Text si důkladně pročtěte a

vyznačte červenou barvou pasáže, kterým je obtížně rozumět, a zelenou barvou pasáže, kterým dobře rozumíte.

Moderátor: Prosím dejte papír každému účastníkovi, ověřte, že jsou všechny podepsané, abychom mohli při analýze každý text spojit s konkrétním účastníkem.

Internet umožňuje vzájemnou komunikaci mezi elektronickými zařízeními pomocí výměny libovolných digitálních dat. Není to jedna síť, ale kombinace mnoha sítí. Sada společných technických pravidel zaručuje, že výměna dat funguje nezávisle na tom, kde a jak se elektronické zařízení k Internetu připojí.

Existují dvě základní pravidla. Za prvé, každé zařízení připojené k Internetu má vlastní adresu. Díky tomu jej lze identifikovat a připojit. Za druhé, existují pravidla, která řídí cestu, kterou se data dostanou od odesílatele k příjemci prostřednictvím jednotlivých sítí.

- Překvapilo vás toto vysvětlení?
 - Co bylo odlišné od vašeho očekávání?
 - Co bylo snadno nebo obtížně pochopitelné?
 - Máte další otázky? (Moderátor: odpovědi na diskutované otázky naleznete níže. Vysvětlení přečtete pouze v případě, že některé aspekty nejsou správně chápány.)
 - **Jak si myslíte, že Internet funguje?** Internet funguje jako síť sítí. Definuje sadu společných pravidel, která určují, jak může být každé připojené zařízení kontaktováno a jak si data najdou cestu k cíli napříč vzájemně propojenými sítěmi, které tvoří Internet.
 - **Kdo provozuje Internet?** V podstatě to jsou operátoři sítí, které vzájemným propojením Internet tvoří, a také operátoři infrastruktury, kde k síťovému propojení dochází. Méně striktní vymezení by zahrnovalo další subjekty, bez nichž by Internet pro většinu uživatelů nebyl použitelný, např. operátory takzvaných root serverů, které jsou klíčové pro správné překládání doménových názvů na Internetové adresy.
 - **Kdo platí za Internet?** Spotřebitelé a firmy platí za přístup k Internetu a často i za objem přenesených dat. Poskytovatelé obsahu a aplikací platí primárně v závislosti na jejich objemu dat přenášených z/do jejich datových center do/z Internetu. Operátoři platí za síťovou infrastrukturu, její provoz a (v závislosti na smluvních podmínkách) za výměnu dat s ostatními sítěmi.

- **Kdo vytváří Internet?** Z hlediska toho, kdo buduje Internet a zajišťuje jeho chod, je odpověď v podstatě stejná, jako kdo provozuje Internet. Z hlediska toho, kdo vytváří pravidla, která definují Internet, by však měla být zmíněná široká škála subjektů, které vyvíjejí Internetové standardy a zajišťují dohled nad Internetem. Důležité příklady zahrnují IETF (Internet Engineering Task Force), IANA (Internet Assigned Numbers Authority), ICANN (Internet Corporation for Assigned Names and Numbers), a W3C (World Wide Web Consortium).
- **Jakými pravidly se Internet řídí?** Samotné jádro těchto pravidel se dotýká přidělování adres a směrování. Pravidla jsou specifikována jako protokoly – uvedená pravidla jsou vysvětlena v Internetovém standardu pro Internetový protokol (IP). S probíhajícím přidáváním nových a nových protokolů do sbírky Internetových standardů byl nyní zaveden všezahrnující balík Internetových protokolů, který pokrývá všechny klíčové aspekty, např. jak jsou přenášena data, nebo jak fungují Internetové aplikace jako e-mail.

(3) Rozhodovací kritéria pro výběr poskytovatele Internetu a smlouvy 30 minut

Tato část má za úkol prozkoumat rozhodovací kritéria pro výběr poskytovatele Internetu. Jaká jsou relevantní hlediska při výběru Internetového poskytovatele? Jaká jsou hlavní kritéria, která kritéria se mohou zdát méně důležitá? Jak vypadá kvalitní smlouva? Jak vypadá rozhodovací proces? Je v procesu účastník zapojen hodně nebo málo?

Zvláštní důraz bude kladen na získání informací o bodech zájmu z hlediska procesu podání nabídky a na identifikaci problémů nebo možných přehnaných nároků.

Poskytovatel Internetu

Děkuji vám. Nyní se posuneme k trochu jinému tématu. Chtěla bych se vás **každého** zeptat:

- U kterého poskytovatele Internetu jste?
 - Kolik měsíčně platíte svému Internetovému poskytovateli?
 - Jak dlouho jste u tohoto poskytovatele? (Moderátor: zaznamenejte si odpovědi, informace jsou důležité pro další diskusi!)
- Kolik možností jste měli (kolik potenciálních poskytovatelů a smluvních variant jste měli) při výběru k dispozici?
- Jaké jsou detaily vaší smlouvy s ohledem na technická data (rychlost stahování, objem dat, rychlost nahrávání, trvání smlouvy?) Pamatujete si je?
- Pokud byste měli svého poskytovatele celkově zhodnotit, jakou známku byste mu dali? 1 je velmi dobrý a 5 nedostatečný.

- Jsou tu nějaké aspekty, které se vám na vašem poskytovateli obzvlášť líbí?
Které (např. stabilita připojení, image firmy)?
- Jsou tu nějaké aspekty, které se vám na vašem poskytovateli obzvlášť nelíbí?
Které (např. pomalé připojení, cena, dlouhé čekání atd.)?

Moderátor: pokud jsou spontánně zmíněny aspekty síťové neutrality, prozkoumejte je!

- Myslíte si, že vaše volba poskytovatele Internetu / smlouvy má vliv na vaši zkušenost s využíváním Internetu?

☒ @ Účastníci, kteří nezměnili poskytovatele/smlouvu během posledních 12 měsíců:

- Chystáte se změnit poskytovatele/smlouvu během následujících 12 měsíců?
- POKUD ANO: Proč?
- POKUD NE: Proč chcete zůstat u svého poskytovatele/zachovat stávající smlouvu?

☒ @ Účastníci, kteří změnili poskytovatele/smlouvu během posledních 12 měsíců:

- Jaké důvody vás vedly ke změně poskytovatele/smlouvy? Proč jste změnili svého poskytovatele/smlouvu?
- Když si vzpomenete na změnu poskytovatele/smlouvy: jak jste tento proces vnímali?
- Bylo pro vás snadné nebo obtížné vybrat nového poskytovatele/smlouvu?
 - POKUD OBTÍŽNÉ: Co konkrétně na tom bylo obtížné? Co jste shledali jako náročné?
- Jak jste se informovali? Bylo pro vás snadné či obtížné získat potřebné informace?
 - Prosím vysvětlete.
 - Co jste dělali poté?
 - Které informace pro vás byly nedostupné i po dlouhém hledání?
- Jak jste se cítili po změně poskytovatele/smlouvy? Byli jste o své volbě přesvědčení? (Zodpovědný nebo nejistý pocit?)

☒ Předstíraná změna poskytovatele:

- Představte si prosím, že byste měli zítra změnit poskytovatele. Kam byste kvůli tomu šli? Co byste dělali?
- Kde byste získali informace? (např. Internetové portály, webové stránky poskytovatelů, doporučení přátel)
- Co byste dělali potom?
- Pohled na nové poskytovatele: která hlediska by pro vás byla obzvlášť důležitá?
Prozkoumejte dále (*Moderátor: následující hlediska jsou důležitá, zajistěte, aby byla všechna zmíněná - pokud ne, vyjmenujte chybějící a prodiskutujte je (krátce):*)
 - Cena
 - Značka
 - Rychlost stahování a nahrávání
 - Balíček s jinými službami (telefonování, televize, mobilní služby atd.)
 - Promo akce (např. router zdarma, bez poplatku za změnu, tablet zdarma, zvláštní nabídky atd.)
 - Služby (horká linka/servisní linka, blízká prodejna s personálem a poradenstvím atd.)
 - Obsah (např. Internetová televize, TV na přání se zvláštním obsahem, streamování hudby atd.)
 - Trvání smlouvy a poplatky za ukončení
- Pokud srovnáte s minulostí, jsou pro vás nyní některá kritéria při výběru poskytovatele důležitější? POKUD ANO, která? Proč se stala důležitější?
- Pohled do budoucnosti: vidíte nějaká hlediska, která získají nebo ztratí na důležitosti? Proč si to myslíte?
Moderátor: pokud jsou zmíněny aspekty síťové neutrality, prosím prozkoumejte

(4) Síťová neutralita

40 minut

Tématem této části je síťová neutralita. Je třeba prozkoumat, jestli je síťová neutralita známý termín, jak a jakými slovy je popisována, jak je vnímána, jaké významy nese a které její aspekty mají pro respondenty osobní význam.

☒ Síťová neutralita – spontánní reakce a porozumění účastníků

Děkuji vám. Nyní bych chtěla mluvit o dalším aspektu Internetu. Napsala jsem na flipchart termín, o kterém bych s vámi chtěla diskutovat: **síťová neutralita**

Moderátor: ukažte prosím termín na flipchartu a napište k němu zmíněné asociace

- Řekněte mi prosím všechno, co se vám vybaví, když tento termín uslyšíte (asociace).
- Znamená pro vás něco? POKUD ANO, co pro vás znamená?
- Jak byste vysvětlili termín síťová neutralita příteli, který o něm dosud neslyšel?

☒ **Síťová neutralita – reakce na definici**

Děkuji vám. Nyní bych vám chtěla přečíst definici termínu síťová neutralita.

Moderátor: Přečtěte přesně následující definici:

Síťová neutralita znamená, že se všemi daty v síti je zacházeno podle stejných pravidel. Stejné zacházení se vztahuje k standardnímu postupu, jakým jsou data v síti přenášena ke svému cíli. Standardní postup pro stejné zacházení je takový, že veškerá data jsou přeposílána podle stejných pravidel.

- V návaznosti na naši předchozí diskusi: byla pro vás tato definice síťové neutrality překvapivá?
 - Co bylo odlišné od vašeho očekávání?
 - Co bylo snadné či obtížné pochopit?
- Zkuste prosím popsat termín síťová neutralita vlastními slovy.
 - Jak byste ho vysvětlili dítěti?

☒ **Aspekty síťové neutrality – smýšlení a chápání účastníků**

- Řekněte mi, prosím, jaké aspekty vás napadnou, když se zamyslíte nad síťovou neutralitou.
 - Najdou se případy, kdy Internet nefungoval tak, jak měl, s ohledem na definici síťové neutrality?
- Vzpomeňte si prosím na dnešní předchozí diskusi. Mohlo dojít k tomu, že jste prožili nečekané zkušenosti v souvislosti s používáním Internetu (např. některé aplikace nefungovaly správně, zatímco jiné ano). Mohlo toto nějak souviset se síťovou neutralitou?

Moderátor: Prosím запиšte si všechna hlediska/příklady

✉ **Aspekty síťové neutrality – reakce na definici**

- Děkuji vám. Nyní bych vám ráda rozdala papíry, na kterých najdete krátký text o následcích, ke kterým by mohlo vést odchýlení od síťové neutrality. Najdete tam také seznam aspektů, které by mohly mít vliv na vaši zkušenost s využíváním Internetu. Prosím, důkladně si vše pročtěte a vyznačte červenou barvou pasáže, které jsou obtížně srozumitelné, a zelenou barvou pasáže, kterým rozumíte snadno. Prosím, napište na horní okraj papíru své křestní jméno.

Moderátor: Rozdejte každému účastníkovi jeden papír, ověřte, že jsou všechny papíry podepsané, abychom mohli při analýze každý text spojit s konkrétním účastníkem.

Text pro účastníky

Odchylna od síťové neutrality má za následek, že data jsou v síti přeposílána podle sady pravidel nastavených podle odesílatele, cíle, typu aplikace, poskytovatele aplikace, typu obsahu, poskytovatele obsahu nebo kombinace těchto faktorů. Specifická pravidla přeposílání mohou platit permanentně, v určitých časových úsecích (např. během špičky) nebo dynamicky v závislosti na konkrétní situaci v síti. Specifická pravidla přeposílání mohou platit pro všechny nebo jen pro některé síťové uživatele. Uplatňování specifických pravidel přeposílání vyžaduje, aby síťový operátor řídil datové přenosy v síti. Na jednu stranu může řízení datových přenosů znamenat, že data nejsou vůbec přeposílána. Toto by znamenalo blokování konkrétního odesílatele, cíle, typu aplikace, poskytovatele aplikace, typu obsahu a/nebo poskytovatele obsahu. Na druhou stranu může řízení datových přenosů znamenat, že data jsou přeposílána s vyšší nebo nižší prioritou, že jsou zpomalována nebo že má jejich přenos určitou garantovanou kvalitu. Tyto praktiky by měly za následek změny v očekávané kvalitě, kterou uživatel pociťuje, pokud využívá konkrétní aplikaci nebo obsah.

- Konkrétní aplikace, konkrétní obsah nebo aplikace či obsah od konkrétního poskytovatele mohou být permanentně nebo dočasně nedostupné, zatímco jiné aplikace, obsah nebo aplikace a obsah od jiných poskytovatelů jsou dostupné.
- Konkrétní aplikace, obsah nebo aplikace či obsah od konkrétního poskytovatele mají permanentně nebo dočasně sníženou kvalitu, zatímco jiné aplikace, obsah nebo aplikace a obsah od jiných poskytovatelů mají dobrou kvalitu.
- Konkrétní aplikace, obsah nebo aplikace či obsah od konkrétního poskytovatele mají permanentně vysokou kvalitu, zatímco jiné aplikace, obsah nebo aplikace a obsah od jiných poskytovatelů se kvalitativně liší.
- Komunikace od konkrétních osob nebo pro konkrétní osoby je permanentně nebo dočasně nedoručována, zatímco komunikace od jiných osob či pro jiné osoby je doručena standardně.

Výše zmíněné efekty mohou být následkem praktikovaného řízení síťového provozu, ale mohou také nastat v důsledku jiných příčin. Samotný efekt neumožňuje přesné stanovení příčiny.

- Byly pro vás některé z těchto aspektů síťové neutrality v minulosti relevantní?
 - Prosím uveďte příklady, jak tyto různé aspekty ovlivnily vaši osobní uživatelskou zkušenost s Internetem.
- Kde jste nejprve spatřovali příčinu těchto efektů? (např. pomalé stahování bylo odůvodňováno zastaralým zařízením namísto omezením rychlosti stahování ze strany poskytovatele)
- Zkuste prosím popsat tyto aspekty síťové neutrality vlastními slovy.
 - Jak byste je vysvětlili dítěti?
- Napadají vás nějaká přirovnání?

Férovost síťové neutrality

- Dokážete si představit situace, ve kterých byste preferovali určitý druh regulace?
- Kdy? Jak?

Moderátor: prosím zajistěte, aby diskuze pokrývala jak pozitivní, tak negativní aspekty regulace síťové neutrality. Prohlašte, že regulace mohou mít a mají i pozitivní efekty: vysvětlete a podpořte příklady.

- Jaký je váš názor? Je síťová neutralita férová, pokud se zamyslíte nad vašim osobním uživatelským chováním a potřebami? (Diskuse nad příklady, např. blokování či “sekání” Skypu, preferenční služby)
- Myslíte si, že je rozumné, aby byla síťová neutralita vyžadována od poskytovatelů Internetového připojení nějakým nařízením?

Důležitost síťové neutrality pro volbu poskytovatele/smlouvy

Moderátor: Prosím, ukažte opět seznam aspektů na flipchartu

- Jaký význam mají tyto aspekty síťové neutrality pro vás, když vybíráte poskytovatele/službu?
- Jak důležité jsou pro vás tyto aspekty ve srovnání s jinými, které jste zmínili dříve (např. cena, image značky, trvání smlouvy atd.)?
- Myslíte si, že je rozumné za Internetovou neutralitu platit více?

- Proč? Nebo proč ne?
- Pokud by bylo umožněno blokování či “sekání”, byli byste ochotni platit vyšší poplatky, pokud by některé z aspektů síťové neutrality byly zaručeny vaší smlouvou?
 - Kterých aspektů by se to týkalo, a proč?
 - O kolik více byste platili?

(5) Závěrečné komentáře / závěr**10 minut**

V této části má každý ve skupině možnost se naposledy vyjádřit nebo přidat osobní závěr.

Jsme na konci mimořádně zajímavé diskuse. Na závěr bych chtěla každého z vás požádat, abyste na toto téma přidali váš osobní závěr.

Mnohokrát vám děkuji za váš čas a vaši účast. Vaše názory na toto téma byly opravdu zajímavé a podnětné. Doufám, že pro vás toto sezení bylo stejně příjemné jako pro mě. Ještě jednou vám děkuji.

C.2.4 Translation into Greek**Θέματα:**

Θέματα	λεπτά
(1) Εισαγωγή	15
(2) Προσωπική χρήση Internet	25
(3) Κριτήρια απόφασης για την επιλογή παρόχου και συμβολαίου Internet	30
(4) Ουδετερότητα δικτύου	40
(5) Τελικά σχόλια / Συμπεράσματα	10
	120

Οδηγός Συζήτησης: Ουδετερότητα Δικτύου

(1) Εισαγωγή

15 ΛΕΠΤΑ

Γενική εισαγωγή της διαδικασίας ομαδικών συζητήσεων – επεξηγήσεις:

- Διάρκεια
- Κανόνες επικοινωνίας
- Εμπιστευτικότητα
- Ενδιαφερόμαστε για απόψεις – δεν υπάρχουν σωστές ή λάθος απαντήσεις
- Τους καλούμε σε μια ανοιχτή και ζωντανή συζήτηση των θεμάτων

Καλησπέρα και σας ευχαριστούμε που ήλθατε όλοι στην ώρα σας. Το όνομά μου είναι ... και θα είμαι η συντονίστρια της σημερινής μας συζήτησης.

Πριν ξεκινήσουμε θα ήθελα να πω μερικά πραγματάκια. Η σημερινή μας συζήτηση είναι εντελώς ανεπίσημη – είμαι εδώ για να ακούσω τις σκέψεις και τις απόψεις σας. Θα έχουμε δύο ώρες να συζητήσουμε τις διάφορες πτυχές του Internet και πώς το χρησιμοποιείτε εσείς.

Δεν υπάρχουν σωστές ή λάθος απαντήσεις. Με ενδιαφέρει μόνο η προσωπική σας άποψη. Οπότε σας παρακαλώ να είστε όσο πιο ανοιχτοί και ευλικρινείς γίνεται. Επίσης, όσο περισσότερα λέτε, τόσο το καλύτερο!

Θα σας παρακαλούσα τώρα αν είναι δυνατόν να κλείσετε τα κινητά σας.

Επειδή κάνουμε πολλές τέτοιες συζητήσεις, τις μαγνητοφωνούμε και μαγνητοσκοπούμε όλες έτσι ώστε να μπορούμε μετά να επεξεργαστούμε τα στοιχεία. Οι μαγνητοσκοπήσεις χρησιμεύουν μόνο για να κάνουμε την ανάλυση και μετά τις σβήνουμε.

Αυτή η έρευνα πραγματοποιείται από την εταιρεία έρευνας αγοράς YouGov plc και διέπεται από τους κώδικες δεοντολογίας του MRS και της ESOMAR των οποίων είμαστε μέλη. Σύμφωνα λοιπόν με αυτούς τους κανονισμούς, όλες οι πληροφορίες που θα μας δώσετε θα είναι αυστηρά εμπιστευτικές.

☒ Γνωριμία με τους συμμετέχοντες

- Για αρχή θα ήθελα να συστηθείτε έτσι ώστε να ξέρουμε όλοι με ποιους μιλάμε.
 - Πείτε μας το μικρό σας όνομα,
 - την ηλικία σας,

- με τι ασχολείστε,
- την οικογενειακή σας κατάσταση και οτιδήποτε άλλο θα θέλατε να ξέρουν οι άλλοι για σας.

Σας ευχαριστώ όλους.

(2) Προσωπική χρήση Internet

25 λεπτά

Αυτό το μέρος έχει σαν στόχο τη διερεύνηση και τη συζήτηση σχετικά με σχέση τους με το ίντερνετ και την προσωπική χρήση που κάνουν.

Σας έχω ήδη αποκαλύψει πως σήμερα πρόκειται να συζητήσουμε σχετικά με το ίντερνετ. Πριν αρχίσουμε όμως να συζητάμε σχετικά με συγκεκριμένα θέματα και πτυχές, θα ήθελα να μάθω με τι συνδέετε τη λέξη "Internet", δηλαδή τι συσχετισμούς κάνετε μ'αυτόν τον όρο.

(Συντονιστή: Παρακαλούμε σημειώσε τη λέξη INTERNET κάθετα στο flipchart)

☒ **Συσχετισμοί/ παιχνίδι flip chart**

- Σας παρακαλώ πείτε μου για κάθε γράμμα της λέξης κάτι με το οποίο συνδέετε το Internet (π.χ. I= ιδέες, κλπ. , N= νέο, κλπ.).
- Τώρα μπορείτε να μου πείτε και λέξεις που αρχίζουν από άλλα γράμματα και σχετίζονται με το Internet

Συντονιστή: Γράψε όλες τις αναφορές στο flip chart

☒ **Προσωπική χρήση σε λεπτομέρεια**

Αν σκεφτείτε την προσωπική χρήση που κάνετε στο Internet:

- Σας παρακαλώ περιγράψτε μου από την αρχή ως το τέλος μια συνηθισμένη μέρα ενασχόλησής σας με το Internet.... Πείτε μου πότε και πού το χρησιμοποιείτε, τι είδους υπηρεσίες χρησιμοποιείτε στο Internet ή ποιες ιστοσελίδες επισκέπτεστε, τι συσκευές χρησιμοποιείτε?

Συντονιστή: Εάν το χρησιμοποιούν σε πολύ διαφορετικές περιστάσεις διερευνήσε τις διαφορές από συναισθηματικής πλευράς, διάθεσης: πώς νοιώθετε όταν... Και ποια είναι η διάθεσή σας τότε ...?

- Υποστηρικτικές ερωτήσεις:
 - Πόσο συχνά χρησιμοποιείτε το Internet?

- Πότε χρησιμοποιείτε το Internet?
- Για ποιους λόγους χρησιμοποιείτε το Internet?
 - Το χρησιμοποιείτε για διασκέδαση? Το χρησιμοποιείτε για δουλειά?
- Πού χρησιμοποιείτε το Internet?
 - Πού συγκεκριμένα στο σπίτι? Πού κάθεστε? (στον καναπέ, στο γραφείο, στο μπάνιο?)
- Όταν το χρησιμοποιείτε την ώρα που κάνετε και κάτι άλλο συγχρόνως (μια δεύτερη οθόνη για να βλέπετε τηλεόραση, είναι πάντα ανοιχτή?) ή έχετε σκοπό να το χρησιμοποιήσετε και εκείνη τη στιγμή συγκεντρώνετε στη χρήση του?
- Ποιες συσκευές χρησιμοποιείτε (στο σπίτι) για να μπείτε στο Internet? (Κινητά, tablets, laptops, notebooks, e-books, σταθερό υπολογιστή κλπ.)
- Ποια συσκευή χρησιμοποιείτε για κάθε σκοπό? Χρησιμοποιείτε διαφορετικά την κάθε συσκευή? Πώς?

☒ Προσωπική σχέση

- Τι σημαίνει για σας προσωπικά το Internet? Τι ρόλο παίζει το Internet στη ζωή σας?
Συντονιστή: μας ενδιαφέρουν τόσο συναισθηματικές και κοινωνικές πλευρές, όσο και λογικές/πρακτικές πλευρές
 - Είναι πηγή πληροφόρησης? Ίσως η κυριότερη πηγή πληροφόρησης...
Ελεύθερη πληροφόρηση, ελεύθερη έκφραση,...
 - Χρησιμοποιείται για απλούστευση/οργάνωση της καθημερινής ζωής
(τραπεζικές συναλλαγές, ψώνια, δημόσιες υπηρεσίες, π.χ. δήλωση φόρου)
 - Διασκέδαση (να βλέπετε τηλεόραση / Ταινίες (νόμιμα / παράνομα), να παίζετε παιχνίδια, κλπ.)
 - Σύνδεση με φίλους και συγγενείς (κοινωνική δικτύωση, Skype, FaceTime, Viber, κλπ.)
 - Να βρίσκετε καινούργιους φίλους, συνεργάτες
 - Προσωπική παρουσίαση (παρουσίαση του εαυτού σας) / Προσωπική εικόνα
(Facebook, Xing, LinkedIn, blogs, κλπ.)
 - Υπάρχουν κάποιες πτυχές του Internet που σας αρέσουν ιδιαίτερα? Τι σας αρέσει σ' αυτό?

- Υπάρχουν κάποιες πτυχές του Internet που σας ενοχλούν/δυσχεραίνουν ιδιαίτερα? Εάν ναι, ποιες?
- Εάν δεν είχατε πια Internet – τι είναι αυτό που θα σας έλειπε περισσότερο? Σας παρακαλώ εξηγήστε.
- Για όσους από εσάς ζείτε με άλλους (οικογένεια/συγκάτοικους): Ποια είναι η σχέση του καθενός από τα υπόλοιπα μέλη του νοικοκυριού με το Internet?
 - Υπάρχουν διαφορές? Ποιες? (Ίσως όχι τόσο σημαντικό για τους γονείς αλλά πολύ σημαντικό για τα παιδιά?).
 - Ποιος θα μπορούσε να ζήσει χωρίς το Internet και ποιος δε θα μπορούσε? Πώς κι έτσι?
 - Για τι είδους χρήση το χρησιμοποιούν τα άλλα μέλη του νοικοκυριού?

☒ Εμπειρίες ενόχλησης

- Μπορείτε να περιγράψετε μια πρόσφατη περίπτωση που είχατε κάποιο πρόβλημα με τη σύνδεση/πρόσβαση στο Internet σας – ή που το Internet δε λειτουργούσε σωστά ή με κάποιο απρόσμενο τρόπο? (Σας παρακαλώ εξηγήστε)!
- Τι συνέβη ακριβώς? (Συντονιστή: Βεβαιώσου πως το πρόβλημα ορίζεται σωστά, Σημαντικό: σ' αυτή τη φάση μας ενδιαφέρουν περισσότερο τα πιο 'μικρά' και 'σύντομα' προβλήματα, όχι προβλήματα που σχετίζονται με ανωμαλίες σύνδεσης μεγαλύτερης διάρκειας, π.χ. αλλαγή παρόχου)
 - Τι νομίζετε πως πήγε στραβά? Ποιοι νομίζετε πως ήταν οι λόγοι γι' αυτές τις ανωμαλίες (π.χ. χρήση μιας παλιάς/παρωχημένης συσκευής, αργή σύνδεση λόγω... πολλών χρηστών συγχρόνως / αργού παρόχου / περιορισμών download κλπ.)?
 - Πώς σας φάνηκε αυτή η εμπειρία? Τι νοιώσατε? (μεγάλη αναστάτωση vs μικρό πρόβλημα, ενόχληση vs ανεκτικότητα)
 - Πώς σας έκανε να αισθανθείτε αυτή η κατάσταση? (ανήμποροι, ευάλωτοι, θυμωμένοι, στενοχωρημένοι, κλπ.)

☒ Εμπειρίες μεγάλης αναστάτωσης

- Μπορείτε να ορίσετε με το δικό σας τρόπο τι αποτελεί μικρή αναστάτωση σε σύγκριση με μια μεγάλη αναστάτωση σχετικά με το Internet?

- Θυμάστε κάποιες πρόσφατες περιπτώσεις που δεν είχατε Internet για αρκετές μέρες συνεχόμενες?
 - Πώς το αντιμετωπίσατε?
 - Γνωρίζετε το λόγο (τεχνικά προβλήματα με δικές σας συσκευές, αλλαγή παρόχου, διακοπές ρεύματος, άλλα)?
 - Για πόσο διάστημα δεν είχατε Internet?
 - Και πώς σας φάνηκε αυτό? (Μεγάλη αναστάτωση στη ζωή σας ή κανένα απολύτως πρόβλημα?)
 - Πώς σας έκανε να αισθανθείτε αυτή η κατάσταση? (ανήμποροι, ευάλωτοι, θυμωμένοι, στενοχωρημένοι, κλπ.)

☒ Η λειτουργία του Internet:

- Μέχρι τώρα έχουμε μιλήσει πολύ για την προσωπική χρήση του Internet που κάνετε καθώς και για τη σημαντικότητα του Internet στην καθημερινή σας ζωή. Τώρα αναρωτιέμαι: Πώς λειτουργεί το Internet στην πραγματικότητα?
- Σας παρακαλώ ας φανταστούμε τώρα πως είμαι παιδί. Και όπως πολλοί από μας γνωρίζουμε, τα παιδιά κάνουν πολλές ερωτήσεις. Οπότε σας παρακαλώ εξηγήστε με δικά σας λόγια τι είναι το Internet και νοιώστε ελεύθεροι να το εκφράσετε και με συμβολικό και μεταφορικό τρόπο.

Συντονιστή: Παρακαλούμε δείξε τις εξής ερωτήσεις γραμμένες στο flipchart για να βοηθηθούν οι συμμετέχοντες, παρακαλούμε σιγουρέψου πως χρησιμοποιούνται και αναλογίες (π.χ. το Internet είναι ένας ιστός αράχνης που ενώνει τον κόσμο)

- Πώς νομίζετε πως λειτουργεί το Internet?
 - Ποιος λειτουργεί το Internet?
 - Ποιος πληρώνει για το Internet?
 - Ποιος φτιάχνει το Internet?
 - Ποιοι κανόνες ισχύουν στο Internet?
- Σας ευχαριστώ. Τώρα θα ήθελα να σας δώσω μια σελίδα χαρτί στο οποίο περιγράψουμε τη λειτουργία του Internet. Σας παρακαλώ σημειώστε το μικρό σας όνομα στο πάνω μέρος της σελίδας. Μετά διαβάστε προσεκτικά και σημειώστε τα

σημεία που βρίσκετε δύσκολο να καταλάβετε με κόκκινο στυλό και τα σημεία που βρίσκετε εύκολο να καταλάβετε με πράσινο στυλό.

Συντονιστή: Παρακαλούμε μοίρασε τα χαρτιά σε όλους τους συμμετέχοντες και σιγουρέψου πως είναι σημειωμένα τα ονόματα σε όλα, έτσι ώστε να μπορεί να γίνει αναγωγή του καθενός στον αντίστοιχο ερωτώμενο κατά τη διάρκεια της ανάλυσης.

Το Internet επιτρέπει στις ηλεκτρονικές συσκευές να επικοινωνούν μεταξύ τους με την ανταλλαγή ψηφιακών δεδομένων με τυχαίο τρόπο. Δεν είναι ένα δίκτυο, αλλά ένας συνδυασμός πολλών δικτύων. Ένα σύνολο κοινών τεχνικών κανόνων διασφαλίζει ότι οι ανταλλαγές δεδομένων λειτουργούν, ανεξάρτητα από το πού ή το πώς συνδέεται μια ηλεκτρονική συσκευή με το Internet.

Υπάρχουν δύο βασικοί κανόνες. Πρώτον, κάθε συσκευή που συνδέεται με το Internet έχει μια μοναδική διεύθυνση. Επομένως, μπορεί να είναι αναγνωρίσιμη και προσβάσιμη. Δεύτερον, υπάρχουν κανόνες που διαχειρίζονται το μονοπάτι των δεδομένων από τον αποστολέα στον παραλήπτη μέσω των διαφόρων δικτύων.

- Σας εξέπληξε αυτή η επεξήγηση?
 - Τι ήταν διαφορετικό απ'ό,τι περιμένατε?
 - Τι ήταν εύκολο ή δύσκολο να καταλάβετε?
 - Έχετε περαιτέρω ερωτήσεις? (Συντονιστή: παρακαλούμε βρες πιο κάτω τις απαντήσεις στις ερωτήσεις που συζητιούνται. Διάβασε μόνο τις δικές μας επεξηγήσεις εάν κάποια σημεία δεν έχουν γίνει κατανοητά.)
 - **Πώς νομίζετε πως λειτουργεί το Internet?** Το Internet λειτουργεί σαν ένα δίκτυο δικτύων. Ορίζει ένα σύνολο κοινών κανόνων που καθορίζουν τον τρόπο με τον οποίο μπορεί να γίνει η πρόσβαση σε κάθε συσκευή που συνδέεται μ'αυτό και πώς βρίσκουν το δρόμο για τον προορισμό τους τα δεδομένα μέσω των αλληλοσυνδεόμενων δικτύων που συνθέτουν το Internet.
 - **Ποιος λειτουργεί το Internet?** Στην ουσία είναι οι διαχειριστές των δικτύων που συνδέονται μεταξύ τους για να δημιουργήσουν το Internet, καθώς και οι διαχειριστές της υποδομής στην οποία πραγματοποιείται η διασύνδεση των δικτύων. Ένας λιγότερο αυστηρός ορισμός θα περιλάμβανε και επιπλέον φορείς εκμετάλλευσης χωρίς τους οποίους το Διαδίκτυο δεν θα ήταν χρήσιμο για τους περισσότερους χρήστες, π.χ. διαχειριστές των λεγόμενων κεντρικών διακομιστών (root servers) που είναι απαραίτητοι για μια λειτουργική

αντιστοίχιση ονομάτων τομέα (*domain names*) σε ιντερνετικές διευθύνσεις (διευθύνσεις *IP*).

- **Ποιος πληρώνει για το Internet?** Οι καταναλωτές και οι επιχειρήσεις πληρώνουν για πρόσβαση στο Internet και συχνά και για την κίνηση δεδομένων τους (*data traffic*). Οι πάροχοι περιεχομένου και εφαρμογών πληρώνουν κυρίως βάσει των όγκων κίνησης δεδομένων που μεταφέρονται από/προς τα κέντρα δεδομένων τους προς/από το Internet. Οι διαχειριστές πληρώνουν για την υποδομή δικτύων, τη λειτουργία της, και – ανάλογα με τη συγκεκριμένη συμφωνία – για την ανταλλαγή κίνησης δεδομένων με άλλα δίκτυα.
- **Ποιος φτιάχνει το Internet?** Από πλευράς του ποιος χτίζει και λειτουργεί το Internet, η απάντηση είναι βασικά η ίδια με την ερώτηση του ποιος λειτουργεί το Internet. Όμως, από πλευράς του ποιος δημιουργεί τους κανόνες που ορίζουν το Internet, θα πρέπει να αναφερθεί ένα ευρύ φάσμα φορέων που αναπτύσσουν τις προδιαγραφές του Internet και που συμμετέχουν στη διακυβέρνηση του Διαδικτύου. Παραδείγματα που ξεχωρίζουν αποτελούν η IETF (*Internet Engineering Task Force*), η IANA (*Internet Assigned Numbers Authority*), η ICANN (*Internet Corporation for Assigned Names and Numbers*), και η W3C (*World Wide Web Consortium*).
- **Ποιοι κανόνες ισχύουν στο Internet?** Ο κεντρικός πυρήνας αυτών των κανόνων σχετίζεται με τις διευθύνσεις και τη δρομολόγηση (*routing*). Οι κανόνες ορίζονται ως πρωτόκολλα – οι κανόνες αυτοί συμπεριλαμβάνονται στις προδιαγραφές του Internet για το Πρωτόκολλο Internet (*Internet Protocol*, ή *IP*). Με την προσθήκη όλο και περισσότερων πρωτοκόλλων (τα οποία μάλιστα συνεχίζουν να αυξάνονται) στη συλλογή των προδιαγραφών, έχει καταλήξει να υπάρχει αυτή τη στιγμή μια συγκεντρωτική στίβα πρωτοκόλλων Internet που καλύπτει όλα τα σχετικά θέματα, όπως πώς μεταφέρονται τα δεδομένα, ή πώς λειτουργούν εφαρμογές όπως το *e-mail*.

(3) Κριτήρια απόφασης για την επιλογή παρόχου και συμβολαίου Internet provider 30 λεπτά

Αυτό το μέρος έχει σαν στόχο να διερευνήσει τα κριτήρια λήψης της απόφασης σχετικά με τον πάροχο Internet. Ποια είναι τα χαρακτηριστικά που μας ενδιαφέρουν όταν ψάχνουμε για πάροχο Internet? Ποια είναι σημαντικά κριτήρια και ποια φαίνονται λιγότερο σημαντικά? Ποιο θα θεωρούσα ένα καλό συμβόλαιο? Ποια είναι η διαδικασία επιλογής? Πόσο μεγάλη ή μικρή συμμετοχή υπάρχει σ'αυτή τη διαδικασία?

Ιδιαίτερη έμφαση πρέπει να δοθεί στη απόκτηση γνώσεων σχετικά με τα σημεία-κλειδιά στη διαδικασία προτάσεων καθώς και τον εντοπισμό προβλημάτων ή δυνατότητας για υπερβολικές απαιτήσεις.

☒ Πάροχος Internet

Σας ευχαριστώ. Τώρα θα ήθελα να πάμε σε ένα λίγο διαφορετικό θέμα. Θα ήθελα να ζητήσω από **καθέναν** από σας τα εξής:

- Ποιο πάροχο Internet έχετε?
 - Πόσο πληρώνετε το μήνα στον πάροχο σας Internet?
 - Από πότε έχετε αυτόν τον πάροχο? (Συντονιστή: παρακαλούμε κράτα σημειώσεις, οι πληροφορίες θα είναι σημαντικές για τη συνέχεια της συζήτησης!)
- Πόσες επιλογές είχατε (πόσοι πιθανοί πάροχοι και επιλογές συμβολαίου υπήρχαν διαθέσιμοι εκείνο τον καιρό)?
- Ποιες είναι οι λεπτομέρειες του συμβολαίου σας όσον αφορά τα τεχνικά στοιχεία (ταχύτητα 'κατεβάσματος', όγκος, ταχύτητα 'ανεβάσματος', διάρκεια συμβολαίου?) Θυμάστε?
- Εάν επρόκειτο να βαθμολογήσετε τον πάροχό σας σε μια συνολική βάση: Τι βαθμό θα δίνετε στον πάροχό σας – από το 1 δηλαδή 'πολύ καλός' μέχρι το 6 δηλαδή 'μη ικανοποιητικός'?
 - Υπάρχουν κάποια σημεία τα οποία σας αρέσουν ιδιαίτερα σχετικά με τον πάροχό σας? Ποια (π.χ. σταθερότητα σήματος, εικόνα εταιρείας)?
 - Υπάρχουν κάποια σημεία τα οποία σας δυσαρεστούν ιδιαίτερα σχετικά με τον πάροχό σας? Ποια (π.χ. αργή σύνδεση, κόστη, μεγάλοι χρόνοι αναμονής κλπ.)?

Συντονιστή: Εάν αναφερθούν αυθόρμητα θέματα σχετικά με την ουδετερότητα δικτύου, παρακαλούμε διερευνήσέ τα!

- Ποια είναι η γνώμη σας, η επιλογή παρόχου / συμβολαίου επηρεάζει την εμπειρία σας στη χρήση του Internet?

☒ @ Συμμετέχοντες που δεν έχουν αλλάξει πάροχο/συμβόλαιο μέσα στους τελευταίους 12 μήνες:

- Σχεδιάζετε να αλλάξετε τον πάροχο / το συμβόλαιό σας μέσα στους επόμενους 12 μήνες?
- EAN NAI: Πώς κι έτσι?

- EAN OXI: Γιατί σκοπεύετε να μείνετε με τον ίδιο πάροχο / να διατηρήσετε το συμβόλαιό σας?

☒ **@ Συμμετέχοντες που έχουν αλλάξει πάροχο ή συμβόλαιο μέσα στους τελευταίους 12 μήνες:**

- Ποιοι ήταν οι λόγοι για τους οποίους θελήσατε να αλλάξετε τον πάροχο/συμβόλαιό σας? Γιατί αλλάξατε τον πάροχο/συμβόλαιό σας?
- Αν θυμηθείτε την εποχή που αλλάξατε τον πάροχο / το συμβόλαιό σας: Ποια ήταν η εμπειρία σας από αυτή τη διαδικασία?
- Ήταν εύκολο ή το βρήκατε δύσκολο να επιλέξετε καινούργιο πάροχο/συμβόλαιο?
 - EAN ΗΤΑΝ ΔΥΣΚΟΛΟ: Συγκεκριμένα τι βρήκατε δύσκολο σ' αυτό? Τι βρήκατε απαιτητικό?
- Και πώς πήρατε πληροφόρηση – ήταν εύκολο ή δύσκολο να πάρετε τις πληροφορίες που χρειαζόσασταν?
 - Παρακαλώ εξηγήστε
 - Τι κάνατε τότε?
 - Ποιες πληροφορίες δε μπορέσατε να βρείτε, ακόμη και μετά από μια μεγάλη διαδικασία έρευνας?
- Πώς νοιώσατε όταν αλλάξατε πάροχο/συμβόλαιο? Είσασαν πεπεισμένοι για την επιλογή σας? (Νοιώθατε σιγουριά ή ανασφάλεια?)

☒ **Φανταστική αλλαγή παρόχου:**

- Σας παρακαλώ φανταστείτε πως θα έπρεπε να αλλάξετε πάροχο αύριο. Πώς θα ενεργούσατε? Τι θα κάνατε?
- Από πού θα παίρνατε πληροφορίες? (π.χ. διαδικτυακές πύλες, ιστοσελίδες παρόχων, συστάσεις φίλων)
- Τι θα κάνατε μετά?
- Ψάχνοντας για νέους παρόχους: Ποια χαρακτηριστικά θα ήταν ιδιαίτερα σημαντικά για σας?
Διερεύνησε περισσότερο (Συντονιστή: τα εξής θέματα είναι σημαντικά – παρακαλούμε σιγουρέψου ότι θα καλυφθούν όλα – εάν όχι, ρώτησε γι' αυτά που δεν έχουν αναφερθεί και άφησε να συζητηθούν εν συντομία):

- Τιμή

- Εταιρεία
 - Ταχύτητα ανεβάσματος και κατεβάσματος
 - Πακέτο με άλλες υπηρεσίες (π.χ. σταθερή, TV, κινητή, κλπ.)
 - Προσφορά (π.χ. δωρεάν router, αλλαγή χωρίς χρέωση, δωρεάν iPad, ειδικές προσφορές, κλπ.)
 - Εξυπηρέτηση πελατών (π.χ. τηλεφωνική γραμμή εξυπηρέτησης, κοντινό κατάστημα με υπαλλήλους να σας εξυπηρετήσουν, κλπ.)
 - Περιεχόμενο (π.χ. IPTV, δυνατότητα TV ειδικού περιεχομένου εάν ζητηθεί, music streaming, κλπ.)
 - Διάρκεια συμβολαίου και χρεώσεις διακοπής
- Σε σύγκριση με το παρελθόν – υπάρχουν κάποια κριτήρια τώρα που είναι πιο σημαντικά από πριν όταν επιλέγετε νέο πάροχο? ΕΑΝ ΝΑΙ, ποια είναι αυτά? Γιατί έχουν γίνει πιο σημαντικά?
 - Κοιτάζοντας στο μέλλον: Βλέπετε κάποια σημεία τα οποία πιθανόν θα γίνουν πιο σημαντικά ή λιγότερο σημαντικά? Γιατί το νομίζετε αυτό?
Συντονιστή: Εάν αναφερθούν θέματα σχετικά με την ουδετερότητα δικτύου, παρακαλούμε διερευνήστε τα

(4) Ουδετερότητα Δικτύου

40 λεπτά

Το θέμα αυτού του μέρους είναι η ουδετερότητα δικτύου. Πρέπει να διερευνηθεί βοηθούμενα εάν η ουδετερότητα δικτύου είναι γνωστός όρος, πώς και με ποιες λέξεις περιγράφεται, τι απόψεις έχουν γι' αυτή, ποια είναι τα νοήματά της και ποιες πτυχές της βρίσκουν οι ερωτώμενοι πως τους αφορούν προσωπικά.

☒ Ουδετερότητα Δικτύου – αυθόρμητες αντιδράσεις και κατανόηση από τους συμμετέχοντες

Σας ευχαριστώ. Τώρα θα ήθελα να συζητήσουμε ένα άλλο θέμα σχετικά με το Internet. Έχω σημειώσει εδώ στον πίνακα έναν όρο που θα ήθελα να συζητήσω μαζί σας: **Ουδετερότητα Δικτύου**

Συντονιστή: Παρακαλούμε δείξε τον όρο στο flipchart και συγκέντρωσε συσχετισμούς πάνω στο flipchart

- Πείτε μου σας παρακαλώ όλα όσα σας έρχονται στο μυαλό όταν ακούτε αυτόν τον όρο (συσχετισμοί)?

- Σημαίνει κάτι για σας? ΕΑΝ ΝΑΙ, τι σημαίνει για σας?
- Πώς θα εξηγούσατε αυτόν τον όρο, δηλαδή 'Ουδετερότητα Δικτύου', σ' ένα φίλο που δεν το έχει ξανακούσει?

☒ Ουδετερότητα Δικτύου – αντιδράσεις στον ορισμό

Σας ευχαριστώ. Τώρα θα ήθελα να σας διαβάσω τον ορισμό του όρου ουδετερότητα δικτύου.

Συντονιστή: Διάβασε την περιγραφή ακριβώς όπως είναι γραμμένη:

Ουδετερότητα Δικτύου σημαίνει πως όλα τα δεδομένα σε ένα δίκτυο αντιμετωπίζονται/μεταχειρίζονται με ίσους όρους. Η ίση μεταχείριση αναφέρεται στο πρωτόκολλο συμπεριφοράς σχετικά με τον τρόπο που τα δεδομένα προωθούνται μέσω του δικτύου στον προορισμό τους. Το πρωτόκολλο συμπεριφοράς για ίση μεταχείριση σημαίνει πως όλα τα δεδομένα προωθούνται σύμφωνα με τους ίδιους κανόνες.

- Μετά την προηγούμενη συζήτησή μας: Αποτέλεσε έκπληξη για σας ο ορισμός της ουδετερότητας δικτύου?
 - Τι ήταν διαφορετικό?
 - Τι ήταν εύκολο ή δύσκολο να καταλάβετε?
- Σας παρακαλώ προσπαθείστε να περιγράψετε τον όρο ουδετερότητα δικτύου με δικά σας λόγια.
 - Πώς θα το περιγράφατε σε ένα παιδί?

☒ Πτυχές της Ουδετερότητας Δικτύου – συσχετισμοί και κατανόηση από τους συμμετέχοντες

- Σας παρακαλώ πείτε μου ποια θέματα σας έρχονται στο μυαλό όταν σκέφτεστε την «ουδετερότητα δικτύου».
 - Έχοντας υπόψη τον ορισμό της ουδετερότητας δικτύου, υπάρχουν κάποια παραδείγματα όπου το Internet δε λειτουργούσε όπως θα έπρεπε?
- Σας παρακαλώ θυμηθείτε τη συζήτηση που είχαμε νωρίτερα. Όταν μιλήσαμε για απρόσμενα αποτελέσματα που πιθανόν να είχατε όταν χρησιμοποιούσατε το Internet (π.χ. εφαρμογές που δε λειτουργούσαν σωστά ενώ άλλες λειτουργούν μια χαρά). Θα μπορούσε αυτό να σχετίζεται κατά κάποιον τρόπο με την ουδετερότητα δικτύου?

Συντονιστή: Παρακαλούμε συγκέντρωσε όλα τα θέματα/παραδείγματα

✉ Χαρακτηριστικά της Ουδετερότητας Δικτύου – αντιδράσεις στον ορισμό

- Σας ευχαριστώ. Τώρα θα ήθελα να σας δώσω μια σελίδα στην οποία υπάρχει ένα κείμενάκι σχετικά με τα αποτελέσματα στα οποία θα μπορούσε να οδηγήσει η απόκλιση από την ουδετερότητα δικτύου. Θα βρείτε επίσης μια λίστα με θέματα που θα μπορούσαν να επηρεάσουν την εμπειρία σας από τη χρήση του Internet. Σας παρακαλώ διαβάστε τα όλα προσεκτικά και σημειώστε τα σημεία που βρίσκετε δύσκολο να καταλάβετε με κόκκινο στυλό και τα σημεία που βρίσκετε εύκολο να καταλάβετε με πράσινο. Σας παρακαλώ σημειώστε πάλι το όνομά σας στο πάνω μέρος της σελίδας.

Συντονιστή: Παρακαλούμε μοίρασε τα χαρτιά σε όλους τους συμμετέχοντες και σιγουρέψου πως είναι σημειωμένα τα ονόματα σε όλα, έτσι ώστε να μπορεί να γίνει αναγωγή του καθενός στον αντίστοιχο ερωτώμενο κατά τη διάρκεια της ανάλυσης.

Σελίδα για του συμμετέχοντες

Παρέκκλιση από την ουδετερότητα δικτύου επομένως σημαίνει πως τα δεδομένα προωθούνται στο δίκτυο σύμφωνα με ένα σύνολο κανόνων που σχετίζονται με τον αποστολέα, τον προορισμό, το είδος της εφαρμογής, τον πάροχο της εφαρμογής, το είδος του περιεχομένου, τον πάροχο του περιεχομένου – ή ένα συνδυασμό αυτών. Συγκεκριμένοι κανόνες προώθησης μπορούν να εφαρμοστούν σε μόνιμη βάση, εντός ορισμένων χρονικών περιόδων (π.χ. κατά τη διάρκεια ωρών αιχμής), ή δυναμικά ως ανταπόκριση σε συγκεκριμένες καταστάσεις σε ένα δίκτυο. Συγκεκριμένοι κανόνες προώθησης μπορεί να εφαρμοστούν σε όλους ή σε κάποιους χρήστες του δικτύου. Η εφαρμογή συγκεκριμένων κανόνων προώθησης απαιτεί να υπάρχει διαχειριστής δικτύου ο οποίος να ελέγχει την κίνηση δεδομένων του δικτύου. Από τη μια πλευρά, η διαχείριση κίνησης μπορεί να σημαίνει πως τα δεδομένα δεν προωθούνται καθόλου. Αυτό θα είχε σαν αποτέλεσμα το μπλοκάρισμα του αντίστοιχου αποστολέα, προορισμού, είδους εφαρμογής, παρόχου εφαρμογής, είδους περιεχομένου, ή/και παρόχου περιεχομένου. Από την άλλη πλευρά, η διαχείριση κίνησης μπορεί να σημαίνει πως τα δεδομένα προωθούνται με υψηλότερη ή χαμηλότερη προτεραιότητα, πως η προώθηση επιβραδύνεται, ή πως πραγματοποιείται με συγκεκριμένη εγγυημένη ποιότητα. Αυτές οι πρακτικές θα οδηγούσαν σε αλλαγή των προσδοκιών όσον αφορά στην ποιότητα που βιώνει ένας καταναλωτής όταν χρησιμοποιεί τη συγκεκριμένη εφαρμογή ή περιεχόμενο.

- Μία συγκεκριμένη εφαρμογή, ένα συγκεκριμένο περιεχόμενο, ή ακόμα κάποιες εφαρμογές/περιεχόμενα ενός συγκεκριμένου παρόχου δεν είναι προσβάσιμα μόνιμα ή περιστασιακά, ενώ άλλες εφαρμογές ή περιεχόμενα ή ακόμα άλλες εφαρμογές/περιεχόμενα ενός άλλου παρόχου είναι προσβάσιμα.

- Μία συγκεκριμένη εφαρμογή, ένα συγκεκριμένο περιεχόμενο, ή ακόμα κάποιες εφαρμογές/περιεχόμενα ενός συγκεκριμένου παρόχου παρουσιάζουν χαμηλή ποιότητα

μόνιμα ή περιστασιακά, ενώ άλλες εφαρμογές ή περιεχόμενα ή ακόμα άλλες εφαρμογές/περιεχόμενα ενός άλλου παρόχου είναι καλής ποιότητας.

- Μία συγκεκριμένη εφαρμογή, ένα συγκεκριμένο περιεχόμενο, ή ακόμα κάποιες εφαρμογές/περιεχόμενα ενός συγκεκριμένου παρόχου έχουν καλή ποιότητα σε μόνιμη βάση, ενώ η ποιότητα άλλων εφαρμογών ή περιεχομένων ή ακόμα άλλων εφαρμογών/περιεχομένων ενός άλλου παρόχου παρουσιάζει αυξομειώσεις.

- Η επικοινωνία από ή προς ένα συγκεκριμένο άτομο μόνιμα ή περιστασιακά δεν είναι εφικτή, ενώ η επικοινωνία από ή προς άλλα άτομα πραγματοποιείται κανονικά.

Οι παραπάνω καταστάσεις μπορεί να είναι το αποτέλεσμα πρακτικών ελέγχου κίνησης, μπορούν όμως να προκύψουν και από άλλες αιτίες. Το αποτέλεσμα από μόνο του δεν επιτρέπει ασφαλή συμπεράσματα σχετικά με το ποια είναι η αιτία του

- Σας έχουν τύχει κάποια από αυτά τα θέματα ουδετερότητας δικτύου στο παρελθόν?
 - Σας παρακαλώ δώστε μας παραδείγματα του πώς επηρέασαν αυτά τα διαφορετικά θέματα τις προσωπικές σας εμπειρίες από του χρήση του Internet.
- Σε τι νομίζατε αρχικά πως οφείλονταν αυτά τα θέματα? (π.χ. χαμηλή ταχύτητα κατεβάσματος – που θεωρήσατε πως οφειλόταν σε παλιές συσκευές αντί για περιορισμούς κατεβάσματος από τους παρόχους)
- Σας παρακαλώ προσπαθείστε να περιγράψετε αυτά τα θέματα ουδετερότητας δικτύου με δικά σας λόγια
 - Πώς θα το περιγράφατε σε ένα παιδί?
- Βλέπετε κανένα συσχετισμό?

☒ Δικαιοσύνη Ουδετερότητας Δικτύου

- Θα μπορούσατε να φανταστείτε καταστάσεις στις οποίες θα προτιμούσατε κάποιο περιορισμό?
- Πότε? Με ποιο τρόπο?

Συντονιστή: παρακαλούμε σιγουρέψου πως η συζήτηση καλύπτει και θετικά και αρνητικά αποτελέσματα της νομοθεσίας ΟΔ. Πες πως οι κανονισμοί (μπορεί να) έχουν και θετικά αποτελέσματα: παρακαλούμε εξηγείστε και υποστηρίξτε με παραδείγματα

- Ποια είναι η γνώμη σας: Είναι δίκαιη η ουδετερότητα δικτύου αν σκεφτείτε τη δική σας προσωπική συμπεριφορά/ανάγκες στη χρήση? (Συζήτηση παραδειγμάτων, π.χ. μπλοκάρισμένο ή/και αργό Skype, εξυπηρέτηση με προτεραιότητα)
- Βρίσκετε λογικό το να υπάρχει νομοθεσία που απαιτεί ουδετερότητα δικτύου από τους παρόχους υπηρεσιών Internet?

☒ **Σημαντικότητα Ουδετερότητας Δικτύου στην επιλογή παρόχου/συμβολαίου**

Συντονιστή: Παρακαλούμε δείξε ξανά τη λίστα με τα θέματα στον πίνακα

- Πόσο σημαντικά είναι αυτά τα θέματα της ουδετερότητας δικτύου για σας όταν επιλέγετε πάροχο/συμβόλαιο?
- Πόσο σημαντικά είναι αυτά σε σύγκριση με τα άλλα θέματα που αναφέρατε προηγουμένως (π.χ. τιμή, εικόνα εταιρείας, διάρκεια συμβολαίου κλπ.)
- Βρίσκετε λογικό το να πληρώνει κανείς περισσότερο για ουδετερότητα δικτύου?
 - Γιατί? Γιατί όχι?
- Εάν επιτρεπόταν το μπλοκάρισμα/καθυστερήσεις, θα είσασταν διατεθειμένοι να πληρώσετε περισσότερο εάν συμπεριλαμβάνονταν στο συμβόλαιό σας κάποια από αυτά τα θέματα ουδετερότητας δικτύου?
 - Για ποια από αυτά τα θέματα ουδετερότητας δικτύου? Γιατί?
 - Πόσο περισσότερο θα πληρώνατε?

(5) Τελικά σχόλια / Συμπέρασμα

10 λεπτά

Αυτό το μέρος έχει σκοπό να δώσει σε όλους τους συμμετέχοντες την ευκαιρία να κάνουν ένα τελικό σχόλιο ή ένα προσωπικό συμπέρασμα.

Φτάσαμε στο τέλος μιας συναρπαστικής συζήτησης. Τέλος, θα ήθελα να ζητήσω από τον καθέναν από εσάς να μας δώσει το προσωπικό του συμπέρασμα πάνω σ' αυτό το θέμα.

Σας ευχαριστώ πολύ για το χρόνο και τη συμμετοχή σας. Ήταν πραγματικά ενδιαφέρον και εποικοδομητικό να ακούσουμε τις σκέψεις σας πάνω σ' αυτό το θέμα. Ελπίζω να ευχαριστηθήκατε αυτή τη συζήτηση τόσο όσο κι εγώ. Σας ευχαριστώ και πάλι!

C.2.5 Translation into Swedish

Ämnen:

Ämnen	Minuter
(1) Intro	15
(2) Personligt Internetanvändande	25
(3) Beslutskriterier för val av Internet leverantör	30
(4) Internetneutralitet	40
(5) Sista kommentarer / Avslut	10
	120

Diskussionsguide Internetneutralitet**(1) Intro****15 minutes**

Generell introduktion av gruppens förlopp – förklarande av:

- Varaktighet
- Kommunikationsregler
- Dataskydd
- Finns inte rätt eller fel svar
- Inbjudning till en öppen och livlig diskussion av ämnena

God kväll och tack för att ni kom i tid allesammans. Mitt namn är _____ och jag är moderator för kvällens gruppdiskussion.

Bara ett par småsaker innan vi börjar. Den här diskussionen är helt informell – jag är här för att lyssna på era åsikter och tankar. Vi har två timmar på oss att diskutera massa aspekter av

Internet och hur ni ser på det. Det finns inga rätta eller fel svar. Jag vill veta era personliga åsikter, så var så öppna som möjligt. Och, ju mer ni har att säga, desto bättre!

Var snälla och se till att era mobiler är avstängda.

Eftersom vi gör ett flertal liknande gruppdiskussioner spelar vi in dessa på DVD så vi kan titta på de vid ett senare tillfälle. Inspelningarna används bara för analys och raderas efteråt.

Den här undersökningen leds av YouGo plc enligt MRS riktlinjer. Enligt MRS riktlinjer är all information du lämnar till oss helt konfidentiell.

☒ **Introduktion av respondenter**

- Först skulle jag vilja att ni alla presenterade er själva så vi vet vilka vi talar med.
 - Berätta ditt namn
 - Ålder
 - Yrke/status
 - Något annat som du vill att de andra ska veta om dig.

Tack!

(2) Personligt Internetanvändande

25 minuter

Denna del har som syfte att utforska och diskutera relevansen och den personliga användningen av Internet.

Jag har redan avslöjat att vi ska prata om Internet idag. Innan vi börjar prata om specifika ämnen och aspekter, skulle jag vilja veta vad ni associerar med termen "Internet".

(Moderator: Skriv ordet INTERNET (vertikalt) på tavlan)

☒ **Associationer/blädderblockslek**

- Berätta vad ni kommer att tänka på för varje bokstav, något ni associerar med Internet. (ex I för idéer, innovation, etc., N för nätverk, ny etc.)
- Nu kan ni också nämna ord/termer som börjar på andra bokstäver men som är associerade med Internet.

Moderator: Samla alla associationer från tavlan

☒ Privat användande i detalj

När ni tänker på ert privata användande av Internet:

- Guida mig genom en typisk dag och din interaktion/användning av Internet. Beskriv när och var du använder Internet, och vilka typer av tjänster du använder på Internet eller vilka typer av hemsidor du besöker, vilka typer av apparater du använder (mobil, surfplatta, dator etc.)?

Moderator: Om de använder Internet i mycket olika situationer, utforska skillnaderna vad gäller de emotionella situationerna, humöret: Hur känner du när du...? Och hur känner du då...?

- Supportfrågor:
 - Hur ofta använder du Internet?
 - När använder du Internet?
 - Vad använder du Internet för?
 - Använder du Internet för nöjes skull? Använder du Internet för jobb?
 - Var använder du Internet?
 - Var i huset? Var sitter du? (i soffan, vid skrivbordet, i badet?)
 - När du använder Internet, gör du det samtidigt som du gör något annat (som en andra skärm när du kollar på TV, är det alltid på?) eller använder du Internet för något specifikt och koncentrerar dig endast på att använda Internet vid det tillfället?
 - Vilka olika apparater använder du (hemma) för att surfa på Internet? (smartphone, surfplattor, e-böcker, kameror, datorer etc.)
 - Vilken apparat använder du för vad? Använder du de olika apparaterna för olika ändamål? Hur?

☒ Personlig relevans

- Vilken betydelse har Internet för dig personligen? Vilken roll har Internet i ditt liv?
Moderator: emotionella och sociala och även rationella aspekter är intressanta
 - Är Internet en informationskälla? Kanske den främsta informationskällan...
Gratis information, åsiktsfrihet...

- Används Internet för att förenkla/organisera vardagen (bankärenden, shopping, deklaration osv.)?
 - Nöje (titta på TV/filmer (lagligt/olagligt), spela spel etc.)
 - Interaktion med vänner och familj (sociala nätverk, Skype, FaceTime, Viber, etc.)
 - Hitta nya vänner, partners
 - Representera sig själv/sin image (LinkedIn, bloggar, Facebook etc.)
 - Finns det några särskilda saker/aspekter du gillar med Internet? Vad är det du gillar med det?
 - Finns det några särskilda saker/aspekter du inte gillar med Internet? Om ja, vad?
- Om du inte skulle ha Internet längre - vad skulle du sakna mest? Förklara gärna.
 - Ni som bor tillsammans med andra människor (familj, sambo, rumskamrater): Vilken relevans/betydelse har Internet för de olika medlemmarna i hushållet?
 - Finns det några skillnader? Vilka? (kanske inte så viktigt för föräldrarna, men väldigt viktigt för barnen?).
 - Vem skulle kunna leva utan Internet? Vem skulle inte kunna göra det? Hur kommer det sig?
 - Vad använder de andra personerna i ert hushåll Internet för?

☒ Erfarenheter av störningar

- Kan du beskriva någon situation då du nyligen hade problem med din Internetuppkoppling/tillgång till Internet – eller då Internet inte fungerade som det skulle eller på något oväntat sätt? (Förklara!)
- Vad hände exakt? (*Moderator: Se till att problemen är väldefinierade, viktigt: i detta läge handlar det om ganska "små" och "korta" problem, inte om problem som baseras på långvarig störning i uppkopplingen, t.ex. byte av leverantör*)
 - Vad tror du gick fel? Vad tror du orsakade problemet? (t.ex. användande av en gammal apparat, slö uppkoppling beroende på..., hög Internettrafik, nedladdningsrestriktioner, långsam leverantör etc.)?

- Hur upplevde du det? Hur kändes det? (större störning vs. mindre problem, irritation vs. tolerans)
- Hur fick situationen dig att känna? (hjätplös, sårbar, irriterad, arg etc.)

☒ **Erfarenhet av stora störningar**

- Kan du definiera/beskriva med egna ord, vad som utgör en mindre jämfört med en store störning på Internet?
- Minns du några situationer nyligen, då du inte hade Internet under flera dagar i rad?
 - Hur hanterade du det?
 - Vet du vad orsaken till problemet (tekniska problem med egna apparater, byte av leverantör, strömbavbrott, annat)?
 - Hur länge har du varit utan Internet?
 - Hur upplevde du det? (som en stor störning i livet, eller inget problem alls?)
 - Hur fick den situationen dig att känna? (hjätplös, sårbar, arg, ledsen, etc.)

☒ **Internets fungerande:**

- Hittills har vi pratat mycket om ditt personliga användande av Internet, samt om hur viktigt Internet är i ert dagliga liv. Nu undrar jag: Hur fungerar Internet egentligen?
- Föreställ er att jag är ett barn nu. Som några av oss vet ifrågasätter barn väldigt mycket. Förklara Internet med egna ord och använd gärna ett symboliskt och bildligt språk.

Moderator: Visa upp följande frågor på ett blädderblock för att stödja respondenterna – vänligen se till att analogier används (Internet är ett spindelnät som kopplar ihop människor)

- Hur tror du att Internet fungerar?
- Vem styr Internet?
- Vem betalar för Internet?
- Vem "gör" Internet?
- Vilka regler gäller på Internet?

- Tack. Nu vill jag dela ut ett papper där vi beskriver hur Internet fungerar. Skriv gärna ditt namn överst på pappret. Läs igenom noga och markera de avsnitt du har svårt att förstå med röd penna, och de avsnitt du har lätt att förstå med grön penna.

Moderator: Dela ut papper till alla respondenter, se till att alla papper är markerade så att man kan se vem som gjort vad vid analysen senare.

- Blev du förvånad av den förklaringen?
 - Vad var annorlunda än det du förväntade dig?
 - Vad var lätt eller svårt att förstå?
 - Har du fler frågor? (Moderator: Se svar nedan för frågor som diskuteras. Läs bara förklaringarna om visa aspekter inte är tydliga.)
 - **Hur tror du att Internet fungerar?** Internet fungerar som ett nätverk av nätverk. Det definierar en uppsättning av gemensamma regler som specificerar hur varje enhet som kopplas upp på Internet kan nås, och hur information finner sin väg till en destination genom de sammankopplade nätverken som utgör Internet.
 - **Vem styr Internet?** Operatörerna av de nätverk som sammankopplas för att utforma Internet samt operatörerna av den infrastruktur där nätverkssammankopplingen sker. Ett mindre strikt perspektiv skulle inkludera ytterligare operativa enheter utan vilka Internet inte skulle vara användbart för de flesta användare, t.ex. operatörer av så kallade rotservrar som är väsentliga för en fungerande lösning av domännamn för Internetadresser.
 - **Vem betalar för Internet?** Konsumenter och företag betalar för att få åtkomst till Internet och ofta för själva datatrafiken också. Innehåll och applikationsleverantörer betalar i första hand sin datatrafik till/från deras datacenter till/från Internet. Operatörerna betalar för nätverksinfrastruktur, dess verksamhet, och – beroende på det särskilda avtalet – för utbyte av datatrafik med andra nätverk.
 - **Vem "gör" Internet?** När det gäller vem som skapar och driver Internet, är svaret i princip samma som för frågan om vem som styr Internet. Vad gäller vem som skapar reglerna som definierar Internet bör ett stort antal olika organ, som utvecklar Internetstandarder och bedriver Internetförvaltning, nämnas. Framträdande exempel inkluderar: IETF (Internet Engineering Task Force), IANA

(Internet Assigned Numbers Authority), ICANN (Internet Corporation for Assigned Names and Numbers), och W3C (World Wide Web Consortium).

- **Vilka regler gäller för Internet?** Kärnan av dessa regler berör adressering och hänvisning. Regler är specificerade som protokoll – de nämnda reglerna adresseras i Internetstandarden för IP-adressen (Internetprotokoll). När fler protokoll läggs till i samlingen av Internetstandarder, finns det nu en heltäckande Internetprotokollstack som täcker alla relevanta aspekter, såsom hur information transporteras eller hur Internetapplikationer såsom e-mail fungerar.

(3) Beslutskriterier för val av Internetleverantör och kontrakt

30 minuter

Den här delen har som mål att undersöka beslutskriterierna för valet av Internetleverantör. Vilka är de relevanta aspekterna när man letar Internetleverantör? Vilka är de viktigaste kriterierna och vilka kriterier verkar mindre viktiga? Hur ser ett bra avtal ut? Hur ser beslutsprocessen ut? Kräver den här processen hög eller låg inblandning?

Fokus kommer ligga på att samla insikter i förankringspunkter vad gäller beslutsprocessen, samt att identifiera problem eller möjligheter för överdrivna krav.

✉ Internetleverantör

Tack! Nu kommer vi till ett annat ämne. Jag skulle vilja fråga **var och en av er**:

- Vilken Internetleverantör har du?
 - Hur mycket betalar du per månad till din Internetleverantör?
 - Hur länge har du haft denna leverantör? (*Moderator: ta anteckningar, detta är viktig information för fortsatta diskussioner!*)
- Hur många alternativ har du haft (hur många potentiella leverantörer och kontraktalternativ fanns vid tillfället?)
- Vilka är dina avtalsdetaljer vad gäller teknisk information (alltså nerladdningshastighet, volym, uppladdningshastighet, längd på avtalet?) Minns du?
- Om du skulle gradera din leverantör generellt: Vilket betyg skulle du ge - om 1 är jättebra och 6 är jättedåligt?
 - Finns det några särskilda aspekter som du gillar med din leverantör? Vilka? (t.ex. uppkopplingsstabilitet, varumärke)?
 - Finns det några särskilda aspekter du inte gillar med din leverantör? Vilka? (t.ex. långsam uppkoppling, priset, långa väntetider etc.)?

Moderator: Om aspekter angående nätverksneutralitet nämns spontant, utforska!

- Vad tror du; har ditt val av Internetleverantör/avtal någon påverkan på din Internetanvändningsupplevelse?

☒ @ Respondenter som inte har bytt leverantör/ändrat sitt avtal under de senaste 12 månaderna:

- Planerar du att byta din leverantör/avtal inom de kommande 12 månaderna?
- OM JA: Hur kommer det sig?
- OM NEJ: Varför vill du vara kvar hos din nuvarande leverantör/behålla ditt avtal?

☒ @ Respondenter som har bytt leverantör/ändrat sitt avtal under de senaste 12 månaderna:

- Vilka var orsakerna till att du bytte leverantör/avtal? Varför ändrade du leverantör/avtal?
- När du tänker på bytet av leverantör/avtal: Hur upplevde du den processen?
- Var det lätt eller tyckte du att det var svårt att välja en ny leverantör/avtal?
 - OM DET VAR SVÅRT: Vad specifikt var det som var svårt med det? Vad tyckte du var krävande?
- Hur tog du reda på information - var det lätt eller svårt att få den information du behövde?
 - Förklara
 - Vad gjorde du då?
 - Vilken information var inte tillgänglig för dig, även efter en lång sökprocess?
- Hur kändes du när du ändrade leverantör/avtal? Var du övertygad om ditt val? (känner de sig kompetenta eller osäkra?)

☒ Föreställt byte av leverantör:

- Föreställ dig att du skulle behöva byta till en ny leverantör i morgon. Hur skulle du gå tillväga? Vad skulle du göra?
- Var skulle du söka information? (t.ex. Internetportaler, leverantörers hemsidor, rekommendationer av vänner)

- Vad skulle du göra sen?
- Om du tänker på nya leverantörer: Vilka aspekter skulle vara speciellt viktigt för dig? Utforska vidare. (*Moderator: Följande aspekter är viktiga – se till att alla aspekter nämns – om inte, nämn de som saknas och låt dem diskutera (kort):*
 - Pris
 - Varumärke
 - Nedladdnings- och uppladdningshastighet
 - Paket med andra tjänster (t.ex. telefon, TV, mobil, etc.)
 - Kampanjer (t.ex. gratis router, ingen byteskostnad, gratis Ipad, specialerbjudanden, etc.)
 - Service (t.ex. kundtjänst, butik nära med personal att prata med, etc.)
 - Innehåll (t.ex. IPTV, TV on-demand med speciellt innehåll, musikstreaming, etc.)
 - Längd på avtal och uppsägningsavgifter
- Om du jämför med tidigare – är andra kriterier viktigare för dig nu när du väljer en ny leverantör? OM JA, vilka är dessa? Varför har de blivit viktigare?
- Om du tänker på framtiden: Tror du att några aspekter kommer bli viktigare eller mindre viktigare? Varför tror du det?

Moderator: Om aspekter angående nätverksneutralitet nämns, utforska!

(4) Nätverksneutralitet

40 minuter

Ämnet för detta avsnitt är nätverksneutralitet. Det måste undersökas om nätverksneutralitet är en känd term, hur och med vilka ord det beskrivs, hur det uppfattas, vilka betydelser det har och vilka aspekter som är av personlig relevans/betydelse för respondenterna.

☒ **Nätverksneutralitet – respondenternas spontana reaktioner och förståelse**

Tack. Nu vill jag prata om en annan aspekt av Internet. Jag har skrivit ner en term på blädderblocket som jag vill diskutera med er: **Nätverksneutralitet**

Moderator: Visa termen på blädderblocket och samla in associationer på blädderblocket

- Nämn allt ni kommer att tänka på (associationer) när ni hör termen nätverksneutralitet?
- Betyder det något för dig? OM JA: vad betyder det för dig?
- Hur skulle du förklara termen nätverksneutralitet för en vän som inte har hört talas om det?

☒ **Nätverksneutralitet - reaktioner av definitionen**

Tack. Nu vill jag läsa upp en definition av termen nätverksneutralitet.

Moderator: läs upp definitionen exakt!

Nätneutralitet innebär att all data i ett nätverk hanteras på lika villkor. Med "lika villkor" avses det sätt som data skickas vidare i ett nätverk mot sin destination. Utgångspunkten för en likvärdig hantering av data är att all data skickas vidare utifrån samma regler.

- Efter vår tidigare diskussion: Var den här definitionen av nätverksneutralitet förvånande för dig?
 - Vad var annorlunda?
 - Vad var lätt eller svårt att förstå?
- Försök beskriva termen nätverksneutralitet med dina egna ord.
 - Hur skulle du förklara det för ett barn?

☒ **Aspekter av nätverksneutralitet – respondenternas tankesätt och förståelse av respondenterna**

- Nämn alla de aspekter som dyker upp när ni tänker på "nätverksneutralitet".
 - Finns det exempel, då Internet inte fungerade som förväntat när ni har definitionen av nätverksneutralitet i åtanke?
- Tänk på diskussionen vi hade tidigare idag. När det kom till oväntade störningar du kan ha upplevt när du använt Internet (t.ex. appar som inte fungerat ordentligt medan andra applikationer fungerade bra). Skulle detta på något sätt kunna relateras till nätverksneutralitet?

Moderator: Samla in alla aspekter/exempel

✉ Aspekter av nätverksneutralitet – reaktioner på definitionen

- Tack. Nu vill jag dela ut ett papper där vi har förberett en kort text om de effekter en avvikelse från nätverksneutralitet skulle kunna leda till. Du hittar också en lista med aspekter som kan ha haft en påverkan på din Internetanvändningsupplevelse. Läs igenom noga markera de ställen du tycker är svåra att förstå med röd färg, och de ställen du tycker är lätta att förstå med grön färg. Skriv ditt förnamn högst upp på pappret.

Moderator: Dela ut papper till alla deltagare, se till att alla papper är märkta så man kan koppla dessa till varje deltagare under analysen.

Alt delas at till deltagarna!

En avvikelse från principen om nätneutralitet innebär att data skickas vidare i ett nätverk utifrån regler som särskilt tar hänsyn till avsändare, mottagare, typ av applikation, ägaren av applikationen, typ av innehåll, vem som tillhandahåller innehållet – eller en kombination av dessa attribut. Den här typen av regler kan appliceras permanent, vid särskilda tider på dygnet (t.ex. under hög trafikbelastning) eller dynamiskt, för att hantera särskilda händelser i nätverket. Reglerna kan vidare tillämpas på alla i nätverket eller avgränsas till vissa användare. För att implementera den här typen särskild hantering, krävs det att en nätoperatör på något sätt hanterar trafiken i ett nätverk. Trafikhantering kan t.ex. innebära att viss data inte skickas vidare alls. En sådan hantering skulle innebära en blockering av avsändaren, mottagaren, typ av applikation, ägaren av applikationen, typ av innehåll och/eller den som tillhandahåller innehållet. Trafikhantering kan också innebära att data skickas vidare med högre eller lägre prioritet, att den fördröjs, eller att den skickas vidare med en bestämd garanterad kvalitet. Den här typen av hantering skulle resultera i en annorlunda kvalitet på den applikation eller det innehåll som konsumeras än vad användaren förväntar sig.

12.2.5.1.1 - En särskild applikation, särskilt innehåll, eller applikation/innehåll från en särskild källa blir permanent eller vid vissa tillfällen otillgänglig, medan annat innehåll eller applikationer/innehåll från andra källor fortsatt är tillgängliga.

12.2.5.1.2 - En särskild applikation, särskilt innehåll, eller applikation/innehåll från en särskild källa får en permanent eller vid vissa tillfällen sämre kvalitet, medan annat innehåll eller applikationer/innehåll från andra källor bibehåller en hög kvalitet.

12.2.5.1.3 - En särskild applikation, särskilt innehåll, eller applikation/innehåll från en särskild källa får en permanent eller vid vissa tillfällen bättre kvalitet, medan annat innehåll eller applikationer/innehåll från andra källor får sämre kvalitet.

12.2.5.1.4 - Kommunikation från eller till en specifik person blir permanent eller vid vissa tillfällen sämre, medan kommunikationen fungerar felfritt för andra användare.

12.2.5.1.5 Ovanstående effekter är exempel på effekter som kan uppstå genom trafikhantering, men kan också uppstå av andra orsaker. Att endast känna till effekten är därför i sig inte tillräcklig för att härleda problemet.

- Har några av dessa aspekter av nätverksneutralitet varit relevanta för dig tidigare?

- Ge gärna exempel av hur dessa olika aspekter har påverkat din personliga Internetanvändningsupplevelse.
- Var har du ursprungligen sett orsakerna till dessa effekter? (t.ex. långsam nedladdningshastighet – som tillskrevs en gammal apparat istället för leverantörernas nedladdningsrestriktioner)
- Försök beskriva dessa aspekter av nätverksneutralitet med egna ord.
 - Hur skulle du förklara det för ett barn?
- Ser du några analogier?

☒ **Rättvisa av nätverksneutralitet**

- Kan du föreställa dig situationer då du skulle föredra någon reglering?
- När? Hur?

Moderator: Se till att diskussionen behandlar både positiva och negativa effekter av NN regleringen. Påpeka att regleringar kan ha positiva effekter också: förklara och visa med exempel

- Vad tror du: Är nätverksneutralitet rättvist om du tänker på ditt personliga användandes beteende/behov? (Diskussion om exempel, t.ex. blockering eller strypning av Skype, prioriterad service)
- Tycker du att det är rimligt att förordningen kräver nätverksneutralitet från leverantörer av Internet?

☒ **Vikten av nätverksneutralitet vid val av leverantör/avtal**

Moderator: Visa listan med aspekter igen på blädderblocket

- Hur relevanta är dessa aspekter om nätverksneutralitet för dig när det kommer till att välja Internetleverantör/avtal?
- Hur viktiga är de i jämförelse med de andra aspekterna ni nämnde förut (t.ex. pris, varumärke, avtalslängden etc.)
- Finner du det rimligt att betala mer för nätverksneutralitet?
 - Varför, varför inte?
- Om blockering eller strypning är tillåtet, skulle du då vara beredd på att betala mer om några av dessa aspekter var en del av ditt kontrakt?
 - För vilka aspekter och varför?

- Hur mycket mer skulle du kunna betala?

(5) Slutgiltiga kommentarer/ Slutsatser

10 minuter

Den här sista delen syftar till att ge alla i gruppen en chans att ge ett sista uttalande eller en personlig slutsats.

Vi har nu kommit till i slutet av denna intressanta diskussion. Slutligen skulle jag vilja be var och en av er att ge oss era personliga slutsatser om detta ämne.

Tack så mycket för er tid och ert deltagande. Det har verkligen varit intressant och insiktsfullt att få höra era tankar om ämnet. Jag hoppas att ni har tyckt det har varit roligt att delta. Tack igen!

C.2.5.2 Exchange of Handouts in Sweden

Unfortunately, it turned out the translation of the handouts for the first focus group discussion in Sweden was not fully correct. Please note, that this was the very first group conducted in this project and the mistakes in the translation were not related to the content itself, but rather to the actual use of the language by Swedish consumers. We asked the Swedish regulator (PTS) for their support and they helped us to clarify some of the phrases in the handouts. Henceforth, we verified the translation of the handouts with all local NRAs prior to conducting the focus groups in the remaining three test areas. It turned out that the translations for the remaining three test areas were overall accepted with only very minor changes.

We have not identified any obvious impact of the handouts used in the first focus group discussion in Sweden as compared to the following two apart from participants not mentioning that the explanations' use of language / terminology seemed somewhat off the line to them. Nonetheless, we would like to document this issue here. In following we present first the the Swedish handouts for the first group and then the ones used in the following two groups.

Handouts for Group 1 in Sweden:

Skriv gärna ditt namn överst på pappret. Läs igenom noga och markera de avsnitt som du har svårt att förstå med röd penna och de avsnitt du har lätt att förstå med grön penna.

Internet tillåter elektroniska enheter att kommunicera genom att byta digital data. Det är inte ett, utan en kombination av många nät. En uppsättning gemensamma tekniska regler ser till att datautbyten fungerar, oavsett var eller hur en elektronisk anordning ansluts till Internet.

Två stora regler finns. För det första har varje enhet som är ansluten till Internet har en individuell adress. Sålunda kan den identifieras och nås. För det andra finns det regler

som förvaltar den "väg" uppgifter tar från avsändare till mottagare genom de olika nätverken.

Skriv gärna ditt namn överst på pappret. Läs igenom noga och markera de avsnitt som du har svårt att förstå med röd penna och de avsnitt du har lätt att förstå med grön penna.

En avvikelse från nätneutralitet innebär följaktligen att uppgifterna vidarebefordras i ett nät enligt en uppsättning regler som är specifika för avsändaren, destination, typ av applikation, applikationsleverantör, typ av innehåll, innehållsleverantör - eller en kombination därav. Särskilda regler för vidarebefordring kan gälla permanent, inom vissa tidsperioder (t.ex. under högtrafik), eller dynamiskt som svar på särskilda situationer i ett nätverk. Särskilda regler för vidarebefordring kan gälla för alla eller vissa användare i ett nätverk. Att genomföra särskilda regler för vidarebefordring kräver en nätverksoperatör för att hantera datatrafiken i ett nätverk. Å ena sidan kan trafikledning innebära att data inte vidarebefordras alls. Detta skulle leda till blockering av respektive avsändare, destination, typ av applikation, applikationsleverantör, typ av innehåll och / eller innehållsleverantör. Å andra sidan kan trafikledning betyda att data vidarebefordras med en högre eller lägre prioritet, att den är långsammare, eller att den vidarebefordras med en viss garanterad kvalitet. Dessa metoder skulle leda till ändrade förväntningar på kvalitet som en användare upplevde konsumerar respektive program eller innehåll

- Ett specifikt program, specifikt innehåll, eller program / innehåll från en viss leverantör är permanent eller vid vissa tider otillgängliga, medan andra program, annat innehåll eller program / innehåll från andra leverantörer är tillgängliga.

- Ett specifikt program, specifikt innehåll, eller program / innehåll från en specifik leverantör lider permanent eller vid vissa tider från dålig kvalitet, medan andra program, annat innehåll eller program / innehåll från andra leverantörer är av god kvalitet.

- Ett specifikt program, specifikt innehåll, eller program / innehåll från en viss leverantör är permanent av god kvalitet, medan andra program, andra innehåll eller program / innehåll från andra leverantörer varierar kvalitetsmässigt.

- Kommunikation från en specific person är permanent eller vid tillfällen inte levererad, samtidigt som kommunikation med andra levereras.

The above effects may be the result of traffic management practices, but they may also emerge for a different reason. The effect alone does not allow precise attribution of its reason.

Handouts for groups 2 and 3 in Sweden:

Internet möjliggör för elektroniska enheter att utbyta digital data. Internet utgörs inte av ett, utan av flera sammankopplade nätverk. Det finns gemensamma tekniska regler som säkerställer att utbytet av data fungerar, oavsett var eller vilken enhet som ansluts till Internet.

Det finns framförallt två regler som får anses grundläggande. Den första är att alla enheter som ansluts till Internet får en egen adress. Därigenom kan terminalen identifieras och nås. Den andra regeln hanterar vilka vägar data ska skickas genom olika nätverk, från avsändare till mottagare.

Skriv gärna ditt namn överst på pappret. Läs igenom noga och markera de avsnitt som du har svårt att förstå med röd penna och de avsnitt du har lätt att förstå med grön penna.

Internet möjliggör för elektroniska enheter att utbyta digital data. Internet utgörs inte av ett, utan av flera sammankopplade nätverk. Det finns gemensamma tekniska regler som säkerställer att utbytet av data fungerar, oavsett var eller vilken enhet som ansluts till Internet.

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Skriv gärna ditt namn överst på pappret. Läs igenom noga och markera de avsnitt som du har svårt att förstå med röd penna och de avsnitt du har lätt att förstå med grön penna.

En avvikelse från principen om nätneutralitet innebär att data skickas vidare i ett nätverk utifrån regler som särskilt tar hänsyn till avsändare, mottagare, typ av applikation, ägaren av applikationen, typ av innehåll, vem som tillhandahåller innehållet – eller en kombination av dessa attribut. Den här typen av regler kan appliceras permanent, vid särskilda tider på dygnet (t.ex. under hög trafikbelastning) eller dynamiskt, för att hantera särskilda händelser i nätverket. Reglerna kan vidare tillämpas på alla i nätverket eller avgränsas till vissa användare. För att implementera den här typen särskild hantering, krävs det att en nätoperatör på något sätt hanterar trafiken i ett nätverk. Trafikhantering kan t.ex. innebära att viss data inte skickas vidare alls. En sådan hantering skulle innebära en blockering av avsändaren, mottagaren, typ av applikation, ägaren av applikationen, typ av innehåll och/eller den som tillhandahåller innehållet. Trafikhantering kan också innebära att data skickas vidare med högre eller lägre prioritet, att den fördröjs, eller att den skickas vidare med en bestämd garanterad kvalitet. Den här typen av hantering skulle resultera i en annorlunda kvalitet på den applikation eller det innehåll som konsumeras än vad

användaren förväntar sig.

- En särskild applikation, särskilt innehåll, eller applikation/innehåll från en särskild källa blir permanent eller vid vissa tillfällen otillgänglig, medan annat innehåll eller applikationer/innehåll från andra källor fortsatt är tillgängliga.
- En särskild applikation, särskilt innehåll, eller applikation/innehåll från en särskild källa får en permanent eller vid vissa tillfällen sämre kvalitet, medan annat innehåll eller applikationer/innehåll från andra källor bibehåller en hög kvalitet.
- En särskild applikation, särskilt innehåll, eller applikation/innehåll från en särskild källa får en permanent eller vid vissa tillfällen bättre kvalitet, medan annat innehåll eller applikationer/innehåll från andra källor får sämre kvalitet.
- Kommunikation från eller till en specifik person blir permanent eller vid vissa tillfällen sämre, medan kommunikationen fungerar felfritt för andra användare.

Ovanstående effekter är exempel på effekter som kan uppstå genom trafikhantering, men kan också uppstå av andra orsaker. Att endast känna till effekten är därför i sig inte tillräcklig för att härleda problemet.

C.3 Information Package Translations

Croatia

Slide 1

Text ID English

Translation

S1.1	<p>This video is about the Internet. It explains...</p> <ul style="list-style-type: none"> • the role of content and application providers and the role of Internet providers. • how and why Internet providers manage data traffic in the Internet. • how traffic management may affect you and other Internet users. 	<p>Ovaj video zapis je o Internetu. U njemu se objašnjava...</p> <ul style="list-style-type: none"> • uloga pružatelja sadržaja i aplikacija i uloga pružatelja Internetskih usluga, • kako i zašto pružatelji Internetskih usluga upravljaju podatkovnim prometom na Internetu, • kako upravljanje prometom utječe na vas i ostale korisnike Interneta.
S1.2	<p>This information will be important in the next step of this survey. Please</p>	<p>Navedene su informacije vrlo važne za sljedeći korak istraživanja. Obratite posebnu pažnju na informacije u</p>

pay close attention.

nastavku.

Slide 2

Text ID	English	Translation
S2.1	This is you going online at home.	Ovo ste vi na mreži kod kuće.
S2.2	The Internet offers you a wide range of content and applications to consume.	Internet vam nudi širok raspon sadržaja i aplikacija zakorištenje.
S2.3	Here are some examples for content and application providers.	Ovdje je navedeno nekoliko primjera pružatelja sadržaja i aplikacija.
S2.4	Music streaming:	<i>Streaming</i> glazbe:
S2.5	Video streaming:	<i>Streaming</i> video zapisa:
S2.6	Voice/video calling:	Glasovni/video pozivi:
S2.7	Instant text messaging:	Slanje trenutačnih poruka:

Slide 3

Text ID	English	Translation
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S3.1	But who brings the data to you?	Tko vam dostavlja navedene podatke?
S3.2	That is the task of Internet providers.	To je zadatak pružatelja Internetskih usluga.

Side 4

Text ID	English	Translation
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S4.1	Internet providers connect you to the content and applications you want to consume.	Pružatelji Internetskih usluga povezuju vas sa sadržajem i aplikacijama koje želite koristiti.
S4.2	They transport data packets between content and application providers and you.	Oni prenose podatkovne pakete između vas i pružatelja sadržaja i aplikacija.

Slide 5

Text ID	English	Translation
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S5.1	Internet providers can manage the data traffic in various ways.	Pružatelji Internetskih usluga upravljaju podatkovnim prometom na razne načine.
S5.2	Certain content or applications may be blocked.	Mogu blokirati određeni sadržaj ili aplikacije.
S5.3	Whilst other traffic may be normally delivered.	Istovremeno mogu omogućiti normalno dostavljanje ostalog prometa.

Slide 6

Text ID	English	Translation
S6.1	Internet providers can manage the data traffic in various ways.	Pružatelji Internetskih usluga upravljaju podatkovnim prometom na razne načine.
S6.2	Certain content or applications may be prioritised.	Mogu dodijeliti prioritet određenom sadržaju ili aplikacijama.
S6.3	Certain content or applications may be slowed down.	Mogu usporiti pristupanje određenom sadržaju ili aplikacijama.

Slide 7

Text ID	English	Translation
S7.1	Blocking may result in unavailability.	Blokiranje sadržaja i aplikacija može rezultirati nedostupnošću.
S7.2	Prioritising may improve quality.	Dodjeljivanje prioriteta može poboljšati kvalitetu.
S7.3	Slowing down may degrade quality.	Usporavanje može smanjiti kvalitetu.
S7.4	Note: Similar effects may appear for other reasons than traffic management (e.g. a weak WiFi signal at home).	Napomena: slični učinci mogu se pojaviti i zbog drugih razloga osim upravljanja prometom (npr. slabog signala WiFi veze kod kuće).

Slide 8

Text ID	English	Translation
S8.1	<p>What are motives for Internet providers to manage traffic?</p> <ul style="list-style-type: none"> to block illegitimate activities. to ensure that urgent content arrives without delay when the network is congested. to earn money from those who are willing to pay (more) for 	<p>Zbog kojih razloga pružatelji Internetskih usluga upravljaju prometom?</p> <ul style="list-style-type: none"> Kako bi blokirali nedopuštene aktivnosti, Kako bi osigurali pravovremeno dostavljanje hitnog sadržaja tijekom zagušenja mreže,

better quality.

- Kako bi ostvarili zaradu od korisnika koji su spremni platiti (više) za veću kvalitetu usluge.

Slide 9

Text ID English

Translation

S9.1	<p>What are the consequences if you choose a package with some content prioritised?</p> <ul style="list-style-type: none"> • For the prioritised content, your quality of experience is likely to be better. • Your choice may decrease the quality of all non-prioritised content for you and all other users. 	<p>Koje su posljedice odabira paketa s dodijeljenim prioritetom na određeni sadržaj?</p> <ul style="list-style-type: none"> • Možete iskusiti poboljšanu kvalitetu tijekom korištenja sadržaja kojem je dodijeljen prioritet. • Odabir takvog paketa može smanjiti kvalitetu sadržaja kojem nije dodijeljen prioritet za vas i sve ostale korisnike.
S9.2	<p>Please keep this in mind in the next step of this survey.</p>	<p>Imajte to na umu u sljedećem koraku ovog istraživanja.</p>

Czech Republic

Slide 1

Text ID English

Translation

S1.1	<p>This video is about the Internet. It explains...</p> <ul style="list-style-type: none"> • the role of content and application providers and the role of Internet providers. • how and why Internet providers manage data traffic in the Internet. • how traffic management may affect you and other Internet users. 	<p>Toto video je o Internetu. Vysvětluje...</p> <ul style="list-style-type: none"> • roli poskytovatelů obsahu a aplikačních služeb a roli poskytovatelů služby přístupu k síti Internet. • jak a proč poskytovatelé služby přístupu k síti Internet řídí datový provoz na Internetu. • jak může řízení datového provozu ovlivnit Vás a ostatní uživatele Internetu.
S1.2	<p>This information will be important in the next step of this survey. Please pay close</p>	<p>Tyto informace budou důležité v následujícím kroku tohoto průzkumu.</p>

attention.

Věnujte jim, prosím, velkou pozornost.

Slide 2

Text ID	English	Translation
S2.1	This is you going online at home.	To jste Vy, připojeni doma, online.
S2.2	The Internet offers you a wide range of content and applications to consume.	Internet Vám nabízí širokou škálu obsahu a aplikačních služeb, které můžete používat.
S2.3	Here are some examples for content and application providers.	Zde uvádíme některé příklady poskytovatelů obsahu a aplikačních služeb.
S2.4	Music streaming:	Přehrávání hudby:
S2.5	Video streaming:	Přehrávání videí:
S2.6	Voice/video calling:	Hlasové a video hovory:
S2.7	Instant text messaging:	Výměna rychlých textových zpráv:

Slide 3

Text ID	English	Translation
S3.1	But who brings the data to you?	Ale kdo Vám data přináší?
S3.2	That is the task of Internet providers.	To je úkolem poskytovatelů služby přístupu k síti Internet.

Slide 4

Text ID	English	Translation
S4.1	Internet providers connect you to the content and applications you want to consume.	Poskytovatelé služby přístupu k síti Internet Vás připojí k obsahu nebo aplikačním službám, které chcete používat.
S4.2	They transport data packets between content and application providers and you.	Přenášejí datové pakety mezi poskytovateli obsahu a aplikačních služeb a Vámi.

Slide 5

Text ID	English	Translation
S5.1	Internet providers can manage the data traffic in various ways.	Poskytovatelé služby přístupu k síti Internet mohou řídit datový provoz různými způsoby.
S5.2	Certain content or applications may be blocked.	Určitý obsah nebo aplikace lze blokovat.
S5.3	Whilst other traffic may be normally delivered.	Zatímco ostatní datový provoz je nadále zajišťován.

Slide 6

Text ID	English	Translation
S6.1	Internet providers can manage the data traffic in various ways.	Poskytovatelé služby přístupu k síti Internet mohou řídit datový provoz různými způsoby.
S6.2	Certain content or applications may be prioritised.	Některý obsah nebo aplikace mohou být preferovány.
S6.3	Certain content or applications may be slowed down.	Některý obsah nebo aplikace mohou být zpomalovány.

Slide 7

Text ID	English	Translation
S7.1	Blocking may result in unavailability.	Blokování může mít za následek nedostupnost.
S7.2	Prioritising may improve quality.	Preferování může zlepšovat kvalitu.
S7.3	Slowing down may degrade quality.	Zpomalování může snižovat kvalitu.
S7.4	Note: Similar effects may appear for other reasons than traffic management (e.g. a weak WiFi signal at home).	Poznámka: Podobné jevy mohou nastat také z jiných důvodů, než z důvodu řízení datového provozu (např. následkem slabého signálu WiFi u Vás doma).

Slide 8

Text ID	English	Translation
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S8.1	<p>What are motives for Internet providers to manage traffic?</p> <ul style="list-style-type: none"> • to block illegitimate activities. • to ensure that urgent content arrives without delay when the network is congested. • to earn money from those who are willing to pay (more) for better quality. 	<p>Jaké mají poskytovatelé služby přístupu k síti Internet motivy pro řízení datového provozu?</p> <ul style="list-style-type: none"> • blokování nezákonných aktivit. • zajistit, aby naléhavý obsah dorazil i při přetížení sítě bez zdržení. • vydělat peníze na těch, kdo jsou ochotni zaplatit (více) za lepší kvalitu.
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Slide 9

Text ID	English	Translation
S9.1	<p>What are the consequences if you choose a package with some content prioritised?</p> <ul style="list-style-type: none"> • For the prioritised content, your quality of experience is likely to be better. • Your choice may decrease the quality of all non-prioritised content for you and all other users. 	<p>K čemu může dojít, pokud si zvolíte balíček, který bude umožňovat preferování určitého obsahu?</p> <ul style="list-style-type: none"> • Pokud jde o preferovaný obsah, Vaše „kvalita prožitku“ (Quality of experience) bude pravděpodobně lepší. • Vaše volba může snížit kvalitu ostatního nepreferovaného obsahu užívaného Vámi a dalšími uživateli.
S9.2	<p>Please keep this in mind in the next step of this survey.</p>	<p>Mějte to, prosím, na paměti v dalším kroku tohoto průzkumu.</p>

Greece

Slide 1

Text ID	English	Translation
S1.1	<p>This video is about the Internet. It explains...</p> <ul style="list-style-type: none"> • the role of content and application providers and the role of Internet providers. • how and why Internet providers manage data traffic in the Internet. • how traffic management may affect you and other Internet users. 	<p>Αυτό το video είναι σχετικό με το διαδίκτυο. Εξηγεί...</p> <ul style="list-style-type: none"> • το ρόλο των παρόχων περιεχομένου και εφαρμογών και το ρόλο των παρόχων διαδικτύου. • πώς και γιατί οι πάροχοι διαδικτύου διαχειρίζονται την κυκλοφορία δεδομένων στο διαδίκτυο. • πώς η διαχείριση κυκλοφορίας

S1.2

This information will be important in the next step of this survey. Please pay close attention.

δεδομένων μπορεί να επηρεάσει εσάς, καθώς και άλλους χρήστες του διαδικτύου.

Η πληροφορία αυτή είναι σημαντική για το επόμενο βήμα της έρευνας.
Παρακαλούμε, διαβάστε προσεκτικά.

Slide 2

Text ID	English	Translation
S2.1	This is you going online at home.	Εδώ είστε εσείς που συνδέεστε στο διαδίκτυο από το σπίτι.
S2.2	The Internet offers you a wide range of content and applications to consume.	Το διαδίκτυο σάς προσφέρει μια ευρεία γκάμα περιεχομένου και εφαρμογών προς κατανάλωση.
S2.3	Here are some examples for content and application providers.	Εδώ βλέπετε μερικά παραδείγματα παρόχων εφαρμογών και περιεχομένου.
S2.4	Music streaming:	Ροή μουσικής:
S2.5	Video streaming:	Ροή Video:
S2.6	Voice/video calling:	Τηλεφωνική κλήση/video κλήση:
S2.7	Instant text messaging:	Αποστολή άμεσων μηνυμάτων:

Slide 3

Text ID	English	Translation
S3.1	But who brings the data to you?	Ναι, αλλά ποιος σάς φέρνει τα δεδομένα;
S3.2	That is the task of Internet providers.	Αυτή είναι η δουλειά των παρόχων διαδικτύου.

Slide 4

Text ID	English	Translation
S4.1	Internet providers connect you to the content and applications you want to consume.	Οι πάροχοι διαδικτύου σάς συνδέουν με το περιεχόμενο και τις εφαρμογές που επιθυμείτε να καταναλώσετε.
S4.2	They transport data packets between content and application providers and you.	Μεταφέρουν πακέτα δεδομένων μεταξύ των παρόχων περιεχομένου και εφαρμογών, και εσάς.

Slide 5

Text ID	English	Translation
S5.1	Internet providers can manage the data traffic in various ways.	Οι πάροχοι διαδικτύου διαχειρίζονται την κυκλοφορία δεδομένων με πολλούς

		τρόπους.
S5.2	Certain content or applications may be blocked.	Συγκεκριμένο περιεχόμενο ή συγκεκριμένες εφαρμογές μπορεί να αποκλειστούν.
S5.3	Whilst other traffic may be normally delivered.	Ενώ άλλα δεδομένα μπορεί να μεταφέρονται κανονικά.

Slide 6

Text ID	English	Translation
S6.1	Internet providers can manage the data traffic in various ways.	Οι πάροχοι διαδικτύου διαχειρίζονται την κυκλοφορία δεδομένων με πολλούς τρόπους.
S6.2	Certain content or applications may be prioritised.	Σε συγκεκριμένο περιεχόμενο ή σε συγκεκριμένες εφαρμογές μπορεί να δοθεί προτεραιότητα.
S6.3	Certain content or applications may be slowed down.	Συγκεκριμένο περιεχόμενο ή συγκεκριμένες εφαρμογές μπορεί να επιβραδυνθούν.

Slide 7

Text ID	English	Translation
S7.1	Blocking may result in unavailability.	Ο αποκλεισμός μπορεί να έχει ως αποτέλεσμα έλλειψη διαθεσιμότητας.
S7.2	Prioritising may improve quality.	Η παροχή προτεραιότητας μπορεί να βελτιώσει την ποιότητα.
S7.3	Slowing down may degrade quality.	Η επιβράδυνση μπορεί να μειώσει την ποιότητα.
S7.4	Note: Similar effects may appear for other reasons than traffic management (e.g. a weak WiFi signal at home).	Προσοχή: Παρόμοια αποτελέσματα μπορεί να εμφανιστούν και για λόγους διαφορετικούς από τη διαχείριση κυκλοφορίας δεδομένων (π.χ. αδύναμο σήμα ασύρματου δικτύου WiFi στο σπίτι).

Slide 8

Text ID	English	Translation
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S8.1	<p>What are motives for Internet providers to manage traffic?</p> <ul style="list-style-type: none"> • to block illegitimate activities. • to ensure that urgent content arrives without delay when the network is congested. • to earn money from those who are willing to pay (more) for better quality. 	<p>Γιατί οι πάροχοι διαδικτύου διαχειρίζονται την κυκλοφορία δεδομένων;</p> <ul style="list-style-type: none"> • για να αποκλείσουν παράνομες δραστηριότητες. • για να διασφαλίσουν πως κάποιο περιεχόμενο που είναι επείγον φτάνει στον προορισμό του χωρίς καθυστέρηση, ακόμη και σε περίπτωση συμφόρησης του δικτύου. • για να κερδίσουν χρήματα από αυτούς που διατίθενται να πληρώσουν (περισσότερο) για καλύτερη ποιότητα.
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Slide 9

Text ID	English	Translation
S9.1	<p>What are the consequences if you choose a package with some content prioritised?</p> <ul style="list-style-type: none"> • For the prioritised content, your quality of experience is likely to be better. • Your choice may decrease the quality of all non-prioritised content for you and all other users. 	<p>Ποιες είναι οι συνέπειες, αν επιλέξετε ένα πακέτο που διαθέτει κάποιο περιεχόμενο με προτεραιότητα;</p> <ul style="list-style-type: none"> • Όσον αφορά το περιεχόμενο με προτεραιότητα, η ποιότητα θα είναι μάλλον καλύτερη. • Η επιλογή σας μπορεί να μειώσει την ποιότητα όλων των άλλων περιεχομένων, που δε χαίρουν προτεραιότητας, τόσο για σας όσο και για όλους τους άλλους χρήστες.
S9.2	<p>Please keep this in mind in the next step of this survey.</p>	<p>Παρακαλούμε, λάβετε υπόψη σας τα παραπάνω στο επόμενο τμήμα της έρευνας αυτής.</p>

Sweden

Slide 1

Text ID	English	Translation
S1.1	<p>This video is about the Internet. It explains...</p> <ul style="list-style-type: none"> • the role of content and application providers and the role of Internet providers. 	<p>Den här videon handlar om Internet. Den förklarar...</p> <ul style="list-style-type: none"> • rollen för innehålls- och applikationsleverantörer och rollen för Internetleverantörer.

	<ul style="list-style-type: none"> • how and why Internet providers manage data traffic in the Internet. • how traffic management may affect you and other Internet users. 	<ul style="list-style-type: none"> • hur och varför Internetleverantörer hanterar datatrafik över Internet. • hur trafikhantering kan påverka dig och andra Internetanvändare.
S1.2	This information will be important in the next step of this survey. Please pay close attention.	Den här informationen är viktig för nästa steg av undersökningen. Titta därför uppmärksamt.

Slide 2

Text ID	English	Translation
S2.1	This is you going online at home.	Det här är du när du kopplar upp dig hemma.
S2.2	The Internet offers you a wide range of content and applications to consume.	Internet erbjuder ett brett utbud av innehåll och applikationer.
S2.3	Here are some examples for content and application providers.	Här är några exempel på innehålls- och applikationsleverantörer.
S2.4	Music streaming:	Musikströmning:
S2.5	Video streaming:	Videoströmning:
S2.6	Voice/video calling:	Röst-/videosamtal:
S2.7	Instant text messaging:	Snabbtextmeddelanden:

Slide 3

Text ID	English	Translation
S3.1	But who brings the data to you?	Men vem levererar datan till dig?
S3.2	That is the task of Internet providers.	Det är Internetleverantörernas uppgift.

Slide 4

Text ID	English	Translation
S4.1	Internet providers connect you to the content and applications you want to consume.	Internetleverantörer kopplar upp dig till innehållet och applikationerna du vill använda.

S4.2	They transport data packets between content and application providers and you.	De transporterar datapaket mellan innehålls- och applikationsleverantörer och dig.
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Slide 5

Text ID	English	Translation
S5.1	Internet providers can manage the data traffic in various ways.	Internetleverantörer kan hantera datatrafiken på olika sätt.
S5.2	Certain content or applications may be blocked.	Visst innehåll eller vissa applikationer kan blockeras.
S5.3	Whilst other traffic may be normally delivered.	Samtidigt som annan trafik levereras normalt.

Slide 6

Text ID	English	Translation
S6.1	Internet providers can manage the data traffic in various ways.	Internetleverantörer kan hantera datatrafiken på olika sätt.
S6.2	Certain content or applications may be prioritised.	Visst innehåll eller vissa applikationer kan prioriteras.
S6.3	Certain content or applications may be slowed down.	Visst innehåll eller vissa applikationer kan saktas ner.

Slide 7

Text ID	English	Translation
S7.1	Blocking may result in unavailability.	Blockering kan leda till att det inte är tillgängligt.
S7.2	Prioritising may improve quality.	Prioritering kan förbättra kvaliteten.
S7.3	Slowing down may degrade quality.	Sakta ned kan försämra kvaliteten.
S7.4	Note: Similar effects may appear for other reasons than traffic management (e.g. a weak WiFi signal at home).	Observera: Liknande effekter kan inträffa av andra anledningar än trafikstyrning (t.ex. svag WiFi-signal hemma).

Slide 8

Text ID	English	Translation
S8.1	<p>What are motives for Internet providers to manage traffic?</p> <ul style="list-style-type: none"> • to block illegitimate activities. • to ensure that urgent content arrives without delay when the network is congested. • to earn money from those who are willing to pay (more) for better quality. 	<p>Vilka motiv finns för Internetleverantörers att hantera trafik?</p> <ul style="list-style-type: none"> • blockera otillåtna aktiviteter. • säkerställa att viktigt innehåll kommer fram utan försening när det är hög belastning i nätverket. • tjäna pengar på de som är villiga att betala (mer) för bättre kvalitet.

Slide 9

Text ID	English	Translation
S9.1	<p>What are the consequences if you choose a package with some content prioritised?</p> <ul style="list-style-type: none"> • For the prioritised content, your quality of experience is likely to be better. • Your choice may decrease the quality of all non-prioritised content for you and all other users. 	<p>Vilka blir konsekvenserna om du väljer ett paket med visst prioriterat innehåll?</p> <ul style="list-style-type: none"> • Du upplever förmodligen bättre kvalitet för det prioriterade innehållet. • Ditt val kan försämra kvaliteten på allt icke-prioriterat innehåll för dig och alla andra användare.
S9.2	<p>Please keep this in mind in the next step of this survey.</p>	<p>Tänk på det här för nästa steg av undersökningen.</p>

D Final Questionnaire

D.1 Final Questionnaire in English

This Section presents the final version of the questionnaire as it has been translated into the national languages of the test areas. Here we will explain our rationale behind the individual parts of the questionnaire and present detailed explanations on questions that have been discussed at the workshop, our meeting or have been commented on by the drafters.

D.1.1 Introduction

This Section represents mainly some screening questions that will be used to identify the relevant respondents for the survey. For instance, age and gender ensure that we can sample a representative mix of respondents. Most important are the questions referring to Internet access at home and if and how the respondent has been involved in the decision-making when purchasing this Internet access. There were several comments why we needed to ask for the month, in which respondents were born. We do this to be able to provide a more accurate figure for respondents' age.

#Introduction
#page break
#Question type: open numeric #Label: Age #Skip logic: #Base: All respondents
[q01_1] In which year were you born? [#open prompt]
[q01_2] In which month were you born? [#open prompt]
#page break
#Question type: single choice #Label: Gender

<p>#Skip logic: #Base: All respondents</p> <p>[q02] Are you...</p> <p><1> Male <2> Female</p>
#page break
<p>#Question type: single choice #Label: Region #Skip logic: #Base: All respondents</p> <p>[q03] In which region of #country do you live?</p> <p><1> List adapted to regions of test areas</p>
#page break
<p>#Question type: multiple choice #Label: Types of internet access available #Skip logic: #Base: All respondents</p> <p>[q04] There are many possibilities to access the Internet. Which of the following do you use?</p> <p><1> At home using stationary access (devices are connected via WiFi or a network cable to e.g. DSL, cable, LTE at home, USB dongles) <2> At home using mobile access (smartphone or tablet PC not connected via WiFi) <3> Out of home using a mobile phone via mobile access, e.g. on the street <4> Out of home using a tablet PC via mobile access, e.g. on the street <5> Out of home connecting to WiFi / hotspots, e.g. on trains, in cafés <777> No answer / don't know</p>
<p>#Screenout if not 1 in [q04] #Respondents who do not use stationary access at home are not surveyed</p>
#page break
<p>#Question type: single choice #Label: Decision making #Skip logic: #Base: All respondents</p> <p>[q05] When it comes to deciding about who / which company you obtain your stationary Internet access at home from, in how far are you involved in the decision?</p> <p><1> I decide alone. <2> I decide together with someone else. <3> Someone else decides, I am not involved.</p>

<777> No answer / don't know

#Screenout if [q05] in [3,777]

#Respondents who do are not involved in decisions about Internet access are not surveyed

#page break

D.1.2 Characteristics of At-Home Internet Access

This section serves several purposes. First of all, it will tell us something about the background of the respondent and thus allow for building meaningful categories of consumers as foreseen in the Tender Specifications. Furthermore, the indication of the current provider will be relevant in analysing the conjoint task as it allows us to check for the potential impact of implicit switching costs or rather a higher degree of trust in the current provider as compared to other ones. To this end, also the item on satisfaction will be interesting to notice as it might provide us with an explanation for the willingness of respondents to switch to another provider. It will be important to analyse this in conjunction with other items to identify where specific effects come from, i.e. from perceived dissatisfaction or from interest in the features of other ISPs. Finally, the speed (although it may be difficult for respondents to recall the specific speed as noted in their contract) may be of particular interest as it has transpired from the focus group discussions that participants with a very good Internet connection were less inclined to opt for prioritisation than those with a worse quality of experience

The item referring to bundles is necessary in order to better understand the following question referring to the price that respondents pay per month for the Internet access service. This latter item represent not exact prices, but rather price brackets since our experience with similar projects shows clearly that respondents are commonly not able to recall their actual expenditure for Internet access correctly. Thus, we chose to present them with price brackets, which have proven to work well in this context.

#Characteristics of at-home Internet access

#Question type: single choice

#Label: ISP fixed

#Skip logic:

#Base: All respondents

[q06] Which of the following Internet service providers do you use for your stationary Internet access at home (the company you obtain your Internet access from)? From here on, we will refer to this company as your "Internet provider".

<1> List adapted to providers in test areas

<555> Other

<777> No answer / don't know

#page break

#Question type: single choice

#Label: Speed fixed

#Skip logic:

#Base: All respondents

[q07] What is the speed of your stationary Internet access at home as defined in your contract?

<1> Up to 2 MBit/s

<2> More than 2 up to 8 MBit/s

<3> More than 8 up to 16 MBit/s

<4> More than 16 up to 32 MBit/s

<5> More than 32 up to 50 MBit/s

<6> More than 50 up to 100 MBit/s

<7> More than 100 MBit/s

<777> No answer / don't know

#page break

#Question type: scale

#Label: Satisfaction with fixed speed

#Skip logic:

#Base: All respondents

[q08] On a scale from 0 to 10: How satisfied are you with the quality of your stationary Internet access at home?

<0> Very dissatisfied

<1>

<2>

<3>

<4>

<5>

<6>

<7>

<8>

<9>

<10> Very satisfied

<777> No answer / don't know

#page break

#Question type: multiple choice

#Label: Bundled services

#Skip logic:

#Base: All respondents

[q09] Stationary Internet access at home is often bundled with telephone or TV services, or a mobile contract. Aside from Internet access, which of these are included in the contract with your Internet provider?

<1> Telephone
 <2> TV
 <3> Mobile contract
 <777> No answer / don't know

#Question type: single choice
#Label: Costs for at home access
#Skip logic:
#Base: All respondents

[q10] And how much do you currently spend in total on these services per month? If you do not know the exact amount, please give a rough estimation.

<1> *List of categories adapted to test areas (e.g. "up to 10 €", "More than 10 up to 20 €")*
 <777> No answer / don't know

#page break

D.1.3 ISP Switching Behaviour

In the discussions with the drafters, it became obvious that switching is one of the main areas of interest to the drafters. Some felt this part ought to gain more importance, whilst others were rather in favour of cutting back in this part of the questionnaire. Thus, the study team reflected carefully on this section. This resulted in a restructuring of this part of the questionnaire. First, it is established how long the respondent has been with his / her current provider. The second item investigates whether the respondent has ever switched provider for at home Internet access. Taking into account comments that we received, we have introduced three potential answers in this question including one that can also qualify whether respondents have switched because they wanted to e.g. because they were unsatisfied with the services of their old provider or if they had to switch because e.g. they moved house and their current provider was not available in the new location. Hence, respondents who have switched their provider before are presented with a question that asks them to indicate their former provider.

The following two items try and capture respondents' general proneness to switching as well as their perception of the choice they actually have. These questions refer back to the results that were found in Stage B of the research project, which showed that many participants in the focus groups were under the impression that they were stuck with their provider anyway and did not have a real choice. This question will also be used to inform the interpretation of the conjoint experiment results. Those respondents who stated to be rather cautious about switching will be further presented with an item set exploring the reasons for their attitude to switching. These results will be able to shed some light on the reasons why respondents in the test areas may feel little inclination to switch providers on a general level.

Finally, we intend to address the subject of switching by analysing the differences in choices in the conjoint task depending on whether the provider that offers the specific package is the one that respondent is currently with or another provider i.e. implying switching. Although the conjoint experiment is, of course, a hypothetical task, it still appears plausible that respondents will approach this task with their individual background and implicitly will account for switching hassle if they choose another provider than their current one.

#ISP switching behaviour

#Question type: single choice

#Label: Duration of current ISP relation

#Skip logic:

#Base: All respondents

[q11] For how long have you been with your current at home Internet provider?

<1> Up to 1 year

<2> More than 1, up to 2 years

<3> More than 2, up to 4 years

<4> More than 4, up to 6 years

<5> More than 6, up to 8 years

<6> More than 8 years

<777> No answer / don't know

#page break

#Question type: multiple choice

#Label: Past switching

#Skip logic:

#Base: All respondents

[q12] Have you ever switched the provider for Internet access at home in the past?

<1> Yes, because I wanted to (e.g. due to a better offer)

<2> Yes, because I had to / was forced to (e.g. due to moving)

<3> No

<777> No answer / don't know

#page break

#Question type: single choice

#Label: Previous ISP

#Skip logic: if [q12] in [1,2]

#Base: Respondents who did switch their ISP before

[q13] Thinking about the last time you switched providers for Internet access at home: Which of the following was your previous Internet provider?

<1> List adapted to providers in test areas

<555> Other

<777> No answer / don't know

#page break

Question type: grid, order of items randomised

#Label: Attitude towards switching

Skip logic:

#Base: All respondents

[q14] Thinking about switching providers for Internet access at home: In how far do you agree with the following statements?

-[q14_1] I am generally unlikely to switch my Internet provider.

-[q14_2] I feel that I do not have a true choice when it comes to deciding for an Internet provider.

<1> Completely disagree

<2> Rather disagree

<3> Rather agree

<4> Completely agree

<777> No answer / don't know

#page break

#Question type: multiple choice, max 3, order of items randomised

#Label: Main barriers to switching

#Skip logic: if -[q14_1] in [3,4]

#Base: Respondents who are (rather) cautious about switching their provider

[q15] Since you are unlikely to switch providers for Internet access at home: What are the three most important reasons against this?

<1> Satisfied with current Internet provider

<2> Risk of paying for two Internet providers during the switching process

<3> Risk of a temporary loss of service during the switching process

<4> No other Internet providers available for my household

<5> No other Internet providers offer better value for money

<6> Requires too much time / effort

<7> Loss of related services (e.g. e-mail address, personal web page)

<8> Not sure what steps to take

<9> Long binding times / minimum contract durations

<10> Comparing different Internet providers is too difficult

<11> Finding information on Internet offers is too difficult

<555> Other: [#open prompt]

<777> No answer / don't know

D.1.4 Characteristics of Out-of-Home Internet Access

We have severely reduced this section as we aim at the “at home” usage situation as agreed in the additional report provided by us at the beginning of the project. In this report, we had promised to capture some insights on mobile contracts in the focus groups as well as in the survey of this research project. We have fulfilled that promise in the focus groups and also intended to do this as part of the survey. However, due to numerous comments we had received to cut back on this part of the questionnaire since it was not part of our focus for the study, we followed these comments of the drafters. The only question that is left here is the satisfaction item for out of home Internet access. This is relevant to us because it allow benchmarking with the at home access in conjunction with the items respondents fill in as regards their experiences of disruptions. This will enable us to understand whether respondents are generally more willing to accept disruptions on their mobile contracts as compared to their fixed contracts.

#Characteristics of out-of-home Internet access

#page break

#Question type: scale

#Label: Satisfaction with mobile access

#Skip logic: if 3 in [q04]

#Base: Respondents who use the Internet out of home with a mobile phone via their mobile operator

[q16] When using the Internet on your mobile phone without connecting to WiFi, how satisfied are you with the quality of your Internet access?

<0> Very dissatisfied

<1>

<2>

<3>

<4>

<5>

<6>

<7>

<8>

<9>

<10> Very satisfied

<777> No answer / don't know

#page break

D.1.5 Internet Usage

It has been noticed by the drafters that this part of the questionnaire seemed to be relatively long and exhausting to respondents in the original version. Indeed, the part does require some effort, however, it will be necessary to develop the categories of consumers as foreseen in the Tender Specifications as one of the major research objectives of Stage C of this project. We decided to cut back on the final question of this part of the questionnaire referring to when devices were used for which applications. Rather, we decided to leave it with the other questions referring to the general usage of devices and applications. Furthermore, some minor amendments were made concerning the phrasing of the questions as well as individual items.

Finally, we added a question on the purpose, for which the Internet is used by the respondent i.e. private, business or both. This question draws from the focus group results that showed that disruptions were particularly annoying when the Internet was used for business as compared to private purposes. Also, there were some indications that participants in the focus groups would be slightly more inclined to purchase prioritised services for business purposes rather than private ones. We intend to explore these results with the added question further.

#Internet usage

#Question type: grid, order of items randomised

#Label: Perception of the Internet in general

Skip logic:

#Base: All respondents

In the next section we want to know a little bit about how you use the Internet.

[q17] Thinking about the importance of the Internet in your private life: In how far do you agree with the following statements?

-[q17_1] I cannot imagine living without the Internet anymore.

-[q17_2] I often find myself being online all the time – whenever, wherever.

-[q17_3] Not being able to use the Internet anymore would have a huge impact on my life.

-[q17_4] Being up-to-date with the latest technology is very important to me.

-[q17_5] I think of myself as a competent user of the Internet.

-[q17_6] Through the internet I can connect to my friends worldwide.

-[q17_7] The Internet is a dangerous place.

-[q17_8] Being able to connect to the wealth of information and services online is important to me.

-[q17_9] To forget everything around me when I am online is very pleasurable to me.

<1> Completely disagree

<2> Rather disagree

<3> Rather agree

<4> Completely agree
<777> No answer / don't know

#Question type: grid
#Label: Frequency of Internet usage
Skip logic:
#Base: All respondents

[q18] On how many days per week do you actively use the Internet? Please think about all activities that require an Internet connection (e.g. browsing, reading news, e-mail, social networks, streaming videos or music, Voice-over-IP, IPTV, playing online games).

-[q18_1] At home connecting through WiFi or cable
-[q18_2] [#if 5 in [q04]] Out of home on a mobile phone connected to WiFi
-[q18_3] [#if 3 in [q04]] Out of home on a mobile phone via mobile access (not connected to WiFi)

<1> Never
<2> Less than once a week
<3> About once per week
<4> On 2-3 days
<5> On 4-5 days
<6> On 6-7 days
<777> No answer / don't know

#page break

#Question type: grid
#Label: Duration of Internet usage
Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]
#Base: All respondents who use the Internet

[q19] On the days you use the Internet, how long do you use it on average?

-[q19_1] [#if -[q18_1] in [2,3,4,5,6]] At home connecting through WiFi or cable
-[q19_2] [#if -[q18_2] in [2,3,4,5,6]] Out of home on a mobile phone connected to WiFi
-[q19_3] [#if -[q18_3] in [2,3,4,5,6]] Out of home on a mobile phone via mobile access (not connected to WiFi)

<1> Up to 30 minutes
<2> More than 30 minutes up to 1 hour
<3> More than 1 hour up to 2 hours
<4> More than 2 hours up to 4 hours
<5> More than 4 hours up to 6 hours
<6> More than 6 hours
<777> No answer / don't know

#page break

#Question type: multiple choice, order randomized

#Label: Devices used for Internet access

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q20] Which of the following devices do you use to access the Internet?

<1> Desktop PC

<2> Laptop / Netbook

<3> Tablet PC

<4> Mobile phone / Smartphone

<5> Smart TV

<6> Gaming console

<777> No answer / don't know

#page break

#Question type: multiple choice, order randomized

#Label: Internet applications used

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q21] Which of the following Internet applications do you use?

<1> E-Mail / Browsing / Reading news

<2> Chat / instant text messaging (e.g. Whatsapp, Skype)

<3> Social networks (e.g. Facebook, Google+)

<4> Voice-over-IP / voice / video calling (e.g. Skype, Viber)

<5> Video streaming (e.g. YouTube, Netflix)

<6> Music streaming (e.g. Spotify, Pandora, Soundcloud)

<7> IPTV (TV programmes via Internet connection)

<8> Online gaming (e.g. MMORPGs like World of Warcraft, Multiplayer games like Counterstrike, FIFA, etc.)

<9> Downloading applications, software updates, games or videos

<10> P2P / Filesharing

<666> None of these

<777> No answer / don't know

#page break

#Question type: dyngrid, multiple, order randomized as [q21]

#Label: Internet applications used by location

Skip logic: if [q21] in [1,2,3,4,5,6,7,8,9,10]

#Base: All respondents who use one of the given applications

[q22] And where do you typically use these applications?

- [q22_1] [#if 1 in [q21]] E-Mail / Browsing / Reading news
- [q22_2] [#if 2 in [q21]] Chat / instant text messaging (e.g. Whatsapp, Skype)
- [q22_3] [#if 3 in [q21]] Social networks (e.g. Facebook, Google+)
- [q22_4] [#if 4 in [q21]] Voice-over-IP / voice / video (e.g. Skype, Viber)
- [q22_5] [#if 5 in [q21]] Video streaming (e.g. YouTube, Netflix)
- [q22_6] [#if 6 in [q21]] Music streaming (e.g. Spotify, Pandora, Soundcloud)
- [q22_7] [#if 7 in [q21]] IPTV (TV programmes via Internet connection)
- [q22_8] [#if 8 in [q21]] Online gaming (e.g. MMORPGs like World of Warcraft, Multiplayer games like Counterstrike, FIFA, etc.)
- [q22_9] [#if 9 in [q21]] Downloading applications, software updates, games or videos
- [q22_10] [#if 10 in [q21]] P2P / Filesharing

<1> [#if -[q18_1] in [2,3,4,5,6]] At home connecting through WiFi or cable

<2> [#if -[q18_2] in [2,3,4,5,6]] Out of home on a mobile phone connected to WiFi

<3> [#if -[q18_3] in [2,3,4,5,6]] Out of home on a mobile phone not connected to WiFi

<777> No answer / don't know

#page break

#Question type: multiple choice

#Label: Purpose of Internet access at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home

[q23] For what purpose do you use the Internet at home connecting through WiFi or cable?

<1> Solely private

<2> Mainly private

<3> Both private and business

<4> Mainly business

<5> Solely business

<777> No answer / don't know

#page break

D.1.6 Experience of Disruptions

Experience of disruptions has emerged from the focus group discussions as one of the major drivers for the role that the Internet plays in participants' lives as well as to some extent their willingness to purchase a prioritised service. Thus, this part of the questionnaire will be very relevant in interpreting the results of the conjoint task.

Furthermore, it will be interesting to explore how the intensity of disruptions influences respondents' satisfaction with their providers. As the questionnaire features the same

questions for both at home and out of home Internet access, we will be able to compare the two.

Those respondents who have experienced at least some disruptions will be asked in more depth about these disruptions. This will give us further insights into what are the drivers for satisfaction / dissatisfaction with providers and thus potential drivers for switching.

#Experience of disruptions
#page break
<p>#Question type: grid</p> <p>#Label: Disruptions of Internet usage at home</p> <p>#Skip logic: if -[q18_1] in [2,3,4,5,6]</p> <p>#Base: All respondents who use the Internet at home through WiFi or cable</p> <p>When using the Internet, sometimes technical disruptions occur. Connections might be lost, or speed might suddenly slow down, resulting in longer loading times / reduced quality, or websites might be unavailable entirely.</p> <p>[q24] Thinking about times when you <u>use the Internet at home connecting through WiFi or cable</u>: Which of following disruptions have you experienced before and how often do they occur?</p> <p>-[q24_1] Losing connection entirely</p> <p>-[q24_2] Suddenly slow speed / loading / reduced quality</p> <p>-[q24_3] Websites unavailable / cannot be reached</p> <p><1> I never experienced this</p> <p><2> Once every couple of months</p> <p><3> At least once per month</p> <p><4> About 2 to 3 times per month</p> <p><5> About once per week</p> <p><6> About 2-5 times per week</p> <p><7> (Nearly) daily</p> <p><777> No answer / don't know</p>
#page break
<p>#Question type: grid</p> <p>#Label: Disruptions of Internet usage at home</p> <p>#Skip logic: if -[q18_3] in [2,3,4,5,6]</p> <p>#Base: All respondents who use the Internet out of home on a mobile phone not connected through WiFi</p> <p>[q25] And thinking about times when you <u>use the Internet out of home on a mobile phone not connected to WiFi</u>: Which of following disruptions have you experienced before and how often do they occur?</p> <p>-[q25_1] Losing connection entirely</p> <p>-[q25_2] Suddenly slow speed / loading / reduced quality</p> <p>-[q25_3] Websites unavailable / cannot be reached</p>

- <1> I never experienced this
- <2> Once every couple of months
- <3> At least once per month
- <4> About 2 to 3 times per month
- <5> About once per week
- <6> About 2-5 times per week
- <7> (Nearly) daily
- <777> No answer / don't know

#page break

#Question type: *dyngrid*

#Label: *Duration of disruptions*

#Skip logic: *if -[q24_1] OR -[q24_2] OR -[q24_3] OR -[q25_1] OR -[q25_2] OR -[q25_3] in [2,3,4,5,6,7]*

#Base: *All respondents who experienced at least one type of disruption*

[q26] And when you experience these disruptions, how long do they normally last?

-[q26_1] [#if -[q24_1] in [2,3,4,5,6,7]] Losing connection entirely at home connecting through WiFi or cable

-[q26_2] [#if -[q24_2] in [2,3,4,5,6,7]] Suddenly slow speed / loading / reduced quality at home connecting through WiFi or cable

-[q26_3] [#if -[q24_3] in [2,3,4,5,6,7]] Websites unavailable / cannot be reached at home connecting through WiFi or cable

-[q26_4] [#if -[q25_1] in [2,3,4,5,6,7]] Losing connection entirely out of home on a mobile phone not connected to WiFi

-[q26_5] [#if -[q25_2] in [2,3,4,5,6,7]] Suddenly slow speed / loading / reduced quality out of home on a mobile phone not connected to WiFi

-[q26_6] [#if -[q25_3] in [2,3,4,5,6,7]] Websites unavailable / cannot be reached out of home on a mobile phone not connected to WiFi

- <1> From seconds to a few minutes
- <2> Up to 2 hours
- <3> Up to 1 day
- <4> More than 1 day
- <777> No answer / don't know

D.1.7 Information Package (Only Seen by Half of the Respondents)

The Information Package is described in depth in the final version of the Final Study Report Stage B. This discussion will not be reproduced here.

Conjoint analysis regarding ISP offers

#Skip logic: *Only test group who will see the information package*

Before we proceed with the next part of the survey, we would like you to view a short video on how Internet

providers manage the way data are sent over the Internet. Please click the “Play” button below to start the video.

#Insert information package

#page break

D.1.8 Check of Understanding of Information Package / Transparency

The objective of this part is twofold. First, it is intended to provide us with an indication whether respondents have actually understood the information package. Second, it will shed some light on the general level of expertise, especially for those respondents who have not received the information package. This may thus enable us to construct a sub-group of respondents with “expert” knowledge as regards the functioning of the Internet and network neutrality. This part of the questionnaire was moved in front of the conjoint task because it is likely that respondents may learn implicitly about some of the issues addressed in the checking of understanding of the information package and thus results may be difficult to interpret for those who have not received the information package. Furthermore, we have carefully cancelled and amended some of the items from the original list to make this part shorter and more diverse as regards the (positive vs. negative) framing of the items. The order of the items will be randomised to omit potential order effects.

Check of understanding information package / transparency

#Skip logic: Only test group who did not see the information package

Using the Internet means that data are being transferred. This transfer of data is also called data traffic. We would now like you to ask you a few questions on how you think this data traffic is managed on the Internet.

#Question type: grid, order of items randomised

#Label: Cross-check of contents of the information package / transparency

Skip logic:

#Base: All respondents

[q27] Please have a look at the following statements and tell us whether you think they are true or not.

- [q27_1] A provider of a music or video streaming service is an example of an Internet provider.
- [q27_2] Consumers typically buy their Internet access from a content provider.
- [q27_3] Internet providers ensure that data finds a way through the network from sender to destination.
- [q27_4] Traffic management does not include Internet providers slowing down or prioritising certain content.
- [q27_5] Traffic management means Internet providers may block certain content.
- [q27_6] Internet providers may apply traffic management in order to respond to congestion in the network.
- [q27_7] Internet providers may apply traffic management in order to charge for prioritised content.
- [q27_8] As the Internet is a network of independent networks the traffic management of one Internet provider only applies in the network it controls.

<1> True
<2> Not true
<777> No answer / don't know

D.1.9 Conjoint Task

The conjoint task is clearly the main focus of the survey. Although relatively it may appear short in comparison to the other parts of the questionnaire, in fact, it comprises 30 choice tasks for each respondent adding up to around 10 minutes of around 20 minutes total. Its objective is to shed light on the respondent's valuation of attributes and levels for Internet access services offers. The methodology is described in detail in the above.

First, respondents receive an explanation of the individual attributes including examples e.g. referring to specific service or applications. Then they are introduced to the different levels referring to variations of network neutrality policies that providers may apply. Within that introduction respondents are told that they can choose freely from all options presented making clear that they should not consider whether, for instance, a particular provider offers services in their area at all or whether a specific bandwidth may actually not be available to them.

The conjoint task has been set up in a way that it represents unrestricted, prioritised and throttled access to applications and content. As it has been explained in the meetings, the questionnaire adapts to the responses of the respondent and triggers ever more difficult decisions i.e. it omits the attribute levels that the respondent considers either "absolute must haves" or "absolute no goes". Due to the partial approach of the chosen method, it is quite likely that respondents may be presented with only network neutrality relevant items. Within that, it is possible that they will see only attributes referring to restricted, non-restricted or even prioritised levels or in fact a mix of those. As regards the number of levels referring to the different possibilities of access, it is important to represent in particular those that refer to deviations from network neutrality in order to be able to estimate the value of network neutrality to consumers.

In total, 10 attributes were selected for the final version of the conjoint task. Out of these 10 attributes, five represent typical Internet access service product attributes that emerged from the literature review and the focus groups consistently as the most important ones. The remaining five attribute address network neutrality policy options that providers may offer regarding data caps including zero-rating as well as access to specific applications online.

The levels within the attributes ISP brand and prices were adjusted to levels representative for the individual test area markets with the support of market data and the local NRAs. The attributes on download speed and bundle remained unchanged. The minimum contract duration was adjusted in line with comments we received at the

meeting / workshop to represent only three levels instead of four. The level “3 months” was deleted.

As regards the attributes linked to (potential) network neutrality policies, the attributes data cap was extended to include zero-rating. It now comprises nine levels. Data caps were introduced at 10GB and 50GB per month. The respondents will see use cases for each of those like “that corresponds to XX hours of video streaming”. When data caps apply also zero-rating options feature as levels referring to respondents respective “favourite” video-streaming service, VoIP application and online game. Finally, there is naturally the level referring to no data cap whatsoever. We decided against mentioning explicit examples of services here because this would bias our results measuring more how important one particular service e.g. Netflix is to respondents rather than how important it is that video-streaming as such (represented by their favourite service) does not count toward the data cap. The following attributes refer to specific services / applications as they were in the original version. However, we cancelled “music streaming” from the list as it can be assumed to be relatively close to video streaming. Consolidating the two attributes into one, however, did not seemed to be a viable option as this would have diluted the measure and would have been difficult to interpret.

#page break

#Skip logic: All respondents

In the following questions, we would like to learn a bit about how you evaluate offers from Internet providers. We will ask you a series of question on how strongly you prefer some features that these offers can include. You will see question regarding the following features: When answering the questions, please assume that you were free to choose the offer you like.

- Internet provider
- Monthly price
- Download speed
- Whether an offer includes Internet, Telephone and / or TV access
- Minimum contract duration, i.e. the period after which you could cancel the contract
- Whether the offer includes some kind of data cap. A data cap means that you can only download and upload a certain amount of data per month. To use more data you would have to pay extra. *In some cases*, certain applications will be exempt from the data cap which means that using those does not count towards the data cap. You will see the following levels of data caps:
 - 10 GB: This is e.g. sufficient for about 5 hours of streaming videos in HD quality or 100 hours of streaming music in good quality in addition to browsing and searching on the Internet.
 - 50 GB: This is e.g. sufficient for about 25 hours of streaming videos in HD quality or 500 hours of streaming music in good quality in addition to browsing and searching on the Internet.
 - No data cap

#page break

- Additionally, in some cases access to certain applications can vary. You will see the following levels:
 - Can be used normally
 - Is prioritised: This means you will have a very stable connection when using this application, without disruptions like sudden slowdown or reloading.

- Is slowed down: This means you will have a slower connection when using this application, so it can be more often disrupted by e.g. slowdowns or reloading.
- Is blocked: This means that the application cannot be accessed at all with this offer.
- The applications you will see in the questions are the following:
 - P2P / Filesharing
 - VoIP services: Video / voice calling chat / Voice-over-IP (e.g. Skype, Viber)
 - Video streaming (e.g. YouTube, Netflix)
 - Online gaming (e.g. MMORPGs like World of Warcraft, Multiplayer games like Counterstrike, FIFA, etc.)

#Internal information, not shown to respondents.

#The following attributes and levels will be tested in the conjoint part:

Attributes other than traffic management	
Attribute	Levels
Internet provider	4 most important ISPs per test area
Monthly price	4 price levels covering the realistic range of prices in each of the test areas
Download speed	Up to 2 MBit/s
	Up to 10 MBit/s
	Up to 25 MBit/s
	Up to 100 MBit/s
Bundled services	No bundle, Internet only
	Bundle of Internet and Telephone
	Bundle of Internet and TV
	Bundle of Internet, Telephone, and TV
Minimum contract duration	1 month
	12 months
	24 months

Attributes covering traffic management measures	
Attribute	Levels
Data cap	10 GB [#use cases from above will be available as mouse over text]
	50 GB [#use cases from above will be available as mouse over text]
	10 GB, your favourite video streaming application does not count towards the cap
	50 GB, your favourite video streaming application does not count towards the cap
	10 GB, your favourite VoIP application does not count towards the cap
	50 GB, your favourite VoIP application does not count towards the cap
	10 GB, your favourite online game does not count towards the cap
	50 GB, your favourite online game does not count towards the cap
	No data cap
P2P / Filesharing	can be used normally
	prioritised
	slowed down
	blocked
VoIP services	can be used normally
	prioritised
	slowed down

	blocked
Video streaming	can be used normally
	prioritised
	slowed down
	blocked
Online gaming	can be used normally
	prioritised
	slowed down
	blocked

#page break

#First section of conjoint questions. This will ask questions of general attractiveness for all levels per attribute. Question [cq01] below is meant to illustrate this procedure as an example.

[cq01] Please rate the following Internet providers in terms of how attractive they are.

-[cq01_1] Brand 1

-[cq01_1] Brand 2

-[cq01_1] Brand 3

-[cq01_1] Brand 4

<1> Not attractive

<2>

<3> Somewhat attractive

<4>

<5> Very attractive

<6>

<7> Extremely attractive

#Second section of conjoint questions. This will ask 30 questions in which respondents state their preference for one of two offers on a 9-point scale. In the first 15 questions, each question will include a selection of 4 attributes, in the remaining part each will include 5 attributes. Question [cq02] below is meant to illustrate this procedure as an example.

[cq02] If these Internet access offers were identical in all other ways, which would you prefer?

Download speed: Up to 2 MBit/s

Download speed: Up to 10 MBit/s

Bundle of Internet and Telephone Data cap of 50 GB Video streaming blocked					No bundle, Internet only Data cap of 30 GB, online gaming not capped Video streaming prioritised			
o	o	o	o	o	O	o	o	o
Strongly prefer the left offer		Somewhat prefer the left offer		Indifferent		Somewhat prefer the right offer		Strongly prefer the right offer
#page break								

D.1.10 Psychographic Section

This part of the questionnaire seeks to explore the general attitudes of respondents towards issues revolving around network neutrality. We have consulted intensively with the drafters, our external expert Prof. Dr. Natali Helberger and the project team on how to amend these questions. Our objective was to extract as much information out of the survey as possible whilst keeping the overall length and difficulty manageable for respondents.

The individual items in the first question refer to comments we received in the consultation process and draw from the results of the focus group discussions in Stage B. The second question addresses switching due to traffic management practices. The statements closely reflect the attributes in the conjoint task. Thus, in conjunction with the conjoint task these items will shed some light on how likely respondents are to actually switch providers due to traffic management practices. Although it should be noted here that this study's major research objective is to investigate how European evaluate network neutrality from various perspectives and not switching intentions in particular. This is, however, certainly a field for further research that can build on our results. The final question here is built from items that refer to wider impact of traffic management and the role of the national regulators as perceived by the respondent. This will enable us to investigate if and how respondents understand the implications of deviations from network neutrality as well as whom they think would be in a position to regulate providers.

Psychographic section
#page break
<p>#Question type: grid, order of items randomised</p> <p>#Label: Attitude towards specific traffic management measures</p> <p># Skip logic:</p> <p>#Base: All respondents</p>

[q28] As you have seen earlier, Internet providers can prioritise or block certain Internet applications. In how far do you agree with the following statements relating to this?

-[q28_1] I am fine with applications being prioritised for a specific user if they pay extra for this service.

-[q28_2] I am concerned that Internet providers' analyses of data traffic to enable prioritised applications violate privacy rights.

-[q28_3] If prioritising one user means that someone else gets slower access to the Internet, I find this unfair.

-[q28_4] I am fine with providers managing data traffic to keep my Internet experience stable.

-[q28_5] It is fine if Internet providers prioritise applications that are offered directly by them (e.g. IPTV from the provider).

-[q28_6] Internet providers should be allowed to prioritise applications if the application provider pays them for this.

-[q28_7] Internet usage of the government or official institutions like police, fire departments, or hospitals should be prioritised, even if it means consumers have to suffer from slower Internet access temporarily.

-[q28_8] If prioritising one application means that I cannot access another application, I cannot accept this.

<1> Completely disagree

<2> Rather disagree

<3> Rather agree

<4> Completely agree

<777> No answer / don't know

#page break

#Question type: grid, order of items randomised

#Label: Switching likelihood due to traffic management

Skip logic:

#Base: All respondents

[q29] Imagine your Internet provider introduced some of these measures. How likely would you switch to another provider who is not making use of these measures?

-[q29_1] If my Internet provider introduced data caps for Internet access at home I would switch providers.

-[q29_2] If my Internet provider decreased the speed for video streaming unless I paid extra, I would switch providers.

-[q29_3] If my Internet provider decreased the speed for music streaming unless I paid extra, I would switch providers.

-[q29_4] If my Internet provider decreased the speed for P2P / filesharing unless I paid extra, I would switch providers.

-[q29_5] If my Internet provider decreased the speed for online gaming unless I paid extra, I would switch providers.

-[q29_6] If my Internet provider decreased the speed for voice chat / VoIP unless I paid extra, I would switch providers.

<1> Completely disagree

<2> Rather disagree
<3> Rather agree
<4> Completely agree
<777> No answer / don't know

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards net neutrality in general

Skip logic:

#Base: All respondents

[q30] Over the course of the survey we have looked at several measures that Internet providers can take to manage data traffic on the Internet. All these measures imply that not all consumers get the same degree of access to the Internet. In light of this, please tell us to what extent you agree with the following statements.

- [q30_1] Internet providers are socially responsible to provide everyone with the same quality of access to the Internet.
- [q30_2] Equal and unrestricted access to the Internet is a human right.
- [q30_3] Traffic management on the Internet does prevent competition between Internet providers.
- [q30_4] Internet providers should not monitor what individual users do online.
- [q30_5] Every Internet provider should be free to decide to which internet applications and services he wants to give users access to.
- [q30_6] Prioritising certain applications above others has a positive effect on innovation.
- [q30_7] Transparency is all that it needs: people will switch providers if they do not agree with prioritising or blocking internet traffic, as long as they are informed that it takes place.
- [q30_8] Everybody should have the right to receive all the content and applications that are offered online.
- [q30_9] National regulators have a responsibility to make sure that everyone is treated equally when it comes to Internet access and speed.
- [q30_10] National regulators have a responsibility to make it easier for users to find alternative offers.

<1> Completely disagree
<2> Rather disagree
<3> Rather agree
<4> Completely agree
<777> No answer / don't know

D.1.11 Socio-Demographic Section

The final part of the questionnaire addresses the socio-demographic background of respondents. It features the commonly used questions used for this kind of investigation. We have, however, made some sacrifices in order to keep the length of the questionnaire manageable. For instance, we opted for not asking for level of education. This decision was taken with several factors in mind. First, education level does not seem to be as relevant as other socio-demographic variables and to keep the questionnaire short, we did not use. Second, we already have a more topic-specific

proxy included in the questionnaire, namely the questions referring to knowledge about traffic management practices and the functioning of the Internet. These provide us with a much more relevant measure of expertise than a simple question for education levels could.

Socio-demographic section

#page break

#Question type: open numeric

#Label: Household size

Skip logic:

#Base: All respondents

Thank you very much for your answers so far. We are nearly finished with the survey and just have some general question regarding your personal background left.

[q31] How many people are living in your household, yourself included?

[#open prompt]

<777> No answer / don't know

#page break

#Question type: single choice

#Label: Household net income

Skip logic:

#Base: All respondents

[q32] What is the net monthly income of your household?

<1> List of categories adapted to test area

<777> No answer / don't know

#page break

#Question type: single choice

#Label: Accommodation

Skip logic:

#Base: All respondents

[q33] Which of the following best describes the household you live in?

<1> Detached house

<2> Semi-detached house

<3> Terraced house

<4> Maisonette
<5> Studio/Flat
<6> Bungalow
<555> Other
<777> No answer / don't know

#page break

#Question type: single choice
#Label: Living area
Skip logic:
#Base: All respondents

[q34] Which of the following best describes the area you live in?

<1> rural
<2> rather rural
<3> rather urban
<4> urban
<777> No answer / don't know

#page break

#Question type: multiple choice
#Label: Employment status
Skip logic:
#Base: All respondents

[q35] What is your current employment status? If you have a full time and a part time occupation, then please tick both that apply.

<1> Working full time (30 or more hours per week)
<2> Working part time (8-29 hours a week)
<3> Working part time (Less than 8 hours a week)
<4> Full time student
<5> Retired
<6> Unemployed / Not working
<555> Other
<777> No answer / don't know

D.1.12 End of the Survey

End of the survey

You have now reached the end of the survey. Thank you very much for your time!

D.2 Final Version Translation – Croatia

• #Introduction

#page break

Poštovani sudionici,

prije svega, hvala vam na sudjelovanju u ovom istraživanju na temu „telekomunikacija“. Trebat ćemo oko 20 minuta.

Upotrijebite strelicu na dnu stranice kako biste nastavili s istraživanjem.

Puno vam hvala na vašem vremenu i trudu.

#page break

#Question type: open numeric

#Label: Age

#Skip logic:

#Base: All respondents

[q01_1] Koje ste godine rođeni?

[#open prompt]

[q01_2] U kojem mjesecu ste rođeni?

[#open prompt]

#page break

#Question type: single choice

#Label: Gender

#Skip logic:

#Base: All respondents

[q36] Jeste li...

<3> Muško

<4> Žensko

#page break
<p><i>#Question type: single choice</i></p> <p><i>#Label: Region</i></p> <p><i>#Skip logic:</i></p> <p><i>#Base: All respondents</i></p>
<p>[q37] U kojoj županiji-živite?</p> <p><1> Zagrebačka županija</p> <p><2> Krapinsko-zagorska županija</p> <p><3> Sisačko-moslavačka županija</p> <p><4> Karlovačka županija</p> <p><5> Varaždinska županija</p> <p><6> Koprivničko-križevačka županija</p> <p><7> Bjelovarsko-bilogorska županija</p> <p><8> Primorsko-goranska županija</p> <p><9> Ličko-senjska županija</p> <p><10> Virovitičko-podravska županija</p> <p><11> Požeško-slavonska županija</p> <p><12> Brodsko-posavska županija</p> <p><13> Zadarska županija</p> <p><14> Osječko-baranjska županija</p> <p><15> Šibensko-kninska županija</p> <p><16> Vukovarsko-srijemska županija</p> <p><17> Splitsko-dalmatinska županija</p> <p><18> Istarska županija</p> <p><19> Dubrovačko-neretvanska županija</p> <p><20> Međimurska županija</p> <p><21> Grad Zagreb</p>
#page break
<p><i>#Question type: multiple choice</i></p> <p><i>#Label: Types of internet access available</i></p> <p><i>#Skip logic:</i></p> <p><i>#Base: All respondents</i></p>
<p>[q38] Postoje mnogi načini pristupa Internetu. Na koji od sljedećih načina pristupate Internetu?</p> <p><6> Kod kuće s pomoću fiksnog pristupa (uređaji se povezuju preko WiFi mreže ili mrežnog kabela na npr. DSL, kablsku mrežu, kućnu LTE mrežu ili USB adapter za bežično povezivanje)</p> <p><7> Kod kuće s pomoću mobilnog pristupa (pametni telefon ili tablet računalo koje nije povezano preko WiFi mreže)</p> <p><8> Izvan kuće s pomoću mobilnog telefona preko mobilnog pristupa, npr. na cesti</p> <p><9> Izvan kuće s pomoću tablet računala preko mobilnog pristupa, npr. na cesti</p> <p><10> Izvan kuće povezivanjem na WiFi mreže / javne pristupne točke (eng. hotspot), npr. u vlaku, kafiću</p>

<777> Bez odgovora / ne znam
<i>#Screenout if not 1 in [q04]</i> <i>#Respondents who do not use stationary access at home are not surveyed</i>
#page break
<i>#Question type: single choice</i> <i>#Label: Decision making</i> <i>#Skip logic:</i> <i>#Base: All respondents</i>
[q39] Koliko ste uključeni u postupak odlučivanja od koga / koje tvrtke dobivate fiksni pristup Internetu kod kuće? <4> Odlučujem sam. <5> Odlučujem s drugom osobom. <6> Netko drugi odlučuje, nisam uključen u postupak odlučivanja. <777> Bez odgovora / ne znam
<i>#Screenout if [q05] in [3,777]</i> <i>#Respondents who do are not involved in decisions about Internet access are not surveyed</i>
#page break
• #Characteristics of at-home Internet access
<i>#Question type: single choice</i> <i>#Label: ISP fixed</i> <i>#Skip logic:</i> <i>#Base: All respondents</i>
[q40] Koje od sljedećih pružatelja internetskih usluga upotrebljavate za fiksni pristup Internetu kod kuće (tvrtka od koje dobivate uslugu pristupa Internetu)? Navedenu tvrtku ćemo u nastavku istraživanja zvati „pružatelj internetskih usluga“. <1> Hrvatski Telekom <2> B.net <3> Metronet telekomunikacije <4> Amis <5> Optima Telekom <6> Magic Telekom <7> H1 telekom <8> Iskon internet <9> Vip <10> <11> Terrakom <555> Druga <777> Bez odgovora / ne znam

#page break
<p>#Question type: single choice</p> <p>#Label: Speed fixed</p> <p>#Skip logic:</p> <p>#Base: All respondents</p>
<p>[q41] Koju brzinu fiksnog pristupa Internetu kod kuće ste ugovorili s Vašim pružateljem internetskih usluga?</p> <p><8> Do 2 MBit/s</p> <p><9> Od 2 do 8 MBit/s</p> <p><10> Od 8 do 16 MBit/s</p> <p><11> Od 16 do 32 MBit/s</p> <p><12> Od 32 do 50 MBit/s</p> <p><13> Od 50 do 100 MBit/s</p> <p><14> Više od 100 MBit/s</p> <p><777> Bez odgovora / ne znam</p>
#page break
<p>#Question type: scale</p> <p>#Label: Satisfaction with fixed speed</p> <p>#Skip logic:</p> <p>#Base: All respondents</p>
<p>[q42] Na ljestvici 0 do 10: Koliko ste zadovoljni kvalitetom fiksnog pristupa Internetu kod kuće?</p> <p><11> Vrlo nezadovoljan</p> <p><12></p> <p><13></p> <p><14></p> <p><15></p> <p><16></p> <p><17></p> <p><18></p> <p><19></p> <p><20></p> <p><21> Vrlo zadovoljan</p> <p><777> Bez odgovora / ne znam</p>
#page break
<p>#Question type: multiple choice</p> <p>#Label: Bundled services</p> <p>#Skip logic:</p> <p>#Base: All respondents</p>
<p>[q43] U paketu sa fiksnim pristupom Internetu kod kuće često dolaze usluge telefonije, digitalne televizije ili mobilne usluge. Osim pristupa Internetu, koje ste od navedenih usluga ugovorili sa svojim pružateljem internetskih usluga?</p>

<4> Telefon
 <5> TV
 <6> Mobilne usluge
 <777> Bez odgovora / ne znam

#Question type: single choice
#Label: Costs for at home access
#Skip logic:
#Base: All respondents

[q44] Koliko mjesečno ukupno trošite na sve navedene usluge? Ako ne znate točan iznos, molimo unesite približnu procjenu.

<2> Do 150 Kn
 <3> Od 150 Kn do 200 Kn
 <4> Od 200 Kn do 250 Kn
 <5> Od 250 Kn do 350 Kn
 <6> Od 350 Kn do 450 Kn
 <7> Više od 450 Kn
 <777> Bez odgovora / ne znam

#page break

• #ISP switching behaviour

#Question type: single choice
#Label: Duration of current ISP relation
#Skip logic:
#Base: All respondents

[q45] Koliko se dugo koristite uslugama trenutnog pružatelja internetskih usluga kod kuće?

<7> Do 1 godine
 <8> Od 1 do 2 godine
 <9> Od 2 do 4 godine
 <10> Od 4 do 6 godina
 <11> Od 6 do 8 godina
 <12> Više od 8 godina
 <777> Bez odgovora / ne znam

#page break

#Question type: multiple choice
#Label: Past switching
#Skip logic:
#Base: All respondents

[q46] Jeste li ikada promijenili pružatelja internetskih usluga?

<4> Da, jer sam htio (npr. zbog bolje ponude)

<5> Da, jer sam morao / bio sam prinuđen (npr. zbog selidbe)

<6> Ne

<777> Bez odgovora / ne znam

#page break

#Question type: single choice

#Label: Previous ISP

#Skip logic: if [q12] in [1,2]

#Base: Respondents who did switch their ISP before

[q47] Prisjetite se posljednje promjene pružatelja internetskih usluga kod kuće: koja je od sljedećih tvrtki bila vaš prethodni pružatelj internetskih usluga?

<1> Hrvatski Telekom

<2> B.net

<3> Metronet telekomunikacije

<4> Amis

<5> Optima Telekom

<6> Magic Telekom

<7> H1 telekom

<8> Iskon Internet

<9> Vip

<10>

<11> Terrakom

<555> Druga

<777> Bez odgovora / ne znam

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards switching

#Skip logic:

#Base: All respondents

[q48] Kada razmišljate o promijeni pružatelja internetskih usluga kod kuće: koliko se slažete sa sljedećim izjavama?

-[q48_1] Vjerojatno neću promijeniti pružatelja internetskih usluga.

-[q48_2] Nisam zadovoljan izborom pružatelja internetskih usluga.

<5> U potpunosti se ne slažem

<6> Većinom se ne slažem

<7> Većinom se slažem

<8> U potpunosti se slažem

<777> Bez odgovora / ne znam

#page break

#Question type: multiple choice, max 3, order of items randomised

#Label: Main barriers to switching

#Skip logic: if -[q14_1] in [3,4]

#Base: Respondents who are (rather) cautious about switching their provider

[q49] Budući da ne planirate promijeniti pružatelja internetskih usluga kod kuće: koja su tri najvažnija razloga za zadržavanje trenutnog pružatelja internetskih usluga?

- <12> Zadovoljan sam trenutnim pružateljem internetskih usluga
- <13> Rizik od plaćanja dva pružatelja internetskih usluga tijekom postupka promijene
- <14> Rizik od privremenog gubitka usluge tijekom postupka promijene
- <15> Drugi pružatelji internetskih usluga nisu dostupni za moje kućanstvo
- <16> Drugi pružatelji internetskih usluga nude manju vrijednost za istu cijenu usluge
- <17> Zahtijeva previše vremena / truda
- <18> Gubitak povezanih usluga (npr. adrese e-pošte, osobne internetske stranice)
- <19> Nisam siguran kako obaviti postupak promijene pružatelja internetskih usluga
- <20> Dugotrajna ugovorna obveza / minimalno trajanje ugovora
- <21> Uspoređivanje različitih pružatelja internetskih usluga je preteško
- <22> Pronalazak informacija o ponudama internetskih usluga je preteško
- <555> Druga: [#open prompt]
- <777> Bez odgovora / ne znam

#page break

• #Characteristics of out-of-home Internet access

#Question type: scale

#Label: Satisfaction with mobile access

#Skip logic: if 3 in [q04]

#Base: Respondents who use the Internet out of home with a mobile phone via their mobile operator

[q50] Kako ste zadovoljni kvalitetom internetskog pristupa tijekom uporabe Interneta na vašem mobilnom telefonu bez povezivanja s WiFi mrežom?

- <11> Vrlo nezadovoljan
- <12>
- <13>
- <14>
- <15>
- <16>
- <17>
- <18>
- <19>
- <20>
- <21> Vrlo zadovoljan

<777> Bez odgovora / ne znam

#page break

• #Internet usage

#Question type: grid, order of items randomised

#Label: Perception of the Internet in general

#Skip logic:

#Base: All respondents

U sljedećem odjeljku želimo saznati kako se koristite Internetom.

[q51] Kada razmišljate o važnosti Interneta u vašem privatnom životu: koliko se slažete sa sljedećim izjavama?

-[q51_1] Ne mogu zamisliti život bez Interneta.

-[q51_2] Često sam cijelo vrijeme prisutan na mreži - u bilo koje vrijeme i na bilo kojem mjestu.

-[q51_3] Nemogućnost pristupanja Internetu imala bi ogroman utjecaj na moj život.

-[q51_4] Vrlo mi je važno držati korak s najnovijom tehnologijom.

-[q51_5] Smatram se stručnim korisnikom Interneta.

-[q51_6] S pomoću Interneta mogu se povezati s prijateljima diljem svijeta.

-[q51_7] Internet je opasno mjesto.

-[q51_8] Vrlo mi je važna mogućnost pristupanja bogatstvu informacija i usluga koje se nalaze na Internetu.

-[q51_9] Veliko zadovoljstvo pruža mi osjećaj isključivanja iz stvarnog svijeta kada sam na Internetu.

<5> U potpunosti se ne slažem

<6> Većinom se ne slažem

<7> Većinom se slažem

<8> U potpunosti se slažem

<777> Bez odgovora / ne znam

#Question type: grid

#Label: Frequency of Internet usage

#Skip logic:

#Base: All respondents

[q52] Koliko se dana tjedno aktivno koristite Internetom? Prije odgovora razmislite o svim aktivnostima koje zahtijevaju pristup internetskoj vezi (npr. pregledavanje internetskih stranica, čitanje vijesti, poruka e-pošte, uporaba društvenih mreža, gledanje video zapisa ili slušanje glazbe, IP telefonija, IP televizija, igranje igara na mreži).

-[q52_1] Kod kuće, povezivanjem preko WiFi ili kablanske mreže

-[q52_2] [#if 5 in [q04]] Izvan kuće s pomoću mobilnog telefona povezanog na WiFi mrežu

-[q52_3] [#if 3 in [q04]] Izvan kuće s pomoću mobilnog telefona preko usluge mobilnog pristupa Internetu (bez povezivanja na WiFi mrežu)

<7> Nikad

<8> Manje od jednom tjedno
 <9> Otprilike jednom tjedno
 <10> 2-3 dana
 <11> 4-5 dana
 <12> 6-7 dana
 <777> Bez odgovora / ne znam

#page break

#Question type: grid

#Label: Duration of Internet usage

#Skip logic: if *-[q18_1]* in [2,3,4,5,6] OR *-[q18_2]* in [2,3,4,5,6] OR *-[q18_3]* in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q53] Na dane kada se koristite Internetom, koliko se dugo koristite u prosjeku?

-[q53_1] [#if *-[q18_1]* in [2,3,4,5,6]] Kod kuće, povezivanjem preko WiFi ili kabela mreže
-[q53_2] [#if *-[q18_2]* in [2,3,4,5,6]] Izvan kuće s pomoću mobilnog telefona povezanog na WiFi mrežu
-[q53_3] [#if *-[q18_3]* in [2,3,4,5,6]] Izvan kuće s pomoću mobilnog telefona preko usluge mobilnog pristupa Internetu (bez povezivanja na WiFi mrežu)

<7> Do 30 minuta
 <8> Od 30 minuta do 1 sata
 <9> Od 1 do 2 sata
 <10> Od 2 do 4 sata
 <11> Od 4 do 6 sati
 <12> Više od 6 sati
 <777> Bez odgovora / ne znam

#page break

#Question type: multiple choice, order randomized

#Label: Devices used for Internet access

#Skip logic: if *-[q18_1]* in [2,3,4,5,6] OR *-[q18_2]* in [2,3,4,5,6] OR *-[q18_3]* in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q54] Koje od sljedećih uređaja upotrebljavate za pristupanje Internetu?

<7> Stolno računalo
 <8> Prijenosno računalo / prijenosno netbook računalo
 <9> Tablet računalo
 <10> Mobilni telefon / pametni telefon
 <11> Pametni TV-uređaj
 <12> Igraća konzola
 <777> Bez odgovora / ne znam

#page break

#Question type: multiple choice, order randomized

#Label: Internet applications used

#Skip logic: if $-[q18_1]$ in $[2,3,4,5,6]$ OR $-[q18_2]$ in $[2,3,4,5,6]$ OR $-[q18_3]$ in $[2,3,4,5,6]$

#Base: All respondents who use the Internet

[q55] Koju od sljedećih internetskih aplikacija upotrebljavate?

- <11> Za e-poštu / pregledavanje internetskih stranica / čitanje vijesti
- <12> Za čavljanje / slanje trenutačnih poruka (npr. Whatsapp, Skype)
- <13> Za društvene mreže (npr. Facebook, Google+)
- <14> Za IP telefoniju / prijenos glasa / video pozive (npr. Skype, Viber)
- <15> Za *streaming* video zapisa (npr. YouTube, Netflix)
- <16> Za *streaming* glazbe (npr. Spotify, Pandora, Soundcloud)
- <17> Za gledanje IP televizije (televizijski programi preko internetske veze)
- <18> Za igranje na mreži (npr. masivne višekorisničke mrežne igre kao što je World of Warcraft, višekorisničke igre kao što su Counterstrike, FIFA, itd.)
- <19> Za preuzimanje aplikacija, ažuriranja softvera, igara ili video zapisa
- <20> Za P2P / dijeljenje datoteka
- <666> Nijedna
- <777> Bez odgovora / ne znam

#page break

#Question type: dyngrid, multiple, order randomized as [q21]

#Label: Internet applications used by location

#Skip logic: if [q21] in $[1,2,3,4,5,6,7,8,9,10]$

#Base: All respondents who use one of the given applications

[q56] Gdje obično upotrebljavate navedene aplikacije?

- [q56_1] [#if 1 in [q21]] Za e-poštu / pregledavanje internetskih stranica / čitanje vijesti
- [q56_2] [#if 2 in [q21]] Za čavljanje / slanje trenutačnih poruka (npr. Whatsapp, Skype)
- [q56_3] [#if 3 in [q21]] Za društvene mreže (npr. Facebook, Google+)
- [q56_4] [#if 4 in [q21]] Za IP telefoniju / prijenos glasa / video pozive (npr. Skype, Viber)
- [q56_5] [#if 5 in [q21]] Za *streaming* video zapisa (npr. YouTube, Netflix)
- [q56_6] [#if 6 in [q21]] Za *streaming* glazbe (npr. Spotify, Pandora, Soundcloud)
- [q56_7] [#if 7 in [q21]] Za gledanje IP televizije (televizijski programi preko internetske veze)
- [q56_8] [#if 8 in [q21]] Za igranje na mreži (npr. masivne višekorisničke mrežne igre kao što je World of Warcraft, višekorisničke igre kao što su Counterstrike, FIFA, itd.)
- [q56_9] [#if 9 in [q21]] Za preuzimanje aplikacija, ažuriranja softvera, igara ili video zapisa
- [q56_10] [#if 10 in [q21]] Za P2P / dijeljenje datoteka

<1> [#if $-[q18_1]$ in $[2,3,4,5,6]$] Kod kuće, povezivanjem preko WiFi ili kablanske mreže

<2> [#if $-[q18_2]$ in $[2,3,4,5,6]$] Izvan kuće s pomoću mobilnog telefona povezanog na WiFi mrežu

<3> [#if $-[q18_3]$ in $[2,3,4,5,6]$] Izvan kuće s pomoću mobilnog telefona bez povezivanja na WiFi mrežu

<777> Bez odgovora / ne znam

#page break

#Question type: multiple choice

#Label: Purpose of Internet access at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home

[q57] U koju svrhu upotrebljavate internetske usluge kod kuće povezivanjem na WiFi ili kabelsku mrežu?

<6> Isključivo privatno

<7> Većinom privatno

<8> Privatno i poslovno

<9> Većinom poslovno

<10> Isključivo poslovno

<777> Bez odgovora / ne znam

#page break

• #Experience of disruptions

#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home through WiFi or cable

Tijekom uporabe Interneta ponekad se javljaju razne tehničke poteškoće. Može doći do gubitka veze ili smanjenja brzine što može uzrokovati predugo učitavanje / smanjenu kvalitetu ili potpunu nedostupnost internetskih stranica.

[q58] Kada se koristite Internetom kod kuće povezivanjem na WiFi ili kabelsku mrežu: koje ste od sljedećih poteškoća primijetili i koliko se često javljaju?

-[q58_1] Potpuni prekid veze

-[q58_2] Iznenadno smanjenje brzine / predugo učitavanje / smanjena kvaliteta

-[q58_3] Internetske stranice nisu dostupne / nije im moguće pristupiti

<8> Nikad

<9> Jednom svakih par mjeseci

<10> Barem jednom mjesečno

<11> 2 do 3 puta mjesečno

<12> Otprilike jednom tjedno

<13> Otprilike 2 do 5 puta tjedno

<14> (Skoro) svakodnevno

<777> Bez odgovora / ne znam

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#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if $-[q18_3]$ in $[2,3,4,5,6]$

#Base: All respondents who use the Internet out of home on a mobile phone not connected through WiFi

[q59] Kada se koristite Internetom izvan kuće s pomoću mobilnog telefona **bez** povezivanja na WiFi mrežu: koje ste od sljedećih poteškoća primijetili i koliko se često javljaju?

-[q59_1] Potpuni prekid veze

-[q59_2] Iznenadno smanjenje brzine / predugo učitavanje / smanjena kvaliteta

-[q59_3] Internetske stranice nisu dostupne / nije im moguće pristupiti

<8> Nikad

<9> Jednom svakih par mjeseci

<10> Barem jednom mjesečno

<11> 2 do 3 puta mjesečno

<12> Otprilike jednom tjedno

<13> Otprilike 2 do 5 puta tjedno

<14> (Skoro) svakodnevno

<777> Bez odgovora / ne znam

#page break

#Question type: dyngrid

#Label: Disruptions of Internet usage at home

#Skip logic: if $-[q24_1]$ OR $-[q24_2]$ OR $-[q24_3]$ OR $-[q25_1]$ OR $-[q25_2]$ OR $-[q25_3]$ in $[2,3,4,5,6,7]$

#Base: All respondents who experienced at least one type of disruption

[q60] Kada se pojave navedene poteškoće, koliko obično traju?

-[q60_1] [#if $-[q24_1]$ in $[2,3,4,5,6,7]$] Potpuni prekid veze kod kuće, povezivanjem preko WiFi ili kablanske mreže

-[q60_2] [#if $-[q24_2]$ in $[2,3,4,5,6,7]$] Iznenadno smanjenje brzine / predugo učitavanje / smanjena kvaliteta kod kuće, povezivanjem preko WiFi ili kablanske mreže

-[q60_3] [#if $-[q24_3]$ in $[2,3,4,5,6,7]$] Internetske stranice nisu dostupne / nije im moguće pristupiti kod kuće, povezivanjem preko WiFi ili kablanske mreže

-[q60_4] [#if $-[q25_1]$ in $[2,3,4,5,6,7]$] Potpuni prekid veze izvan kuće s pomoću mobilnog telefona bez povezivanja na WiFi mrežu

-[q60_5] [#if $-[q25_2]$ in $[2,3,4,5,6,7]$] Iznenadno smanjenje brzine / predugo učitavanje / smanjena kvaliteta izvan kuće s pomoću mobilnog telefona bez povezivanja na WiFi mrežu

-[q60_6] [#if $-[q25_3]$ in $[2,3,4,5,6,7]$] Internetske stranice nisu dostupne / nije im moguće pristupiti izvan kuće s pomoću mobilnog telefona bez povezivanja na WiFi mrežu

<5> Od par sekundi do par minuta

<6> Do 2 sata

<7> 1 dan

<8> Više od 1 dana

<777> Bez odgovora / ne znam

#page break

• #Conjoint analysis regarding ISP offers

#Skip logic: Only test group who will see the information package

Prije nego što nastavimo s istraživanjem, htjeli bismo vam prikazati kratak video zapis o načinu na koji pružatelji internetskih usluga upravljaju podacima koji se šalju preko Interneta. Kliknite na gumb „Play“ (Reprodukcija) u nastavku za početak reprodukcije video zapisa.

#Insert video

#page break

• #Check of understanding information package / transparency

#Skip logic: Only test group who did not see the information package

Uporaba Interneta podrazumijeva prijenos podataka. Taj prijenos podataka se još naziva i podatkovni promet. Sada bismo vam htjeli postaviti nekoliko pitanja o vašem shvaćanju prijenosa i upravljanja podacima na Internetu.

#Question type: grid, order of items randomised

#Label: Cross-check of contents of the information package / transparency

#Skip logic:

#Base: All respondents

[q61] Pročitajte sljedeće izjave i recite nam jesu li, prema vašem mišljenju, istinite.

-[q61_1] Pružatelj usluge *streaminga* glazbenih ili video zapisa primjer je pružatelja internetskih usluga.

-[q61_2] Korisnici obično kupuju pristup Internetu od pružatelja sadržaja.

-[q61_3] Pružatelji internetskih usluga osiguravaju prijenos podataka preko mreže, od pošiljatelja do odredišta.

-[q61_4] Upravljanje prometom ne uključuje usporavanje ili dodjeljivanje prioriteta određenom sadržaju od strane pružatelja internetskih usluga.

-[q61_5] Upravljanje prometom znači da pružatelji internetskih usluga mogu blokirati određene sadržaje.

-[q61_6] Pružatelji internetskih usluga mogu primijeniti načela upravljanja prometom kako bi ispravili zagušenja mreže.

-[q61_7] Pružatelji internetskih usluga mogu primijeniti načela upravljanja prometom kako bi naplatili određene prioritetne sadržaje.

-[q61_8] Budući da je Internet mreža koja se sastoji od mnogo neovisnih mreža, pružatelj internetskih usluga primjenjuje načela upravljanja prometom samo u mreži koju kontrolira.

<3> Točno

<4> Netočno

<777> Bez odgovora / ne znam

#page break

#Skip logic: All respondents

Kroz sljedeća pitanja htjeli bismo saznati više o načinu na koji procjenjujete ponude pružatelja internetskih usluga. Postavit ćemo vam niz pitanja o tome kako vam se sviđaju značajke koje navedene ponude mogu sadržavati. Prilikom odgovaranja na pitanja, pretpostavite da ste slobodni odabrati ponudu koju želite.

Vidjet ćete pitanja o sljedećim značajkama:

- Pružatelj internetskih usluga
- Mjesečna cijena
- Brzina preuzimanja podataka
- Sadrži li ponuda pristup Internetu, uslugu telefonije i / ili televizije
- Minimalno trajanje ugovora, tj. razdoblje nakon kojeg možete raskinuti ugovor
- Sadrži li ponuda nekakvo ograničenje podataka. Ograničenje podataka znači da mjesečno možete preuzimati ili prenositi samo određenu količinu podataka. Kada dostignete postavljeno ograničenje, morate platiti određenu naknadu za prijenos dodatnih podataka. *U nekim slučajevima*, određene aplikacije mogu biti izuzete iz navedenog ograničenja podataka, što znači da se podaci preneseni njihovom uporabom ne zbrajaju s količinom podataka koja je ograničena ugovorom. Uobičajene su sljedeće razine ograničenja podataka:
 - 10 GB: To je, na primjer, dovoljno za približno 5 sati *streaminga* video zapisa visoke razlučivosti ili 100 sati strujanja glazbe visoke kvalitete, uz uobičajeno pregledavanje i pretraživanje internetskih stranica.
 - 50 GB: To je, na primjer, dovoljno za približno 25 sati *streaminga* video zapisa visoke razlučivosti ili 500 sati strujanja glazbe visoke kvalitete, uz uobičajeno pregledavanje i pretraživanje internetskih stranica.
 - Nema ograničenja podataka

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- Dodatno, u nekim se slučajevima može razlikovati način pristupanja određenim aplikacijama. Uobičajene su sljedeće razine pristupa:
 - Može se normalno upotrebljavati
 - Pristup ima prioritet: ovo znači da imate vrlo stabilnu vezu tijekom uporabe navedene aplikacije, bez ometanja kao što je iznenadno usporavanje ili ponovno učitavanje.
 - Pristup je usporen: ovo znači da imate sporiju vezu tijekom uporabe navedene aplikacije, moguće su češće smetnje kao, na primjer, usporavanja ili ponovno učitavanje.
 - Pristup je blokiran: ovo znači da se aplikaciji ne može pristupiti ovom ponudom.
- Sljedeće aplikacije pojavljuju se u pitanjima:
 - Za P2P / dijeljenje datoteka
 - Za usluge prijenosa glasa preko internetske veze: video / čavrljanje uz glasovni poziv / prijenos glasa preko internetske veze (npr. Skype, Viber)
 - Za *streaming* video zapisa (npr. YouTube, Netflix)
 - Za igranje na mreži (npr. masivne višekorisničke mrežne igre kao što je World of Warcraft, višekorisničke igre kao što su Counterstrike, FIFA, itd.)

#Internal information, not shown to respondents.

#The following attributes and levels will be tested in the conjoint part:

Ostala obilježja pored upravljanja prometom

Obilježje	Razine
Pružatelj internetskih usluga	Hrvatski Telekom
	B.net

	Metronet telekomunikacije
	Lokalni pružatelj internetskih usluga
Mjesečna cijena	150 Kn
	240 Kn
	320 Kn
	400 Kn
Brzina preuzimanja podataka	Do 2 MBit/s
	Do 10 MBit/s
	Do 25 MBit/s
	Do 100 MBit/s
Paket usluga	Nema paketa usluga, samo pristup Internetu
	Paket usluga sadrži pristup Internetu i uslugu telefonije
	Paket usluga sadrži pristup Internetu i uslugu televizije
	Paket usluga sadrži pristup Internetu, uslugu telefonije i uslugu televizije
Minimalno trajanje ugovora	1 mjesec
	12 mjeseca
	24 mjeseca
Obilježja koja pokrivaju mjere upravljanja prometom	
Obilježje	Razine
Ograničenje podataka	10 GB

	50 GB
	10 GB, vaša omiljena aplikacija za streaming video zapisa ne ulazi u postavljeno ograničenje podataka
	50 GB, vaša omiljena aplikacija za streaming video zapisa ne ulazi u postavljeno ograničenje podataka
	10 GB, vaša omiljena aplikacija za prijenos glasa preko internetske veze ne ulazi u postavljeno ograničenje podataka
	50 GB, vaša omiljena aplikacija za prijenos glasa preko internetske veze ne ulazi u postavljeno ograničenje podataka
	10 GB, vaša omiljena mrežna igra ne ulazi u postavljeno ograničenje podataka
	50 GB, vaša omiljena mrežna igra ne ulazi u postavljeno ograničenje podataka
	Nema ograničenja podataka
P2P / dijeljenje datoteka	može se normalno upotrebljavati
	pristup ima prioritet
	pristup je usporen
	pristup je blokiran
Usluge prijenosa glasa preko internetske veze	moгу se normalno upotrebljavati
	pristup ima prioritet
	pristup je usporen
	pristup je blokiran
Streaming video zapisa	može se normalno upotrebljavati

	pristup ima prioritet
	pristup je usporen
	pristup je blokiran
Igranje na mreži	može se normalno upotrebljavati
	pristup ima prioritet
	pristup je usporen
	pristup je blokiran

#page break

#First section of conjoint questions. This will ask questions of general attractiveness for all levels per attribute. Question [cq01] below is meant to illustrate this procedure as an example.

[cq01a] Molimo ocijenite privlačnost sljedećih pružatelja internetskih usluga.

-[cq01_1] Marka 1

-[cq01_1] Marka 2

-[cq01_1] Marka 3

-[cq01_1] Marka 4

<1> Nije privlačan

<2>

<3> Malo privlačan

<4>

<5> Jako privlačan

<6>

<7> Iznimno privlačan

[cq01b] Molimo ocijenite privlačnost sljedećih cjenovnih razina.

[cq01c] Molimo ocijenite privlačnost sljedećih razina brzine preuzimanja podataka.

[cq01c] Molimo ocijenite privlačnost sljedećih paketa.

[cq01d] Molimo ocijenite privlačnost sljedećih minimalnih trajanja ugovora.

[cq01e] Molimo ocijenite privlačnost sljedećih razina ograničenja podataka.

[cq01f] Molimo ocijenite privlačnost sljedećih mogućnosti P2P / dijeljenja datoteka.

[cq01g] Molimo ocijenite privlačnost sljedećih mogućnosti usluga prijenosa glasa preko internetske veze.

[cq01h] Molimo ocijenite privlačnost sljedećih mogućnosti strujanja video zapisa.

[cq01i] Molimo ocijenite privlačnost sljedećih mogućnosti strujanja video zapisa.

[cq01j] Molimo ocijenite privlačnost sljedećih mogućnosti mrežnog igranja.

#Second section of conjoint questions. This will ask 30 questions in which respondents state their preference for one of two offers on a 9-point scale. In the first 15 questions, each question will include a selection of 4 attributes, in the remaining part each will include 5 attributes. Question [cq02] below

is meant to illustrate this procedure as an example.

[cq02] Kada bi ove ponude pristupa Internetu bile identične u svim ostalim značajkama, koju biste odabrali?

Brzina preuzimanja podataka: do 2 MBit/s Paket usluga sadrži pristup Internetu i uslugu telefonije Ograničenje podataka od 50 GB Streaming video zapisa je blokiran				Brzina preuzimanja podataka: Do 10 MBit/s Nema paketa usluga, samo pristup Internetu Ograničenje podataka od 30 GB, mrežno igranje nije ograničeno Streaming video zapisa ima prioritetni pristup				
o	o	o	o	o	O	o	o	o
Snažno preferiram lijevu ponudu		Malo preferiram lijevu ponudu		Svejedno		Malo preferiram desnu ponudu		Snažno preferiram desnu ponudu

#page break

• **#Psychographic section**

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards specific traffic management measures

#Skip logic:

#Base: All respondents

[q62] Kao što je ranije napomenuto, pružatelji internetskih usluga mogu dodijeliti prioritet ili blokirati određene internetske aplikacije. Uzimajući to u obzir, koliko se slažete sa sljedećim izjavama?

-[q62_1] Slažem se s dodjeljivanjem prioriteta aplikacijama za određene korisnike, ako oni plate dodatnu naknadu za tu uslugu.

-[q62_2] Zabrinut sam da pružatelji internetskog pristupa možda krše prava privatnosti analiziranjem podatkovnog prometa u svrhu dodjeljivanja prioriteta određenim aplikacijama.

-[q62_3] Mislim da nije pravedno da dodjeljivanjem prioriteta jednom korisniku, netko drugi ostvaruje sporiji pristup Internetu.

-[q62_4] Slažem se da pružatelji internetskih usluga upravljaju podatkovnim prometom kako bi osigurali stabilnu uporabu veze na Internet.

-[q62_5] Slažem se da pružatelji internetski usluga dodjeljuju prioritet aplikacijama koje izravno nude (npr. uslugu televizije preko njihove internetske veze).

-[q62_6] Pružatelji internetskih usluga mogu dodijeliti prioritet aplikaciji ako im je za to platio pružatelj aplikacije.

-[q62_7] Uporaba Interneta od strane vladinih ili službenih ustanova, kao što su policija, vatrogasci i bolnice, treba imati prioritet, čak i ako zbog toga neki korisnici privremeno ostvaruju sporiji pristup Internetu.

-[q62_8] Ne mogu prihvatiti da dodjeljivanje prioriteta jednoj aplikaciji znači nemogućnost pristupanja nekoj drugoj aplikaciji.

<5> U potpunosti se ne slažem

<6> Većinom se ne slažem

<7> Većinom se slažem

<8> U potpunosti se slažem
<777> Bez odgovora / ne znam

#page break

#Question type: grid, order of items randomised

#Label: Switching likelihood due to traffic management

#Skip logic:

#Base: All respondents

[q63] Zamislite da je vaš pružatelj internetskih usluga usvojio neke od navedenih mjera. Kolika je vjerojatnost da biste se prebacili na drugog pružatelja internetskih usluga, koji ne primjenjuje takve mjere?

-[q63_1] Kada bi moj pružatelj internetskih usluga uveo ograničenje podataka za pristup Internetu kod kuće, promijenio bih pružatelja internetskih usluga.

-[q63_2] Kada bi moj pružatelj internetskih usluga smanjio brzinu za *streaming* video zapisa, osim ako mu ne platim dodatnu naknadu, promijenio bih pružatelja internetskih usluga.

-[q63_3] Kada bi moj pružatelj internetskih usluga smanjio brzinu za *streaming* glazbe, osim ako mu ne platim dodatnu naknadu, promijenio bih pružatelja internetskih usluga.

-[q63_4] Kada bi moj pružatelj internetskih usluga smanjio brzinu za P2P / dijeljenje datoteka, osim ako mu ne platim dodatnu naknadu, promijenio bih pružatelja internetskih usluga.

-[q63_5] Kada bi moj pružatelj internetskih usluga smanjio brzinu za mrežno igranje, osim ako mu ne platim dodatnu naknadu, promijenio bih pružatelja internetskih usluga.

-[q63_6] Kada bi moj pružatelj internetskih usluga smanjio brzinu za glasovno čavljanje / prijenos glasa preko internetske veze, osim ako mu ne platim dodatnu naknadu, promijenio bih pružatelja internetskih usluga.

<5> U potpunosti se ne slažem
<6> Većinom se ne slažem
<7> Većinom se slažem
<8> U potpunosti se slažem
<777> Bez odgovora / ne znam

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards net neutrality in general

#Skip logic:

#Base: All respondents

[q64] U ovom istraživanju pregledali smo nekoliko mjera kojima pružatelji internetskih usluga mogu upravljati podatkovnim prometom na Internetu. Navedene mjere podrazumijevaju da pristup Internetu nije jednak za sve korisnike. U tom pogledu, recite nam koliko se slažete sa sljedećim izjavama.

-[q64_1] Pružatelji internetskih usluga imaju društvenu odgovornost svima pružiti jednaku kvalitetu pristupa Internetu.

-[q64_2] Jednak i neograničen pristup Internetu pravo je svake osobe.

-[q64_3] Upravljanje prometom na Internetu sprječava natjecanje između pružatelja internetskih usluga.

-[q64_4] Pružatelji internetskih usluga ne bi smjeli nadzirati mrežnu aktivnost pojedinih korisnika.

- [q64_5] Svaki pružatelj internetskih usluga treba imati slobodu odlučivanja kojim aplikacijama i uslugama želi omogućiti pristup.
- [q64_6] Dodjeljivanje prioriteta određenim aplikacijama ima pozitivan utjecaj na razvoj inovacija.
- [q64_7] Samo je potrebna transparentnost: korisnici će promijeniti pružatelja internetskih usluga ako se ne slažu s dodjeljivanjem prioriteta ili blokiranjem internetskog prometa, tako dugo dok su obaviješteni o provođenju ili usvajanju navedenih mjera.
- [q64_8] Svatko ima pravo primiti sav sadržaj i aplikacije koje se nude na Internetu.
- [q64_9] Državne regulatorne ustanove imaju odgovornost osigurati jednak odnos prema svima kada su u pitanju pristup Internetu i brzina pristupa.
- [q64_10] Državna regulatorne ustanove imaju odgovornost olakšati korisnicima pronalazak alternativnih ponuda.

<5> U potpunosti se ne slažem

<6> Većinom se ne slažem

<7> Većinom se slažem

<8> U potpunosti se slažem

<777> Bez odgovora / ne znam

• #Socio-demographic section

#page break

#Question type: open numeric

#Label: Household size

#Skip logic:

#Base: All respondents

Hvala vam na dosadašnjim odgovorima. Skoro smo gotovi s istraživanjem, imamo još samo nekoliko općih pitanja o vašim osobnim informacijama.

[q65] Koliko osoba živi u vašem kućanstvu, uključujući vas?

[#open prompt]

<777> Bez odgovora / ne znam

#page break

#Question type: single choice

#Label: Household net income

#Skip logic:

#Base: All respondents

[q66] Koliki je neto mjesečni prihod vašeg kućanstva?

<1> ispod 3.000 Kn

<2> 3.001 - 4.000 Kn

<3> 4.001 - 5.000 Kn

<4> 5.001 - 6.000 Kn

<5> 6.001 - 7.000 Kn

<6> 7.001 - 8.000 Kn

<7> 8.001 - 10.000 Kn

<8> iznad 10.000 Kn

<777> Bez odgovora / ne znam

#page break

#Question type: single choice

#Label: Accommodation

#Skip logic:

#Base: All respondents

[q67] Koja od navedenih stavki najbolje opisuje vaše kućanstvo

<1> Samostojeća kuća

<2> Dvojna kuća

<3> Kuća u nizu

<4> Manja kuća

<5> Stan

<6> Bungalov/vikendica

<555> Druga

<777> Bez odgovora / ne znam

#page break

#Question type: single choice

#Label: Living area

#Skip logic:

#Base: All respondents

[q68] Koje područje od navedenih u nastavku najbolje opisuje ono u kojem živite?

<1> ruralno

<2> donekle ruralno

<3> donekle urbano

<4> urbano

<777> Bez odgovora / ne znam

#page break

#Question type: multiple choice

#Label: Employment status

#Skip logic:

#Base: All respondents

[q69] Koji je vaš trenutni radni status? Ako ste istovremeno stalno i privremeno zaposleni, označite obje stavke.

<1> Stalno zaposlen (30 ili više sati tjedno)

<2> Privremeno zaposlen (8-29 sati tjedno)
 <3> Privremeno zaposlen (manje od 8 sati tjedno)
 <4> Redovan student
 <5> Umirovljenik
 <6> Nezaposlen / ne radim
 <555> Druga
 <777> Bez odgovora / ne znam

• #End

Došli ste do kraja istraživanja. Puno hvala što ste odvojili svoje vrijeme!

D.3 Final Version Translation – Czech Republic

• #Introduction

#page break

Vážení účastníci,

nejdříve bychom Vám rádi poděkovali za Vaši účast v tomto průzkumu na téma „telekomunikace“. Zabere Vám to asi 20 minut.

Pomocí šipky na konci každé stránky se budete v průzkumu pohybovat směrem vpřed.

Velmi Vám děkujeme za Váš čas a úsilí.

#page break

#Question type: open numeric

#Label: Age

#Skip logic:

#Base: All respondents

[q01_1] Ve kterém roce jste se narodil/a?

[#open prompt]

[q01_2] Ve kterém měsíci jste se narodil/a?

[#open prompt]

#page break

#Question type: single choice

#Label: Gender

#Skip logic:

#Base: All respondents	
[q70]	Jste...
<5>	Muž
<6>	Žena
#page break	
#Question type: single choice	
#Label: Region	
#Skip logic:	
#Base: All respondents	
[q71]	Ve kterém regionu #země žijete?
<1>	Středočeský kraj
<2>	Plzeňský kraj
<3>	Karlovarský kraj
<4>	Ústecký kraj
<5>	Liberecký kraj
<6>	Jihočeský kraj
<7>	Královohradecký kraj
<8>	Pardubický kraj
<9>	kraj Vysočina
<10>	Jihomoravský kraj
<11>	Zlínský kraj
<12>	Olomoucký kraj
<13>	Moravskoslezský kraj
<14>	Hlavní město Praha
#page break	
#Question type: multiple choice	
#Label: Types of internet access available	
#Skip logic:	
#Base: All respondents	
[q72]	Existuje mnoho způsobů přístupu k internetu. Který z následujících způsobů používáte?
<11>	Doma prostřednictvím pevného přístupu (zařízení se připojují prostřednictvím WiFi nebo síťového kabelu např. k DSL modemu, modemu kabelové televize, domácímu modemu LTE, USB klíči)
<12>	Doma prostřednictvím mobilního přístupu (chytrý telefon nebo tablet, který není připojen přes WiFi)
<13>	Mimo domov prostřednictvím mobilního telefonu s mobilním přístupem (přístupem prostřednictvím mobilní sítě), např. na ulici
<14>	Mimo domov prostřednictvím tabletu s mobilním přístupem (přístupem prostřednictvím mobilní sítě), např. na ulici
<15>	Mimo domov prostřednictvím připojení k WiFi / hotspotům, např. ve vlacích, kavárnách apod.

<777> Bez odpovědi / nevím

#Screenout if not 1 in [q04]

#Respondents who do not use stationary access at home are not surveyed

#page break

#Question type: single choice

#Label: Decision making

#Skip logic:

#Base: All respondents

[q73] Pokud jde o rozhodování o tom, koho / jakou společnost využijete doma pro získání pevného přístupu k internetu, do jaké míry jste zapojen/a do rozhodování?

<7> Rozhoduji se sám/sama.

<8> Rozhoduji společně s někým dalším.

<9> Rozhoduje někdo jiný, já se do rozhodování nezapojuji.

<777> Bez odpovědi / nevím

#Screenout if [q05] in [3,777]

#Respondents who do are not involved in decisions about Internet access are not surveyed

#page break

• #Characteristics of at-home Internet access

#Question type: single choice

#Label: ISP fixed

#Skip logic:

#Base: All respondents

[q74] Kterého z následujících poskytovatelů internetových služeb využíváte doma jako poskytovatele Vašeho stacionárního přístupu k internetu (společnost, jejíž internetový přístup využíváte)? Od této chvíle budeme tuto společnost uvádět jako Vašeho „poskytovatele internetu“.

<1> O2

<2> UPC

<3> RIO MEDIA

<4> T-Mobile

<5> Air Telecom (U:fon)

<6> GTS

<7> Vodafone

<8> Internethome

<9> STARNET

<10> SMART Comp.

<11> COMA

<12> PODA

<13> Nej TV

<555> Ostatní

<777> Bez odpovědi / nevím

#page break

#Question type: single choice

#Label: Speed fixed

#Skip logic:

#Base: All respondents

[q75] Jaká je rychlost Vašeho domácího pevného internetového připojení, která je uvedena ve Vaší smlouvě?

<15> Do 2 Mbit/s včetně

<16> Od 2 do 8 Mbit/s včetně

<17> Od 8 do 16 Mbit/s včetně

<18> Od 16 do 32 Mbit/s včetně

<19> Od 32 do 50 Mbit/s včetně

<20> Od 50 do 100 Mbit/s včetně

<21> Více než 100 Mbit/s

<777> Bez odpovědi / nevím

#page break

#Question type: scale

#Label: Satisfaction with fixed speed

#Skip logic:

#Base: All respondents

[q76] Na stupnici od 0 do 10 zhodnoťte: Jak jste spokojen/a s kvalitou Vašeho domácího pevného internetového připojení?

<22> Velmi nespokojen/a

<23>

<24>

<25>

<26>

<27>

<28>

<29>

<30>

<31>

<32> Velmi spokojen/a

<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice

#Label: Bundled services

#Skip logic:

#Base: All respondents

[q77] Domácí pevná přístup k internetu může být často spojen s telefonními či TV službami nebo smlouvou o mobilních službách do balíčku. Které z následujících služeb jsou kromě internetového přístupu součástí smlouvy, kterou máte uzavřenou s Vaším poskytovatelem pevného přístupu k internetu?

<7> Telefon

<8> TV

<9> Smlouva o mobilních službách

<777> Bez odpovědi / nevím

#Question type: single choice

#Label: Costs for at home access

#Skip logic:

#Base: All respondents

[q78] Jakou celkovou měsíční částku v současné době utratíte za tyto služby? Pokud nevíte přesnou částku, uveďte, prosím, hrubý odhad.

<8> Do 300 Kč

<9> Více než 300 Kč, méně než 500 Kč

<10> Více než 500 Kč, méně než 700 Kč

<11> Více než 700 Kč, méně než 900 Kč

<12> Více než 900 Kč, méně než 1200 Kč

<13> Více než 1200 Kč

<777> Bez odpovědi / nevím

#page break

• #ISP switching behaviour

#Question type: single choice

#Label: Duration of current ISP relation

#Skip logic:

#Base: All respondents

[q79] Jak dlouho jste zákazníkem Vašeho současného poskytovatele pevného domácího připojení k internetu?

<13> 1 rok či méně

<14> Více než 1 rok, méně než 2 roky

<15> Více než 2 roky, méně než 4 roky

<16> Více než 4 roky, méně než 6 let

<17> Více než 6 let, méně než 8 let

<18> Více než 8 let

<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice

#Label: Past switching

#Skip logic:

#Base: All respondents

[q80] Změnil/a jste někdy v minulosti Vašeho poskytovatele domácího připojení k internetu?

<7> Ano, protože jsem chtěl/a (např. kvůli lepší nabídce).

<8> Ano, protože jsem musel/a – byl/a jsem přinucen/a (např. kvůli stěhování).

<9> Ne

<777> Bez odpovědi / nevím

#page break

#Question type: single choice

#Label: Previous ISP

#Skip logic: if [q12] in [1,2]

#Base: Respondents who did switch their ISP before

[q81] Když jste naposledy změnil/a poskytovatele domácího připojení k internetu: Který z následujících poskytovatelů internetu byl Vaším předchozím poskytovatelem?

<1> O2

<2> UPC

<3> RIO MEDIA

<4> T-Mobile

<5> Air Telecom (U:fon)

<6> GTS

<7> Vodafone

<8> Internethome

<9> STARNET

<10> SMART Comp.

<11> COMA

<12> PODA

<13> Nej TV

<555> Ostatní

<777> Bez odpovědi / nevím

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards switching

#Skip logic:

#Base: All respondents

[q82] Pokud jde o změnu poskytovatele domácího internetu: Do jaké míry souhlasíte s následujícími tvrzeními?

-[q82_1] Je celkově nepravděpodobné, že bych změnil/a svého poskytovatele internetu.

-[q82_2] Mám pocit, že nemám vlastně na výběr, pokud bych se měl/a rozhodnout pro jiného poskytovatele internetu.

<9> Zcela nesouhlasím.

<10> Spíše nesouhlasím.

<11> Spíše souhlasím.

<12> Zcela souhlasím.

<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice, max 3, order of items randomised

#Label: Main barriers to switching

#Skip logic: if -[q14_1] in [3,4]

#Base: Respondents who are (rather) cautious about switching their provider

[q83] Vzhledem k tomu, že je nepravděpodobné, že byste změnil/a poskytovatele domácího připojení k internetu: Jaké jsou tři nejdůležitější důvody, které Vás k tomuto postoji vedou?

<23> Jsem spokojený/á se stávajícím poskytovatelem internetu.

<24> Riziko, že v průběhu přechodu k jinému poskytovateli internetu budu platit dvěma poskytovateli.

<25> Riziko dočasného přerušení služby v průběhu přechodu k jinému poskytovateli.

<26> Pro mou domácnost není k dispozici žádný jiný poskytovatel internetu.

<27> Žádný jiný poskytovatel přístupu k internetu nenabízí výhodnější nabídku.

<28> Vyžaduje to příliš mnoho času / úsilí.

<29> Ztráta souvisejících služeb (např. e-mailové adresy, osobní webové stránky).

<30> Nevím, jak postupovat.

<31> Dlouhá závazná lhůta / minimální doba trvání smlouvy.

<32> Srovnávání různých poskytovatelů internetu je příliš složité.

<33> Hledání informací ohledně nabídek na poskytování internetu je příliš složité.

<555> Ostatní: [#open prompt]

<777> Bez odpovědi / nevím

#page break

• #Characteristics of out-of-home Internet access

#Question type: scale

#Label: Satisfaction with mobile access

#Skip logic: if 3 in [q04]

#Base: Respondents who use the Internet out of home with a mobile phone via their mobile operator

[q84] Jak jste spokojen/a s kvalitou Vašeho mobilního internetového připojení, když používáte internet ve Vašem mobilním telefonu a nejste připojen k WiFi?

<22> Velmi nespokojen/a

<23>

<24>

<25>

<26>
 <27>
 <28>
 <29>
 <30>
 <31>
 <32> Velmi spokojen/a
 <777> Bez odpovědi / nevím

#page break

• #Internet usage

#Question type: grid, order of items randomised

#Label: Perception of the Internet in general

#Skip logic:

#Base: All respondents

V další části bychom rádi zjistili pár informací o tom, jak internet využíváte.

[q85] Pokud jde o důležitost internetu pro Váš soukromý život: Do jaké míry souhlasíte s následujícími tvrzeními?

- [q85_1] Už si nedovedu představit, že bych měl/a žít bez internetu.
- [q85_2] Často se přistihnu, že jsem pořád online – kdykoli a kdekoli.
- [q85_3] Pokud bych už nemohl/a používat internet, mělo by to obrovský dopad na můj život.
- [q85_4] Je pro mne velmi důležité být neustále informován/a o nejnovějších technologiích.
- [q85_5] Považuji se za zkušeného uživatele internetu.
- [q85_6] Prostřednictvím internetu jsem v kontaktu s mými přáteli po celém světě.
- [q85_7] Internet je nebezpečné místo.
- [q85_8] Je pro mne důležité, že se mohu připojit k online službám a získávat tak velké množství informací.
- [q85_9] Je pro mne velmi příjemné, že když jsem online, mohu zapomenout na vše kolem mne.

<9> Zcela nesouhlasím.

<10> Spíše nesouhlasím.

<11> Spíše souhlasím.

<12> Zcela souhlasím.

<777> Bez odpovědi / nevím

#Question type: grid

#Label: Frequency of Internet usage

#Skip logic:

#Base: All respondents

[q86] Kolik dní v týdnu aktivně používáte internet? Zamyslete se, prosím, nad všemi aktivitami, které vyžadují připojení k internetu (např. prohlížení internetových stránek, čtení denních zpráv, e-mail, sociální sítě, přehrávání videí nebo hudby, Voice-over-IP (telefonování po internetu), IPTV (internetová televize), hraní online her).

- [q86_1] Doma s připojením přes WiFi nebo kabel
-[q86_2] [#if 5 in [q04]] Připojení mimo domov mobilním telefonem připojeným k WiFi
-[q86_3] [#if 3 in [q04]] Připojení mimo domov mobilním telefonem s mobilním přístupem (bez připojení k WiFi)

- <13> Nikdy
<14> Méně než jednou za týden
<15> Asi jednou týdně
<16> 2-3 dny v týdnu
<17> 4-5 dnů v týdnu
<18> 6-7 dnů v týdnu
<777> Bez odpovědi / nevím

#page break

#Question type: grid

#Label: Duration of Internet usage

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q87] Jak dlouho v průměru používáte internet ve dnech, kdy se k internetu připojujete?

- [q87_1] [#if -[q18_1] in [2,3,4,5,6]] Doma s připojením přes WiFi nebo kabel
-[q87_2] [#if -[q18_2] in [2,3,4,5,6]] Mimo domov mobilním telefonem s připojením na WiFi
-[q87_3] [#if -[q18_3] in [2,3,4,5,6]] Mimo domov mobilním telefonem s mobilním přístupem (bez připojení k WiFi)

- <13> Ne déle než 30 minut
<14> Více než 30 minut, méně než 1 hodinu
<15> Více než 1 hodinu, méně než 2 hodiny
<16> Více než 2 hodiny, méně než 4 hodiny
<17> Více než 4 hodiny, méně než 6 hodin
<18> Více než 6 hodin
<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice, order randomized

#Label: Devices used for Internet access

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q88] Které z následujících zařízení používáte k přístupu na internet?

- <13> Stolní počítač
<14> Laptop / notebook
<15> Tablet
<16> Mobilní telefon / chytrý telefon
<17> Smart TV

<18> Herní konzoli
<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice, order randomized

#Label: Internet applications used

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q89] Které z následujících internetových aplikací používáte?

<21> E-mail / prohlížení internetových stránek / čtení denních zpráv
<22> Chat / výměnu rychlých zpráv (např. Whatsapp, Skype, ICQ)
<23> Sociální sítě (např. Facebook, Twitter, Google+)
<24> Telefonování po internetu / hlasové / video telefonování (např. Skype, Viber)
<25> Přehrávání videí (např. YouTube, Stream.cz, Voyo)
<26> Přehrávání hudby (např. Spotify, iTunes, Pandora, TuneIn Radio, Soundcloud)
<27> IPTV (TV programy přes internetové připojení)
<28> Hraní online her (např. MMORPG, jako jsou World of Warcraft, Multiplayer hry, jako jsou Counterstrike, FIFA, atd.)
<29> Stahování aplikací, aktualizací softwaru, her nebo videí
<30> Síť P2P / sdílení souborů
<666> Žádné z uvedených
<777> Bez odpovědi / nevím

#page break

#Question type: dyngrid, multiple, order randomized as [q21]

#Label: Internet applications used by location

#Skip logic: if [q21] in [1,2,3,4,5,6,7,8,9,10]

#Base: All respondents who use one of the given applications

[q90] A kde tyto aplikace obvykle používáte?

-[q90_1] [#if 1 in [q21]] E-mail / prohlížení internetových stránek / čtení denních zpráv
-[q90_2] [#if 2 in [q21]] Chat / výměna rychlých zpráv (např. Whatsapp, Skype, ICQ)
-[q90_3] [#if 3 in [q21]] Sociální sítě (např. Facebook, Twitter, Google+)
-[q90_4] [#if 4 in [q21]] Telefonování po internetu / hlasové / video služby (např. Skype, Viber)
-[q90_5] [#if 5 in [q21]] Přehrávání videí (např. YouTube, Stream.cz, Voyo)
-[q90_6] [#if 6 in [q21]] Přehrávání hudby (např. Spotify, iTunes, Pandora, TuneIn Radio, Soundcloud)
-[q90_7] [#if 7 in [q21]] IPTV (TV programy přes internetové připojení)
-[q90_8] [#if 8 in [q21]] Hraní online her (např. MMORPG, jako jsou World of Warcraft, Multiplayer hry, jako jsou Counterstrike, FIFA, atd.)

-[q90_9] [#if 9 in [q21]] Stahování aplikací, aktualizací softwaru, her nebo videí
-[q90_10] [#if 10 in [q21]] Síť P2P / sdílení souborů

<1> [#if -[q18_1] in [2,3,4,5,6]] Doma s připojením přes WiFi nebo kabel
<2> [#if -[q18_2] in [2,3,4,5,6]] Mimo domov mobilním telefonem s připojením na WiFi
<3> [#if -[q18_3] in [2,3,4,5,6]] Mimo domov mobilním telefonem bez připojení na WiFi
<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice
#Label: Purpose of Internet access at home
#Skip logic: if -[q18_1] in [2,3,4,5,6]
#Base: All respondents who use the Internet at home

[q91] K čemu používáte doma internet s připojením přes WiFi nebo kabel?

<11> Pouze pro soukromé účely
<12> Hlavně pro soukromé účely
<13> Pro soukromé i pracovní účely
<14> Hlavně pro pracovní účely
<15> Výhradně pro pracovní účely
<777> Bez odpovědi / nevím

#page break

• #Experience of disruptions

#Question type: grid
#Label: Disruptions of Internet usage at home
#Skip logic: if -[q18_1] in [2,3,4,5,6]
#Base: All respondents who use the Internet at home through WiFi or cable

Při používání internetu dochází občas k technickým výpadkům. Může docházet ke ztrátě připojení nebo k náhlému zpomalení rychlosti, které způsobí prodloužení času stahování / snížení kvality, nebo se může stát, že jsou webové stránky zcela nedostupné.

[q92] Zamyslete se, jak používáte Váš domácí internet s připojením přes WiFi nebo kabel: Které z následujících výpadků jste zaznamenal/a a jak často k nim dochází?

-[q92_1] Úplná ztráta připojení
-[q92_2] Náhlé zpomalení rychlosti / stahování / snížení kvality
-[q92_3] Webové stránky nejsou dostupné / nelze je načíst.

<15> Nikdy se mi to nestalo.
<16> Jednou za několik měsíců
<17> Minimálně jednou měsíčně
<18> 2 až 3 krát za měsíc
<19> Asi jednou týdně
<20> 2 až 5 krát za týden
<21> (Téměř) denně

<777> Bez odpovědi / nevím

#page break

#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet out of home on a mobile phone not connected through WiFi

[q93] Zamyslete se, jak používáte internet mimo domov ve Vašem mobilním telefonu **bez** připojení přes WiFi. Které z následujících výpadků jste předtím zaznamenal/a a jak často k nim dochází?

-[q93_1] Úplná ztráta připojení

-[q93_2] Náhlé zpomalení rychlosti / stahování / snížení kvality

-[q93_3] Webové stránky nejsou dostupné / nelze je načíst.

<15> Nikdy se mi to nestalo.

<16> Jednou za několik měsíců

<17> Minimálně jednou měsíčně

<18> 2 až 3 krát za měsíc

<19> Asi jednou týdně

<20> 2 až 5 krát za týden

<21> (Téměř) denně

<777> Bez odpovědi / nevím

#page break

#Question type: dyngrid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q24_1] OR -[q24_2] OR -[q24_3] OR -[q25_1] OR -[q25_2] OR -[q25_3] in [2,3,4,5,6,7]

#Base: All respondents who experienced at least one type of disruption

[q94] A pokud se Vám takové výpadky stávají, jak dlouho většinou trvají?

-[q94_1] [#pokud -[q24_1] v [2,3,4,5,6,7]] Úplná ztráta připojení doma s připojením přes WiFi nebo kabel

-[q94_2] [#pokud -[q24_2] v [2,3,4,5,6,7]] Náhlé zpomalení rychlosti / stahování / snížení kvality doma s připojením přes WiFi nebo kabel

-[q94_3] [#pokud -[q24_3] v [2,3,4,5,6,7]] Stránky jsou nedostupné / nelze je načíst doma s připojením přes WiFi nebo kabel

-[q94_4] [#pokud -[q25_1] v [2,3,4,5,6,7]] Úplná ztráta připojení mimo domov ve Vašem mobilním telefonu nepřipojeném přes WiFi

-[q94_5] [#pokud -[q25_2] v [2,3,4,5,6,7]] Náhlé zpomalení rychlosti / stahování / snížení kvality mimo domov ve Vašem mobilním telefonu nepřipojeném přes WiFi

-[q94_6] [#pokud -[q25_3] v [2,3,4,5,6,7]] Webové stránky nejsou dostupné / nelze je načíst mimo domov ve Vašem mobilním telefonu nepřipojeném přes WiFi

<9> Od několika sekund po několik minut

<10> Až 2 hodiny

<11> Až 1 den

<12>	Více než 1 den
<777>	Bez odpovědi / nevím
#page break	
• #Conjoint analysis regarding ISP offers	
#Skip logic: Only test group who will see the information package	
Než budeme pokračovat v další části průzkumu, chtěli bychom Vás požádat, abyste shlédli krátké video vysvětlující, jakým způsobem poskytovatelé internetu zajišťují odesílání dat přes internet. Klikněte, prosím, na níže umístěné tlačítko „Přehrát“, kterým video spustíte.	
#Insert video	
#page break	
• #Check of understanding information package / transparency	
#Skip logic: Only test group who did not see the information package	
Používání internetu znamená, že dochází k přenosu dat. Tento přenos dat je také nazýván datovým provozem. Nyní bychom Vám rádi položili několik otázek, jak je podle Vás tento datový provoz na internetu řízen.	
#Question type: grid, order of items randomised	
#Label: Cross-check of contents of the information package / transparency	
#Skip logic:	
#Base: All respondents	
[q95] Přečtěte si prosím následující tvrzení a řekněte nám, zda si myslíte, že jsou pravdivá či nikoliv.	
<p>-[q95_1] Poskytovatel služeb přehrávání hudby nebo videí je typickým poskytovatelem internetu.</p> <p>-[q95_2] Zákazníci si obvykle kupují internetový přístup od poskytovatele obsahu.</p> <p>-[q95_3] Poskytovatelé internetu zajišťují, aby se data dostala po síti od odesílatele do místa určení.</p> <p>-[q95_4] Řízení datového provozu nezahrnuje zpomalování ani preferování určitého obsahu poskytovatelem internetu.</p> <p>-[q95_5] Řízení datového provozu znamená, že poskytovatelé internetu mohou blokovat určitý obsah.</p> <p>-[q95_6] Poskytovatelé internetu mohou řídit datový provoz tak, aby odpovídajícím způsobem reagovali na zahlcení sítě.</p> <p>-[q95_7] Poskytovatelé internetu mohou uplatnit řízení datového provozu za účelem zpoplatnění preferovaného obsahu.</p> <p>-[q95_8] Vzhledem k tomu, že internet je síť nezávislých sítí, řízení datového provozu jednoho poskytovatele internetu se týká pouze sítě, kterou sám spravuje.</p>	
<5> Pravda	
<6> Nepravda	
<777> Bez odpovědi / nevím	
#page break	
#Skip logic: All respondents	
Prostřednictvím následujících dotazů bychom rádi zjistili, jak hodnotíte nabídky poskytovatelů internetu. Položíme Vám sérii otázek na téma, do jaké míry dáváte přednost určitým prvkům, které tyto nabídky	

zahrnují. Při odpovědích na otázky prosím předpokládejte, že máte svobodnou možnost výběru služby podle vlastních preferencí.

Zobrazí se Vám otázky týkající se následujících prvků:

- Poskytovatel internetu
- Cena za měsíc
- Rychlost stahování
- Zda nabídka zahrnuje internet, telefon a/nebo TV
- Minimální doba trvání smlouvy, tj. lhůta, po uplynutí které můžete smlouvu zrušit.
- Zda nabídka zahrnuje určitý druh omezení datové kapacity. Datová kapacita znamená, že můžete stahovat a nahrávat pouze určitý objem dat za měsíc. Za použití většího objemu dat musíte platit zvlášť. V některých případech jsou určité aplikace vyňaty z datové kapacity, což znamená, že jejich používání se do datové kapacity nezapočítává. Uvidíte následující úrovně datových kapacit:
 - 10 GB: To stačí např. na 5 hodin přehrávání videí v HD kvalitě nebo na 100 hodin přehrávání hudby v dobré kvalitě plus prohlížení a vyhledávání na internetu.
 - 50 GB: To stačí např. na 25 hodin přehrávání videí v HD kvalitě nebo na 500 hodin přehrávání hudby v dobré kvalitě plus prohlížení a vyhledávání na internetu.
 - Bez omezení datové kapacity

#page break

- Dále se může v některých případech lišit přístup k určitým aplikacím. Posuďte následující úrovně:
 - Lze běžně používat
 - Preferovaná: To znamená, že při používání této aplikace budete mít velmi stabilní připojení bez přerušení, jako je zpomalení nebo opětovné načítání.
 - Zpomalená: To znamená, že při používání této aplikace bude připojení pomalejší, takže může častěji docházet k přerušením, například zpomalením nebo opětovným načítáním.
 - Blokována: To znamená, že v rámci této nabídky nemáte k této aplikaci přístup.
- Aplikace, které v otázkách uvidíte, jsou následující:
 - Síť P2P / sdílení souborů
 - Služby VoIP: Video / hlasové chatování / Voice-over-IP (telefonování po internetu) (např. Skype, Viber)
 - Přehrávání videí (např. YouTube, Stream.cz, Voyo)
 - Hraní online her (např. MMORPG, jako jsou World of Warcraft, Multiplayer hry, jako jsou Counterstrike, FIFA, atd.)

#Internal information, not shown to respondents.

#The following attributes and levels will be tested in the conjoint part:

Jiné atributy, než je řízení datového provozu	
Atribut	Úrovně
Poskytovatel internetu	O2 Czech Republic (dříve Telefónica Czech Republic a.s.)
	UPC Česká republika
	RIO media
	Místní poskytovatel internetu

Cena za měsíc	300 Kč
	500 Kč
	700 Kč
	900 Kč
Rychlost stahování	Až 2 Mbit/s
	Až 10 Mbit/s
	Až 25 Mbit/s
	Až 100 Mbit/s
Balíček služeb	Pouze internet (bez balíčku služeb)
	Balíček internetu a telefonní služby
	Balíček internetu a TV
	Balíček internetu, telefonní služby a TV
Minimální doba trvání smlouvy	1 měsíc
	12 měsíců
	24 měsíců
Atributy opatření řízení datového provozu	
Atribut	Úrovně
Datová kapacita	10 GB
	50 GB
	10 GB, Vaše oblíbená aplikace pro přehrávání videí se do datové kapacity nezapočítává.
	50 GB, Vaše oblíbená aplikace pro přehrávání videí se do datové kapacity nezapočítává.
	10 GB, Vaše oblíbená aplikace VoIP (telefonování po internetu) se do datové kapacity nezapočítává.
	50 GB, Vaše oblíbená aplikace VoIP (telefonování po internetu) se do datové kapacity nezapočítává.
	10 GB, Vaše oblíbená online hra se do datové kapacity nezapočítává.
	50 GB, Vaše oblíbená online hra se do datové kapacity nezapočítává.
	Bez datové kapacity
Síť P2P / sdílení souborů	Ize běžně používat
	preferovaná
	zpomalená
	blokována
Služby VoIP	Ize běžně používat
	preferovaná
	zpomalená

	blokována
Přehrávání videí	lze běžně používat
	preferovaná
	zpomalená
	blokována
Hraní online her	lze běžně používat
	preferovaná
	zpomalená
	blokována

#page break

#First section of conjoint questions. This will ask questions of general attractiveness for all levels per attribute. Question [cq01] below is meant to illustrate this procedure as an example.

[cq01a] Ohodnoťte, prosím, následující poskytovatele internetu z pohledu jejich atraktivity.

-[cq01_1] Značka 1

-[cq01_1] Značka 2

-[cq01_1] Značka 3

-[cq01_1] Značka 4

<1> Neatraktivní

<2>

<3> Mírně atraktivní

<4>

<5> Velmi atraktivní

<6>

<7> Neobyčejně atraktivní

[cq01b] Ohodnoťte, prosím, následující cenové úrovně z pohledu jejich atraktivity.

[cq01c] Ohodnoťte, prosím, následující úrovně rychlosti stahování z pohledu jejich atraktivity.

[cq01c] Ohodnoťte, prosím, následující balíčky z pohledu jejich atraktivity.

[cq01d] Ohodnoťte, prosím, následující minimální doby trvání smlouvy z pohledu jejich atraktivity.

[cq01e] Ohodnoťte, prosím, následující úrovně datové kapacity z pohledu jejich atraktivity.

[cq01f] Ohodnoťte, prosím, následující možnosti P2P / sdílení souborů z pohledu jejich atraktivity.

[cq01g] Ohodnoťte, prosím, následující možnosti služeb VoIP z pohledu jejich atraktivity.

[cq01h] Ohodnoťte, prosím, následující možnosti přehrávání videí z pohledu jejich atraktivity.

[cq01i] Ohodnoťte, prosím, následující možnosti přehrávání videí z pohledu jejich atraktivity.

[cq01j] Ohodnoťte, prosím, následující možnosti hraní online her z pohledu jejich atraktivity.

#Second section of conjoint questions. This will ask 30 questions in which respondents state their preference for one of two offers on a 9-point scale. In the first 15 questions, each question will include a selection of 4 attributes, in the remaining part each will include 5 attributes. Question [cq02] below is meant to illustrate this procedure as an example.

[cq02] Pokud by tyto nabídky internetového přístupu byly ve všech jiných ohledech stejné, kterou byste upřednostnil/a?

Rychlost stahování: Až 2 MBit/s Balíček internetu a telefonu Datová kapacita 50 GB Přehrávání videí blokováno					Rychlost stahování: Až 10 MBit/s Pouze internet bez balíčku služeb Datová kapacita 30 GB, hraní online her nezahrnuto do limitu Přehrávání videí v síti preferováno			
o	o	o	o	o	O	o	o	o
Rozhodně dávám přednost nabídce vlevo.		Spíše dávám přednost nabídce vlevo.		Je mi to jedno.		Spíše dávám přednost nabídce vpravo.		Rozhodně dávám přednost nabídce vpravo.

#page break

• #Psychographic section

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards specific traffic management measures

#Skip logic:

#Base: All respondents

[q96] Jak již bylo uvedeno, poskytovatelé internetu mohou určité internetové aplikace preferovat nebo je blokovat. Do jaké míry souhlasíte s následujícími tvrzeními, které se této skutečnosti týkají?

-[q96_1] Souhlasím s tím, že některé aplikace mohou být preferovány pro specifického uživatele, pokud si za tuto službu zvlášť zaplatí.

-[q96_2] Obávám se, že analyzování datového provozu poskytovateli internetu za účelem preferování určitých aplikací je v rozporu s právem na ochranu osobních údajů.

-[q96_3] Pokud preferování jednoho uživatele znamená, že někdo jiný má v důsledku toho pomalejší přístup k internetu, zdá se mi to nespravedlivé.

-[q96_4] Souhlasím s tím, pokud poskytovatelé internetu řídí datový provoz, aby mé připojení k internetu udrželi stabilní.

-[q96_5] Je v pořádku, že poskytovatelé internetu preferují aplikace, které nabízejí přímo oni (např. IPTV od poskytovatele).

-[q96_6] Poskytovatelům internetu by mělo být umožněno, aby preferovali aplikace, pokud jim za to poskytovatel aplikace zaplatí.

-[q96_7] Používání internetu vládou nebo státními institucemi, jako jsou policie, hasiči nebo nemocnice, by mělo být preferováno, a to i přesto, že ostatní uživatelé by museli dočasně tolerovat pomalejší přístup k internetu.

-[q96_8] Pokud preferování jedné aplikace znamená, že nemám přístup k jiné, nemohu s tím souhlasit.

<9> Zcela nesouhlasím.

<10> Spíše nesouhlasím.

<11> Spíše souhlasím.

<12> Zcela souhlasím.

<777> Bez odpovědi / nevím

#page break

#Question type: grid, order of items randomised

#Label: Switching likelihood due to traffic management

#Skip logic:

#Base: All respondents

[q97] Představte si, že Váš poskytovatel internetu zavede některá z těchto opatření. Jak je pravděpodobné, že byste přešel/přešla k jinému poskytovateli, který tato opatření nepoužívá?

-[q97_1] Pokud by můj poskytovatel internetu zavedl datovou kapacitu pro domácí přístup k internetu, změnil/a bych ho.

-[q97_2] Pokud by můj poskytovatel internetu snížil rychlost přehrávání videí, pokud si za něj nepřiplatím, změnil/a bych ho.

-[q97_3] Pokud by můj poskytovatel internetu snížil rychlost přehrávání hudby, pokud si za něj nepřiplatím, změnil/a bych ho.

-[q97_4] Pokud by můj poskytovatel internetu snížil rychlost pro P2P / sdílení souborů, pokud si za něj nepřiplatím, změnil/a bych ho.

-[q97_5] Pokud by můj poskytovatel internetu snížil rychlost pro hraní online her, pokud si za něj nepřiplatím, změnil/a bych ho.

-[q97_6] Pokud by můj poskytovatel internetu snížil rychlost pro hlasový chat / VoIP, pokud si za něj nepřiplatím, změnil/a bych ho.

<9> Zcela nesouhlasím.

<10> Spíše nesouhlasím.

<11> Spíše souhlasím.

<12> Zcela souhlasím.

<777> Bez odpovědi / nevím

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards net neutrality in general

#Skip logic:

#Base: All respondents

[q98] V průběhu tohoto průzkumu jsme se zaměřili na několik opatření, která mohou poskytovatelé internetu zavádět pro účely řízení datového provozu na internetu. Všechna tato opatření znamenají, že ne všichni uživatelé získají stejnou úroveň přístupu k internetu. S ohledem na tuto skutečnost, prosím, uveďte, do jaké míry souhlasíte s následujícími tvrzeními.

-[q98_1] Poskytovatelé internetu mají vůči společnosti povinnost poskytovat každému stejně kvalitní přístup k internetu.

-[q98_2] Stejný a neomezený přístup k internetu je lidským právem.

-[q98_3] Řízení datového provozu na internetu omezuje konkurenci mezi poskytovateli internetu.

-[q98_4] Poskytovatelé internetu by neměli sledovat, co jednotliví uživatelé dělají online.

-[q98_5] Každý poskytovatel internetu by měl mít právo se svobodně rozhodnout, ke kterým internetovým aplikacím a službám umožní svým uživatelům přístup.

-[q98_6] Preferování určitých aplikací má, mimo jiné, pozitivní dopad na inovace.

-[q98_7] Vše, co je třeba, je transparentnost: lidé změní své poskytovatele internetu, pokud nebudou souhlasit s preferováním nebo blokováním datového provozu na internetu, za předpokladu, že budou

o takových omezeních informování.

-[q98_8] Každý by měl mít právo na přístup k veškerému obsahu a aplikacím, které jsou nabízeny online.

-[q98_9] Národní regulační orgány mají povinnost zajistit, aby měl každý stejná práva, pokud jde o přístup a rychlost internetu.

-[q98_10] Národní regulační orgány mají povinnost zajistit, aby pro každého uživatele bylo jednoduché nalézt alternativní nabídky.

<9> Zcela nesouhlasím.

<10> Spíše nesouhlasím.

<11> Spíše souhlasím.

<12> Zcela souhlasím.

<777> Bez odpovědi / nevím

• #Socio-demographic section

#page break

#Question type: open numeric

#Label: Household size

#Skip logic:

#Base: All respondents

Velmi Vám děkujeme za Vaše odpovědi. Náš průzkum je už téměř u konce a máme již jen pár obecných otázek týkajících se Vašeho osobního života.

[q99] Kolik osob žije ve Vaší domácnosti včetně Vás?

[#open prompt]

<777> Bez odpovědi / nevím

#page break

#Question type: single choice

#Label: Household net income

#Skip logic:

#Base: All respondents

[q100] Jaký je čistý měsíční příjem Vaší domácnosti?

<1> Do 20 000 Kč

<2> 20 000 – 30 000 Kč

<3> 30 001 – 40 000 Kč

<4> 40 001 – 50 000 Kč

<5> 50 001 – 60 000 Kč

<6> 60 001 – 70 000 Kč

<7> více než 70 000 Kč

<777> Bez odpovědi / nevím

#page break

#Question type: single choice

#Label: Accommodation

#Skip logic:

#Base: All respondents

[q101] Který z následujících typů bydlení nejlépe popisuje domácnost, ve které žijete?

<1> Samostatný rodinný domek

<2> Dvojdomek

<3> Řadový domek

<4> Vícepodlažní byt

<5> Garsonka/Byt

<6> Bungalov

<555> Ostatní

<777> Bez odpovědi / nevím

#page break

#Question type: single choice

#Label: Living area

#Skip logic:

#Base: All respondents

[q102] Který z následujících typů míst nejlépe popisuje oblast, ve které žijete?

<1> venkovská

<2> spíše venkovská

<3> spíše městská

<4> městská

<777> Bez odpovědi / nevím

#page break

#Question type: multiple choice

#Label: Employment status

#Skip logic:

#Base: All respondents

[q103] Jaké je Vaše současné pracovní postavení? Pokud máte zaměstnání na plný a částečný úvazek, pak zaškrtněte ty, které se Vás týkají.

<1> Práce na plný úvazek (30 nebo více hodin týdně)

<2> Práce na částečný úvazek (8-29 hodin týdně)

<3> Práce na částečný úvazek (méně než 8 hodin týdně)

<4> Student/ka denního studia

<5> Důchodce/důchodkyně

<6> Nezaměstnaný/á / Nepracující
 <555> Ostatní
 <777> Bez odpovědi / nevím

• **#End**

Nyní jste se dostal/a na konec průzkumu. Velmi Vám děkujeme za Váš čas!

D.4 Final Version Translation - Greece

• **#Introduction**

#page break

Αγαπητοί συμμετέχοντες,

Κατ' αρχήν θα θέλαμε να σας ευχαριστήσουμε για τη συμμετοχή σας σε αυτήν την έρευνα με θέμα «τηλεπικοινωνίες». Η διάρκειά της είναι περίπου 20 λεπτά.

Παρακαλούμε, χρησιμοποιήστε το τόξο στο τέλος κάθε σελίδας για να συνεχίσετε.

Ευχαριστούμε πολύ για το χρόνο και τον κόπο σας.

#page break

#Question type: open numeric

#Label: Age

#Skip logic:

#Base: All respondents

[q01_1] Ποιο έτος γεννηθήκατε;

[#open prompt]

[q01_2] Ποιο μήνα γεννηθήκατε;

[#open prompt]

#page break

#Question type: single choice

#Label: Gender

#Skip logic:

#Base: All respondents

[q104] Είστε...

<7> Άντρας

<8> Γυναίκα
#page break
#Question type: single choice #Label: Region #Skip logic: #Base: All respondents
[q105] Σε ποια περιοχή της/του #country μένετε;
<1> Αττική <2> Ήπειρος <3> Ιόνια νησιά <4> Κρήτη <5> Στερεά Ελλάδα <6> Βόρειο Αιγαίο <7> Ανατολική Μακεδονία και Θράκη <8> Πελοπόννησος <9> Νότιο Αιγαίο <10> Θεσσαλία <11> Δυτική Ελλάδα <12> Δυτική Μακεδονία <13> Κεντρική Μακεδονία
#page break
#Question type: multiple choice #Label: Types of internet access available #Skip logic: #Base: All respondents
[q106] Υπάρχουν πολλές δυνατότητες πρόσβασης στο διαδίκτυο. Ποιες από τις παρακάτω χρησιμοποιείτε;
<16> Στο σπίτι με σταθερή πρόσβαση (οι συσκευές είναι συνδεδεμένες μέσω ασύρματου δικτύου ή καλωδίου δικτύου σε π.χ. DSL, καλωδιακή σύνδεση, LTE στο σπίτι, USB dongles) <17> Στο σπίτι με κινητή πρόσβαση (smartphone ή tablet μη συνδεδεμένα, μέσω ασύρματου δικτύου) <18> Εκτός σπιτιού με κινητό τηλέφωνο μέσω κινητής πρόσβασης, π.χ. στο δρόμο <19> Εκτός σπιτιού με tablet μέσω κινητής πρόσβασης, π.χ. στο δρόμο <20> Εκτός σπιτιού με σύνδεση σε ασύρματο δίκτυο WiFi / hotspots, π.χ. στο τρένο, ή σε καφέ <777> Δεν απαντώ / δεν ξέρω
#Screenout if not 1 in [q04] #Respondents who do not use stationary access at home are not surveyed
#page break
#Question type: single choice

<i>#Label: Decision making</i>	
<i>#Skip logic:</i>	
<i>#Base: All respondents</i>	
[q107] Κατά πόσο συμμετέχετε στην απόφαση από ποιον / από ποια εταιρία θα αποκτήσετε σταθερή πρόσβαση στο διαδίκτυο στο σπίτι σας;	
<10>	Αποφασίζω μόνη/μόνος.
<11>	Αποφασίζω μαζί με κάποιον άλλον.
<12>	Κάποιος άλλος αποφασίζει, εγώ δε συμμετέχω.
<777>	Δεν απαντώ / δεν ξέρω
<i>#Screenout if [q05] in [3,777]</i>	
<i>#Respondents who do are not involved in decisions about Internet access are not surveyed</i>	
#page break	
• #Characteristics of at-home Internet access	
<i>#Question type: single choice</i>	
<i>#Label: ISP fixed</i>	
<i>#Skip logic:</i>	
<i>#Base: All respondents</i>	
[q108] Ποιον από τους παρακάτω παρόχους υπηρεσιών διαδικτύου χρησιμοποιείτε για τη σταθερή πρόσβαση στο διαδίκτυο από το σπίτι σας (από ποια εταιρία λαμβάνετε πρόσβαση στο διαδίκτυο); Στο εξής θα αναφερόμαστε στην εταιρία αυτή ως τον «πάροχο διαδικτύου» σας.	
<1>	OTE
<2>	forthnet
<3>	hellas online (hol)
<4>	Cyta
<5>	On Telecoms
<6>	Wind/Tellas
<7>	Cosmote
<8>	Vodafone
<555>	Άλλος
<777>	Δεν απαντώ / δεν ξέρω
#page break	
<i>#Question type: single choice</i>	
<i>#Label: Speed fixed</i>	
<i>#Skip logic:</i>	
<i>#Base: All respondents</i>	
[q109] Ποια είναι η ταχύτητα της σταθερής πρόσβασης στο διαδίκτυο από το σπίτι, όπως αυτή αναφέρεται στο συμβόλαιό σας;	
<22>	Έως και 2 MBit/s
<23>	Μεταξύ 2 και 8 MBit/s
<24>	Μεταξύ 8 και 16 MBit/s

<25> Μεταξύ 16 και 32 MBit/s
 <26> Μεταξύ 32 και 50 MBit/s
 <27> Μεταξύ 50 και 100 MBit/s
 <28> Μεγαλύτερη από 100 MBit/s
 <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: scale
 #Label: Satisfaction with fixed speed
 #Skip logic:
 #Base: All respondents

[q110] Σε μία κλίμακα από 0 έως 10: Πόσο ευχαριστημένοι είστε με την ποιότητα της σταθερής πρόσβασής σας στο διαδίκτυο από το σπίτι;

<33> Πολύ δυσανεσστημένη/ος
 <34>
 <35>
 <36>
 <37>
 <38>
 <39>
 <40>
 <41>
 <42>
 <43> Πολύ ευχαριστημένη/ος
 <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice
 #Label: Bundled services
 #Skip logic:
 #Base: All respondents

[q111] Η σταθερή πρόσβαση στο διαδίκτυο από το σπίτι προσφέρεται συχνά σε ένα πακέτο με σταθερή τηλεφωνία, υπηρεσίες τηλεόρασης ή συμβόλαιο κινητής τηλεφωνίας. Εκτός από την πρόσβαση στο διαδίκτυο, ποιες από τις παραπάνω υπηρεσίες συμπεριλαμβάνονται στο συμβόλαιό σας με τον πάροχο διαδικτύου;

<10> Σταθερή τηλεφωνία
 <11> Τηλεόραση
 <12> Συμβόλαιο κινητής τηλεφωνίας
 <777> Δεν απαντώ / δεν ξέρω

#Question type: single choice
 #Label: Costs for at home access
 #Skip logic:
 #Base: All respondents

[q112] Και πόσα χρήματα ξοδεύετε συνολικά για αυτές τις υπηρεσίες το μήνα; Αν δε γνωρίζετε το ακριβές ποσό, υπολογίστε χοντρικά.

- <14> έως και 17 €
<15> μεταξύ 17 € και 25 €
<16> μεταξύ 25 € και 35 €
<17> μεταξύ 35 € και 50 €
<18> μεταξύ 50 € και 70 €
<19> άνω των 70 €

<777> Δεν απαντώ / δεν ξέρω

#page break

• **#ISP switching behaviour**

#Question type: single choice

#Label: Duration of current ISP relation

#Skip logic:

#Base: All respondents

[q113] Πόσον καιρό έχετε τον συγκεκριμένο πάροχο διαδικτύου για το σπίτι;

- <19> Έως και 1 χρόνο
<20> Μεταξύ 1 και 2 χρόνων
<21> Μεταξύ 2 και 4 χρόνων
<22> Μεταξύ 4 και 6 χρόνων
<23> Μεταξύ 6 και 8 χρόνων
<24> Περισσότερο από 8 χρόνια

<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice

#Label: Past switching

#Skip logic:

#Base: All respondents

[q114] Έχετε ποτέ στο παρελθόν αλλάξει πάροχο διαδικτύου για το σπίτι;

- <10> Ναι, γιατί το επιθυμούσα (π.χ. λόγω μιας καλύτερης προσφοράς)
<11> Ναι, γιατί έπρεπε / αναγκάστηκα (π.χ. λόγω μετακόμισης)
<12> Όχι

<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: single choice

#Label: Previous ISP

#Skip logic: if [q12] in [1,2]

#Base: Respondents who did switch their ISP before

[q115] Όσον αφορά την τελευταία φορά που αλλάξατε πάροχο διαδικτύου για το σπίτι: Ποιος από τους παρακάτω ήταν ο προηγούμενος πάροχος διαδικτύου σας;

- <1> OTE
- <2> forthnet
- <3> hellas online (hol)
- <4> Cytta
- <5> On Telecoms
- <6> Wind/Tellas
- <7> Cosmote
- <8> Vodafone
- <555> Άλλος
- <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards switching

#Skip logic:

#Base: All respondents

[q116] Όσον αφορά την αλλαγή παρόχου διαδικτύου για το σπίτι: Σε ποιο βαθμό συμφωνείτε με τις παρακάτω δηλώσεις;

-[q116_1] Είναι μάλλον απίθανο να αλλάξω τον πάροχο διαδικτύου μου.

-[q116_2] Νομίζω πως δεν έχω πραγματική επιλογή όσον αφορά την επιλογή παρόχου διαδικτύου.

- <13> Διαφωνώ απολύτως
- <14> Μάλλον διαφωνώ
- <15> Μάλλον συμφωνώ
- <16> Συμφωνώ απολύτως
- <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice, max 3, order of items randomised

#Label: Main barriers to switching

#Skip logic: if -[q14_1] in [3,4]

#Base: Respondents who are (rather) cautious about switching their provider

[q117] Δεδομένου πως είναι μάλλον απίθανο να αλλάξετε τον πάροχο διαδικτύου για το σπίτι: Ποιοι είναι οι τρεις πιο σημαντικοί λόγοι γι' αυτό;

- <34> Η ικανοποίηση με τον τωρινό πάροχο διαδικτύου
- <35> Ο κίνδυνος να πρέπει να πληρώσω και για τους δύο παρόχους διαδικτύου κατά τη διάρκεια της αλλαγής
- <36> Ο κίνδυνος προσωρινής απώλειας της υπηρεσίας κατά τη διάρκεια της αλλαγής
- <37> Δεν υπάρχουν άλλοι διαθέσιμοι πάροχοι διαδικτύου για το νοικοκυριό μου
- <38> Δεν υπάρχει άλλος πάροχος διαδικτύου που να προσφέρει καλύτερη σχέση

<p>ποιότητας / τιμής</p> <p><39> Απαιτεί πολύ χρόνο / κόπο</p> <p><40> Η απώλεια των σχετικών υπηρεσιών (π.χ. διεύθυνση e-mail, προσωπική ιστοσελίδα)</p> <p><41> Δεν είμαι σίγουρη / σίγουρος για το ποια βήματα πρέπει να ακολουθήσω</p> <p><42> Μεγάλος χρόνος δέσμευσης / ελάχιστη διάρκεια συμβολαίου</p> <p><43> Είναι πολύ δύσκολο να συγκρίνω τους διάφορους παρόχους διαδικτύου.</p> <p><44> Είναι πολύ δύσκολο να βρω πληροφορίες σχετικά με προσφορές διαδικτύου.</p> <p><555> Άλλο: [#open prompt]</p> <p><777> Δεν απαντώ / δεν ξέρω</p>	
#page break	
• #Characteristics of out-of-home Internet access	
<p>#Question type: scale</p> <p>#Label: Satisfaction with mobile access</p> <p>#Skip logic: if 3 in [q04]</p> <p>#Base: Respondents who use the Internet out of home with a mobile phone via their mobile operator</p> <p>[q118] Όταν χρησιμοποιείτε το διαδίκτυο στο κινητό σας τηλέφωνο χωρίς να συνδεθείτε σε ασύρματο δίκτυο WiFi, πόσο ευχαριστημένοι είστε με την ποιότητα της πρόσβασής σας στο διαδίκτυο;</p> <p><33> Πολύ δυσαρεστημένη/ος</p> <p><34></p> <p><35></p> <p><36></p> <p><37></p> <p><38></p> <p><39></p> <p><40></p> <p><41></p> <p><42></p> <p><43> Πολύ ευχαριστημένη/ος</p> <p><777> Δεν απαντώ / δεν ξέρω</p>	
#page break	
• #Internet usage	
<p>#Question type: grid, order of items randomised</p> <p>#Label: Perception of the Internet in general</p> <p>#Skip logic:</p> <p>#Base: All respondents</p> <p>Στο επόμενο τμήμα θα θέλαμε να μάθουμε μερικά πράγματα σχετικά με τον τρόπο που χρησιμοποιείτε το διαδίκτυο.</p> <p>[q119] Σε σχέση με τη σπουδαιότητα του διαδικτύου στην προσωπική σας ζωή: Σε ποιο βαθμό συμφωνείτε με τις παρακάτω δηλώσεις;</p>	

- [q119_1] Δεν μπορώ πλέον να φανταστώ τη ζωή μου χωρίς το διαδίκτυο.
- [q119_2] Συχνά πιάνω τον εαυτό μου να είναι online όλη την ώρα - οποτεδήποτε και οπουδήποτε
- [q119_3] Αν δεν μπορούσα πλέον να χρησιμοποιήσω το διαδίκτυο, θα είχε τεράστια επίδραση στη ζωή μου.
- [q119_4] Το να είμαι ενημερωμένη/ος σχετικά με τις πρόσφατες εξελίξεις της τεχνολογίας είναι πολύ σημαντικό για μένα.
- [q119_5] Θεωρώ τον εαυτό μου ικανό χρήστη του διαδικτύου.
- [q119_6] Μέσω του διαδικτύου μπορώ να επικοινωνήσω με φίλους σε όλον τον κόσμο.
- [q119_7] Το διαδίκτυο είναι επικίνδυνο.
- [q119_8] Η πρόσβαση σε μια πληθώρα online πληροφοριών και υπηρεσιών είναι σημαντική για μένα.
- [q119_9] Μου προσφέρει μεγάλη ευχαρίστηση το να ξεχνάω τα πάντα γύρω μου όταν είμαι online.

- <13> Διαφωνώ απολύτως
- <14> Μάλλον διαφωνώ
- <15> Μάλλον συμφωνώ
- <16> Συμφωνώ απολύτως
- <777> Δεν απαντώ / δεν ξέρω

#Question type: grid

#Label: Frequency of Internet usage

#Skip logic:

#Base: All respondents

[q120] Πόσες ημέρες την εβδομάδα χρησιμοποιείτε ενεργά το διαδίκτυο; Παρακαλούμε, σκεφτείτε δραστηριότητες που απαιτούν σύνδεση στο διαδίκτυο (π.χ. πλοήγηση, ανάγνωση ειδήσεων, e-mail, κοινωνικά δίκτυα, μετάδοση βίντεο ή μουσικής, Voice-over-IP, IPTV, παιχνίδια online).

- [q120_1] Στο σπίτι με ασύρματη ή καλωδιακή σύνδεση
- [q120_2] [#if 5 in [q04]] Εκτός σπιτιού, με κινητό τηλέφωνο συνδεδεμένο σε ασύρματο δίκτυο WiFi
- [q120_3] [#if 3 in [q04]] Εκτός σπιτιού, με κινητό τηλέφωνο μέσω κινητής πρόσβασης (χωρίς σύνδεση σε ασύρματο δίκτυο WiFi)

- <19> Ποτέ
- <20> Λιγότερο από μία φορά την εβδομάδα
- <21> Περίπου μία φορά την εβδομάδα
- <22> 2-3 ημέρες
- <23> 4-5 ημέρες
- <24> 6-7 ημέρες
- <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: grid

#Label: Duration of Internet usage

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q121] Τις ημέρες που χρησιμοποιείτε το διαδίκτυο, για πόσο χρόνο κατά μέσο όρο το χρησιμοποιείτε;

-[q121_1] [#if -[q18_1] in [2,3,4,5,6]] Στο σπίτι με ασύρματη ή καλωδιακή σύνδεση

-[q121_2] [#if -[q18_2] in [2,3,4,5,6]] Εκτός σπιτιού, με κινητό τηλέφωνο συνδεδεμένο σε ασύρματο δίκτυο WiFi

-[q121_3] [#if -[q18_3] in [2,3,4,5,6]] Εκτός σπιτιού, με κινητό τηλέφωνο μέσω κινητής πρόσβασης (χωρίς σύνδεση σε ασύρματο δίκτυο WiFi)

- <19> Έως 30 λεπτά
<20> Από 30 λεπτά έως και 1 ώρα
<21> Από 1 ώρα έως 2 ώρες
<22> Από 2 ώρες ως 4 ώρες
<23> Από 4 ώρες ως 6 ώρες
<24> Πάνω από 6 ώρες
<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice, order randomized

#Label: Devices used for Internet access

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q122] Ποιες από τις παρακάτω συσκευές χρησιμοποιείτε για να συνδεθείτε στο διαδίκτυο;

- <19> Επιτραπέζιο υπολογιστή
<20> Φορητό υπολογιστή / Netbook
<21> Tablet
<22> Κινητό τηλέφωνο / Smartphone
<23> Smart TV
<24> Κονσόλα παιχνιδιών
<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice, order randomized

#Label: Internet applications used

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q123] Ποιες από τις παρακάτω διαδικτυακές εφαρμογές χρησιμοποιείτε;

- <31> E-Mail / πλοήγηση / ανάγνωση ειδήσεων
<32> Chat / στιγμιαία ανταλλαγή μηνυμάτων (π.χ. Whatsapp, Skype)
<33> Κοινωνικά δίκτυα (π.χ. Facebook, Google+)
<34> Voice-over-IP / τηλεφωνία / video τηλεφωνία (π.χ. Skype, Viber)
<35> Ροή Video (π.χ. YouTube, Netflix)
<36> Ροή μουσικής (π.χ. Spotify, Napster)
<37> IPTV (τηλεοπτικά προγράμματα μέσω σύνδεσης στο διαδίκτυο)

<38> Παιχνίδια online (π.χ. MMORPG όπως World of Warcraft, παιχνίδια πολλαπλών παικτών όπως Counterstrike, FIFA, κλπ.)
 <39> Φόρτωση εφαρμογών, ενημέρωση λογισμικού, παιχνίδια ή βίντεο
 <40> P2P / ανταλλαγή αρχείων
 <666> Τίποτα από τα παραπάνω
 <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: dyngrid, multiple, order randomized as [q21]

#Label: Internet applications used by location

#Skip logic: if [q21] in [1,2,3,4,5,6,7,8,9,10]

#Base: All respondents who use one of the given applications

[q124] Και πού χρησιμοποιείτε συνήθως αυτές τις εφαρμογές;

- [q124_1] [#if 1 in [q21]]E-Mail / πλοήγηση / ανάγνωση ειδήσεων
- [q124_2] [#if 2 in [q21]]Chat / στιγμιαία ανταλλαγή μηνυμάτων (π.χ. Whatsapp, Skype)
- [q124_3] [#if 3 in [q21]]Κοινωνικά δίκτυα (π.χ. Facebook, Google+)
- [q124_4] [#if 4 in [q21]]Voice-over-IP / τηλεφωνία / video τηλεφωνία (π.χ. Skype, Viber)
- [q124_5] [#if 5 in [q21]]Ροή Video (π.χ. YouTube, Netflix)
- [q124_6] [#if 6 in [q21]]Ροή μουσικής (π.χ. Spotify, Napster)
- [q124_7] [#if 7 in [q21]]IPTV (τηλεοπτικά προγράμματα μέσω σύνδεσης στο διαδίκτυο)
- [q124_8] [#if 8 in [q21]]Παιχνίδια online (π.χ. MMORPG όπως World of Warcraft, παιχνίδια πολλαπλών παικτών όπως Counterstrike, FIFA, κλπ.)
- [q124_9] [#if 9 in [q21]]Φόρτωση εφαρμογών, ενημέρωση λογισμικού, παιχνίδια ή βίντεο
- [q124_10] [#if 10 in [q21]]P2P / ανταλλαγή αρχείων

<1>[#if -[q18_1] in [2,3,4,5,6]] Στο σπίτι με ασύρματη ή καλωδιακή σύνδεση

<2> [#if -[q18_2] in [2,3,4,5,6]] Εκτός σπιτιού, με κινητό τηλέφωνο συνδεδεμένο σε ασύρματο δίκτυο WiFi

<3>[#if -[q18_3] in [2,3,4,5,6]] Εκτός σπιτιού, με κινητό τηλέφωνο χωρίς σύνδεση σε ασύρματο δίκτυο WiFi

<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice

#Label: Purpose of Internet access at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home

[q125] Για ποιους σκοπούς χρησιμοποιείτε το διαδίκτυο στο σπίτι με ασύρματη ή καλωδιακή σύνδεση;

<16> Αποκλειστικά για προσωπική χρήση

<17> Κυρίως για προσωπική χρήση

<18> Και για προσωπική και για επαγγελματική χρήση

<19> Κυρίως για επαγγελματική χρήση
 <20> Αποκλειστικά για επαγγελματική χρήση
 <777> Δεν απαντώ / δεν ξέρω

#page break

• #Experience of disruptions

#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home through WiFi or cable

Όταν χρησιμοποιείτε το διαδίκτυο μερικές φορές προκύπτουν τεχνικά προβλήματα. Μπορεί να χαθεί η σύνδεση ή η ταχύτητα να μειωθεί ξαφνικά, με αποτέλεσμα μεγαλύτερα διαστήματα φόρτωσης / μείωση της ποιότητας, ή ολική μη διαθεσιμότητα ιστοσελίδων.

[q126] Όσον αφορά τις φορές που χρησιμοποιείτε το διαδίκτυο στο σπίτι με ασύρματη ή καλωδιακή σύνδεση: Ποια από τα παρακάτω προβλήματα σας έχουν τύχει και πόσο συχνά εμφανίζονται;

-[q126_1] Παντελής απώλεια σύνδεσης

-[q126_2] Ξαφνική μείωση της ταχύτητας / φόρτωση / μείωση της ποιότητας

-[q126_3] Μη διαθέσιμες ιστοσελίδες / μη προσβάσιμες ιστοσελίδες

<22> Δεν μου έτυχε ποτέ
 <23> Μια φορά κάθε δύο-τρεις μήνες
 <24> Τουλάχιστον μια φορά το μήνα
 <25> Γύρω στις 2 με 3 φορές το μήνα
 <26> Περίπου μία φορά την εβδομάδα
 <27> Γύρω στις 2-5 φορές την εβδομάδα
 <28> (Σχεδόν) καθημερινά
 <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet out of home on a mobile phone not connected through WiFi

[q127] Όταν χρησιμοποιείτε το διαδίκτυο εκτός σπιτιού, με κινητό τηλέφωνο χωρίς σύνδεση σε ασύρματο δίκτυο WiFi: Ποια από τα παρακάτω προβλήματα σας έχουν τύχει και πόσο συχνά εμφανίζονται;

-[q127_1] Παντελής απώλεια σύνδεσης

-[q127_2] Ξαφνική μείωση της ταχύτητας / φόρτωση / μείωση της ποιότητας

-[q127_3] Μη διαθέσιμες ιστοσελίδες / μη προσβάσιμες ιστοσελίδες

<22> Δεν μου έτυχε ποτέ
 <23> Μια φορά κάθε δύο-τρεις μήνες
 <24> Τουλάχιστον μια φορά το μήνα

<25> Γύρω στις 2 με 3 φορές το μήνα
 <26> Περίπου μία φορά την εβδομάδα
 <27> Γύρω στις 2-5 φορές την εβδομάδα
 <28> (Σχεδόν) καθημερινά
 <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: dyngrid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q24_1] OR -[q24_2] OR -[q24_3] OR -[q25_1] OR -[q25_2] OR -[q25_3] in [2,3,4,5,6,7]

#Base: All respondents who experienced at least one type of disruption

[q128] Και όταν σας τυχαίνουν προβλήματα, πόσο διαρκούν συνήθως;

-[q128_1] [#if -[q24_1] in [2,3,4,5,6,7]] Παντελής απώλεια σύνδεσης στο σπίτι με ασύρματη ή καλωδιακή σύνδεση

-[q128_2] [#if -[q24_2] in [2,3,4,5,6,7]] Ξαφνική μείωση της ταχύτητας / φόρτωση / μείωση της ποιότητας στο σπίτι με ασύρματη ή καλωδιακή σύνδεση

-[q128_3] [#if -[q24_3] in [2,3,4,5,6,7]] Μη διαθέσιμες ιστοσελίδες / μη προσβάσιμες ιστοσελίδες από το σπίτι με ασύρματη ή καλωδιακή σύνδεση

-[q128_4] [#if -[q25_1] in [2,3,4,5,6,7]] Παντελής απώλεια σύνδεσης εκτός σπιτιού με κινητό τηλέφωνο μη συνδεδεμένο σε ασύρματο δίκτυο WiFi

-[q128_5] [#if -[q25_2] in [2,3,4,5,6,7]] Ξαφνική μείωση της ταχύτητας / φόρτωση / μείωση της ποιότητας εκτός σπιτιού με κινητό τηλέφωνο μη συνδεδεμένο σε ασύρματο δίκτυο WiFi

-[q128_6] [#if -[q25_3] in [2,3,4,5,6,7]] Μη διαθέσιμες ιστοσελίδες / μη προσβάσιμες ιστοσελίδες εκτός σπιτιού με κινητό τηλέφωνο μη συνδεδεμένο σε ασύρματο δίκτυο WiFi

<13> Από μερικά δευτερόλεπτα έως μερικά λεπτά
 <14> Έως και 2 ώρες
 <15> Έως και 1 ημέρα
 <16> Πάνω από 1 ημέρα
 <777> Δεν απαντώ / δεν ξέρω

#page break

• #Conjoint analysis regarding ISP offers

#Skip logic: Only test group who will see the information package

Πριν προχωρήσουμε στο επόμενο τμήμα της έρευνας, θα θέλαμε να παρακολουθήσετε ένα σύντομο βίντεο σχετικά με το πώς οι πάροχοι διαδικτύου διαχειρίζονται τη μεταφορά των δεδομένων μέσω του διαδικτύου. Παρακαλούμε, κάντε κλικ στο πεδίο «Play» παρακάτω, για να ξεκινήσει η αναμετάδοση.

[#Insert video](#)

#page break

• #Check of understanding information package / transparency

#Skip logic: Only test group who did not see the information package

Χρήση του διαδικτύου σημαίνει μεταφορά δεδομένων. Η μεταφορά δεδομένων ονομάζεται και κυκλοφορία δεδομένων. Θα θέλαμε να σας κάνουμε μερικές ερωτήσεις σχετικά με το πώς βλέπετε τη διαχείριση αυτής της κυκλοφορίας δεδομένων στο διαδίκτυο.

#Question type: grid, order of items randomised

#Label: Cross-check of contents of the information package / transparency

#Skip logic:

#Base: All respondents

[q129] Παρακαλούμε, ρίξτε μια ματιά στις παρακάτω δηλώσεις και πείτε μας αν νομίζετε πως ισχύουν ή όχι.

-[q129_1] Οι πάροχοι υπηρεσιών μουσικής ή ροής βίντεο αποτελούν παραδείγματα παρόχων διαδικτύου.

-[q129_2] Οι καταναλωτές αγοράζουν συνήθως την πρόσβαση στο διαδίκτυο από κάποιον πάροχο περιεχομένου.

-[q129_3] Οι πάροχοι διαδικτύου διασφαλίζουν τη μεταφορά των δεδομένων από τον αποστολέα στον προορισμό τους μέσω του δικτύου.

-[q129_4] Η διαχείριση κυκλοφορίας δεδομένων δε συμπεριλαμβάνει την καθυστέρηση ή την προτεραιοποίηση συγκεκριμένου περιεχομένου από πλευράς του παρόχου διαδικτύου.

-[q129_5] Διαχείριση κυκλοφορίας δεδομένων σημαίνει πως οι πάροχοι διαδικτύου μπορούν να αποκλείσουν συγκεκριμένο περιεχόμενο.

-[q129_6] Οι πάροχοι διαδικτύου μπορεί να εφαρμόσουν τακτικές διαχείρισης κυκλοφορίας δεδομένων για να αποσυμφορήσουν το δίκτυο.

-[q129_7] Οι πάροχοι διαδικτύου μπορεί να εφαρμόσουν τακτικές διαχείρισης κυκλοφορίας δεδομένων για να χρεώσουν περιεχόμενο με προτεραιότητα.

-[q129_8] Δεδομένου ότι το διαδίκτυο είναι ένα δίκτυο ανεξάρτητων δικτύων, ο πάροχος διαδικτύου μπορεί να εφαρμόσει τακτικές διαχείρισης κυκλοφορίας δεδομένων μόνο στο δίκτυο που ελέγχει.

<7> Ισχύει

<8> Δεν ισχύει

<777> Δεν απαντώ / δεν ξέρω

#page break

#Skip logic: All respondents

Στις παρακάτω ερωτήσεις θα θέλαμε να μάθουμε μερικά πράγματα για το πώς εκτιμάτε τις προσφορές των παρόχων διαδικτύου. Θα σας κάνουμε μια σειρά ερωτήσεων σχετικά με το πόσο προτιμάτε κάποια χαρακτηριστικά που συμπεριλαμβάνουν οι προσφορές αυτές. Απαντήστε τις ερωτήσεις θεωρώντας ότι είστε ελεύθερος/-η να διαλέξετε την προσφορά που σας αρέσει.

Θα δείτε ερωτήσεις που αφορούν τα παρακάτω χαρακτηριστικά:

- Πάροχος διαδικτύου
- Μηνιαία τιμή
- Ταχύτητα φόρτωσης αρχείων
- Αν μια προσφορά συμπεριλαμβάνει διαδίκτυο, σταθερή τηλεφωνία και / ή πρόσβαση στην τηλεόραση
- Ελάχιστη διάρκεια συμβολαίου, δηλαδή η περίοδος έπειτα από την οποία μπορείτε να ακυρώσετε το συμβόλαιο
- Αν η προσφορά συμπεριλαμβάνει κάποιο είδος ορίου δεδομένων. Όριο δεδομένων σημαίνει πως μπορείτε να κατεβάσετε και να ανεβάσετε συγκεκριμένο αριθμό δεδομένων το μήνα. Για να χρησιμοποιήσετε περισσότερα δεδομένα πρέπει να πληρώσετε επιπλέον. Σε μερικές περιπτώσεις, συγκεκριμένες εφαρμογές εξαιρούνται από το όριο δεδομένων, πράγμα που σημαίνει πως η χρήση αυτών των εφαρμογών δεν επηρεάζεται από το όριο δεδομένων. Θα δείτε τα παρακάτω επίπεδα ορίων δεδομένων:

- 10 GB: Αρκεί, π.χ. για περίπου 5 ώρες ροής video σε ποιότητα HD ή 100 ώρες ροής μουσικής σε καλή ποιότητα, παράλληλα με την πλοήγηση και την αναζήτηση στο διαδίκτυο.
- 50 GB: Αρκεί, π.χ. για περίπου 25 ώρες ροής video σε ποιότητα HD ή 500 ώρες ροής μουσικής σε καλή ποιότητα, παράλληλα με την πλοήγηση και την αναζήτηση στο διαδίκτυο.
- Απουσία ορίου δεδομένων

#page break

- Επιπλέον, σε μερικές περιπτώσεις η πρόσβαση σε συγκεκριμένες εφαρμογές μπορεί να διαφέρει. Θα δείτε τα παρακάτω επίπεδα:
 - Μπορεί να χρησιμοποιηθεί κανονικά
 - Έχει προτεραιότητα: Αυτό σημαίνει πως όταν χρησιμοποιείτε αυτήν την εφαρμογή, θα έχετε πολύ σταθερή σύνδεση χωρίς προβλήματα επιβράδυνσης ή επαναφόρτωσης.
 - Έχει επιβραδυνθεί: Αυτό σημαίνει πως όταν χρησιμοποιείτε αυτήν την εφαρμογή, θα έχετε πιο αργή σύνδεση, δηλαδή συχνότερα προβλήματα π.χ. επιβράδυνσης ή επαναφόρτωσης.
 - Έχει αποκλειστεί: Αυτό σημαίνει πως δεν έχετε καμία απολύτως πρόσβαση στην εφαρμογή με την προσφορά αυτή.
- Οι εφαρμογές που θα δείτε στις ερωτήσεις είναι οι ακόλουθες:
 - P2P / Ανταλλαγή αρχείων
 - Υπηρεσίες VoIP: Video / voice calling chat / Voice-over-IP (π.χ. Skype, Viber)
 - Ροή Video (π.χ. YouTube, Netflix)
 - Παιχνίδια online (π.χ. MMORPG όπως World of Warcraft, παιχνίδια πολλαπλών παικτών όπως Counterstrike, FIFA, κλπ.)

#Internal information, not shown to respondents.

#The following attributes and levels will be tested in the conjoint part:

Χαρακτηριστικά διαφορετικά από τη διαχείριση κυκλοφορίας δεδομένων	
Χαρακτηριστικά	Επίπεδα
Πάροχος διαδικτύου	OTE
	forthnet
	hellas online (hol)
	Τοπικός πάροχος διαδικτύου
Μηνιαία τιμή	17 €
	30 €
	45 €
	60 €
Ταχύτητα φόρτωσης αρχείων	Έως και 2 MBit/s
	Έως και 10 MBit/s
	Έως και 25 MBit/s
	Έως και 100 MBit/s
Πακέτα υπηρεσιών	Απουσία πακέτου, μόνο διαδίκτυο
	Πακέτο διαδικτύου και σταθερής τηλεφωνίας
	Πακέτο διαδικτύου και τηλεόρασης

	Πακέτο διαδικτύου, σταθερής τηλεφωνίας και τηλεόρασης
Ελάχιστη διάρκεια συμβολαίου	1 μήνας
	12 μήνες
	24 μήνες
Χαρακτηριστικά που καλύπτουν μέτρα διαχείρισης κυκλοφορίας δεδομένων	
Χαρακτηριστικά	Επίπεδα
Όριο δεδομένων	10 GB
	50 GB
	10 GB, η αγαπημένη σας εφαρμογή ροής video δε συμπεριλαμβάνεται στο όριο δεδομένων
	50 GB, η αγαπημένη σας εφαρμογή ροής video δε συμπεριλαμβάνεται στο όριο δεδομένων
	10 GB, η αγαπημένη σας εφαρμογή VoIP δε συμπεριλαμβάνεται στο όριο δεδομένων
	50 GB, η αγαπημένη σας εφαρμογή VoIP δε συμπεριλαμβάνεται στο όριο δεδομένων
	10 GB, το αγαπημένο σας online παιχνίδι δε συμπεριλαμβάνεται στο όριο δεδομένων
	50 GB, το αγαπημένο σας online παιχνίδι δε συμπεριλαμβάνεται στο όριο δεδομένων
	Απουσία ορίου δεδομένων
P2P / Ανταλλαγή αρχείων	μπορεί να χρησιμοποιηθεί κανονικά
	έχει προτεραιότητα
	έχει επιβραδυνθεί
	έχει αποκλειστεί
Υπηρεσίες VoIP	μπορεί να χρησιμοποιηθεί κανονικά
	έχει προτεραιότητα
	έχει επιβραδυνθεί
	έχει αποκλειστεί
Ροή Video	μπορεί να χρησιμοποιηθεί κανονικά
	έχει προτεραιότητα
	έχει επιβραδυνθεί
	έχει αποκλειστεί
Παιχνίδια online	μπορεί να χρησιμοποιηθεί κανονικά
	έχει προτεραιότητα
	έχει επιβραδυνθεί
	έχει αποκλειστεί
#page break	
#First section of conjoint questions. This will ask questions of general attractiveness for all levels per	

attribute. Question [cq01] below is meant to illustrate this procedure as an example.

[cq01a] Παρακαλούμε, εκτιμήστε τους παρακάτω παρόχους διαδικτύου όσον αφορά το πόσο ελκυστικοί είναι.

-[cq01_1] Επωνυμία 1

-[cq01_1] Επωνυμία 2

-[cq01_1] Επωνυμία 3

-[cq01_1] Επωνυμία 4

<1> Καθόλου ελκυστικοί

<2>

<3> Σχετικά ελκυστικοί

<4>

<5> Πολύ ελκυστικοί

<6>

<7> Εξαιρετικά ελκυστικοί

[cq01b] Παρακαλούμε, εκτιμήστε τα παρακάτω επίπεδα τιμών όσον αφορά το πόσο ελκυστικά είναι.

[cq01c] Παρακαλούμε, εκτιμήστε τα παρακάτω επίπεδα ταχύτητας φόρτωσης αρχείων όσον αφορά το πόσο ελκυστικά είναι.

[cq01c] Παρακαλούμε, εκτιμήστε τα παρακάτω πακέτα όσον αφορά το πόσο ελκυστικά είναι.

[cq01d] Παρακαλούμε, εκτιμήστε τις παρακάτω ελάχιστες διάρκειες συμβολαίου όσον αφορά το πόσο ελκυστικές είναι.

[cq01e] Παρακαλούμε, εκτιμήστε τα παρακάτω επίπεδα ορίων δεδομένων όσον αφορά το πόσο ελκυστικά είναι.

[cq01f] Παρακαλούμε, εκτιμήστε τις παρακάτω δυνατότητες P2P / ανταλλαγής αρχείων όσον αφορά το πόσο ελκυστικές είναι.

[cq01g] Παρακαλούμε, εκτιμήστε τις παρακάτω δυνατότητες υπηρεσιών VoIP όσον αφορά το πόσο ελκυστικές είναι.

[cq01h] Παρακαλούμε, εκτιμήστε τις παρακάτω δυνατότητες ροής video όσον αφορά το πόσο ελκυστικές είναι.

[cq01i] Παρακαλούμε, εκτιμήστε τις παρακάτω δυνατότητες ροής video όσον αφορά το πόσο ελκυστικές είναι.

[cq01j] Παρακαλούμε, εκτιμήστε τις παρακάτω δυνατότητες online παιχνιδιών όσον αφορά το πόσο ελκυστικές είναι.

#Second section of conjoint questions. This will ask 30 questions in which respondents state their preference for one of two offers on a 9-point scale. In the first 15 questions, each question will include a selection of 4 attributes, in the remaining part each will include 5 attributes. Question [cq02] below is meant to illustrate this procedure as an example.

[cq02] Αν αυτές οι προσφορές διαδικτύου ήταν πανομοιότυπες κατά όλα τα άλλα, ποιες θα προτιμούσατε;

Ταχύτητα φόρτωσης αρχείων: Έως και 2 MBit/s Πακέτο διαδικτύου και σταθερής τηλεφωνίας Όριο δεδομένων 50 GB Ροή Video αποκλεισμένη					Ταχύτητα φόρτωσης αρχείων: Έως και 10 MBit/s Απουσία πακέτου, μόνο διαδίκτυο Όριο δεδομένων 30 GB, online παιχνίδια χωρίς όριο Προτεραιότητα ροής Video			
ο	ο	ο	ο	ο	Ο	ο	ο	ο
Προτιμώ ένθερμα		Προτιμώ την		Είμαι αδιάφορη/ο		Προτιμώ την		Προτιμώ ένθερμα

την προσφορά αριστερά		προσφορά αριστερά		ς		προσφορά δεξιά		την προσφορά δεξιά
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#page break

• #Psychographic section

#page break

#Question type: grid, order of items randomised
 #Label: Attitude towards specific traffic management measures
 #Skip logic:
 #Base: All respondents

[q130] Όπως είδατε νωρίτερα, οι πάροχοι διαδικτύου μπορεί να δώσουν προτεραιότητα ή να αποκλείσουν συγκεκριμένες εφαρμογές του διαδικτύου. Σε ποιο βαθμό συμφωνείτε με τις παρακάτω σχετικές δηλώσεις;

-[q130_1] Δε με ενοχλεί να δίνεται προτεραιότητα σε κάποιες εφαρμογές για έναν συγκεκριμένο χρήστη, αν πληρώνει επιπλέον για αυτήν την υπηρεσία.
 -[q130_2] Φοβάμαι πως οι αναλύσεις της κυκλοφορίας δεδομένων που διεξάγει ο πάροχος διαδικτύου προκειμένου να δώσει προτεραιότητα σε κάποιες εφαρμογές καταπατούν την ιδιωτικότητα.
 -[q130_3] Αν η παροχή προτεραιότητας για έναν χρήστη σημαίνει πως κάποιος άλλος λαμβάνει πιο αργή πρόσβαση στο διαδίκτυο, το βρίσκω άδικο.
 -[q130_4] Δε με ενοχλεί οι πάροχοι να διαχειρίζονται την κυκλοφορία των δεδομένων έτσι ώστε η διαδικτυακή μου εμπειρία να διατηρείται σταθερή.
 -[q130_5] Δε με ενοχλεί οι πάροχοι διαδικτύου να δίνουν προτεραιότητα σε εφαρμογές που προσφέρονται απευθείας από αυτούς (π.χ. IPTV από τον πάροχο).
 -[q130_6] Οι πάροχοι διαδικτύου θα πρέπει να έχουν το δικαίωμα να δίνουν προτεραιότητα σε συγκεκριμένες εφαρμογές, αν πληρώνονται γι' αυτό από τον πάροχο των εφαρμογών.
 -[q130_7] Η χρήση του διαδικτύου από την κυβέρνηση ή από δημόσιες υπηρεσίες όπως η αστυνομία, η πυροσβεστική ή τα νοσοκομεία πρέπει να έχει προτεραιότητα, έστω και αν αυτό σημαίνει πως οι καταναλωτές θα έχουν προσωρινά πιο αργή πρόσβαση στο διαδίκτυο.
 -[q130_8] Αν η προτεραιότητα μιας εφαρμογής σημαίνει πως δεν έχω πρόσβαση σε κάποια άλλη, δεν μπορώ να το δεχτώ.

<13> Διαφωνώ απολύτως
 <14> Μάλλον διαφωνώ
 <15> Μάλλον συμφωνώ
 <16> Συμφωνώ απολύτως
 <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: grid, order of items randomised
 #Label: Switching likelihood due to traffic management
 #Skip logic:
 #Base: All respondents

[q131] Φανταστείτε πως ο πάροχος διαδικτύου σας υιοθετεί μερικά από αυτά τα μέτρα. Πόσο πιθανό είναι να αλλάξετε σε άλλον πάροχο που δε χρησιμοποιεί αυτά τα μέτρα;

-[q131_1] Αν ο πάροχος διαδικτύου μου υιοθετούσε όρια δεδομένων για την πρόσβαση στο διαδίκτυο από το σπίτι, θα άλλαζα πάροχο.

-[q131_2] Αν ο πάροχος διαδικτύου μου μείωνε την ταχύτητα ροής video, εκτός και αν πλήρωνα επιπλέον, θα άλλαζα πάροχο.

-[q131_3] Αν ο πάροχος διαδικτύου μου μείωνε την ταχύτητα ροής μουσικής, εκτός και αν πλήρωνα επιπλέον, θα άλλαζα πάροχο.

-[q131_4] Αν ο πάροχος διαδικτύου μου μείωνε την ταχύτητα P2P / ανταλλαγής αρχείων, εκτός και αν πλήρωνα επιπλέον, θα άλλαζα πάροχο.

-[q131_5] Αν ο πάροχος διαδικτύου μου μείωνε την ταχύτητα των online παιχνιδιών, εκτός και αν πλήρωνα επιπλέον, θα άλλαζα πάροχο.

-[q131_6] Αν ο πάροχος διαδικτύου μου μείωνε την ταχύτητα voice chat / VoIP, εκτός και αν πλήρωνα επιπλέον, θα άλλαζα πάροχο.

<13> Διαφωνώ απολύτως

<14> Μάλλον διαφωνώ

<15> Μάλλον συμφωνώ

<16> Συμφωνώ απολύτως

<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards net neutrality in general

#Skip logic:

#Base: All respondents

[q132] Στην πορεία της έρευνας είδαμε διάφορα μέτρα που μπορούν να πάρουν οι πάροχοι διαδικτύου, προκειμένου να διαχειριστούν την κυκλοφορία δεδομένων στο διαδίκτυο. Όλα αυτά τα μέτρα συνεπάγονται πως δεν απολαμβάνουν όλοι οι καταναλωτές τον ίδιο βαθμό πρόσβασης στο διαδίκτυο. Έχοντας αυτό στο μυαλό σας, πείτε μας σε ποιο βαθμό συμφωνείτε με τις παρακάτω δηλώσεις.

-[q132_1] Οι πάροχοι διαδικτύου έχουν την κοινωνική ευθύνη να παρέχουν την ίδια ποιότητα διαδικτύου σε όλους.

-[q132_2] Η ισότιμη και απεριόριστη πρόσβαση στο διαδίκτυο αποτελεί ανθρώπινο δικαίωμα.

-[q132_3] Η διαχείριση κυκλοφορίας δεδομένων στο διαδίκτυο εμποδίζει τον ανταγωνισμό μεταξύ παρόχων διαδικτύου.

-[q132_4] Οι πάροχοι διαδικτύου δε θα έπρεπε να παρακολουθούν τι κάνουν οι χρήστες online.

-[q132_5] Κάθε πάροχος διαδικτύου θα έπρεπε να μπορεί να αποφασίζει για ποιες διαδικτυακές εφαρμογές και υπηρεσίες θέλει να δίνει πρόσβαση στους χρήστες.

-[q132_6] Η προτεραιότητα συγκεκριμένων εφαρμογών σε σχέση με άλλες προωθεί την καινοτομία.

-[q132_7] Διαφάνεια είναι ό,τι χρειάζεται: ο κόσμος θα αλλάξει παρόχους αν δεν συμφωνεί με την προτεραιοποίηση ή τον αποκλεισμό της διαδικτυακής κυκλοφορίας, εφόσον γνωρίζει πως κάτι τέτοιο συμβαίνει.

-[q132_8] Ο καθένας θα έπρεπε να έχει το δικαίωμα να λαμβάνει όλα τα περιεχόμενα και τις εφαρμογές που προσφέρονται online.

-[q132_9] Οι κρατικές υπηρεσίες ρύθμισης του διαδικτύου έχουν την υποχρέωση να διασφαλίζουν πως όλοι δέχονται ίση μεταχείριση όσον αφορά την πρόσβαση στο διαδίκτυο και την ταχύτητα.

-[q132_10] Οι κρατικές υπηρεσίες ρύθμισης του διαδικτύου έχουν την υποχρέωση να διευκολύνουν τους χρήστες να βρίσκουν εναλλακτικές προσφορές.

- <13> Διαφωνώ απολύτως
<14> Μάλλον διαφωνώ
<15> Μάλλον συμφωνώ
<16> Συμφωνώ απολύτως
<777> Δεν απαντώ / δεν ξέρω

• #Socio-demographic section

#page break

#Question type: open numeric

#Label: Household size

#Skip logic:

#Base: All respondents

Ευχαριστούμε πολύ για τις απαντήσεις σας. Η έρευνα έχει σχεδόν τελειώσει και απομένουν μόνο μερικές γενικές ερωτήσεις σχετικά με το προσωπικό σας υπόβαθρο.

[q133] Πόσα άτομα ζουν στο νοικοκυριό σας συμπεριλαμβανομένου και του εαυτού σας;

[#open prompt]

<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: single choice

#Label: Household net income

#Skip logic:

#Base: All respondents

[q134] Ποιο είναι το καθαρό μηνιαίο εισόδημα του νοικοκυριού σας;

- <1> έως και 500 €
<2> μεταξύ 501 και 1000 €
<3> μεταξύ 1001 και 1500 €
<4> μεταξύ 1501 και 2000 €
<5> μεταξύ 2001 και 2500 €
<6> μεταξύ 2501 και 3000 €
<7> μεταξύ 3001 και 4000 €
<8> άνω των 4000 €
<777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: single choice

#Label: Accommodation

#Skip logic:

#Base: All respondents

[q135] Ποιο από τα παρακάτω περιγράφει καλύτερα το νοικοκυριό σας;

- <1> Ανεξάρτητη κατοικία
- <2> Ημιανεξάρτητη κατοικία
- <3> Σπίτι σε σειρά κατοικιών
- <4> Μεζονέτα
- <5> Στούντιο/διαμέρισμα
- <6> Μπανγκαλόου
- <555> Άλλο
- <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: single choice

#Label: Living area

#Skip logic:

#Base: All respondents

[q136] Ποιο από τα παρακάτω περιγράφει καλύτερα την περιοχή σας;

- <1> αγροτική
- <2> μάλλον αγροτική
- <3> μάλλον αστική
- <4> αστική
- <777> Δεν απαντώ / δεν ξέρω

#page break

#Question type: multiple choice

#Label: Employment status

#Skip logic:

#Base: All respondents

[q137] Ποια είναι η παρούσα εργασιακή σας κατάσταση; Αν έχετε πλήρη και μερική απασχόληση, σημειώστε και τις δύο.

- <1> Εργάζομαι με πλήρες ωράριο (30 ή παραπάνω ώρες την εβδομάδα)
- <2> Εργάζομαι με ωράριο μερικής απασχόλησης (8-29 ώρες την εβδομάδα)
- <3> Εργάζομαι με ωράριο μερικής απασχόλησης (λιγότερο από 8 ώρες την εβδομάδα)
- <4> Είμαι φοιτήτρια/φοιτητής πλήρους απασχόλησης
- <5> Είμαι συνταξιούχος
- <6> Είμαι άνεργη/άνεργος / Δεν εργάζομαι
- <555> Άλλο
- <777> Δεν απαντώ / δεν ξέρω

• #End

Η έρευνα ολοκληρώθηκε. Ευχαριστούμε πολύ για το χρόνο σας!

D.5 Final Version Translation - Sweden

• #Introduction

#page break

Bästa deltagare,

Vi vill börja med att tacka för att du vill vara med i den här undersökningen om "telekommunikationer". Den tar ungefär 20 minuter.

Vänligen använd pilen nederst på varje sida för att gå framåt i undersökningen.

Tack för att du tog dig tid och vill vara med.

#page break

#Question type: open numeric

#Label: Age

#Skip logic:

#Base: All respondents

[q01_1] Vilket år är du född?

[#open prompt]

[q01_2] Vilken månad är du född?

[#open prompt]

#page break

#Question type: single choice

#Label: Gender

#Skip logic:

#Base: All respondents

[q138] Är du...

<9> Man

<10> Kvinna

#page break

#Question type: single choice

#Label: Region

#Skip logic:

#Base: All respondents

[q139] I vilket län i *#land* bor du?

- <1> Blekinge
- <2> Bohuslän
- <3> Dalarna
- <4> Dalsland
- <5> Gotland
- <6> Gästrikland
- <7> Halland
- <8> Hälsingland
- <9> Härjedalen
- <10> Jämtland
- <11> Lappland
- <12> Medelpad
- <13> Norrbotten
- <14> Närke
- <15> Skåne
- <16> Småland
- <17> Södemanland
- <18> Uppland
- <19> Värmland
- <20> Västerbotten
- <21> Västergötland
- <22> Västmanland
- <23> Ångermanland
- <24> Öland
- <25> Östergötland

#page break

#Question type: multiple choice

#Label: Types of internet access available

#Skip logic:

#Base: All respondents

[q140] Det finns många möjligheter att koppla upp sig till internet. Vilka av följande använder du?

- <21> Hemma med fast uppkoppling (utrustning ansluten via WiFi eller en nätverkskabel till t.ex. DSL, kabel, LTE hemma, USB-donglar)
- <22> Hemma med mobil uppkoppling (smartphone eller tablet-pc ej ansluten via WiFi)
- <23> Utanför hemmet med en mobiltelefon via mobil uppkoppling , t.ex. på gatan
- <24> Utanför hemmet med tablet-pc via mobil uppkoppling, t.ex. på gatan
- <25> Utanför hemmet ansluten till WiFi/hotspots, t.ex. på tåg, på kaféer
- <777> Inget svar/vet ej

#Screenout if not 1 in [q04]

#Respondents who do not use stationary access at home are not surveyed

#page break

#Question type: single choice

#Label: Decision making

#Skip logic:

#Base: All respondents

[q141] När det gäller att besluta vem/vilket företag som tillhandahåller din fasta internetuppkoppling hemma, i vilken utsträckning är du delaktig i beslutet?

<13> Jag bestämmer ensam.

<14> Jag bestämmer tillsammans med någon annan.

<15> Någon annan bestämmer, jag är inte delaktig.

<777> Inget svar/vet ej

#Screenout if [q05] in [3,777]

#Respondents who do are not involved in decisions about Internet access are not surveyed

#page break

• #Characteristics of at-home Internet access

#Question type: single choice

#Label: ISP fixed

#Skip logic:

#Base: All respondents

[q142] Vilken av följande internetleverantör använder du för fast internetuppkoppling hemma (företaget som tillhandahåller din internetuppkoppling)? I fortsättningen kallar vi det här företaget din "internetleverantör".

<1> Telia

<2> telenor

<3> TELE2

<4> 3

<5> com hem

<6> IP-ONLY

<7> Glocalnet

<8> Net4Mobility

<9> Bahnhof

<10> bredbands bolaget

<11> T3

<12> Bredband2

<13> AllTele

<555> Annat

<777> Inget svar/vet ej

#page break

#Question type: single choice

#Label: Speed fixed

#Skip logic:

#Base: All respondents

[q143] Vilken hastighet anges i avtalet för din fasta internetuppkoppling hemma?

- <29> Upp till 2 Mbit/s
<30> Mer än 2 upp till 8 Mbit/s
<31> Mer än 8 upp till 16 Mbit/s
<32> Mer än 16 upp till 32 Mbit/s
<33> Mer än 32 upp till 50 Mbit/s
<34> Mer än 50 upp till 100 Mbit/s
<35> Mer än 100 Mbit/s
<777> Inget svar/vet ej

#page break

#Question type: scale

#Label: Satisfaction with fixed speed

#Skip logic:

#Base: All respondents

[q144] På en skala från 0 till 10: Hur nöjd är du med kvaliteten på din fasta internetuppkoppling hemma?

- <44> Mycket missnöjd
<45>
<46>
<47>
<48>
<49>
<50>
<51>
<52>
<53>
<54> Mycket nöjd
<777> Inget svar/vet ej

#page break

#Question type: multiple choice

#Label: Bundled services

#Skip logic:

#Base: All respondents

[q145] Fast internetuppkoppling hemma kombineras ofta i paket med telefon- eller TV-tjänster, eller ett mobilavtal. Bortsett från internetuppkoppling, vilka av följande tjänster ingår i avtalet från din internetleverantör?

<13> Telefon
<14> TV
<15> Mobilavtal
<777> Inget svar/vet ej

#Question type: single choice
#Label: Costs for at home access
#Skip logic:
#Base: All respondents

[q146] Hur mycket lägger du för närvarande på de här tjänsterna totalt per månad? Om du inte vet den exakta summan, gör en grov uppskattning.

<20> Upp till 190 kr
<21> Mer än 190 kr up till 300 kr
<22> Mer än 300 kr up till 500 kr
<23> Mer än 500 kr up till 700 kr
<24> Mer än 700 kr up till 1 000 kr
<25> Mer än 1 000 kr
<777> Inget svar/vet ej

#page break

• #ISP switching behaviour

#Question type: single choice
#Label: Duration of current ISP relation
#Skip logic:
#Base: All respondents

[q147] Hur länge har du haft din nuvarande internetleverantör?

<25> Upp till 1 år
<26> Mer än 1, upp till 2 år
<27> Mer än 2, upp till 4 år
<28> Mer än 4, upp till 6 år
<29> Mer än 6, upp till 8 år
<30> Mer än 8 år
<777> Inget svar/vet ej

#page break

#Question type: multiple choice
#Label: Past switching
#Skip logic:
#Base: All respondents

[q148] Har du någon gång bytt internetleverantör för internetuppkoppling hemma?

<13>	Ja, för att jag ville (t.ex. beroende på ett bättre erbjudande)
<14>	Ja, för att jag var tvungen/inte hade något val (t.ex. genom flytt)
<15>	Nej
<777>	Inget svar/vet ej
#page break	
#Question type: single choice #Label: Previous ISP #Skip logic: if [q12] in [1,2] #Base: Respondents who did switch their ISP before	
[q149] Tänk på senaste gången du bytte internetleverantör för internetuppkoppling hemma: Vilken av följande var din tidigare internetleverantör?	
<1>	Telia
<2>	telenor
<3>	TELE2
<4>	3
<5>	com hem
<6>	IP-ONLY
<7>	Glocalnet
<8>	Net4Mobility
<9>	Bahnhof
<10>	bredbands bolaget
<11>	T3
<12>	Bredband2
<13>	AllTele
<777>	Inget svar/vet ej
#page break	
#Question type: grid, order of items randomised #Label: Attitude towards switching #Skip logic: #Base: All respondents	
[q150] Tänk på att byta internetleverantör för internetuppkoppling hemma: I vilken mån håller du med om följande påståenden?	
-[q150_1] Det är generellt inte troligt att jag byter internetleverantör.	
-[q150_2] Jag känner att jag inte har något riktigt val när det gäller att bestämma mig för en internetleverantör.	
<17>	Håller inte alls med
<18>	Håller delvis inte med
<19>	Håller delvis med
<20>	Håller med helt och hållet
<777>	Inget svar/vet ej

#page break	
<p>#Question type: multiple choice, max 3, order of items randomised</p> <p>#Label: Main barriers to switching</p> <p>#Skip logic: if -[q14_1] in [3,4]</p> <p>#Base: Respondents who are (rather) cautious about switching their provider</p>	
<p>[q151] Eftersom det inte är troligt att du byter leverantörer för internet hemma: Vilka är de tre viktigaste anledningarna till detta?</p>	
<45>	Nöjd med nuvarande internetleverantör
<46>	Risk att betala för två internetleverantörer under övergångsperioden
<47>	Risk att vara utan tjänsten under övergångsperioden
<48>	Inga andra internetleverantörer tillgängliga för mitt hushåll
<49>	Inga andra internetleverantörer erbjuder mer valuta för pengarna
<50>	Tar för mycket tid/är för jobbigt
<51>	Tappar relaterade tjänster (t.ex. e-postadress, egen webbsida)
<52>	Är inte säker på hur man gör
<53>	Långa bindningstider/minsta bindningstider för avtalet
<54>	För svårt att jämföra olika internetleverantörer
<55>	För svårt hitta information om interneterbjudanden
<555>	Annat: [#öppna prompt]
<777>	Inget svar/vet ej
#page break	
• #Characteristics of out-of-home Internet access	
<p>#Question type: scale</p> <p>#Label: Satisfaction with mobile access</p> <p>#Skip logic: if 3 in [q04]</p> <p>#Base: Respondents who use the Internet out of home with a mobile phone via their mobile operator</p>	
<p>[q152] När du använder internet i din mobiltelefon utan att ansluta till WiFi, hur nöjd är du med kvaliteten på internetuppkopplingen?</p>	
<44>	Mycket missnöjd
<45>	
<46>	
<47>	
<48>	
<49>	
<50>	
<51>	
<52>	
<53>	
<54>	Mycket nöjd

<777> Inget svar/vet ej

#page break

• #Internet usage

#Question type: grid, order of items randomised

#Label: Perception of the Internet in general

#Skip logic:

#Base: All respondents

I nästa avsnitt skulle vi vilja få reda på hur du använder internet.

[q153] För att förstå hur viktigt internet är för dig privat: I vilken mån håller du med om följande påståenden?

-[q153_1] Jag kan inte tänka mig att leva utan internet längre.

-[q153_2] Jag är ofta online hela tiden - när som helst, var som helst.

-[q153_3] Att inte kunna använda internet längre skulle påverka mitt liv enormt mycket.

-[q153_4] Det är väldigt viktigt för mig att vara uppdaterad med den senaste teknologin.

-[q153_5] Jag tycker att jag är en kunnig internetanvändare.

-[q153_6] Med internet kan jag få kontakt med vänner i hela världen.

-[q153_7] Internet är ett farligt ställe.

-[q153_8] Det är viktigt för mig att kunna ta del av all den mängd information och tjänster som finns online.

-[q153_9] Det är behagligt att kunna glömma allt runt omkring när jag är online.

<17> Håller inte alls med

<18> Håller delvis inte med

<19> Håller delvis med

<20> Håller med helt och hållet

<777> Inget svar/vet ej

#Question type: grid

#Label: Frequency of Internet usage

#Skip logic:

#Base: All respondents

[q154] Hur många dagar i veckan använder du internet aktivt? Tänk på alla aktiviteter som kräver internetuppkoppling (t.ex. surfa, läsa nyheter, e-post, sociala nätverk, strömma videor eller musik, Voice-over-IP, IP-TV, spela onlinespel).

-[q154_1] Hemma uppkopplad med WiFi eller kabel

-[q154_2] [#if 5 in [q04]] Utanför hemmet med en mobiltelefon ansluten till WiFi

-[q154_3] [#if 3 in [q04]] Utanför hemmet med en mobiltelefon med mobil uppkoppling (ej ansluten till WiFi)

<25> Aldrig

<26> Mindre än en gång i veckan

<27> Ungefär en gång i veckan

<28> Under 2-3 dagar

<29> Under 4-5 dagar
<30> Under 6-7 dagar
<777> Inget svar/vet ej

#page break

#Question type: grid

#Label: Duration of Internet usage

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q155] De dagar du använder internet, hur länge gör du det i genomsnitt?

-[q155_1] [#if -[q18_1] in [2,3,4,5,6]] Hemma uppkopplad med WiFi eller kabel

-[q155_2] [#if -[q18_2] in [2,3,4,5,6]] Utanför hemmet med en mobiltelefon ansluten till WiFi

-[q155_3] [#if -[q18_3] in [2,3,4,5,6]] Utanför hemmet med en mobiltelefon med mobil uppkoppling (ej ansluten till WiFi)

<25> Upp till 30 minuter
<26> Mer än 30 minuter upp till 1 timme
<27> Mer än 1 timme upp till 2 timmar
<28> Mer än 2 timmar upp till 4 timmar
<29> Mer än 4 timmar upp till 6 timmar
<30> Mer än 6 timmar
<777> Inget svar/vet ej

#page break

#Question type: multiple choice, order randomized

#Label: Devices used for Internet access

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q156] Vilken av följande utrustning använder du för att koppla upp dig mot internet?

<25> Stationär dator
<26> Bärbar dator/netbook
<27> Tablet-pc
<28> Mobiltelefon/smartphone
<29> Smart-TV
<30> Spelkonsol
<777> Inget svar/vet ej

#page break

#Question type: multiple choice, order randomized

#Label: Internet applications used

#Skip logic: if -[q18_1] in [2,3,4,5,6] OR -[q18_2] in [2,3,4,5,6] OR -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet

[q157] Vilka av följande internetapplikationer använder du?

- <41> E-post/surfa/läsa nyheter
- <42> Chatt/snabbmeddelanden (t.ex. Whatsapp, Skype)
- <43> Sociala nätverk (t.ex. Facebook, Google+)
- <44> Voice-over-IP/röst-/videosamtal (t.ex. Skype, Viber)
- <45> Videoströmning (t.ex. YouTube, Netflix)
- <46> Musikströmning (t.ex. Spotify, Pandora, Soundcloud)
- <47> IP-TV (TV-program via internetuppkoppling)
- <48> Onlinespel (t.ex. MMORPG:s som World of Warcraft, multiplayer spel som Counterstrike, FIFA, etc.)
- <49> Ladda ner applikationer, programvaruuppdateringar, spel eller videor
- <50> P2P/fildelning
- <666> Inga av dessa
- <777> Inget svar/vet ej

#page break

#Question type: dyngrid, multiple, order randomized as [q21]

#Label: Internet applications used by location

#Skip logic: if [q21] in [1,2,3,4,5,6,7,8,9,10]

#Base: All respondents who use one of the given applications

[q158] Och var använder du normalt de här applikationerna?

- [q158_1] [#if 1 in [q21]] E-post/surfa/läsa nyheter
- [q158_2] [#if 2 in [q21]] Chatt/snabbmeddelanden (t.ex. Whatsapp, Skype)
- [q158_3] [#if 3 in [q21]] Sociala nätverk (t.ex. Facebook, Google+)
- [q158_4] [#if 4 in [q21]] Voice-over-IP/röst/video (t.ex. Skype, Viber)
- [q158_5] [#if 5 in [q21]] Videoströmning (t.ex. YouTube, Netflix)
- [q158_6] [#if 6 in [q21]] Musikströmning (t.ex. Spotify, Pandora, Soundcloud)
- [q158_7] [#if 7 in [q21]] IP-TV (TV-program via internetuppkoppling)
- [q158_8] [#if 8 in [q21]] Onlinespel (t.ex. MMORPG:s som World of Warcraft, multiplayer spel som Counterstrike, FIFA, etc.)
- [q158_9] [#if 9 in [q21]] Ladda ner applikationer, programvaruuppdateringar, spel eller videor
- [q158_10] [#if 10 in [q21]] P2P/fildelning

<1> [#if -[q18_1] in [2,3,4,5,6]] Hemma uppkopplad med WiFi eller kabel

<2> [#if -[q18_2] in [2,3,4,5,6]] Utanför hemmet med en mobiltelefon ansluten till WiFi

<3> [#if -[q18_3] in [2,3,4,5,6]] Utanför hemmet med en mobiltelefon ej ansluten till WiFi

<777> Inget svar/vet ej

#page break

#Question type: multiple choice

#Label: Purpose of Internet access at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home

[q159] I vilket syfte använder du internet hemma uppkopplad med WiFi eller kabel?

- <21> Endast privat
- <22> Huvudsakligen privat
- <23> Både privat och arbete
- <24> Huvudsakligen arbete
- <25> Endast arbete
- <777> Inget svar/vet ej

#page break

• #Experience of disruptions

#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q18_1] in [2,3,4,5,6]

#Base: All respondents who use the Internet at home through WiFi or cable

När man använder internet inträffar ibland tekniska avbrott. Anslutningar kan brytas eller hastigheten plötsligt bli sämre, vilket ger längre laddningstider/sämre kvalitet eller webbsajter man inte kommer åt alls.

[q160] Tänk på när du använder internet hemma med uppkoppling via WiFi eller kabel: Vilka av följande avbrott har du varit med om och hur ofta händer det?

- [q160_1] Anslutning bryts helt
- [q160_2] Plötsligt dålig hastighet/laddning/sämre kvalitet
- [q160_3] Webbsajter ej tillgängliga/går ej att komma in

- <29> Jag har aldrig varit med om detta
- <30> Med några månaders mellanrum
- <31> Minst en gång per månad
- <32> Ungefär 2 till 3 gånger i månaden
- <33> Ungefär en gång i veckan
- <34> Ungefär 2-5 gånger per vecka
- <35> (Nästan) dagligen
- <777> Inget svar/vet ej

#page break

#Question type: grid

#Label: Disruptions of Internet usage at home

#Skip logic: if -[q18_3] in [2,3,4,5,6]

#Base: All respondents who use the Internet out of home on a mobile phone not connected through WiFi

[q161] Och tänk på när du använder internet utanför hemmet med en mobiltelefon som **ej** är ansluten till WiFi: Vilka av följande avbrott har du varit med om och hur ofta händer det?

- [q161_1] Anslutning bryts helt
- [q161_2] Plötsligt dålig hastighet/laddning/sämre kvalitet
- [q161_3] Webbssajter ej tillgängliga/går ej att komma in

- <29> Jag har aldrig varit med om detta
- <30> Med några månaders mellanrum
- <31> Minst en gång per månad
- <32> Ungefär 2 till 3 gånger i månaden
- <33> Ungefär en gång i veckan
- <34> Ungefär 2-5 gånger per vecka
- <35> (Nästan) dagligen
- <777> Inget svar/vet ej

#page break

#Question type: *dyngrid*

#Label: *Disruptions of Internet usage at home*

#Skip logic: *if -[q24_1] OR -[q24_2] OR -[q24_3] OR -[q25_1] OR -[q25_2] OR -[q25_3] in [2,3,4,5,6,7]*

#Base: *All respondents who experienced at least one type of disruption*

[q162] Och när du är med om de här avbrotten, hur länge varar det normalt?

- [q162_1] [#om -[q24_1] på [2,3,4,5,6,7]] Anslutning bryts helt hemma med anslutning via WiFi eller kabel
- [q162_2] [#om -[q24_2] på [2,3,4,5,6,7]] Plötsligt dålig hastighet/laddning/sämre kvalitet med anslutning via WiFi eller kabel
- [q162_3] [#om -[q24_3] på [2,3,4,5,6,7]] Webbssajter ej tillgängliga/går ej att komma in med anslutning via WiFi eller kabel
- [q162_4] [#om -[q25_1] på [2,3,4,5,6,7]] Anslutning bryts helt utanför hemmet med en mobiltelefon ej ansluten till WiFi
- [q162_5] [#om -[q25_2] på [2,3,4,5,6,7]] Plötsligt dålig hastighet/laddning/sämre kvalitet utanför hemmet med en mobiltelefon ej ansluten till WiFi
- [q162_6] [#om -[q25_3] på [2,3,4,5,6,7]] Webbssajter ej tillgängliga/går ej att komma in utanför hemmet med en mobiltelefon ej ansluten till WiFi

- <17> Från sekunder till några minuter
- <18> Upp till 2 timmar
- <19> Upp till 1 dag
- <20> Mer än 1 dag
- <777> Inget svar/vet ej

#page break

• #Conjoint analysis regarding ISP offers

#Skip logic: *Only test group who will see the information package*

Innan vi fortsätter med nästa del av undersökningen, skulle vi vilja att du tittar på en kort video hur internetleverantörer hanterar sättet data skickas över internet. Klicka på "Play"-knappen nedan för att starta videon.

#Insert information package

#page break
<p>• #Check of understanding information package / transparency</p>
<p><i>#Skip logic: Only test group who did not see the information package</i></p>
<p>Att använda internet betyder att data överförs. Den här överföringen av data kallas även datatrafik. Nu skulle vi vilja ställa några frågor om hur du tror att den här datatrafiken hanteras på internet.</p>
<p><i>#Question type: grid, order of items randomised</i> <i>#Label: Cross-check of contents of the information package / transparency</i> <i>#Skip logic:</i> <i>#Base: All respondents</i></p>
<p>[q163] Ta del av följande uttalanden och tala om för oss, om du tror de är sanna eller inte.</p> <p>-[q163_1] En leverantör av musik- eller videoströmningstjänst är ett exempel på en internetleverantör. -[q163_2] Konsumenterna köper normalt internetuppkopplingen från en innehållsleverantör. -[q163_3] Internetleverantörer säkerställer att data hittar genom nätverket från sändare till mål. -[q163_4] I trafikstyrning ingår inte att internetleverantörer saktar ner eller prioriterar visst innehåll. -[q163_5] Trafikstyrning betyder att internetleverantörer kan blockera viss innehåll. -[q163_6] Internetleverantörer kan tillämpa trafikstyrning för att svara på trängsel i nätverket. -[q163_7] Internetleverantörer kan tillämpa trafikstyrning för att ta ut avgifter för prioriterat innehåll. -[q163_8] Eftersom internet är ett nätverk av oberoende nätverk, tillämpas trafikstyrning från en internetleverantör endast för nätverket den styr.</p> <p><9> Sant <10> Falskt <777> Inget svar/vet ej</p>
#page break
<p><i>#Skip logic: All respondents</i></p>
<p>De följande frågorna tar upp hur du värderar erbjudanden från internetleverantörer. Vi kommer att ställa en rad frågor i vilken grad du föredrar vissa funktioner som kan ingå i erbjudandena. När du besvarar dessa frågor, foreställ dig att du är helt fri att välja det erbjudande du vill.</p> <p>Frågorna kommer att ta upp följande funktioner:</p> <ul style="list-style-type: none"> • Internetleverantör • Månadspris • Nedladdningshastighet • Om ett erbjudande innehåller internet, telefon och/eller TV-åtkomst • Minsta bindningstider för avtalet, dvs. den period efter vilken du kan säga upp avtalet • Om det ingår någon slags datagräns i erbjudandet. En datagräns betyder att du endast kan ladda ner eller ladda upp en viss mängd data per månad. Du måste betala extra för att använda mer data. / vissa fall är vissa applikationer undantagna från datagränsen, vilket betyder att användningen av dem inte räknas av mot datagränsen. Du kommer att se följande datagränser: <ul style="list-style-type: none"> ○ 10 GB: Detta är t.ex. tillräckligt för ungefär 5 timmar med videoströmning i HD-kvalitet eller 100 timmar med musikströmning av god kvalitet plus att surfa och söka på internet. ○ 50 GB: Detta är t.ex. tillräckligt för ungefär 25 timmar med videoströmning i HD-kvalitet eller 500 timmar med musikströmning av god kvalitet plus att surfa och söka på internet.

- Ingen datagräns

#page break

- Dessutom kan åtkomsten till vissa applikationer variera. Du kommer att se följande nivåer:
 - Kan användas normalt
 - Prioriteras: Detta betyder att du kommer att ha en mycket stabil uppkoppling när du använder applikationer, utan avbrott som att det plötsligt går sakta eller måste laddas om.
 - Saktas ner: Detta betyder att du kommer att ha en långsammare uppkoppling när du använder applikationer, med fler avbrott som att det plötsligt går sakta eller måste laddas om.
 - Är blockerad: Betyder att det inte finns någon åtkomst alls till applikationen med det här erbjudandet.
- Applikationerna du kommer att se i frågorna är följande:
 - P2P/fildelning
 - VoIP-tjänster: Video-/röstsamtalchatt/Voice-over-IP (t.ex. Skype, Viber)
 - Videoströmning (t.ex. YouTube, Netflix)
 - Onlinespel (t.ex. MMORPG:s som World of Warcraft, multiplayer spel som Counterstrike, FIFA, etc.)

#Internal information, not shown to respondents.

#The following attributes and levels will be tested in the conjoint part:

Andra egenskaper än trafikstyrning	
Egenskap	Nivåer
Internetleverantör	Telia
	telenor
	TELE2
	Lokal internetleverantör
Månadspris	190 kr
	400 kr
	600 kr
	800 kr
Nedladdningshastighet	Upp till 2 Mbit/s
	Upp till 10 Mbit/s
	Upp till 25 Mbit/s
	Upp till 100 Mbit/s
Paket med tjänster	Inget paket, endast internet
	Paket med internet och telefon
	Paket med internet och TV
	Paket med internet, telefon och TV
Minsta bindningstid för avtalet	1 månad

	12 månader
	24 månader
Egenskaper som täcker åtgärder för trafikstyrning	
Egenskap	Nivåer
Datagräns	10 GB
	50 GB
	10 GB, din favorit för videoströmning räknas inte för datagränsen
	50 GB, din favorit för videoströmning räknas inte för datagränsen
	10 GB, din favorit för VoIP räknas inte för datagränsen
	50 GB, din favorit för VoIP räknas inte för datagränsen
	10 GB, din favorit för onlinespel räknas inte för datagränsen
	50 GB, din favorit för onlinespel räknas inte för datagränsen
	Ingen datagräns
P2P/fildelning	kan användas normalt
	prioriteras
	saktas ner
	blockerad
VoIP-tjänster	kan användas normalt
	prioriteras
	saktas ner
	blockerad
Videoströmning	kan användas normalt
	prioriteras
	saktas ner
	blockerad
Onlinespel	kan användas normalt
	prioriteras
	saktas ner
	blockerad
#page break	
#First section of conjoint questions. This will ask questions of general attractiveness for all levels per attribute. Question [cq01] below is meant to illustrate this procedure as an example.	
[cq01a] Vänligen värdera följande internetleverantörer när det gäller hur attraktiva de är.	
-[cq01_1] Märke 1	

-[cq01_1] Märke 2
 -[cq01_1] Märke 3
 -[cq01_1] Märke 4

<1> Ej attraktiv
 <2>
 <3> Delvis attraktiv
 <4>
 <5> Mycket attraktiv
 <6>
 <7> Extremt attraktiv

[cq01b] Vänligen värdera följande prisnivåer när det gäller hur attraktiva de är.
 [cq01c] Vänligen värdera följande nivåer för nedladdningshastighet när det gäller hur attraktiva de är.
 [cq01c] Vänligen värdera följande paket när det gäller hur attraktiva de är.
 [cq01d] Vänligen värdera följande lägsta bindningstider när det gäller hur attraktiva de är.
 [cq01e] Vänligen värdera följande nivåer för datagränser när det gäller hur attraktiva de är.
 [cq01f] Vänligen värdera följande alternativ för P2P/fildelning när det gäller hur attraktiva de är.
 [cq01g] Vänligen värdera följande alternativ för VoIP -tjänster när det gäller hur attraktiva de är.
 [cq01h] Vänligen värdera följande alternativ för videoströmning när det gäller hur attraktiva de är.
 [cq01i] Vänligen värdera följande alternativ för videoströmning när det gäller hur attraktiva de är.
 [cq01j] Vänligen värdera följande alternativ för onlinespel när det gäller hur attraktiva de är.

#Second section of conjoint questions. This will ask 30 questions in which respondents state their preference for one of two offers on a 9-point scale. In the first 15 questions, each question will include a selection of 4 attributes, in the remaining part each will include 5 attributes. Question [cq02] below is meant to illustrate this procedure as an example.

[cq02] Om de här erbjudandena för internetuppkoppling vore identiska på alla andra sätt, vilket skulle du föredra?

Nedladdningshastighet: Upp till 2 Mbit/s Paket med internet och telefon Datagräns på 50 GB Blockerad videoströmning					Nedladdningshastighet: Upp till 10 Mbit/s Inget paket, endast internet Datagräns på 30 GB, onlinespel ej begränsat Videoströmning prioriterat			
o	o	o	o	o	O	o	o	o
Föredrar tydligt vänster erbjudande		Föredrar snarare vänster erbjudande		Spelar ingen roll		Föredrar snarare höger erbjudande		Föredrar tydligt höger erbjudande

#page break

• #Psychographic section

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards specific traffic management measures

#Skip logic:

#Base: All respondents

[q164] Som du sett tidigare kan internetleverantörer prioritera eller blockera vissa internetapplikationer. I vilken mån håller du med om följande påståenden om detta?

-[q164_1] Det är OK för mig att applikationer prioriteras för en specifik användare om de betalar extra för tjänsten.

-[q164_2] Jag tycker det är oroväckande att internetleverantörers analyser av datatrafik för att möjliggöra prioriterade applikationer bryter mot rätten för personlig integritet.

-[q164_3] Om prioritering av en användare innebär att någon annan får långsammare internetuppkoppling, tycker jag att det är orättvist.

-[q164_4] Det är OK att leverantörer hanterar datatrafik för att mitt internet skall fungera stabilt.

-[q164_5] Det är OK att internetleverantörer prioriterar applikationer som erbjuds direkt av dem (t.ex. IP-TV från leverantören).

-[q164_6] Internetleverantörer skall få prioritera applikationer om leverantören av applikationen betalar dem för det.

-[q164_7] Internetanvändning för regeringen och officiella instanser som polis, brandkår eller sjukhus skall prioriteras, även om det innebär att konsumenterna måste drabbas av långsammare internetuppkoppling övergående.

-[q164_8] Om prioritering av en applikation betyder att jag inte kommer åt en annan applikation, kan jag inte acceptera det.

- <17> Håller inte alls med
<18> Håller delvis inte med
<19> Håller delvis med
<20> Håller med helt och hållet
<777> Inget svar/vet ej

#page break

#Question type: grid, order of items randomised

#Label: Switching likelihood due to traffic management

#Skip logic:

#Base: All respondents

[q165] Föreställ dig att din internetleverantör införde några av de här åtgärderna. Hur troligt är det att du skulle byta till en annan leverantör som inte använder de här åtgärderna?

-[q165_1] Om min internetleverantör skulle införa datagräns för internetuppkoppling hemma skulle jag byta leverantörer.

-[q165_2] Om min internetleverantör skulle minska hastigheten för videoströmning om jag inte skulle betala extra, skulle jag byta leverantörer.

-[q165_3] Om min internetleverantör skulle minska hastigheten för musikströmning om jag inte skulle betala extra, skulle jag byta leverantörer.

-[q165_4] Om min internetleverantör skulle minska hastigheten för P2P/fildelning om jag inte skulle betala extra, skulle jag byta leverantörer.

-[q165_5] Om min internetleverantör skulle minska hastigheten för onlinespel om jag inte skulle betala extra, skulle jag byta leverantörer.

-[q165_6] Om min internetleverantör skulle minska hastigheten för röstchatt/VoIP om jag inte skulle

betala extra, skulle jag byta leverantörer.

- <17> Håller inte alls med
 <18> Håller delvis inte med
 <19> Håller delvis med
 <20> Håller med helt och hållet
 <777> Inget svar/vet ej

#page break

#Question type: grid, order of items randomised

#Label: Attitude towards net neutrality in general

#Skip logic:

#Base: All respondents

[q166] I undersökningen har vi tittat på flera åtgärder internetleverantörer kan vidta för att hantera datatrafik på internet. Alla de här åtgärderna betyder att inte alla konsumenter får samma grad av åtkomst till internet. Med tanke på detta, tala om i vilken grad du håller med om följande uttalanden.

-[q166_1] Internetleverantörer har socialt ansvar att tillhandahålla samma kvalitet på uppkoppling till internet för alla.

-[q166_2] Rättvis och obegränsad uppkoppling till internet är en mänsklig rättighet.

-[q166_3] Trafikstyrning på internet förhindrar konkurrens mellan internetleverantörer.

-[q166_4] Internetleverantörer skall inte övervaka vad enskilda personer gör online.

-[q166_5] Alla internetleverantörer skall bestämma fritt vilka internetapplikationer och tjänster de ger användare åtkomst till.

-[q166_6] Att prioritera vissa applikationer framför andra har en positiv effekt på innovation.

-[q166_7] Det är transparens som krävs: människor kommer att byta leverantör om de inte samtycker till att internettrafik prioriteras eller blockeras, om de får information att det äger rum.

-[q166_8] Alla skall ha rätten att få hela innehållet och applikationerna som erbjuds online.

-[q166_9] Nationella tillsynsmyndigheter har ett ansvar att säkerställa att alla behandlas jämnt när det gäller internetuppkoppling och -hastighet.

-[q166_10] Nationella tillsynsmyndigheter har ett ansvar att göra det lättare för användare att hitta alternativa erbjudanden.

- <17> Håller inte alls med
 <18> Håller delvis inte med
 <19> Håller delvis med
 <20> Håller med helt och hållet
 <777> Inget svar/vet ej

• #Socio-demographic section

#page break

#Question type: open numeric

#Label: Household size

#Skip logic:

<p><i>#Base: All respondents</i></p> <p>Tack för att du tog dig tid att vara med. Vi är nästan klara med undersökningen och har bara några allmänna frågor kvar om din personliga bakgrund.</p> <p>[q167] Hur många personer bor i ditt hushåll, inklusive dig själv?</p> <p>[#open prompt]</p> <p><777> Inget svar/vet ej</p>
#page break
<p><i>#Question type: single choice</i></p> <p><i>#Label: Household net income</i></p> <p><i>#Skip logic:</i></p> <p><i>#Base: All respondents</i></p> <p>[q168] Vilken är hushållets månadsinkomst netto?</p> <p><1> Mindre än 9 000 kr</p> <p><2> 9 000 kr till 13 500 kr</p> <p><3> 13 501 kr till 18 000 kr</p> <p><4> 18 001 kr till 22 500 kr</p> <p><5> 22 501 kr till 27 000 kr</p> <p><6> 27 001 kr till 31 500 kr</p> <p><7> 31 501 kr till 36 000 kr</p> <p><8> Mer än 36 000 kr</p> <p><777> Inget svar/vet ej</p>
#page break
<p><i>#Question type: single choice</i></p> <p><i>#Label: Accommodation</i></p> <p><i>#Skip logic:</i></p> <p><i>#Base: All respondents</i></p> <p>[q169] Vilket av följande beskriver bäst hushållet du bor i?</p> <p><1> Fristående hus</p> <p><2> Parhus</p> <p><3> Radhus</p> <p><4> Etagevåning</p> <p><5> Enrumsvåning/lägenhet</p> <p><6> Enplanshus</p> <p><555> Annat</p> <p><777> Inget svar/vet ej</p>
#page break
<p><i>#Question type: single choice</i></p> <p><i>#Label: Living area</i></p>

#Skip logic:

#Base: All respondents

[q170] Vilket av följande beskriver bäst området där du bor ?

<1> landsbygd

<2> delvis landsbygd

<3> delvis stad

<4> stad

<777> Inget svar/vet ej

#page break

#Question type: multiple choice

#Label: Employment status

#Skip logic:

#Base: All respondents

[q171] Hur är din aktuella anställning? Om du har ett heltidsjobb och ett deltidjobb, klicka på båda.

<1> Arbetar heltid (30 eller fler timmar i veckan)

<2> Arbetar deltid (8-29 timmar i veckan)

<3> Arbetar deltid (mindre än 8 timmar i veckan)

<4> Studerar på heltid

<5> Pensionär

<6> Arbetslös/arbetar inte

<555> Annat

<777> Inget svar/vet ej

• #End

Du har nu kommit till slutet av frågeformuläret. Tack för att du tog dig tid!