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1 Abbreviations

Below is a list of abbreviations used in this report:

HAKOM	Croatian Posts and Electronic Communications Agency (www.telekom.hr)
CSWG	The Consumer Survey Working Group
BUSTI	Basic Usage Survey Telecommunication Indicators
CSUSI	Country Specific Usage Survey Indicators
CS	Consumer Survey

2 Objectives of the project

The global objective of the project is to assure further strengthening of regulatory rules of the telecommunications market in Croatia (in compliance with the EU *acquis*), which will contribute to its further development.

In the Terms of reference there are two specific objectives mentioned:

To provide an overview of the entire telecommunications market in Croatia including both historical data and future projections in order to provide access to the information necessary for focusing research and development efforts and developing new products and business strategies.

To provide strategic assessment of the role of regulatory rules (laws, bylaws, decisions) in the telecommunications sector with the main focus on the role of competition in delivering benefits for customers.

Emphasis on broadband

In discussions with the beneficiary it was asked and agreed that the project would put emphasis on the broadband development as this is of vital importance to the development of the information society in Croatia.

3 Objectives of the deliverable

The objective of this deliverable, the entity “Report on the role of regulation and consumer view of the market”, was to provide guidelines for the beneficiary on the strategic design and implementation of a systematic approach to Consumer Analysis of the Croatian Telecommunications markets.

4 Procedural Analysis of the Consumer Survey (CS) task

As the project itself did not have a specific budget to carry this out, the project drafted and at the end of the first mission to Zagreb in January 2009 submitted to the agency a strategy design and Implementation plan which was called **A Proposal for a consumer survey** (attachment I).

Some of the key points from this proposal were:

- Introduced the terms BUSTI and CSUSI, separating inter-country comparable indicators from country specific indicators
- first took a detailed look at similar consumer surveys carried out elsewhere.
- Outlined a strategy for HAKOM to follow
- Proposed an Action Plan
- Stipulated that the survey should be carried out annually, with a HAKOM budget for staff, survey outsourcing and publication of findings on their website
- Presented a proposed format for the reporting of the survey results
- Presented a draft questionnaire as a starting point for the HAKOM Consumer Survey working group to review and finalize.
- Proposed a schedule outline for the project:
 - Jan 2009: Inception report outlines case studies that will be used as the basis for a local model

- Feb 2009: HAKOM reviews the model and if adopted, assigns a working group of 3-5 staff to supervise the project within HAKOM, perhaps a representative of the Ministry and/or e-Croatia could be invited.
- March 2009: the project team together with the HAKOM working group brainstorm and finalise BUSTI & CSUSI indicators and finalise the draft- questionnaire to be used for the Croatian Telecommunications Consumer Survey.
- End Mar 2009: Tendering for outsourcing of survey
- Apr 2009: Survey carried out
- May 2009: Presentation of findings from survey

During the second mission to Croatia in March 2009, the project team held a presentation for HAKOM staff. One of the presentations was the Consumer Survey Proposal. Shortly after this, the agency committed to the outlined proposal. The Consumer Survey Working Group (CSWG) was quickly set up and several meetings were held together with the project staff. By the end of the second mission, the Questionnaire was finalized by the CSWG and two Survey Companies were contacted for quotes in line with the procurement procedures of HAKOM.

One of the companies was chosen to carry out the survey in April with preliminary results made available by the first week of May and their final report delivered by May 15, 2009 (Attachment II).

During the Third mission to Zagreb, the results of the annual consumer survey were analyzed together with the HAKOM CSWG.

A final CSWG meeting was held during which several issues were discussed and agreed

- General discussions of the findings of the report
- A project Coordinator was selected from the CSWG: Ms. Gordana Kulišić. Below were some of the key items that she should follow up on:
 - Co-ordination of the Press Release, it was later decided that there would be no separate press release. The presentation to the public will be done by the President of the Council during his yearly presentation of the activities to parliament.
 - Co-ordinate the inclusion of the CS in the HAKOM
 - Co-ordinate the review of the questions within a month. Are there questions that need modification; is there a need for new questions to explain identified new issues?
 - Co-ordination of the HAKOM final report on the CS.
 - Prepare a schedule for the implementation of 2010 CS Starting in Feb 2010.
- Next year: In the tender procedure, the survey company should include in its deliverables analysis of the deltas (changes between the results of 2009 and 2010).

It was agreed with HAKOM management that:

- The consumer survey was a valuable undertaking
- The results will be made public by the end of May at the time the Director presents key findings from the Consumer Survey to Parliament
- The Survey will be carried out annually to measure changes in the market
- The findings will be made public and published on the HAKOM web site, including a full-text version for download in PDF format.

5 Key findings from the Consumer Survey

As part of the research conducted, two surveys were carried out. One focused on fixed network end-users and the other on the end users of mobile networks.

The survey focused on end-users of fixed networks was conducted on a representative sample of 1200 respondents aged 18 to 65 years, divided into 6 regions (Zagreb, Croatia Northern, Eastern Croatia, Lika and Banovina, Littoral Croatia and Istria, Croatia and South) and by urban / rural aspect.

The survey focused on end users of mobile networks was conducted on a small sample of 206 users aged 18 to 65 years in order to obtain a percentage frequency of users of mobile networks that do not have access to a fixed telephone line in their household.

Some of the conclusions:

- 21% of the respondents had heard of HAKOM, of which more than half see the role of HAKOM as positive;
- the majority of users are satisfied with the information provided from the operator's fixed mobile network;
- 79% of Internet users are not planning on giving up their landline. Of these, half stated this was due to the fact that they needed it for access to the Internet;
- although a number of households still use dial-up internet access, slightly over a third of households in Croatia have broadband internet access;
- 57% of respondents without broadband Internet do not perceive a need for broadband internet, however 25% of respondents without broadband internet consider it as too expensive or unavailable;
- a little more than half of respondents who use broadband internet do not know how fast their Internet access is and 37% of them are not familiar with the exact conditions of their Internet package;
- 15% of those who use broadband are also using IPTV, while 23% of the respondents who use broadband are interested in using the services;
- 83% of respondents do not use public telephone booths;
- 82% of respondents have both a land line at their residence and a mobile phone, yet most of them are not considering to give up their land lines because either they need it for Internet access or are simply used to it.

6 Summary of trends based on the Consumer Survey

These kind of predictions are always dangerous to make and should thus be considered with some reserve as tentative predictions.

- Coverage is mostly global in Croatia: Those people that want broadband generally can get it.
- Due to a relatively large variance in wealth and development levels within Croatia, there is a higher uptake of broadband in the wealthier regions
- The consumers are generally satisfied with the speed of their Internet connections
- All of the younger people interviewed had at least one mobile phone! 5% of those interviewed did not have a personal mobile phone, but the older population is less inclined to have mobile phones than the young
- There is interest in the uptake of newer technologies offered by broadband, yet their uptake so far is still relatively low
- The move from land lines to mobile telephony is perceived today to be only starting
- Telephone booths are at the end of their life cycle, even in Croatia
- Consumers are generally either satisfied with the amount of information they receive from telecom suppliers, or are not willing to publicly complain

7 Detailed analysis of parts of the Consumer Survey

7.1 The missing segment of the population in the CS

Population segments as telephone users			
Fixed	Fixed + Mobile	Mobile	Neither
F	FM	M	X

The Fixed telephony survey (n=1200) looked at two groups of the total population

- Segment of the population that only have a fixed telephone (F)
- Segment of the population that have both a fixed telephone and a mobile (FM)

The Mobile survey (n=206) looked at two groups of the total population

- Segment of the population that only have a mobile telephone (M)
- Segment of the population that have both a fixed telephone and a mobile (FM)

Both surveys do not give an indication of the final missing segment of the total population that is those that have neither a fixed telephone nor a mobile phone (X). Using telephone surveys, by definition, this segment is excluded from telephone surveys. Before the surveys were carried out, some discussion was given to this. Market research estimates that this segment is between 3 and 4 percent of the population.

Since the Fixed plus Mobile segment is looked at in both surveys, the two surveys together give a new estimate of the actual population size compared to the survey size, taking into account the segment X that is excluded from the calculations in both surveys.

- From Question 19 in the CS1, 26% of 1200 respondents answered that they do not have Internet (=312).
In Q20, 893 respondents / 52% = 464 have Broadband
Based on the two different surveys, where it is possible to calculate the number of people that have either Fixed plus Mobile or Mobile only, we are able to calculate the group of people that neither a fixed nor mobile phone. This cross referencing gives a new n value of 1406 to represent the complete population. This is comprised of 4 groups:

Population segments as telephone users			
Fixed (F)	Fixed + Mobile FM	Mobile M	Neither X
5%	77%	14%	3%

How was this calculated?

Without better data, the values of 14% for M (from CS2 the 18% has been depreciated in weight slightly) and 3% for X (from PULS interviews) will change CS1 (1200) to include M & X to form a total where $1200 + 17\% = 1404$

From our statistical calculations, this is at 10% certainty (12-16% for M)

Based on $n=1404 / 464$ (Have BB in Q20), our prediction is that 33 % of the households have Broadband in 2008.

As an example, we also calculated the percentage from data supplied by the suppliers: in 2008, 496122 ADSL subscriptions for a population of 4.4million. From the Statistical bureau, the average household has 2.9 people per household (thru 2011). Thus $4.4/2.9 =$



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1.517mill. households. $1.517 / .496122 = 33\%$

→ the cross-check gives exactly the same percentage.

8 Attachment I: Proposal for a consumer survey

For the complete document we refer to the special deliverable with the proposal in detail

8.1 Background

One of the objectives of this project is the provision of an analysis of the customer perception of the local market of telecommunication services as perceived by the users of these services. This type of information is generally gathered using a Gallup that focuses on key indicators.

In addition to this key objective, other objectives should also be considered.

BUSTI

Some of the indicators that could be considered could be classified as Basic Usage Survey Telecommunication Indicators (BUSTI). BUSTI's are characterized as key identifiers/descriptors of basic telecommunication usage. e.g. rates of mobile phone usage versus traditional Plain-Old-Telephone-Systems (POTS) or the ratio between dial-up Internet connectivity to broadband (BB). These are indicators that can also be used to analyze and compare telecommunication markets between countries.

CSUSI

Some of the indicators that should be considered at the planning phase could be identified as Country Specific Usage Survey Indicators – (CSUSI). These differ from BUSTI's in that they aim at describing something that is more specific to the country itself instead of measuring indicators that can be found in most countries, like BUSTI's do. They focus the attention of the analysis to identify issues that are country specific and often are used to measure these developments over time (by comparing annual surveys to each other).

The EU has not identified clear guidelines of BUSTI's. It would be very beneficial if a certain level of standardization was implemented for these. HAKOM could even consider being proactive in this regards by presenting this concept at an ERG/IRG level and possibly ask for feedback from the ERG/IRG members on developing and adopting this concept on a wider scope. By consulting so many experts in the field, discussion and development of a core list of BUSTI's could be an interesting exercise.

In the current situation, the best approach for HAKOM thus is to take a look at those indicators that are used and surveys that are carried out in other countries in comparative studies. At the national level, some form of working group could then consider this data with the objective of identifying a comprehensive set of BUSTI's and where relevant try to analyse any CSUSI's applicable to the Croatian market. Once these have been identified and if necessary divided into the two groups, they should be considered for relevance. Are they the key indicators/questions that give the statistical analysis enough information to make assumptions of the current market?

Firstly, the basic BUSTI part should give a clear overview of the local market situation, with these objectives:

- a) Try to use BUSTI's as much as possible
- b) Verify that all key areas of the study receive enough focus and
- c) Aim to keep the questions as general/transferable as possible.

At the same time it is important not to define more questions than are really needed.



Secondly, the working group should brainstorm the anticipated data collection of the BUSTI data. In particular, they should try to identify:

- a) Traits that are country specific (to Croatia) and of relevance/interest
- b) Additional indicators CSUSI needed to address these (e.g. what indicators should be used to measure/quantify traits identified in (a) and
- c) How these indicators can be used to measure change/developments over time.

This second phase should thus have the objective of designing any CSUSI questions that will then be added to the BUSTI questions.

This projects budget gives no provision for actually arranging such a survey. In essence the design of such a survey could and should be done in active cooperation with the national body in charge of regulating these services. In Croatia this is The Croatian Post and Electronic Communications Agency (HAKOM).

8.2 Benefits of the defined strategy:

- It is cost-effective and time-efficient to set up
- It incorporates learned lessons from previous comparable national surveys done elsewhere
- It offers inter-country comparability
- It can be easily supplemented at the design phase to include any Croatia-specific conditions

Based on discussions with HAKOM (Jan 2009), their current schedule indicates that they are planning to carry out such a survey in 2-3 years during the next forecasted market survey round. It is strongly recommended to not wait so long to implement such a study as the results are not only relevant for the market analysis as dictated by the Telecommunications Law but are also important for the development of the strategy in this area.

The first public enquiry could even be carried out during 2009 with the following assumptions:

- The design of the proposed survey can be reviewed and finalized jointly with HAKOM
- The study can be commissioned by outsourcing to an appropriate local survey company
- The needed financing is estimated at 10.000€, it must be discussed within HAKOM how this can be found
- For continuity and identification of short term developments, such surveys should be carried out annually, not every three years

After the survey has been initially designed, it can be enriched with each annual execution, but existing questions should not be modified without strong cause in order to maintain comparability between the data collected from year to year.

8.3 Existing customer-surveys looked at in detail:

- Finland survey (<http://www.ficora.fi/>) 2008,2007,2006 (see annex 1)
- Sweden survey (<http://www.pts.se/>) 2007, (see annex 2)
- Macedonia survey (see annex 3)
- Croatia (GTK) Omnibus surveys of Eastern Europe (see annex 4)
- The Cullen Report (from the customer-survey perspective), (see annex 5)

8.4 Proposed Action Plan

Below is a proposed Schedule for the set-up of the Consumer Survey for HAKOM Croatia:

- Jan 2009: Inception report outlines case studies that will be used as the basis for a local model
- Feb 2009: HAKOM reviews the model and if adopted, assigns a working group of 3-5 staff to supervise the project within HAKOM, perhaps a representative of the Ministry



and/or e-Croatia could be invited.

- March 2009: the project team together with the HAKOM working group brainstorm and finalise BUSTI & CSUSI indicators and finalise the draft- questionnaire to be used for the Croatian Telecommunications Consumer Survey.
- End Mar 2009: Tendering for outsourcing of survey
- Apr 2009: Survey carried out
- May 2009: Presentation of findings from survey

The survey should be carried out annually, with a HAKOM budget for staff, survey outsourcing and publication of findings on their website.

9 Annex II report of the survey

Report

Telecommunications and Information technologies, consumer survey

Prepared for: HAKOM

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Introduction

Objectives

The Croatian Post and Electronic Communications Agency (HAKOM) asked Puls agency to conduct a consumer survey about usage and attitudes of telecommunications and information technologies. A goal is to develop measures for observing the electronic communication markets development in Croatia.

In this context, specific research aims are:

- ⇒ Satisfaction with fixed telephone operator: Aim is to detect if there are gaps between fixed telephone operator and citizens in terms of understanding bill, tariffs, services offered. Also it is important to detect what is future trend – keeping or canceling fixed line.
- ⇒ Mobile telephony usage – Identify number of SIM cards used, terms of paying mobile phone, switching from one to another operator.
- ⇒ Identify incidence of Internet connection in households and usage of Broadband Internet: using broadband in the future, switching providers, type of broadband used...

- ⇒ VoIP telephony usage and reasons for not using it
- ⇒ Mobile Data usage, reasons for using/not using, forecasting usage in the future
- ⇒ Interest in Triple Play services
- ⇒ Public Telephone booths usage
- ⇒ Awareness of HAKOM and his role on telecommunication market

Methodology

Two surveys were conducted by telephone interviewing method – CATI.

Sample universe:

Fixed telephone survey - 1200 respondents, from 18 up to 65 years old. Sample was nationally representative by gender, age, region (Zagreb, Northern Croatia, Eastern Croatia, Lika and Banovina, Northern Adriatic coast and Istra, Southern Croatia).

and type of settlement (urban/rural).

Questionnaire length – up to 20min

In order to measure incidence rate of mobile phone users who do not have fixed telephone line in their household we conducted a small mobile telephone survey – 206 respondents, representative by mobile operators market share (53% T-Mobile users, 35% VIPnet, 10% Tele 2 and 2% Tomato users). Representative quotas were set up for gender and age (18 to 65 years old).

Questionnaire length – up to 3min

Organization

Research was conducted during April 2009.

Notes

Statistical significant differences (with 95% probability) between segments (males/females, older/younger, different regions, urban/rural) are shown on graphs with ↑ or ○. In tables they are shown with numbers colored in red.

Some answers that are produced on small sample size (30 or less than 30) are mentioned with showing frequencies.

Key findings

Majority of citizens of Croatia with land-line own a mobile phone. Older (46 to 65 years old) and citizens from rural areas in higher percentage do not own mobile phone. Giving up land-line and managing only with mobile phone, for 80% of citizens is not an option - they need their land-line for Internet access and they are accustomed to it.

Citizens are generally satisfied with information that they get from their land-line provider and with its billing transparency. Also majority agrees that they can check telephone services in simple and customer friendly way. More than 50% stated that they can compare tariffs with competitor offers and block/unblock costly fixed telephone services. Younger are more critical than older citizens (46 to 65 years old) as well residents in urban areas – they are more dissatisfied with easiness of comparing tariffs among fixed phone operators.

Most of residents own only one mobile phone (71%), one SIM card and use only one MSP. Usage of two mobile phones, two SIM cards is more frequent in male population, young segment (18 to 30 years old), and in Zagreb region. Similar pattern we see in MSP switching – 74% never switched their MSP. One who switched are men and young residents (18 to 30 years). Most of them switched their MSP only once.

PRP method of payment is used more than POP method. Men, middle age group (31 to 45) and residents from urban settlements use more POP method of paying. 24 month fixed term is most used type of postpaid contract, especially by young residents (18 to 30 years) and residents from Northern and Eastern Croatia when compared to region Zagreb. Continuous contract is next most used type of POP contract, especially for older in urban areas. A proximally one third of residents agreed on additional services by signing a contract. Free calls within network are the most popular additional service.

Half of residents do not know how much roaming costs. Generally younger and residents from urban settlements have some information of the cost involved more than others. Women more often than men inquire the cost from MSP before trip.

Almost all residents (80%) are satisfied with information received from MSP, women more than men.

In general citizens did not have any problem with acquiring mobile or land-line subscription (92%). If there were any problems they were about high prices, breakdowns and waiting.

74% of population (age 18 to 65 years old with fixed telephone line)¹ have Internet access in their household. Broadband is the most used type of Internet connection (52%), ADSL in particular. ISDN/Dial up is used right after Broadband, but in smaller amount. Men, age group (18 to 45), residents in Zagreb region and those from urban settlement use Broadband more. Non Broadband users mostly say that they don't need it, especially older residents. Flat rate and 4Mbit, 2Mbit and 1Mbit speeds are mostly mentioned as used by the one who now their Internet speed. About half of BB users do not know their Internet speed nor their data traffic tariff (37%).

Majority of BB users did not switch their Broadband Internet provider. In general younger switch more than older ones. Main reasons for switching are lower price of current/new provider and dissatisfaction with previous providers. Half of BB users would switch their Broadband Internet provider if their price would get 5 to 10% higher.

¹ Internet penetration in households in Croatia (with and without fixed line, 14 + years old) is 51% (Puls Omnibus, April 2009). 15% of population of Croatia does not have fixed line. Our sample for this survey was from 18 to 65 years old. If we take into account these facts then it is reasonable to have such a high Internet penetration on fixed phone users.

Urban settlements are more aware of alternative supplier of Broadband, while residents from rural settlements report in higher extent that there is no alternative supplier of Broadband. Eastern Croatia has the less report alternative supplier of Broadband compared to other regions.

About one third of fixed BB users consider using Mobile Broadband in the future. Older and residents from Northern Adriatic coast and Istra state that they are not so familiar with these technologies as rest of population.

Majority of BB users are satisfied with their Internet speed, women more than man. They wouldn't pay more for extra speed, except residents from Northern Croatia region who are considering it more than others.

Broadband users in general don't have problem in obtaining desired Broadband speed (84%). Unable to connect to the Internet, generally slow Internet and technical problems are main problems with Broadband. Interest in IPTV, Video on Demand, fast interactive Internet content and Audio-Video content is low. Young BB users (18 to 30 years) are generally more interested in them and use them already.

Residents are generally satisfied with information received from Internet service providers (65%). Men and residents from 18 to 45 years old are more unsatisfied than others. Internet users from Eastern Croatia are more unsatisfied than users from Lika and Banovina.

About 30% of BB customers use VoIP. It is mostly used for international calls. Ones who do not use VoIP say that they are satisfied with current method of communication, especially young residents (18 to 30 years). Residents in Northern Adriatic coast and Istra are less aware of possibility to use Internet for telephone calls than residents in Southern Croatia. Northern Croatia residents anticipate that they will use Internet for telephone calls in the future more than residents in Zagreb. Half of of VoIP user predict that will use VoIP more in the future.

SMS out of other different mobile phone services (except voice) is widely used. Women use SMS more while men and younger one (18 to 30 years old) use maps and GPS more. In urban areas, using mobile phone as a gateway for lap top is used more than in rural areas. Mobile phone for web browsing and e-mail is more used in Zagreb region than in Southern Croatia. Northern Adriatic Coast and Istra use more maps and GPS than Southern Croatia. Main reason for using only voice or SMS is low need for the other services. Older citizens (46 to 65 years old) more than younger do not know how to use these services. Men perceive these services as expensive while women in higher extent stated that they do not know how to use these services.

Only 3% of population are using 3G Mobile package. Chance to have a nice, new mobile phone, practical solution and spontaneous purchase are main reasons for using 3G Mobile package. Users are satisfied with it and they use Internet, read e-mail and send MMS more than before. Monthly fixed cost data package is used mostly.

Current usage of Triple play is low, only 2% of population uses it. Low need and not enough information about it are main reasons for not using it.

About one third of Croatian population would like to use Triple play service. Main reason for interest is lower expenses of such "all-in-one" service, ease of paying the bills and ease of handling with only one provider. Men are more interested than women, while older and inhabitants of rural settlements are less interested in triple play. Telephone services and Broadband Internet are the most attractive services. About a half of respondents show interest in IPTV, especially males.

Interest in additional TV content is lower than interest in other Triple Play services. There is some indices that TV services are least attractive since it is extra cost.

Aerial reception is still mostly used in Croatia, especially in Lika and Banovina and Eastern Croatia. Satellite, cable and terrestrial digital television are other type of reception that are also used, but much lesser extent.

In year 2010. Croatian station will begin to broadcast digital TV only (DVB-T). There is some space for greater penetration of Triple Play because this service can serve instead analogue TV.

Currently small percentage of population receives digital terrestrial TV. Exception is Istra and North Adriatic coast in which Croatian government sent vouchers for purchasing DVB-T set top boxes to all subscribers to national TV station. In this region is also present the highest penetration of IPTV and Satellite TV.

Cable TV is the most present in households in Zagreb and Southern Croatia.

Majority do not use public phone boots. Ones that use them do it mostly when they are abroad.

HAKOM achieved low awareness (21%). Older population (46 to 65 years) and residents from Lika and Banovina are more aware of HAKOM. HAKOM's role on telecommunication market is perceived as moderate – “has helped a bit”. About 30% of citizens who heard about HAKOM are indifferent – they do not have opinion about its role.

80% of mobile phone users have fixed line at their household. Lika and Banovina have the highest percent of households which never had fixed line.

Younger respondents are in higher extent ready to cancel their fixed line. Reasons for cancellation are: expensive, low need and mobile phone was enough. Majority of respondents do not intend to cancel fixed line in next 12 months regardless age or gender.

Main reasons for not canceling fixed line are: need for Internet access and accustomed to it. Generally speaking, if current trends of mobile technology development will continue – higher Mobile internet speed (e.g. LTE technology), more reliable mobile connections, less expensive mobile Internet usage, it will be hard to find reasons for fixed line usage.

Report

Sample description

Table.1. Demographic characteristics of main sample

		%			%
Gender	Males	49%	Age	18 to 30 years old	27%
	Females	51%		31 to 45 years old	34%
Settlement type	Urban	62%		46 to 65 years old	39%
	Rural	38%	Education	Without primary school	1%
Settlement size	More then 100 000 habitants	26%		Primary school	9%
	10 000 to 100 000 habitants	20%		High school	64%
	2 000 to 10 000 habitants	16%		University	26%
	Up to 2 000 habitants	38%	Don't know	0%	
Region	Zagreb	26%	Working status	Employed	54%
	Northern Croatia	18%		Unemployed	18%
	Eastern Croatia	17%		Retired	17%
	Lika and Banovina	8%		Student	7%
	Northern Adriatic coast and Istra	12%		Housewife	4%
	Southern Croatia	19%			

*N = 1200

Table.2. Demographic characteristics of main sample

		%			%
Marital status	Married/Living with partner	64%	Number of children in household from 7 to14 years old	Zero	70%
	Divorced	4%		One	17%
	Single	26%		Two	7%
	Widow	5%		Three and more then three	2%
	Don't know	1%		Don't know	4%
Number of persons in household	One	6%	Number of children in household from 15 to18 years old	Zero	79%
	Two	19%		One	13%
	Three	23%		Two and more then two	3%
	Four	27%		Don't know	6%
	Five	13%			
	Six and more then 6	9%			
	Don't know	2%			
Number of children in household up to 6 years old	Zero	77%	Number of persons in household older then 65 years old	Zero	76%
	One	12%		One	15%
	Two	5%		Two and more then two	5%
	Three and more then three	1%		Don't know	5%
	Don't know	4%			

*N = 1200

Table.3. Demographic characteristics of main sample

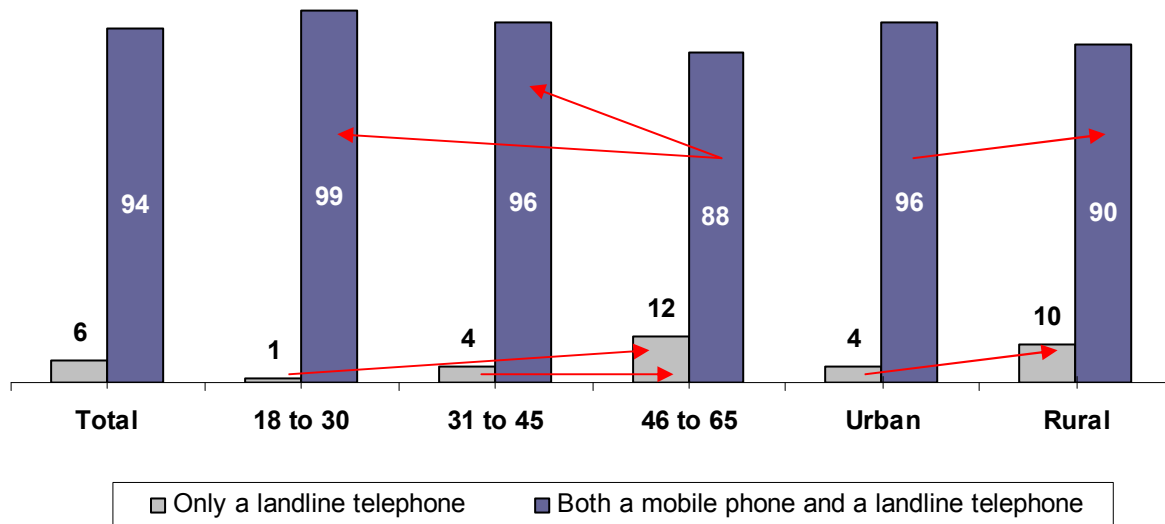
		%			%
Personal monthly income	Up to 1000 kn	12%	Personal monthly expenditure on mobile phone	Up to 50 kn	23%
	1001 - 2500 kn	16%		51 to 100 kn	21%
	2501 - 4000 kn	18%		101 - 200 kn	26%
	4001 - 5500 kn	14%		201 - 300 kn	12%
	5501 - 7000 kn	10%		More then 300 kn	14%
	7001 - 8500 kn	5%		Don't know/Refuse to answer	5%
	8501 - 10000 kn	4%			
	More then 10000 kn	4%			
	Don't know/Refuse to answer	17%			
	Monthly household income	Up to 1000 kn	2%	Household monthly expenditure on fixed line and Internet	Up to 100 kn
1001 - 2500 kn		6%	101 - 150 kn		16%
2501 - 4000 kn		10%	151 - 200 kn		21%
4001 - 5500 kn		11%	201 - 250 kn		12%
5501 - 7000 kn		11%	251 - 300 kn		15%
7001 - 8500 kn		9%	301 - 500 kn		15%
8501 - 10000 kn		11%	More then 500 kn		5%
10001 - 12000 kn		7%	Don't know/Refuse to answer		5%
12001 - 14000 kn		5%			
More then 14000 kn		11%			
Don't know/Refuse to answer		20%			

*N = 1200

Land-line and mobile phones in households

Most citizens own both - land-line and mobile phone. Older (46 to 65 years old) and residents from rural settlements in higher percentage have land-line and not a mobile phone.

Graph .1. Billing transparency of fixed provider by age and type of settlement, in %

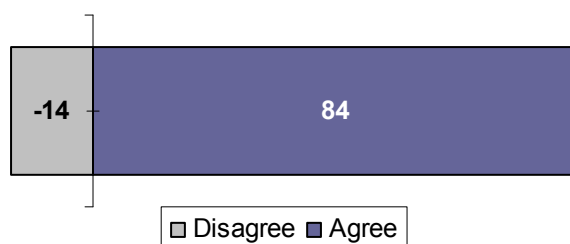


*N = 1200

Satisfaction with transparency of fixed telephone operator

Almost all citizens perceive fixed telephone billing as transparent. Majority agrees that they can check telephone services in simple and customer friendly way (76%). 56% of citizens agree that they have a possibility to block/unblock costly fixed telephone services. Younger (18 to 30 years old) in higher extent believe that they do not have such possibility. 65% of citizens agree that they can compare current landline tariff scheme with other offers, while residents younger then 46 years, and those from urban settlements disagree with that statement more then others. In general most citizens are satisfied with information received from FTP.

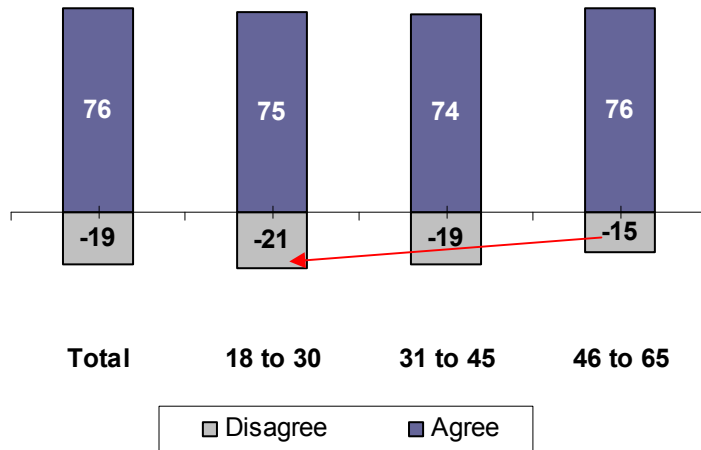
Graph.2. Billing transparency of fixed provider, in %



*N = 1200

**Scale from 1 to 4, where 1 is totally disagree, 2 is tend to disagree, 3 tend to agree, 4 is totally agree. Graph shows combined measures: disagree (2 -tend to disagree +1-totally disagree); Agree (3 - tend to agree + 4- totally agree)

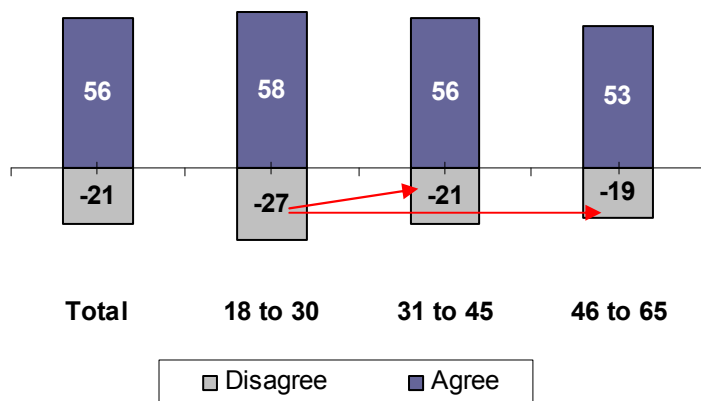
Graph.3. Simple and customer friendly fixed telephone service checking by age, in %



*N = 1200

**Scale from 1 to 4, where 1 is totally disagree, 2 is tend to disagree, 3 tend to agree, 4 is totally agree. Graph shows combined measures: disagree (2 -tend to disagree +1-totally disagree); Agree (3 - tend to agree + 4- totally agree)

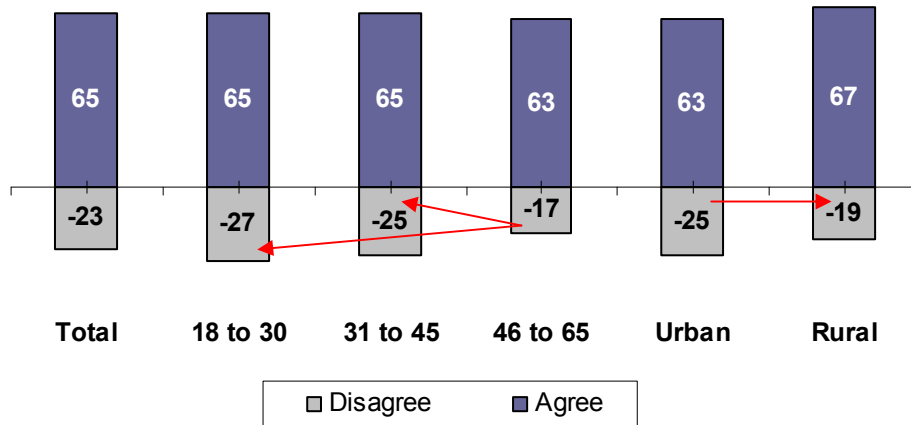
Graph.4. Possibility of blocking/unblocking costly fixed telephone services by age, in %



*N = 1200

**Scale from 1 to 4, where 1 is totally disagree, 2 is tend to disagree, 3 tend to agree, 4 is totally agree. Graph shows combined measures: disagree (2 -tend to disagree +1-totally disagree); Agree (3 - tend to agree + 4- totally agree)

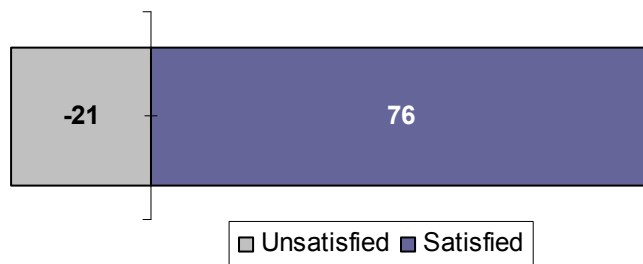
Graph.5. Possibility of comparing current landline tariff scheme with other offers by age and type of settlement, in %



*N = 1200

**Scale from 1 to 4, where 1 is totally disagree, 2 is tend to disagree, 3 tend to agree, 4 is totally agree. Graph shows combined measures: disagree (2 -tend to disagree +1-totally disagree); Agree (3 - tend to agree + 4- totally agree)

Graph.6.Satisfaction with information from FTP, in %



*N = 1200

**Scale from 1 to 4, where 1 is totally unsatisfied, 2 is somewhat unsatisfied, 3 is somewhat satisfied, 4 is totally satisfied. Graph shows combined measures: Unsatisfied (2 - somewhat unsatisfied +1- totally unsatisfied); Satisfied (3 - somewhat satisfied + 4- totally satisfied)

Only 21% of citizens would consider giving up land-line and managing with just mobile phone, men more than women. Main reasons for not managing only with mobile phone are need of land-line for Internet access and accustomed to land lines. Women and older in higher extent stated that they accustomed to landline while men and younger more stated need for Internet access as a reason.

Graph.7. Consideration of giving up land-line and managing with just mobile phone by gender, in %



*N = 1200

Table.4. Reasons for not managing only with mobile phone

	N	We need the landline for the Internet access	Accustomed to land lines	Financial reasons / Too expensive	We need the landline for using IPTV services (Internet TV)	Poor mobile phone reception at home	Mobile phones are unreliable	Don't know how to use mobile phones	Other reasons	DK/NA
Total	952	49%	40%	26%	8%	5%	5%	2%	9%	3%
Gender										
Males	451	54%	31%	24%	9%	4%	6%	2%	9%	4%
Females	501	44%	47%	28%	8%	6%	5%	3%	10%	2%
Age										
18 to 30	244	57%	32%	30%	9%	5%	5%	1%	6%	2%
31 to 45	330	56%	35%	31%	9%	6%	6%	0%	11%	3%
46 to 65	378	37%	48%	21%	6%	4%	5%	5%	10%	4%
Region										
Zagreb	236	48%	41%	25%	8%	3%	5%	3%	6%	4%
Northern Croatia	173	48%	45%	22%	5%	6%	4%	3%	8%	4%
Eastern Croatia	168	44%	38%	32%	10%	7%	5%	2%	9%	5%
Lika and Banovina	85	53%	40%	22%	7%	4%	5%	5%	8%	1%

	Northern Adriatic coast and Istra	114	61%	30%	24%	13%	4%	4%	0%	13%	2%
	Southern Croatia	176	45%	42%	31%	6%	7%	9%	2%	14%	1%
Settlement type	Urban	581	50%	38%	28%	9%	3%	5%	2%	10%	3%
	Rural	371	46%	43%	23%	7%	8%	6%	4%	8%	4%

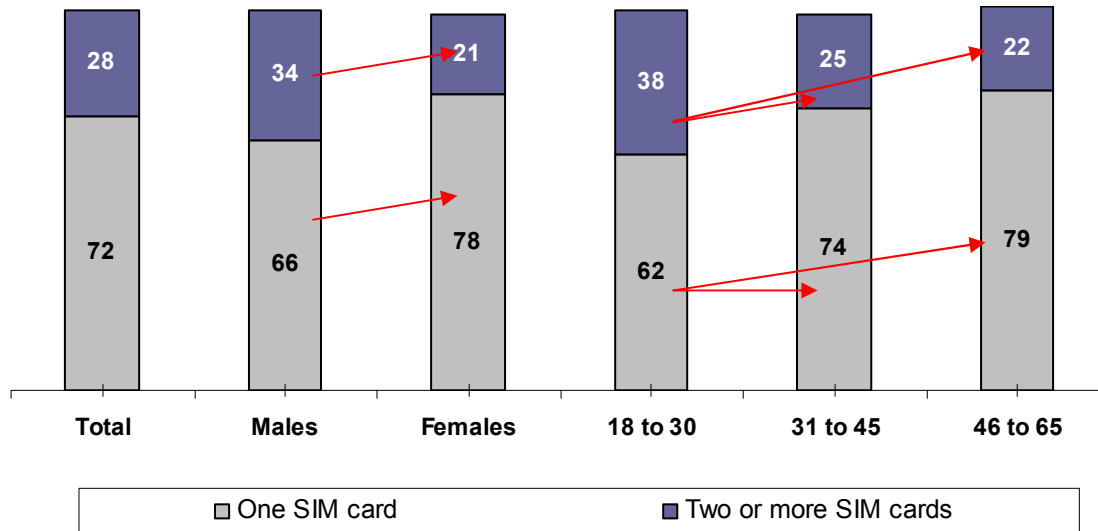
Mobile telephone usage

Citizens mainly use one mobile phone (71%), more women and residents from Northern Adriatic coast and Istra. Similarly, one SIM card is mostly used, although younger (18 to 30 years) and men use two mobile phones and two SIM cards more than others. In region Zagreb two mobile phones and two SIM cards are more used than in Northern, Eastern Croatia and Adriatic coast and Istra.

Table.5. Number of mobile phones used personally

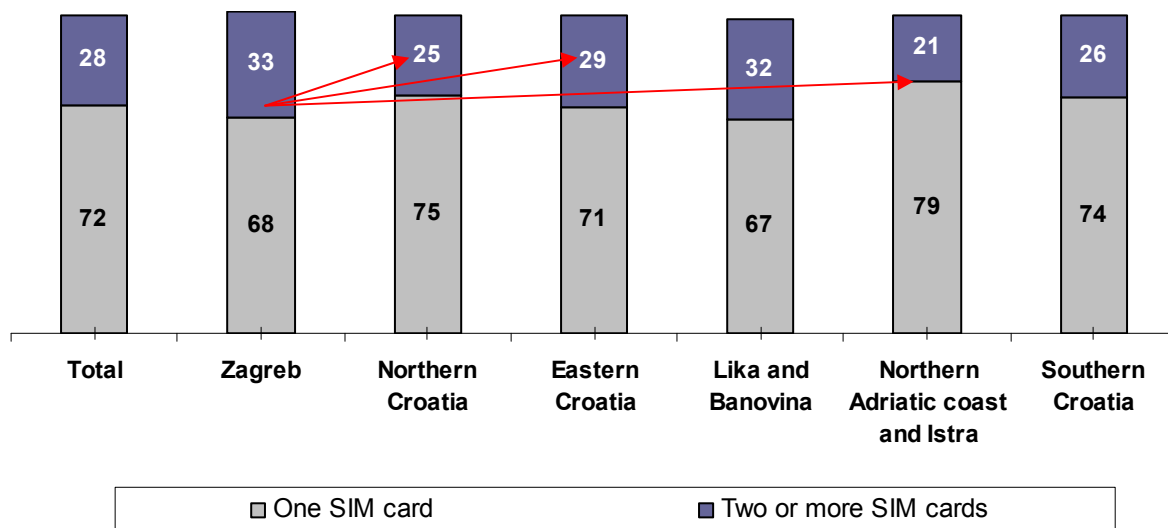
		N	Zero	One	Two	Three or more
	Total	1125	5%	71%	20%	4%
Gender	Males	553	4%	66%	24%	5%
	Females	572	6%	76%	16%	2%
Age	18 to 30	321	0%	70%	26%	3%
	31 to 45	394	4%	73%	20%	4%
	46 to 65	410	10%	70%	15%	4%
Region	Zagreb	290	3%	66%	26%	5%
	Northern Croatia	198	8%	71%	18%	4%
	Eastern Croatia	191	5%	74%	18%	4%
	Lika and Banovina	91	5%	63%	25%	6%
	Northern Adriatic coast and Istra	140	4%	81%	11%	5%
	Southern Croatia	215	6%	72%	21%	1%
Settlement type	Urban	710	4%	71%	21%	4%
	Rural	415	7%	71%	18%	4%

Graph.8. Number of SIM cards used by gender and age, in %



*N = 1068

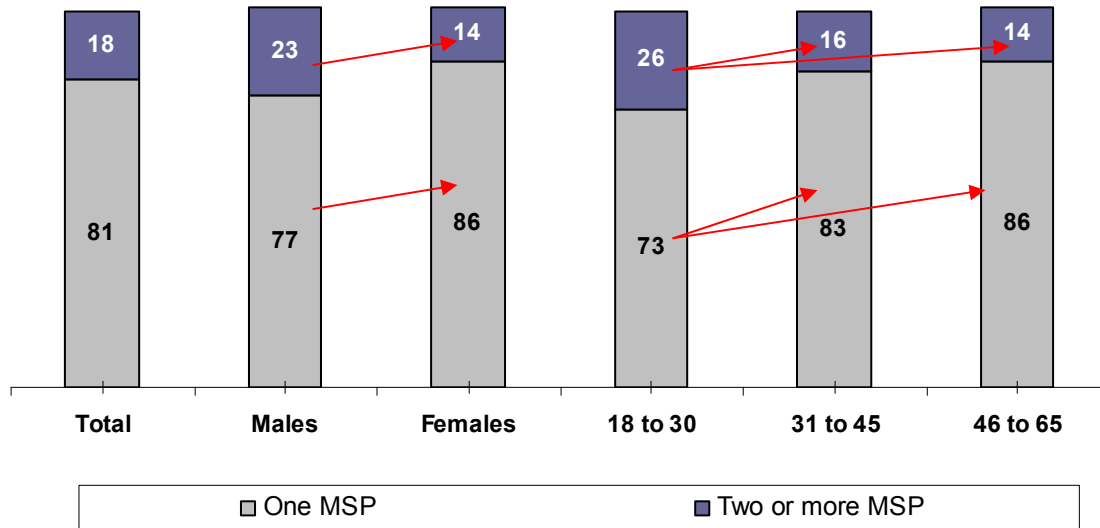
Graph.9. Number of SIM cards used by region, in %



*N = 1068

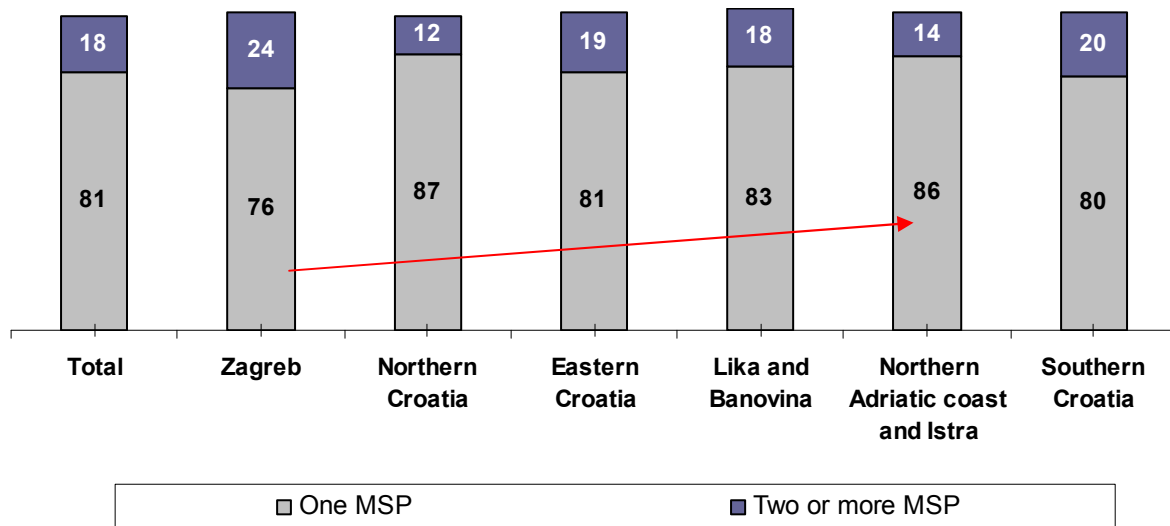
One MSP is mostly used. Older residents and women use one MSP more than others. Citizens from region Zagreb use two or more MSP more than citizen from Northern Adriatic coast and Istra.

Graph.10. Number of MSP used by gender and age, in %



*N = 1068

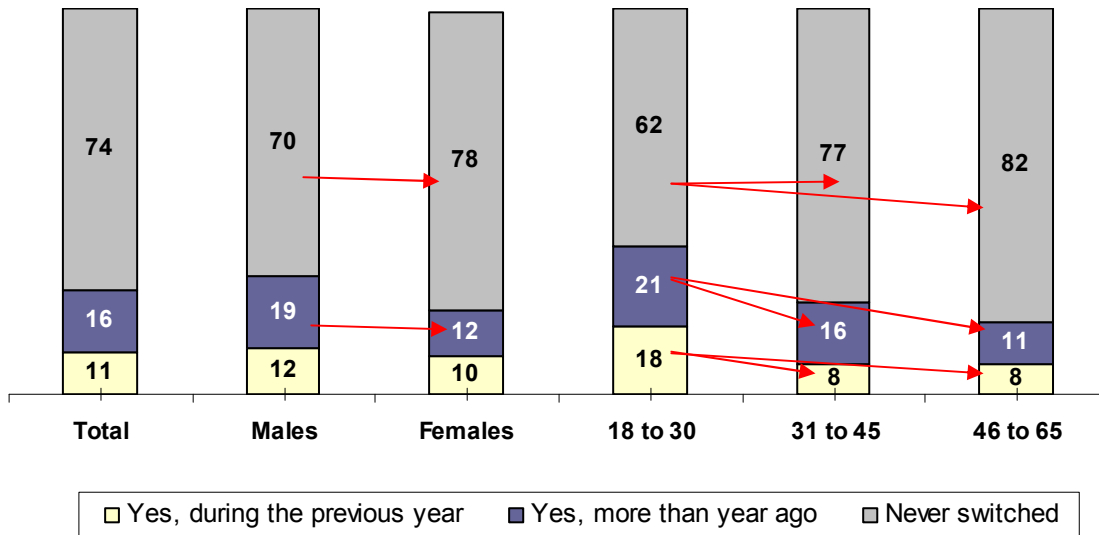
Graph.11. Number of MSP used by region, in %



*N = 1068

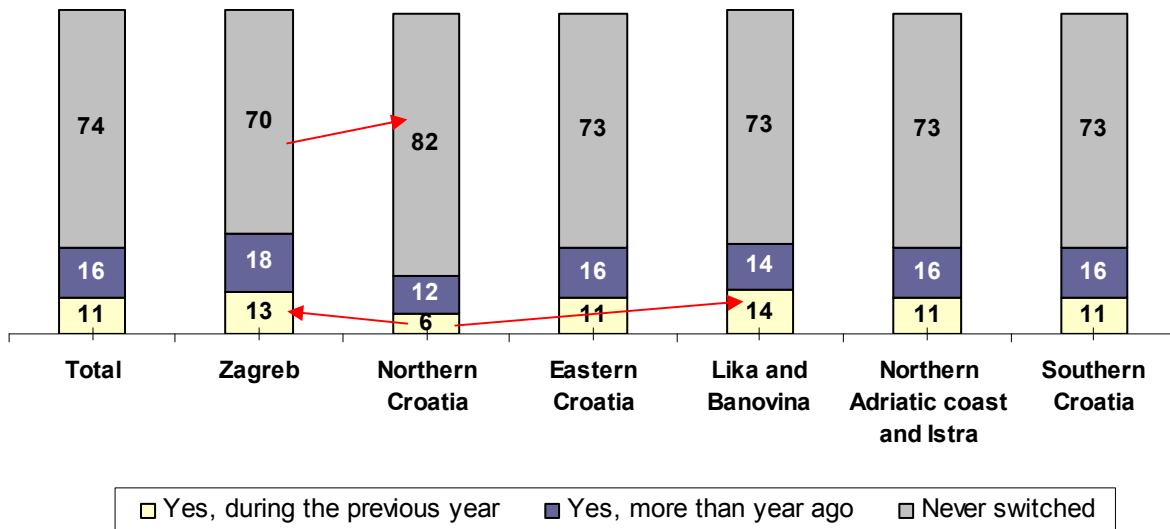
74 % of residents never switched MSP. “Switchers” are more males and young one (18 to 30 years).

Graph.12. Switching MSP by gender and age, in %



*N = 1068

Graph.13. Switching MSP by region, in %



*N = 1068

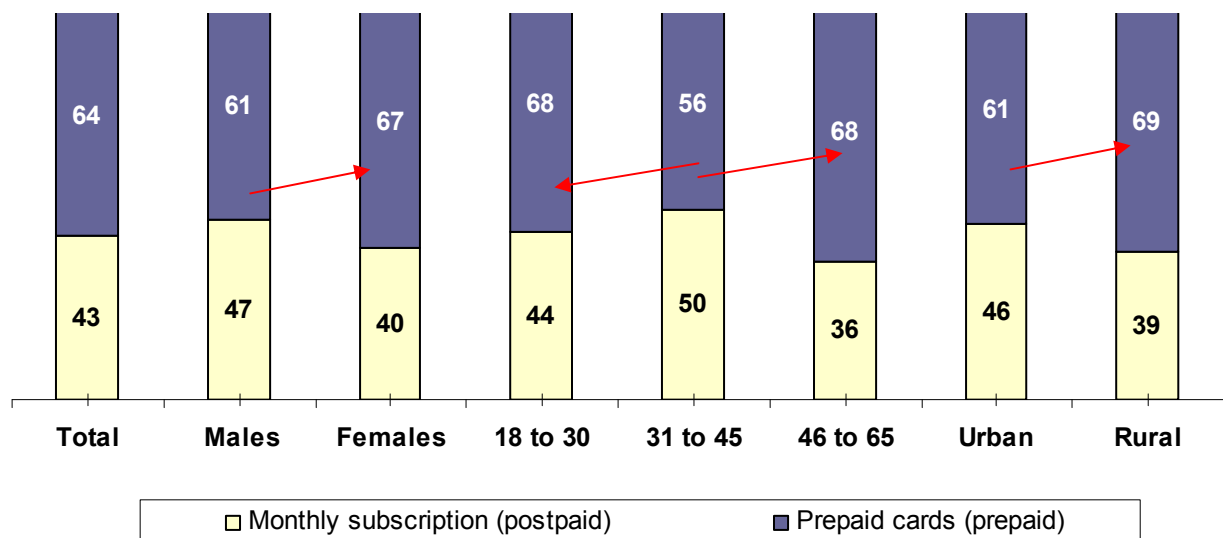
Within “switchers” group younger and respondents from rural settlements are the one who switched more then older and urban residents.

Table.6. Number of MSP change

		N	Once	Twice	Three times	More than three times
	Total	278	63%	19%	10%	6%
Gender	Males	158	62%	20%	9%	8%
	Females	120	63%	18%	11%	5%
Age	18 to 30	123	54%	20%	12%	10%
	31 to 45	89	71%	16%	8%	5%
	46 to 65	66	67%	20%	8%	0%
Region	Zagreb	83	69%	14%	8%	8%
	Northern Croatia	32	56%	22%	13%	3%
	Eastern Croatia	48	65%	13%	15%	6%
	Lika and Banovina	23	48%	39%	0%	9%
	Northern Adriatic coast and Istra	37	57%	19%	14%	11%
	Southern Croatia	55	65%	20%	7%	0%
Settlement type	Urban	189	66%	19%	7%	6%
	Rural	89	55%	18%	16%	7%

There is an advantage of prepaid method (64%) of paying for mobile phone service over postpaid method (43%). Women prefer prepaid method, while residents from 31 to 45 years of age and those from urban settlements prefer postpaid method. 24 month fixed term is most used type of postpaid contract, especially by young residents (18 to 30 years) and residents from Northern and Eastern Croatia when compared to region Zagreb. Continuous contract is more interested for older in urban areas.

Graph.14. Method of paying for mobile phone service by gender, age and region, in %



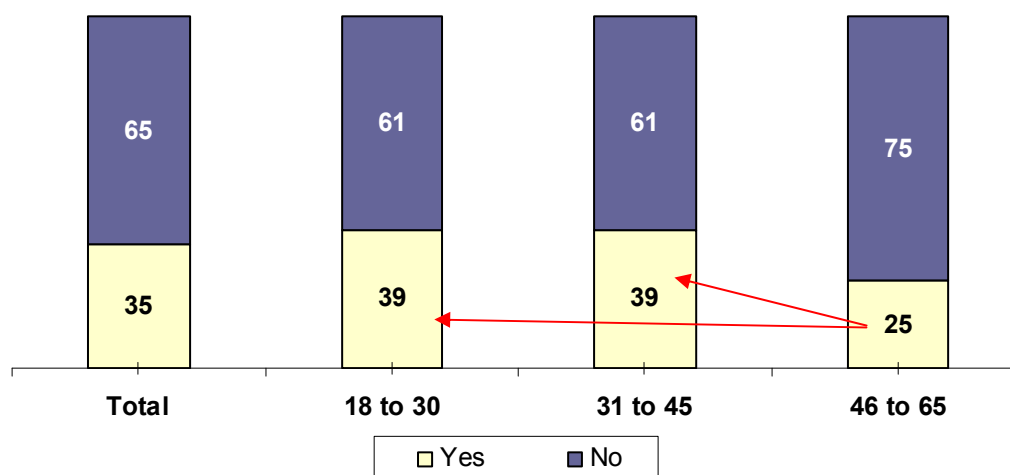
*N = 1068

Table.7. Type of postpaid contract

		N	Continuous Contract	24 month fixed term	12 month fixed term	Other fixed term	DK/NA
Total		462	27%	54%	10%	2%	7%
Gender	Males	247	29%	54%	11%	1%	5%
	Females	215	26%	54%	9%	2%	9%
Age	18 to 30	138	14%	72%	9%	1%	3%
	31 to 45	191	27%	53%	10%	2%	8%
	46 to 65	133	42%	36%	9%	3%	9%
Region	Zagreb	128	33%	44%	8%	2%	12%
	Northern Croatia	76	25%	63%	7%	1%	4%
	Eastern Croatia	73	21%	65%	9%	1%	4%
	Lika and Banovina	31	16%	62%	13%	3%	6%
	Northern Adriatic coast and Istra	60	30%	55%	8%	5%	2%
	Southern Croatia	94	27%	49%	16%	1%	7%
Settlement type	Urban	313	30%	51%	9%	3%	7%
	Rural	149	20%	62%	11%	1%	6%

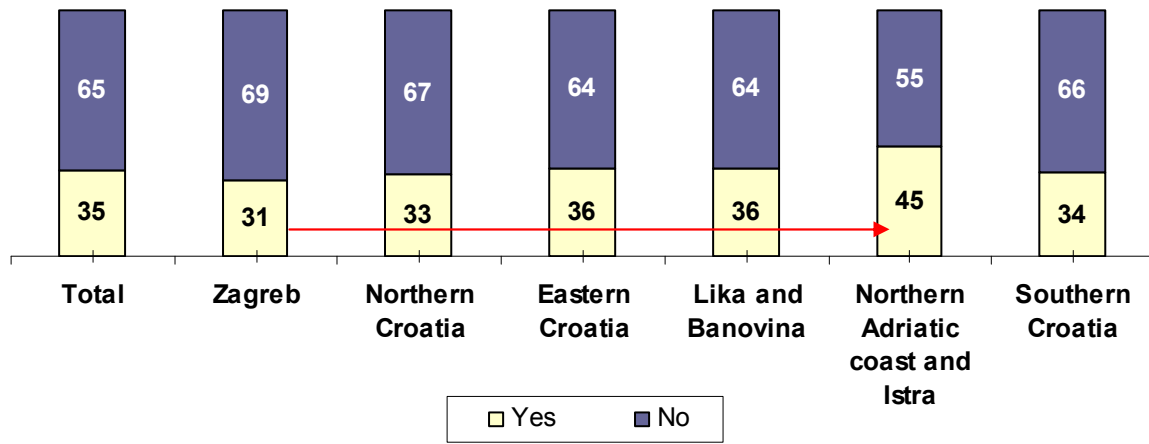
Only third of citizens agreed on additional services by signing contract, especially younger then 46, and ones from Zagreb compared to Adriatic coast and Istra. Most preferred additional service is free calls within network.

Graph.15. Agreement on additional services by signing contract by age, in %



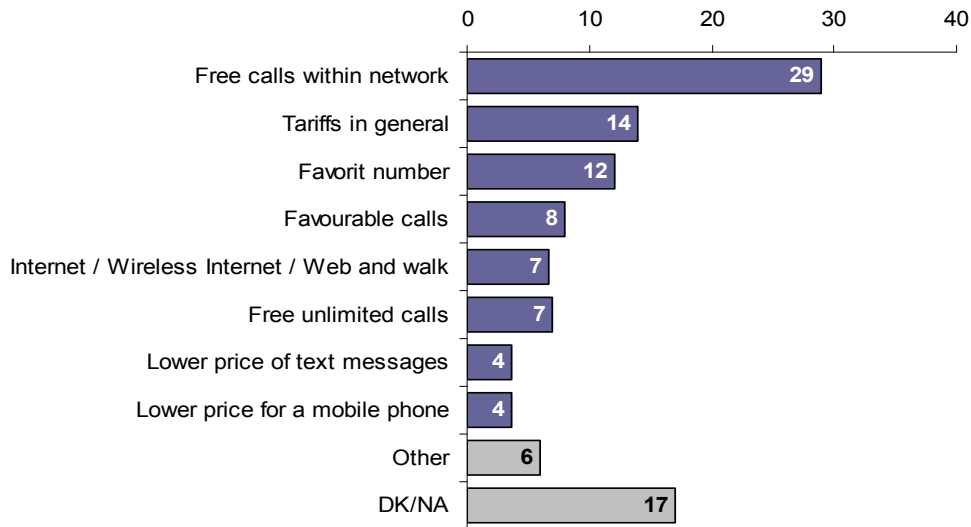
*N = 473

Graph.16. Agreement on additional services by signing contract by region, in %



*N = 1068

Graph.17. Additional services, in %



*N = 166

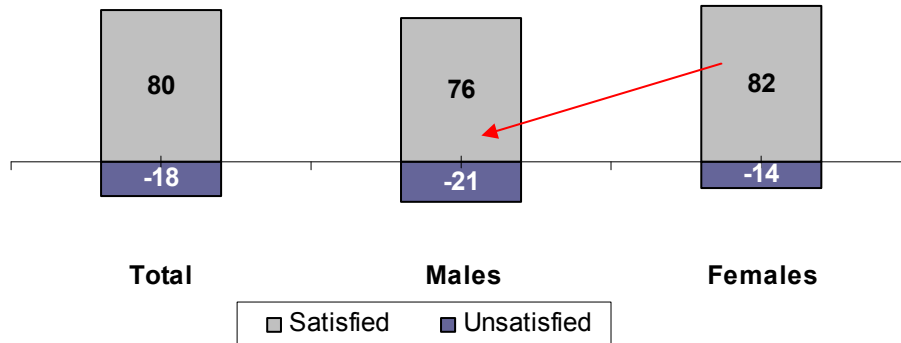
Half of residents (54%) don't know the roaming's cost; residents from rural settlement and citizens older then 45 years. Women inquire the cost from MSP before trip, more then men. Young residents (18 to 30 years), residents from Northern Adriatic coast and Istra and from urban settlements have some information of the cost involved more then others.

Table.8. Statements regarding roaming

		N	I inquire the costs involved before the trip	I don't know exactly, but have a good idea of the costs involved	I do not really know how much it costs
	Total	1068	29%	18%	54%
Gender	Males	530	25%	18%	57%
	Females	538	33%	17%	50%
Age	18 to 30	321	29%	22%	49%
	31 to 45	379	31%	18%	51%
	46 to 65	368	27%	13%	60%
Region	Zagreb	281	32%	15%	53%
	Northern Croatia	182	26%	16%	58%
	Eastern Croatia	181	23%	19%	59%
	Lika and Banovina	86	35%	10%	55%
	Northern Adriatic coast and Istra	135	25%	26%	49%
	Southern Croatia	203	33%	19%	48%
Settlement type	Urban	683	30%	20%	51%
	Rural	385	28%	14%	58%

Generally, residents are satisfied with the information received from the MSP, women more than men.

Graph.18. Satisfaction with information received from the MSP by gender, in %



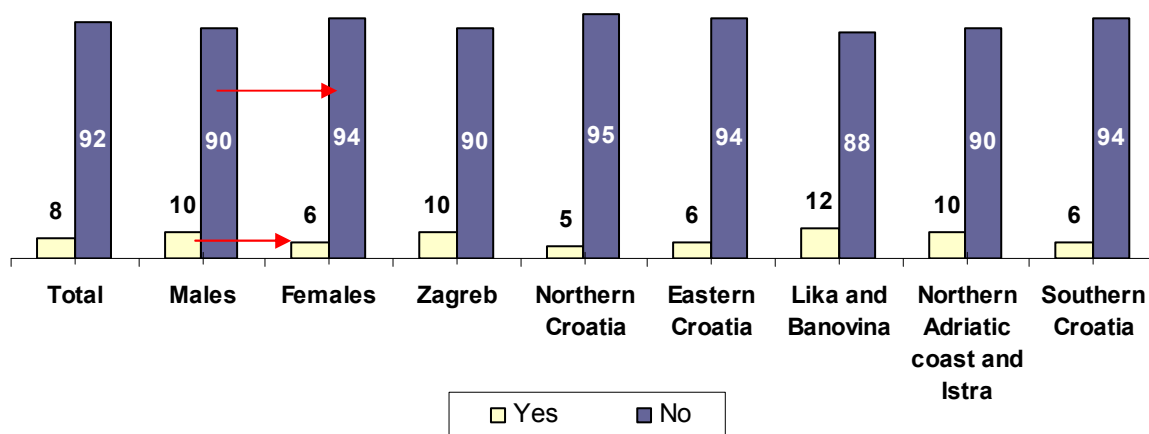
*N = 1068

**Scale from 1 to 4, where 1 is totally unsatisfied, 2 is somewhat unsatisfied, 3 is somewhat satisfied, 4 is totally satisfied. Graph shows combined measures: Unsatisfied (2 - somewhat unsatisfied + 1- totally unsatisfied); Satisfied (3 - somewhat satisfied + 4- totally satisfied)

Land-line and mobile subscription problems

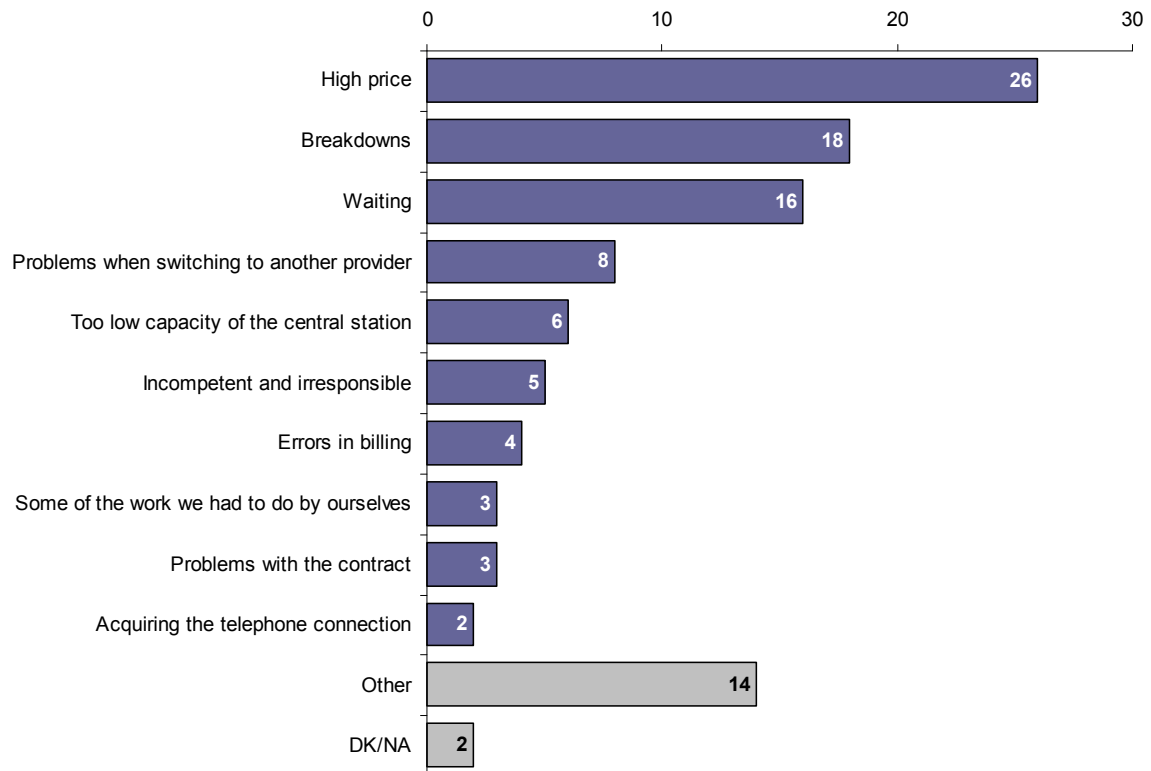
Almost all citizens didn't have any problems with obtaining mobile or land-line subscription. Women stated in less amount that they had any problems. Main problems were: high price, breakdowns and waiting.

Graph.19. Problems with obtaining mobile or land-line subscription gender and region, in %



*N = 1200

Graph.20. Reasons for the problem, in %

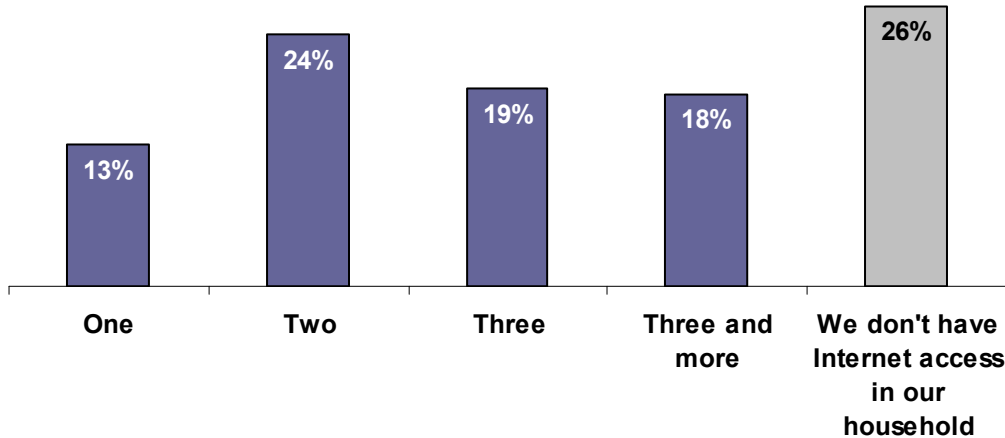


*N = 93

Internet connection in households and Broadband Internet

74% of population (age 18 to 65 years old with fixed telephone line)² have Internet access in their household. Broadband is most common Internet connection type (52%), dial up/ISDN in smaller extent (29%). Men, younger than 46 years old, residents from urban settlements and citizens of region Zagreb have in higher extent Broadband connection. In most households there are in average two or more then two (2, 6) Internet users.

Graph.21. Number of Internet users in household, in %



*N = 1200

Table.9. Internet connection type in household

		N	Broadband	Dial up/ISDN	Mobile Broadband	Other	DK/NA
	Total	893	52%	29%	7%	2%	15%
Gender	Males	454	59%	27%	8%	3%	8%
	Females	439	44%	30%	7%	2%	22%
Age	18 to 30	280	55%	35%	8%	1%	5%
	31 to 45	338	53%	27%	6%	3%	15%
	46 to 65	275	46%	24%	9%	3%	24%
Region	Zagreb	246	60%	26%	9%	1%	11%
	Northern Croatia	147	44%	30%	6%	1%	22%
	Eastern Croatia	136	51%	24%	8%	6%	15%
	Lika and Banovina	76	43%	36%	4%	1%	17%
	Northern Adriatic coast and Istra	122	51%	34%	7%	3%	10%
	Southern Croatia	166	51%	27%	8%	2%	17%

² Internet penetration in households in Croatia (with and without fixed line, 14 + years old) is 51% (Puls Omnibus, April 2009). 15% of population of Croatia does not have fixed line. Our sample for this survey was from 18 to 65 years old. If we take into account these facts then it is reasonable to have such a high Internet penetration on fixed phone users.

Settlement type	Urban	598	55%	28%	7%	2%	13%
	Rural	295	44%	31%	8%	2%	18%

57% of residents who don't use Broadband think that they don't need it, which is more evident with age. Younger residents and those from rural settlements said more than others that non availability is a reason for not using Broadband. Women and residents younger than 46 years old perceive Broadband service as too expensive more than others. ADSL is mostly used type of Broadband connection, more evident in younger segment.

Table.10. Broadband Internet consideration

		N	No, I don't need it	Yes, but it's not available in my settlement	Yes, but it's too expensive	Other	DK/NA
Total		757	57%	11%	14%	7%	10%
Gender	Males	334	60%	13%	11%	7%	9%
	Females	423	55%	9%	17%	7%	12%
Age	18 to 30	171	51%	20%	18%	6%	5%
	31 to 45	239	49%	12%	17%	10%	12%
	46 to 65	347	66%	5%	11%	5%	12%
Region	Zagreb	170	55%	8%	16%	9%	11%
	Northern Croatia	150	57%	9%	17%	6%	11%
	Eastern Croatia	140	59%	12%	19%	4%	6%
	Lika and Banovina	66	56%	9%	14%	5%	17%
	Northern Adriatic coast and Istra	84	58%	18%	11%	8%	5%
	Southern Croatia	147	56%	12%	7%	10%	14%
Settlement type	Urban	429	57%	7%	16%	8%	12%
	Rural	328	58%	16%	13%	6%	8%

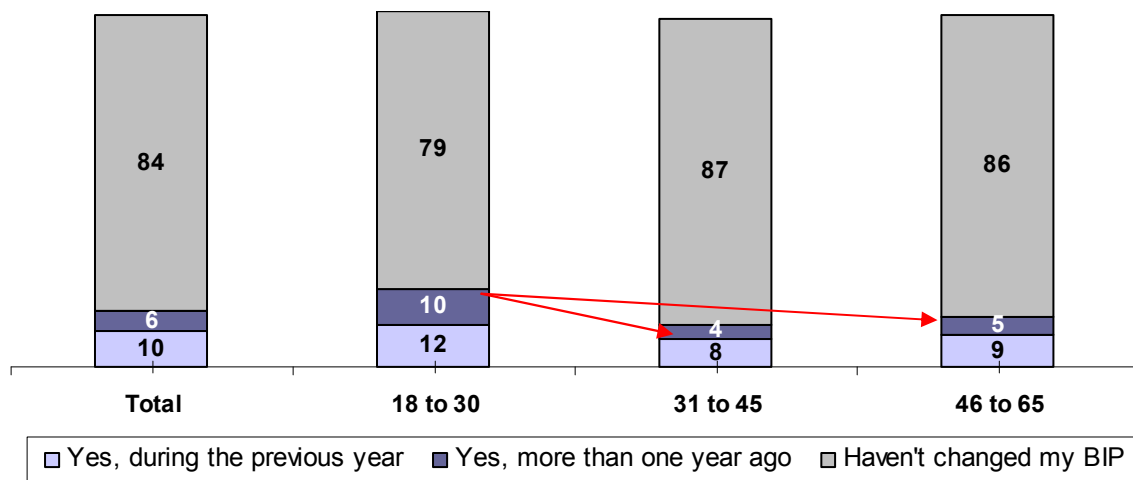
Table.11. Type of broadband connection

		N	ADSL	Cable	Mobile Broadband	Other	DK/NA
Total		397	82%	9%	3%	3%	5%
Gender	Males	230	83%	10%	4%	3%	3%
	Females	167	80%	9%	2%	2%	8%
Age	18 to 30	136	90%	6%	2%	2%	1%
	31 to 45	156	82%	8%	3%	3%	6%
	46 to 65	105	71%	15%	5%	4%	9%
Region	Zagreb	119	79%	11%	3%	3%	7%
	Northern Croatia	59	83%	7%	2%	5%	5%
	Eastern Croatia	59	81%	10%	5%	0%	7%
	Lika and Banovina	32	84%	9%	3%	3%	0%
	Northern Adriatic coast and Istra	56	88%	7%	2%	4%	2%
	Southern Croatia	72	81%	10%	4%	4%	6%

Settlement type	Urban	284	83%	8%	4%	2%	6%
	Rural	113	80%	12%	2%	5%	4%

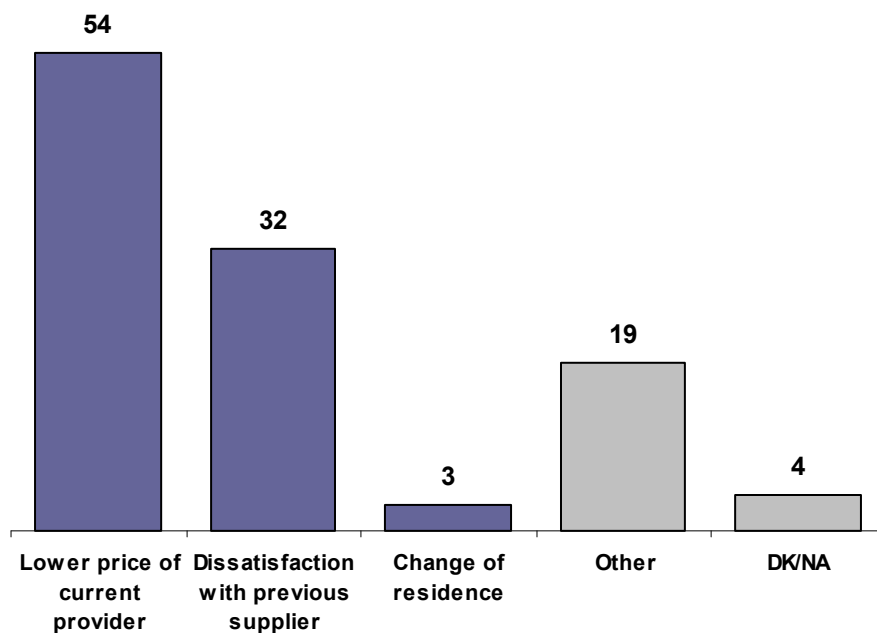
Almost all residents didn't change their Broadband Internet provider. Younger residents (18 to 30 years) more than older one, changed Broadband Internet provider more than year ago. Lower price of new/current provider and dissatisfaction with previous one were main reasons for switching. If price of their current provider would raise 5-10 %, half of Broadband Internet users would switch to another one.

Graph.22. Broadband Internet provider switches by age, in %



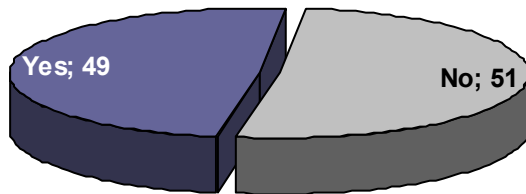
*N = 443

Graph.23. Reasons for Broadband Internet provider switches, in %



*N = 72

Graph.24. Intention of switching in case of price rising for 5 – 10%, in %



*N = 443

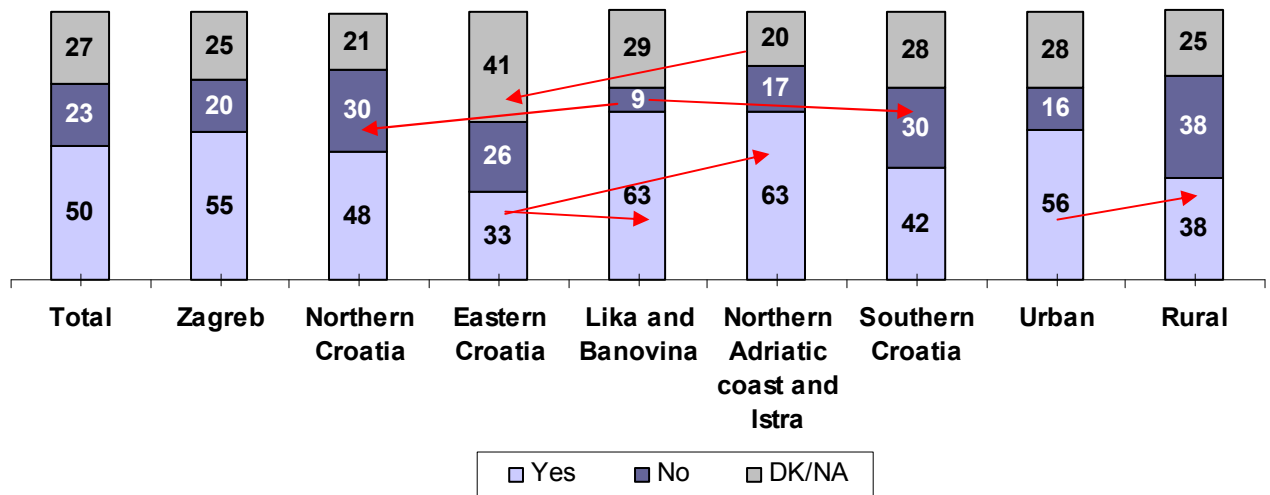
36% of residents are considering to use Mobile Broadband, while 39% not considering to use Mobile broadband. 19% are not even familiar with these technologies, especially older respondents (46 to 65 years) and respondents from Northern Adriatic coast and Istra.

Table.12. Interest for using Mobile Broadband beside fixed broadband

		N	I already have both broadband and Mobile broadband	I am considering Mobile broadband	I don't have Mobile broadband and am not considering it	I am not familiar with these technologies	DK/NA
	Total	430	2%	36%	39%	19%	4%
Gender	Males	245	2%	38%	40%	17%	2%
	Females	185	1%	34%	38%	22%	5%
Age	18 to 30	149	1%	38%	44%	13%	4%
	31 to 45	166	2%	38%	40%	19%	2%
	46 to 65	115	3%	31%	32%	28%	6%
Region	Zagreb	133	1%	40%	40%	16%	4%
	Northern Croatia	65	2%	40%	37%	18%	3%
	Eastern Croatia	63	2%	32%	38%	24%	5%
	Lika and Banovina	34	0%	32%	59%	6%	3%
	Northern Adriatic coast and Istra	59	3%	32%	31%	29%	5%
	Southern Croatia	76	4%	36%	38%	20%	3%
Settlement type	Urban	299	2%	38%	37%	18%	3%
	Rural	131	1%	31%	43%	21%	5%

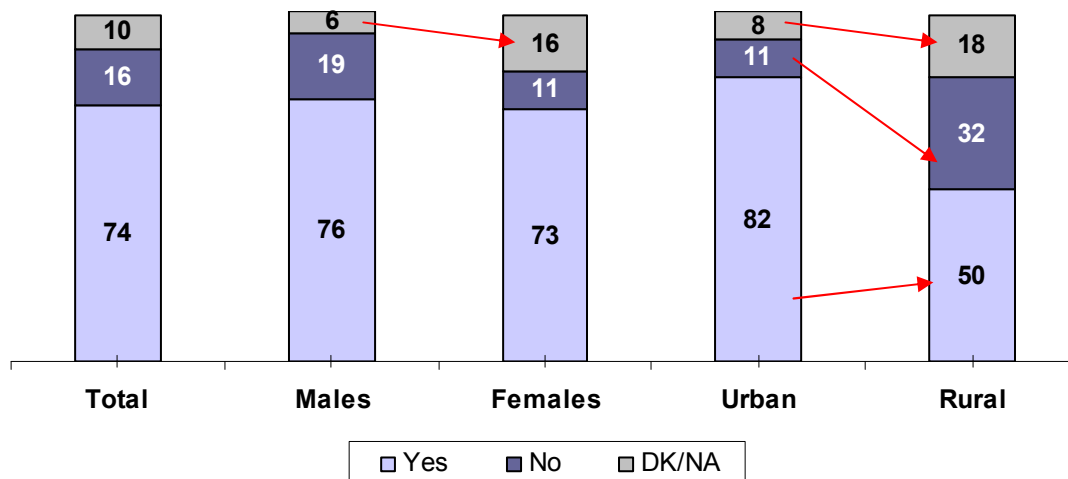
50% of Broadband users are aware of alternative Broadband supplier, especially the one from urban settlements. Broadband users from Eastern Croatia are least aware of alternative Broadband supply. 74% think that competition's Broadband supply is sufficient, mainly from urban settlements.

Graph.25. Existence of alternative supplier of Broadband by region and type of settlement, in %



*N = 443

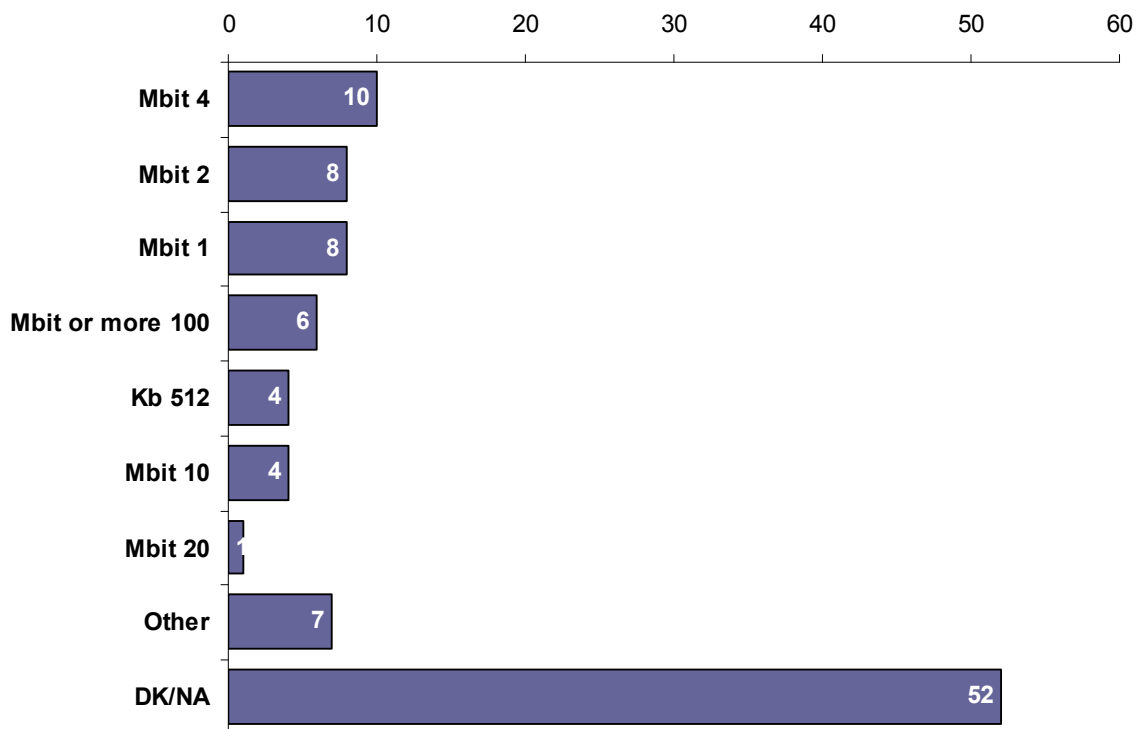
Graph.26. Sufficient supply of Broadband's competition by gender and type of settlement, in %



*N = 223

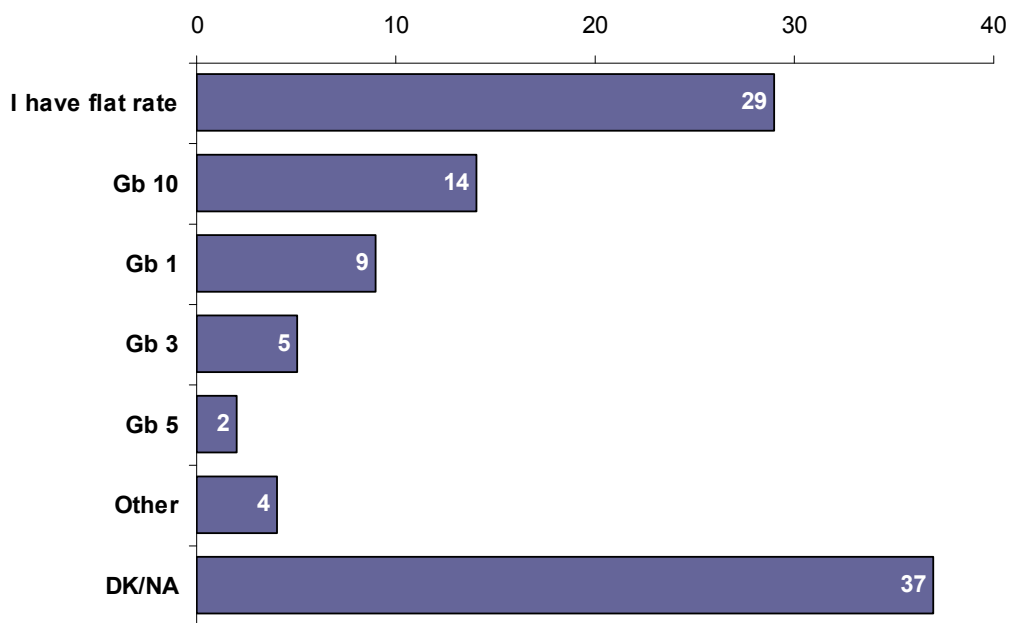
One half of Broadband users don't know their Broadband speed. 4 Mbit speed is mostly used (10%), then 2 Mbit and 1 Mbit speed. Broadband users are mainly not aware which amount of data traffic is included in their Broadband tariff (37%), while one third stated that they have flat rate.

Graph.27. Broadband speed in households, in %



*N = 443

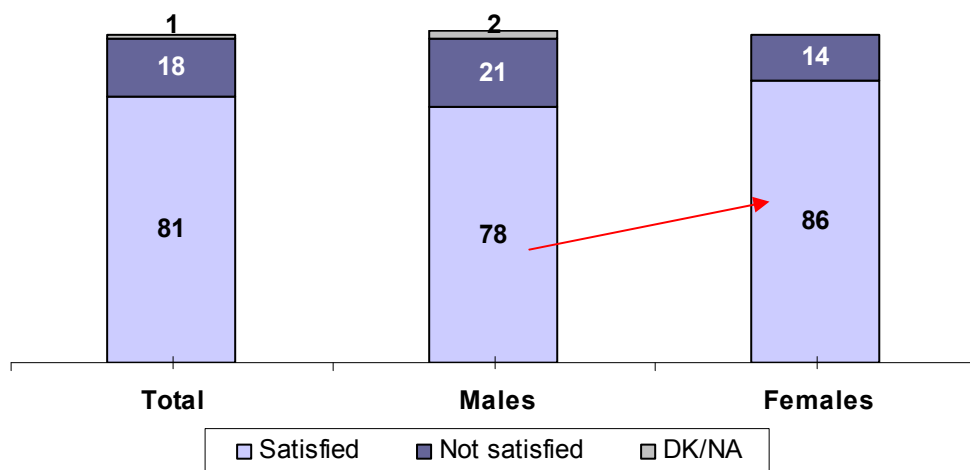
Graph.28. Amount of data traffic included in the Broadband's tariff, in %



*N = 443

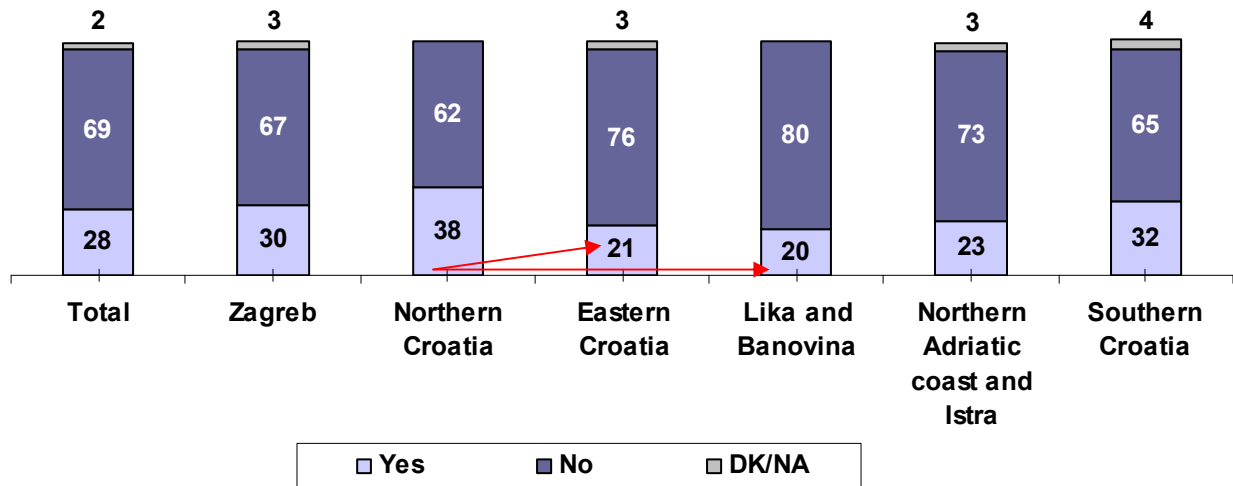
81% of residents are satisfied with their current Internet speed, women more than men. Broadband users from Northern Croatia more than users in Eastern Croatia and Lika and Banovina would consider paying more for higher speed.

Graph.29. Satisfaction with current Internet speed by gender, in %



*N = 443

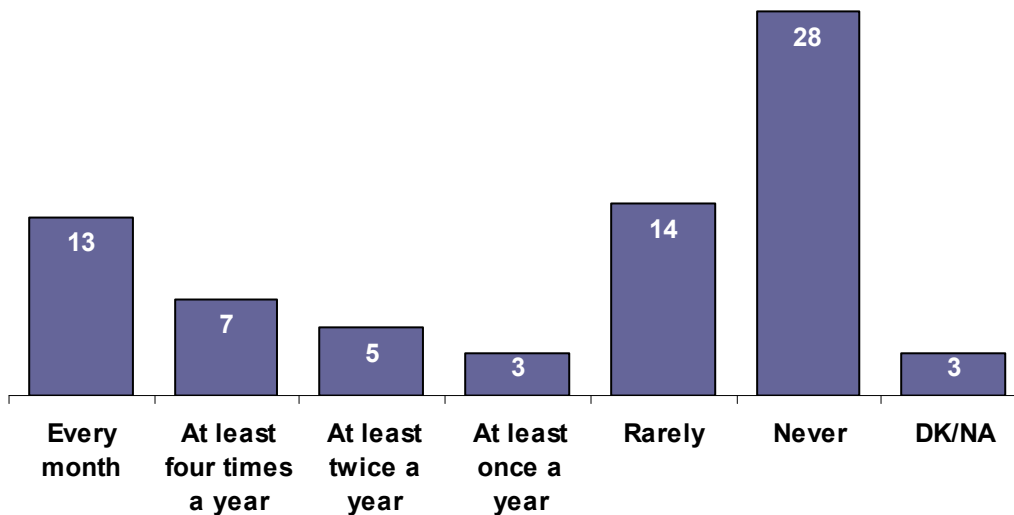
Graph.30. Considering paying more for higher Internet speed by region, in %



*N = 443

About one third of residents stated they never exceed their data limit in Internet subscription (28%). If they exceed it, they do it rarely (14%).

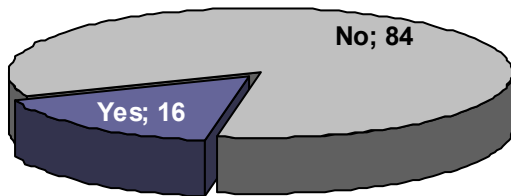
Graph.31. Exceeding data limit in Internet subscription, in %



*N = 443

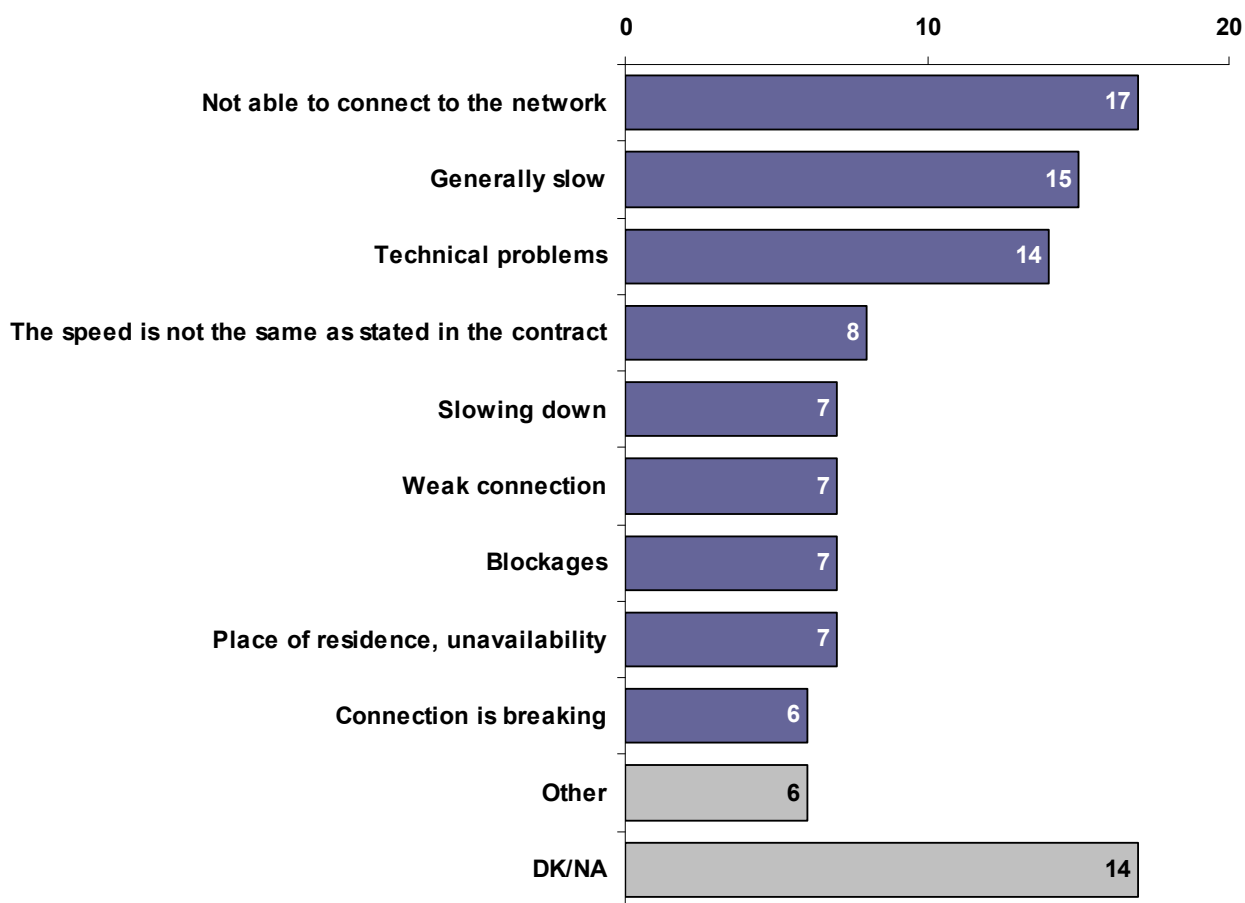
Only 16% of Broadband users experienced problems obtaining desired Broadband speed. Main reasons were: not able to connect to the network, generally slow connection and technical problems.

Graph.32. Existence of problems obtaining desired Broadband speed, in %



*N = 443

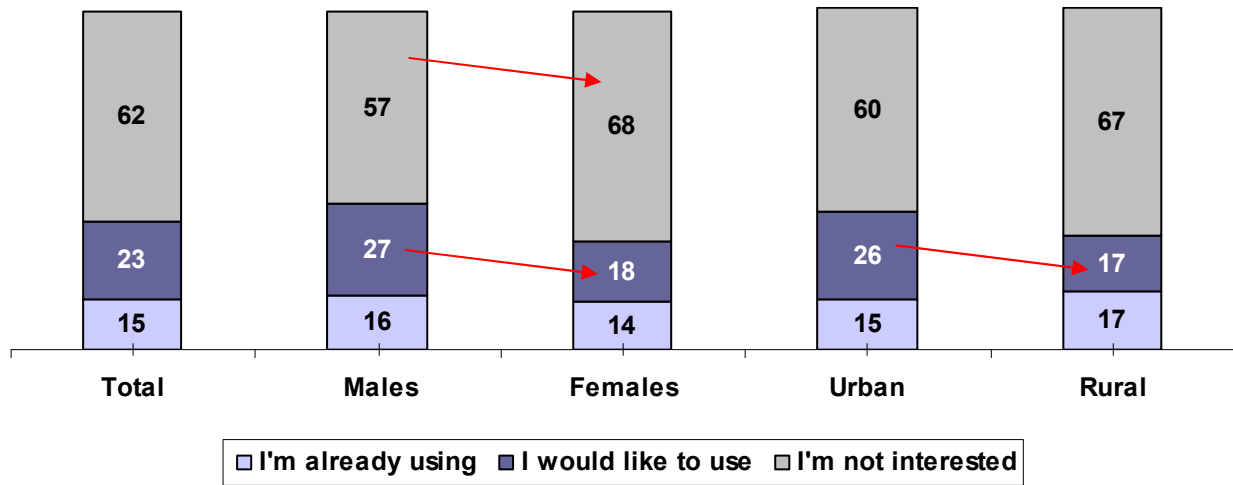
Graph.33. Problems obtaining desired Broadband speed, in %



*N = 71

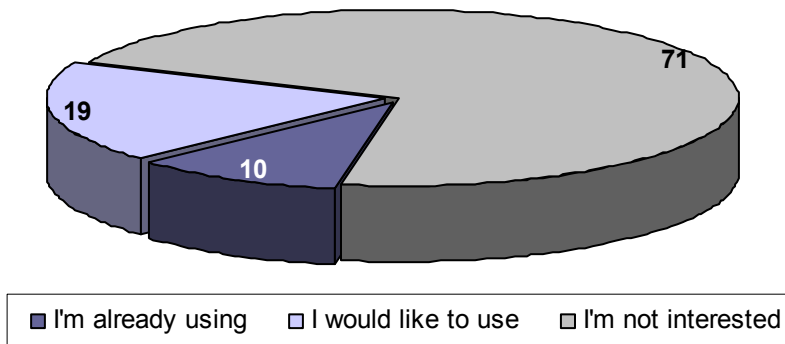
One fifth of BB users are interested in IPTV, and only 15% use it already. Men and BB users from urban settlements are more interested than others. 19% of BB users are interested in Video on Demand service, 10% use it already. Small number of BB users is interested in online gaming (9%), but 20% use online gaming already. Younger are more interested in online gaming. 25% of BB users are interested in fast interactive Internet content, young (18 to 30 years) more than older (46 to 65). Also, young (18 to 30 years) already use fast interactive Internet content. Interest in Audio-Video content is the same as it is for fast interactive Internet content (25%). Men more than women, and younger (18 to 30) more than older use it more.

Graph.34. Interest in IPTV by gender and type of settlement, in %



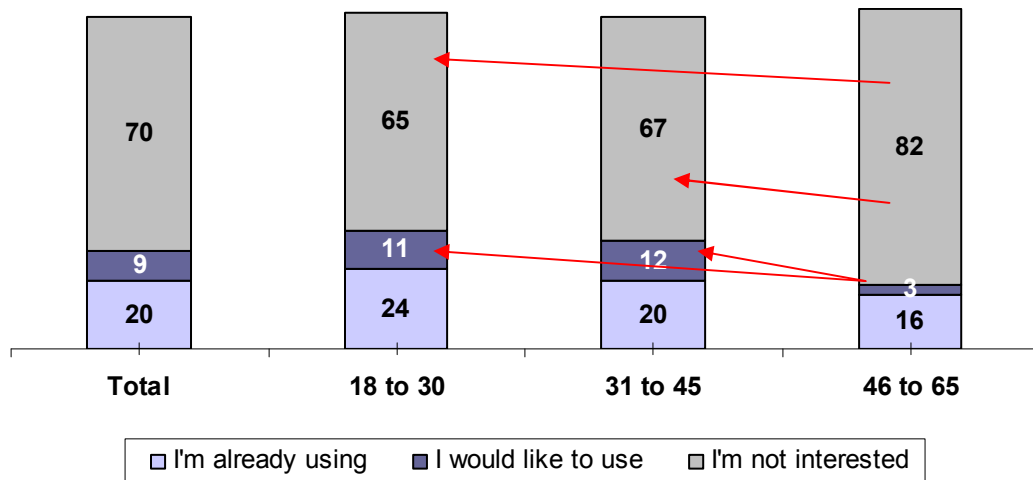
*N = 443

Graph.35. Interest in Video on Demand, in %



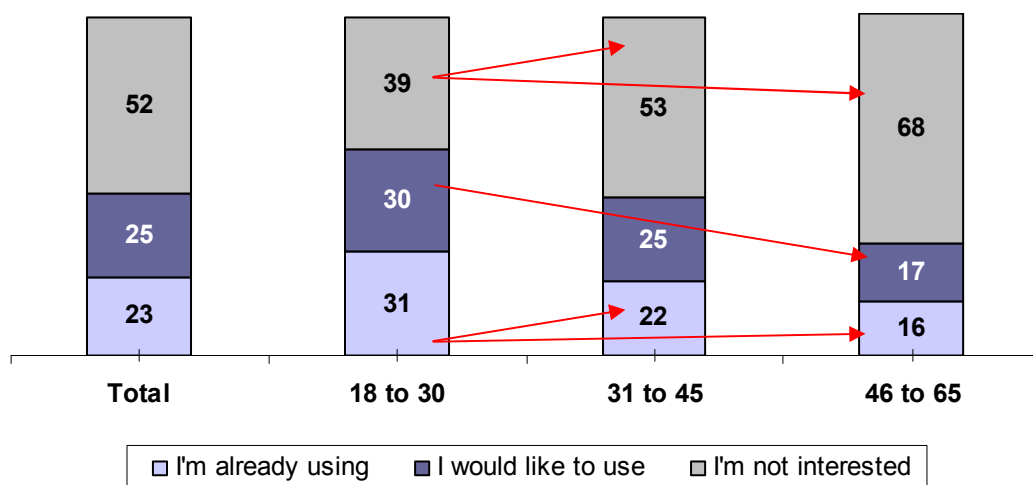
*N = 443

Graph.36. Interest in Online gaming by age, in %



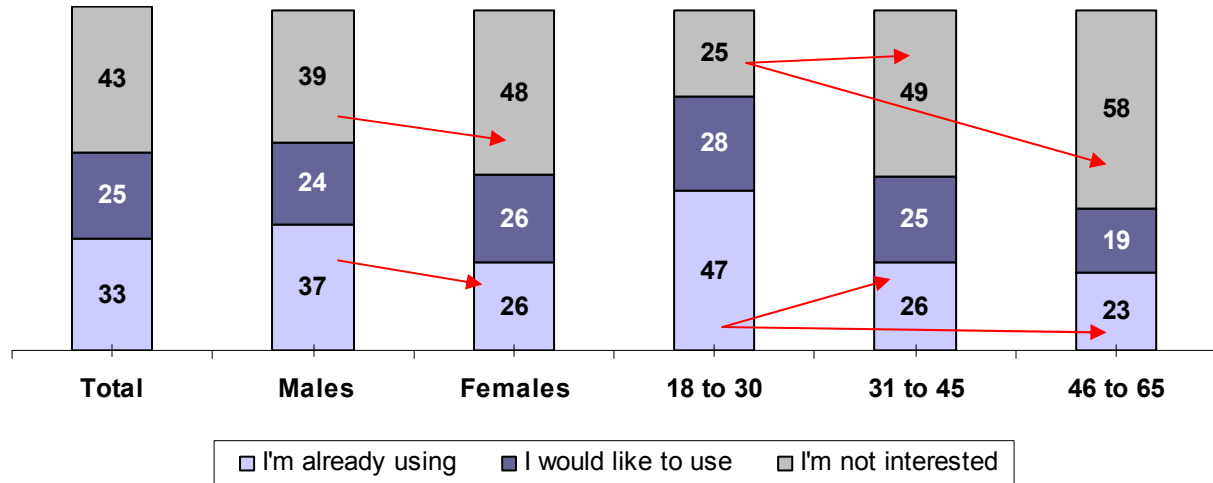
*N = 443

Graph.37. Interest in fast interactive Internet content by age, in %



*N = 443

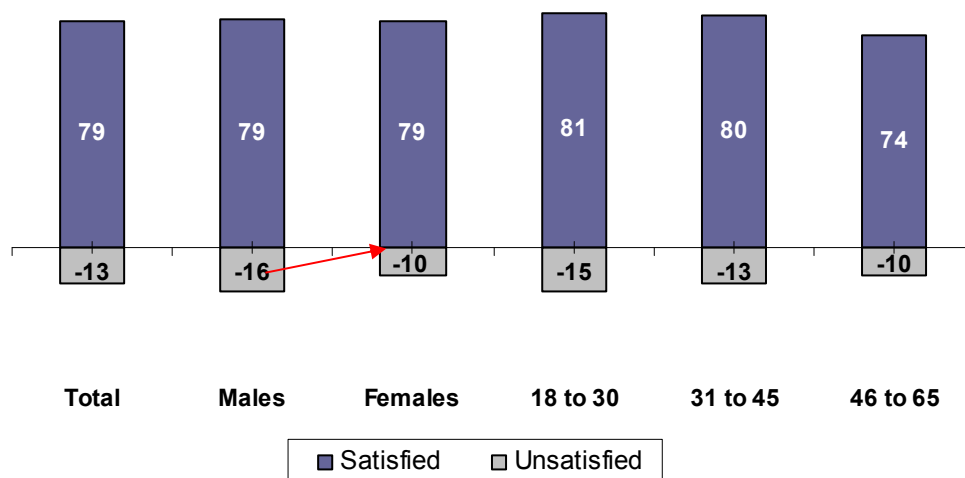
Graph.38. Interest in Audio-Video content by gender and age, in %



*N = 443

65% of Internet users are satisfied with information received from Internet service provider. Only small number (9%) are unsatisfied, men more then women, and older (46 to 65) more then other age groups. Internet users from Eastern Croatia are more unsatisfied then users from Lika and Banovina.

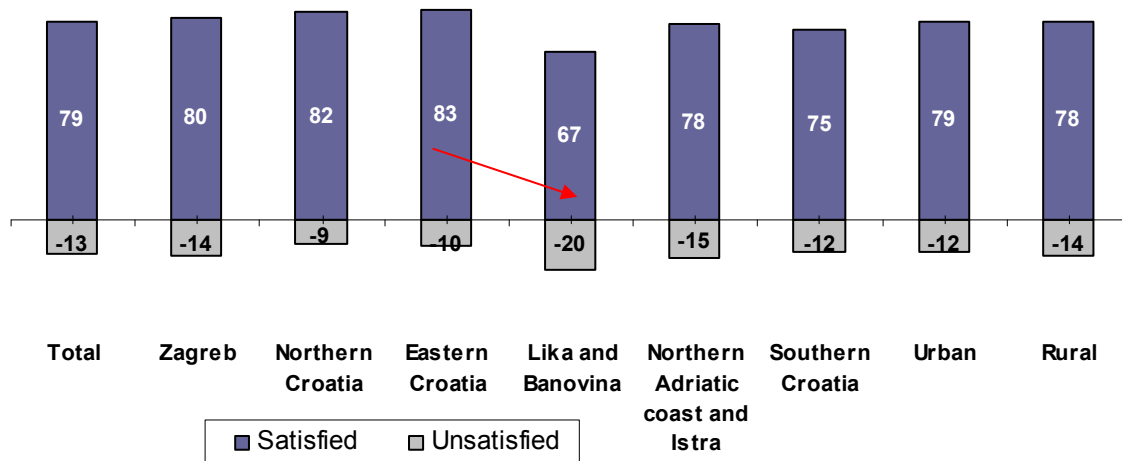
Graph.39. Satisfaction with information received from Internet service providers by gender and age, in %



*N = 893

**Scale from 1 to 4, where 1 is totally unsatisfied, 2 is somewhat unsatisfied, 3 is somewhat satisfied, 4 is totally satisfied. Graph shows combined measures: Unsatisfied (2 - somewhat unsatisfied + 1- totally unsatisfied); Satisfied (3 - somewhat satisfied + 4- totally satisfied)

Graph.40. Satisfaction with information received from Internet service providers by region, in %



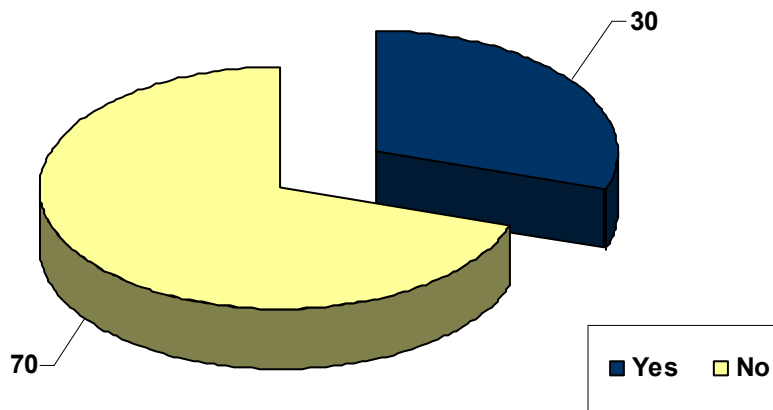
*N = 893

**Scale from 1 to 4, where 1 is totally unsatisfied, 2 is somewhat unsatisfied, 3 is somewhat satisfied, 4 is totally satisfied. Graph shows combined measures: Unsatisfied (2 - somewhat unsatisfied + 1- totally unsatisfied); Satisfied (3 - somewhat satisfied + 4- totally satisfied)

VoIP telephony

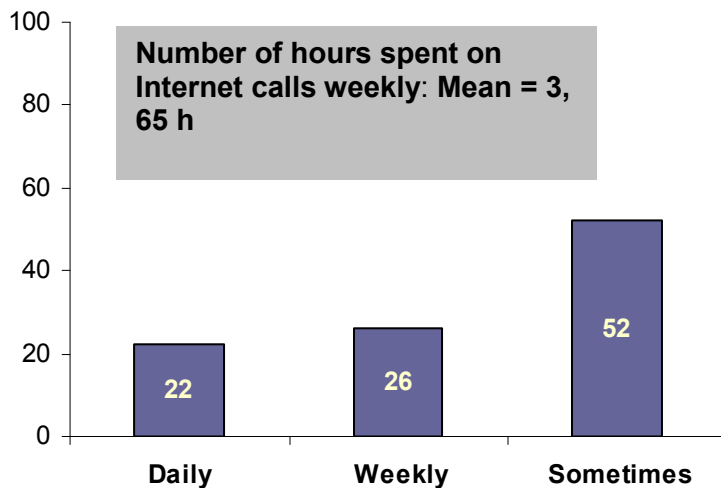
Every third citizen who has Broadband Internet using it for telephone calls. Frequency of usage is moderate – up to 50% use it daily or weekly, the other half sometimes. Majority of calls are the international calls. Internet telephone users anticipate that they will use more this kind of telecommunication in the future (55%).

Graph.41. Usage of Broadband for telephone calls in %



*N = 443

Graph.42. Frequency of Broadband usage for telephone calls in %



*N = 132

Table.13. Forecasting usage of Internet calls in near future, in %

My usage will decrease noticeably	My usage will decrease somewhat	My usage will remain the same	My usage will increase somewhat	My usage will increase noticeably	DK/NA
3%	2%	37%	32%	23%	2%

*N = 132

No need is the main reason for not using the Broadband for telephone calls. Younger (18 to 30 years old) are less interested in Internet telephone usage. Women more often than men state poor sound quality as the reason for not using Internet for telephone calls, same as citizens from urban areas. Residents in Northern Adriatic coast and Istra are less aware of

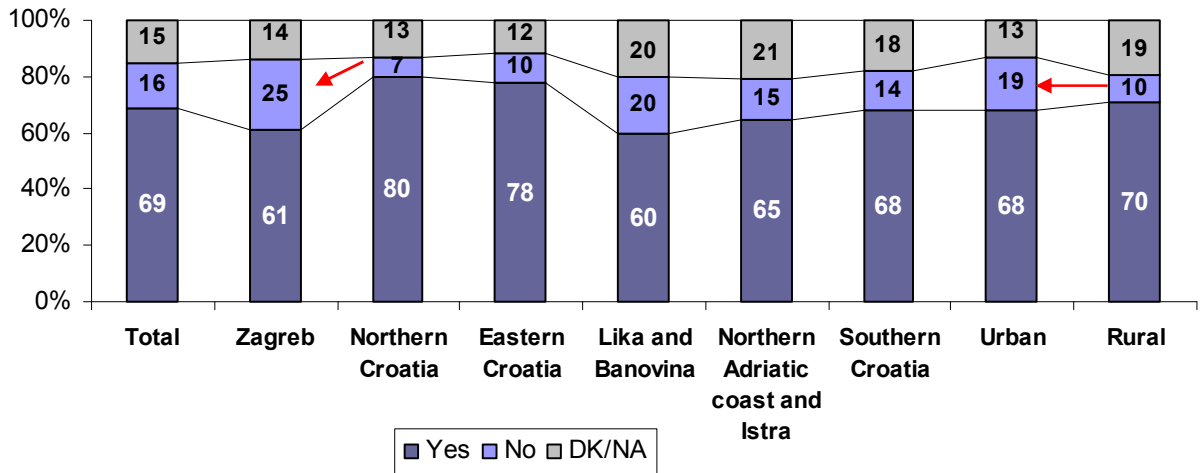
possibility to use Internet for telephone calls then residents in Southern Croatia. Northern Croatia residents anticipate that they will use Internet for telephone calls in the future more than residents in Zagreb. Residents in rural areas are not sure as residents in urban areas if they will use in Internet for phone calls in the future. There are no differences between gender and age regarding future anticipation of Internet usage for telephone calls.

Table.14. Reasons for not using Broadband for telephone calls, in %

		N	I have not been aware of this possibility	I find it hard to use	Poor sound quality	My friends do not use it	I'm not interested to use it / I'm happy with my current methods	Other reasons	DK/NA
	Total	309	11%	6%	5%	7%	61%	11%	4%
Gender	Males	181	10%	8%	3%	6%	65%	10%	2%
	Females	128	13%	5%	8%	9%	55%	11%	6%
Age	18 to 30	91	9%	5%	3%	8%	71%	11%	2%
	31 to 45	126	12%	4%	5%	7%	58%	11%	6%
	46 to 65	92	12%	11%	7%	7%	55%	10%	3%
Region	Zagreb	95	13%	7%	6%	6%	59%	9%	2%
	Northern Croatia	54	11%	9%	4%	2%	69%	7%	6%
	Eastern Croatia	50	8%	10%	8%	6%	56%	16%	4%
	Lika and Banovina	20	5%	0%	0%	5%	75%	10%	5%
	Northern Adriatic coast and Istra	34	24%	6%	6%	9%	59%	6%	0%
	Southern Croatia	56	5%	2%	2%	14%	59%	14%	7%
Settlement type	Urban	211	11%	6%	7%	8%	60%	11%	4%
	Rural	98	11%	8%	1%	6%	63%	10%	4%

Graph

.43. Anticipation of using Broadband for telephone calls in the future, by region and type of settlement, in %

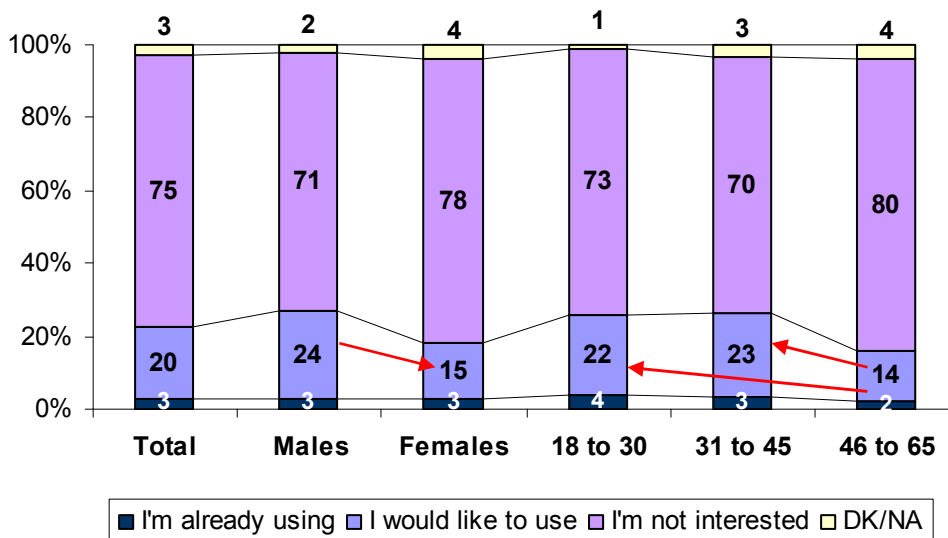


*N = 309

Mobile Data

Only 3% of population are using 3G Mobile package. Men would like to use 3G more than women while older (46 to 65 years old) are less eager to use it.

Graph.44. Interest in 3G Mobile package, in %



*N = 1068

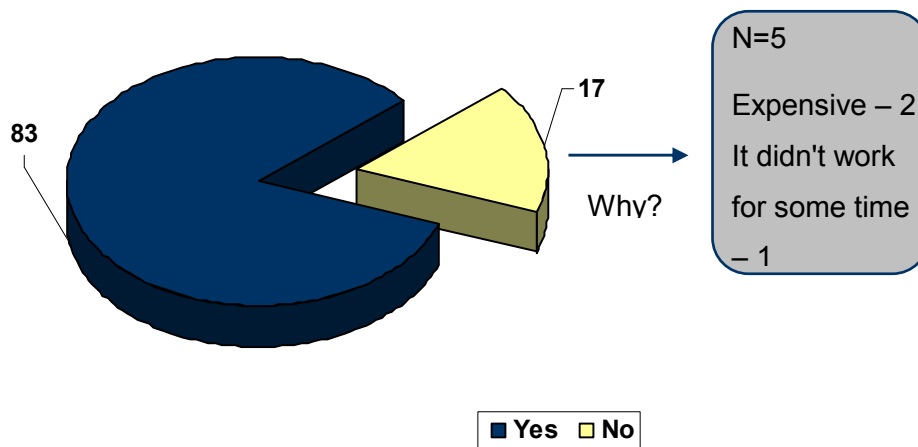
3G Mobile package was purchased from various reasons, esthetic or practical. Sample of respondents who purchased 3G is too small to draw out some evident, but we can say that

most of 3G users are satisfied with 3G package and they mostly pay for data services monthly fixed cost.

Table.15. Reasons for deciding to use 3G Mobile package

N=30	Frequency
The chance to have a nice new mobile phone	6
This solution was economical for me	5
This was a spontaneous purchase / special offer	5
The fast data transfer functionality (e.g. Internet, email, mobile-TV)	3
The functions of the telephone (e.g. camera, mp3-player)	2
The option to pay the new phone with monthly installments	1
Other reasons	6
Can't really say	3

Graph.45. Satisfaction with 3G Mobile package, in %



*N = 30

Table.16. Difference in mobile phone usage since having 3G Mobile package

N=30	Frequency
I haven't noticed any changes	13
I use the Internet and email more since	12
I send more MMS messages	5
I use video telephony	2
Some other change	1
DK/NA	1

Table.17. Paying methods for using mobile phone data services

N=30	Frequency
Monthly fixed cost data package	15
Mobile BB with unlimited data transfers for a fixed monthly rate	3
Pay-by-usage without a separate contract or data-packet	6
I don't use these services	2
I can't say	4

SMS out of other different mobile phone services (except voice) is widely used. Women more than men use SMS, while older use it less together with MMS. Men and younger one (18 to 30 years old) use maps and GPS more than women and older. In urban areas, SMS and using mobile phone as a gateway for lap top is more used. Mobile phone for web browsing and e-mail is more used in Zagreb region than in Southern Croatia. Northern Adriatic Coast and Istra use more maps and GPS than Southern Croatia.

Table.18. Usage of mobile phone services by gender and age

	Total	Gender		Age		
		Males	Females	18 to 30	31 to 45	46 to 65
Text messages (SMS)	89%	86%	91%	97%	93%	77%
Multimedia messages (MMS)	42%	41%	44%	58%	42%	29%
Web browsing and Internet information retrieval	13%	18%	8%	23%	11%	6%
E-mail	9%	13%	5%	12%	8%	8%
Mobile TV	1%	2%	0%	2%	0%	1%
Video telephony	2%	3%	1%	3%	1%	2%
Maps and GPS usage	10%	12%	7%	19%	7%	4%
Used as gateway for a laptop	3%	4%	3%	4%	4%	3%
None of the above	10%	12%	9%	2%	6%	22%
Number of respondents	1068	530	538	321	379	368

Table.19. Usage of mobile phone services by region and settlement type

	Total	Region						Settlement type	
		Zagreb	Northern Croatia	Eastern Croatia	Lika and Banovina	Northern Adriatic coast and Istra	Southern Croatia	Urban	Rural
Text messages (SMS)	89%	89%	90%	87%	88%	90%	87%	91%	85%
Multimedia messages (MMS)	42%	41%	40%	48%	43%	47%	37%	44%	39%
Web browsing and Internet info retrieval	13%	20%	10%	14%	9%	14%	7%	13%	13%
E-mail	9%	13%	9%	8%	8%	10%	4%	9%	9%
Mobile TV	1%	2%	1%	0%	1%	0%	1%	1%	0%
Video telephony	2%	2%	3%	2%	0%	2%	1%	2%	2%
Maps and GPS usage	10%	10%	12%	6%	12%	15%	6%	10%	9%
Used as gateway for a laptop	3%	6%	2%	2%	6%	2%	2%	5%	1%
None of the above	10%	10%	10%	12%	10%	6%	13%	9%	13%
Number of respondents	1068	281	182	181	86	135	203	683	385

No need is one of the main reasons for not using other mobile phone services (then SMS and voice). Older respondents more than younger stated they do not know how to use these

services. Men more than women perceive these services as expensive while women in higher extent stated that they do not know how to use these services.

Table.20. Reasons of using only SMS or only voice (“none of the above stated service”)

	Total	Males	Females	18 to 30	31 to 45	46 to 65
I am not aware of such services	3%	2%	4%	2%	1%	5%
I do not know how to use these services	9%	7%	12%	3%	5%	16%
I do not need these services	63%	63%	63%	66%	69%	56%
The price of these services is too high	12%	15%	9%	17%	11%	10%
The services do not work very well or have poor usability	1%	2%	1%	3%	2%	0%
These services do not interest me	18%	19%	17%	16%	15%	22%
My phone only supports telephone and SMS services	6%	5%	8%	6%	6%	7%
Other reasons	6%	7%	5%	2%	7%	7%
DK/NA	1%	1%	1%	1%	2%	0%
Number of respondents	540	259	281	109	194	237

Table.21. Usage of mobile phone services in the future

N=1068	My usage will increase	No change	My usage will decrease	DK/NA
SMS	14%	63%	15%	8%
MMS	14%	59%	10%	17%
Internet on Mobile phone	15%	54%	7%	24%
E-Mail on Mobile phone	15%	55%	6%	24%
Mobile TV	7%	58%	7%	28%
Video calls	13%	53%	6%	28%
GPS	17%	52%	6%	25%



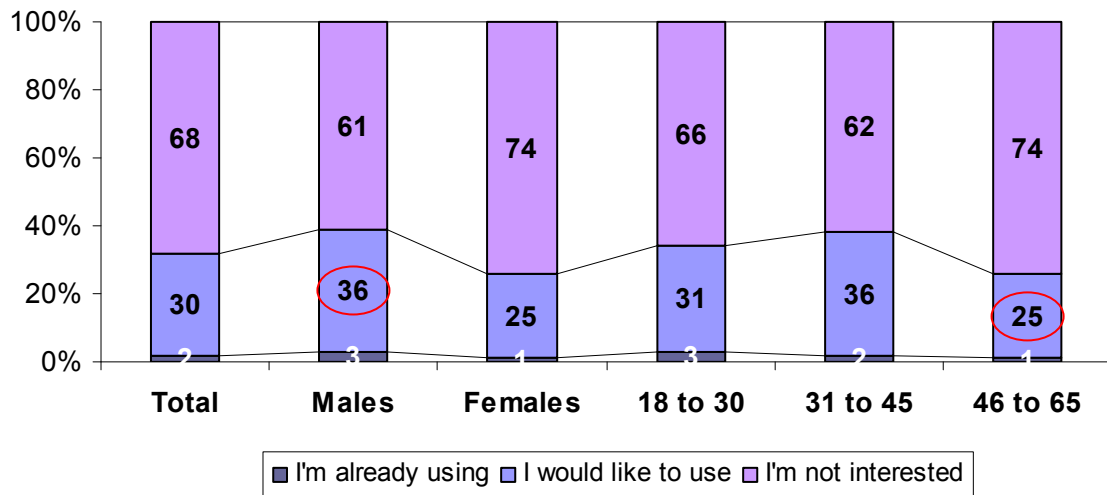
Men more than women and younger (18 to 30 years old) more than older perceive that they will increase ...

Triple Play – usage and interest

Triple play service is not attractive for majority of Croatian population. About one third of Croatian population would like to use Triple play service. Male population is more interested in this service than females, while older and inhabitants of rural settlements are less interested in triple play.

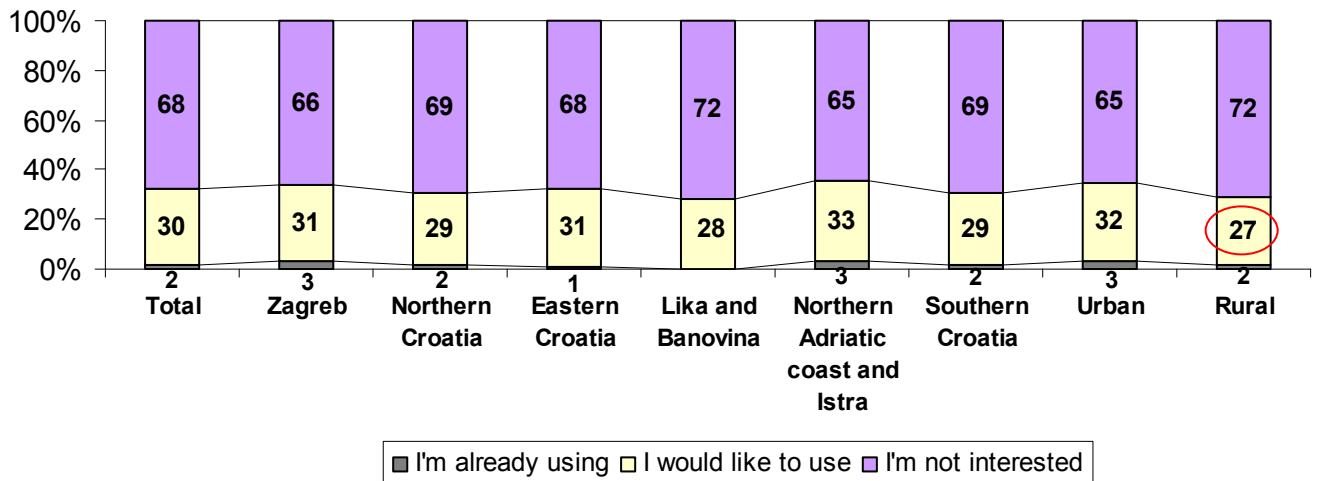
Current usage is quite low, only 2% of population uses Triple play.

Graph 46. Interest and usage of Triple play service by gender and age



*N = 1200

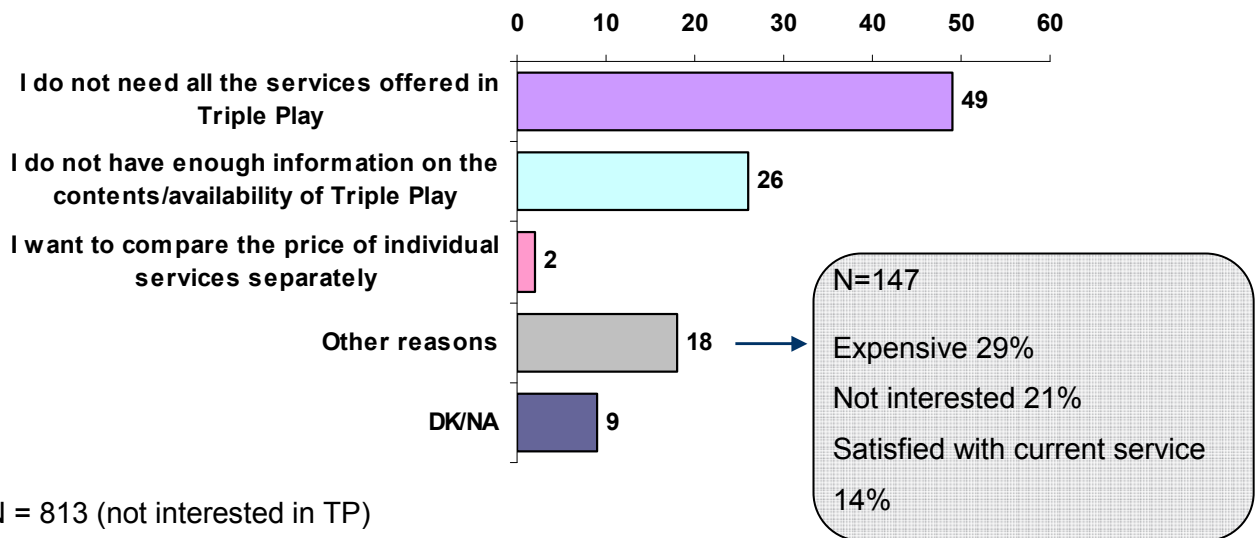
Graph 47. Interest and usage of Triple play service by region and settlement type



*N = 1200

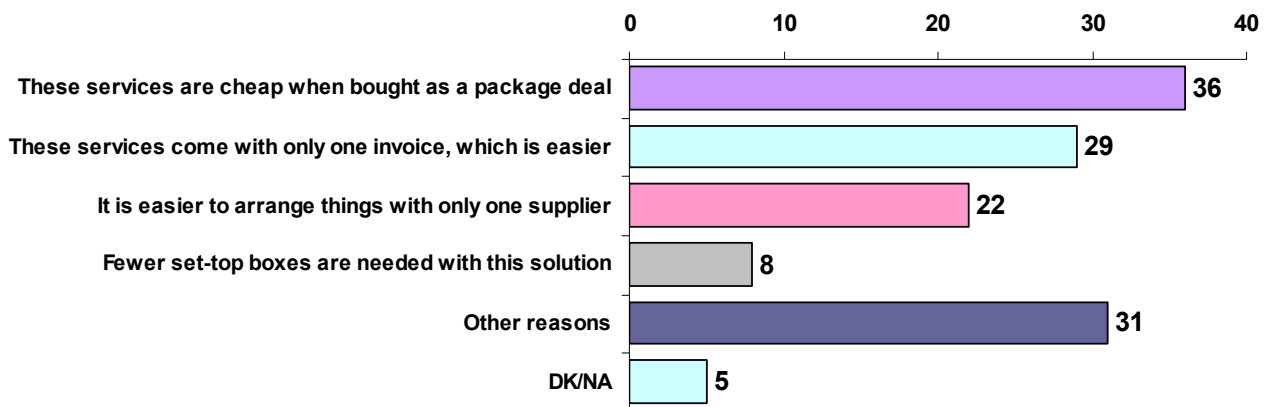
Main reason for lack of interest in Triple Play is lack of need for all services included in Triple Play. Lack of information about Triple Play service as reason for lower interest is also mentioned by one quarter of respondent.

Graph 48. Reasons for lack of interest in Triple Play



*N = 813 (not interested in TP)

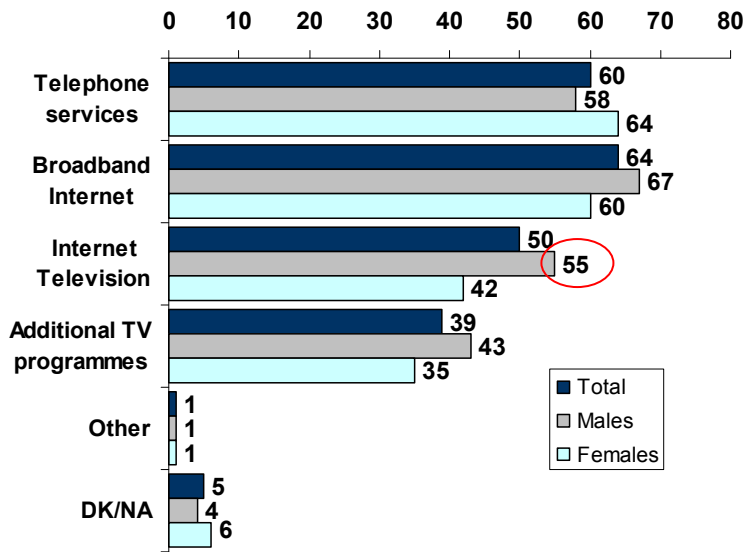
Graph 49. Reasons for interest in Triple Play service



*N = 387 (Interested in TP and TP users)

Main reason for interest in Triple Play is lower expenses of such “all-in-one” service, ease of paying the bills and ease of handling with only one provider.

Graph 50. The most attractive Triple Play services

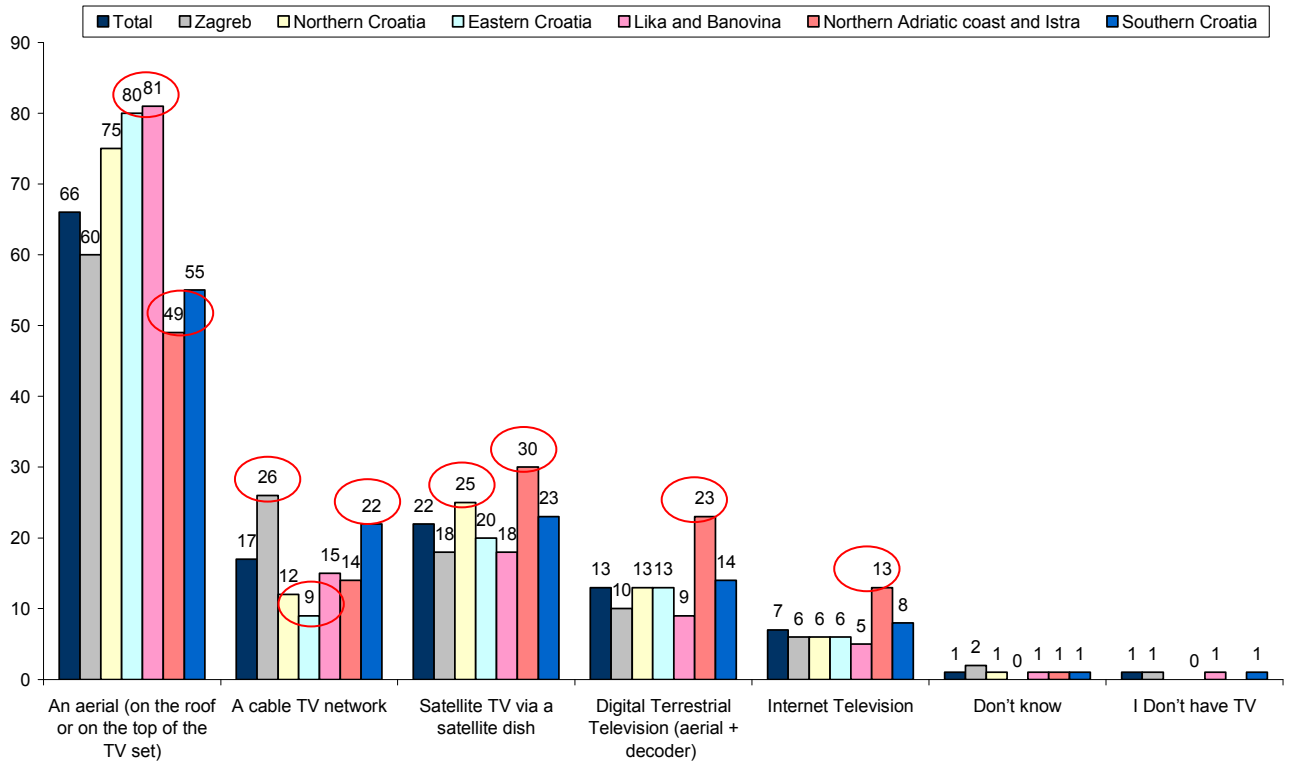


*N = 387 (Interested in TP and TP users)

Telephone services and Broadband Internet are the most attractive Triple Play services, about 60% of respondents are interested in those two services. About a half of respondents show interest in IPTV, especially males. Interest in additional TV content is lower than interest in other Triple Play services. Interest for Triple Play is moderate in Croatian population. Main reason for lack of interest is lack of need for all services included in Triple play. There is some indices that TV services are least attractive since it is extra cost.

Aerial reception is still mostly used in Croatia, especially in Lika and Banovina and Eastern Croatia. Satellite, cable and terrestrial digital television are other type of reception that are also used, but much lesser extent. Cable TV is the most present in households in Zagreb and Southern Croatia.

Graph 51. TV receiving signal

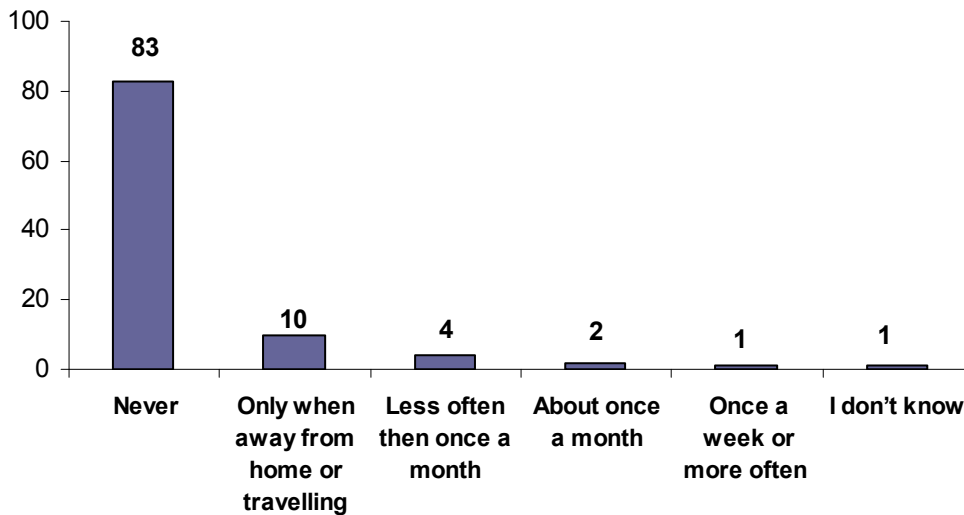


*N = 1200

Public Telephone boots

Majority of population do not use public phones and the one who use it mainly use it when away or traveling. The rest (8%) use it mainly when their mobile phone is out of battery.

Graph.52. Frequency of public telephone usage, in %



*N = 1200

Table.22. Reasons for using phone boot

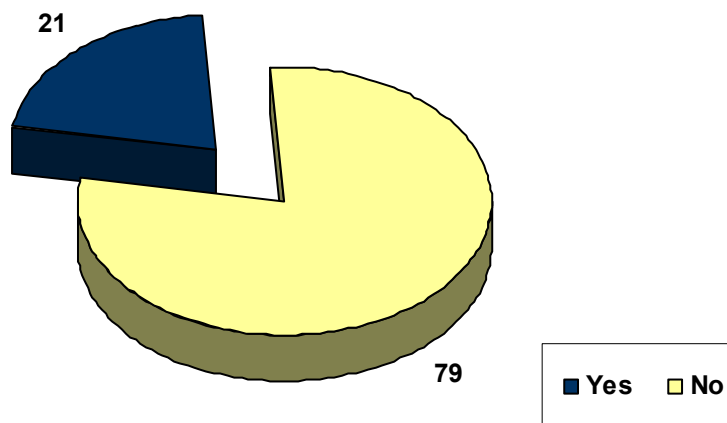
N=70*	%
When the mobile phone is out of range / out of credit / out of battery	42%
You have a mobile phone but it is too costly to make international phone calls	17%
The only phone at home is always in use	6%
Other	24%
I don't know	13%

*Respondents who said that they use public telephone, not including one who use it when away from home or traveling

HAKOM awareness

HAKOM has low awareness: every fifth citizen is aware of HAKOM. Older citizens are more aware, while looking at regions Northern Adriatic coast and Istra is less aware than Lika and Banovina. HAKOM's role on telecommunication market is perceived as moderate – “has helped a bit”. One third of citizens who heard about HAKOM are rather indifferent – they do not have opinion about its role.

Graph.53. Awareness of HAKOM, in %

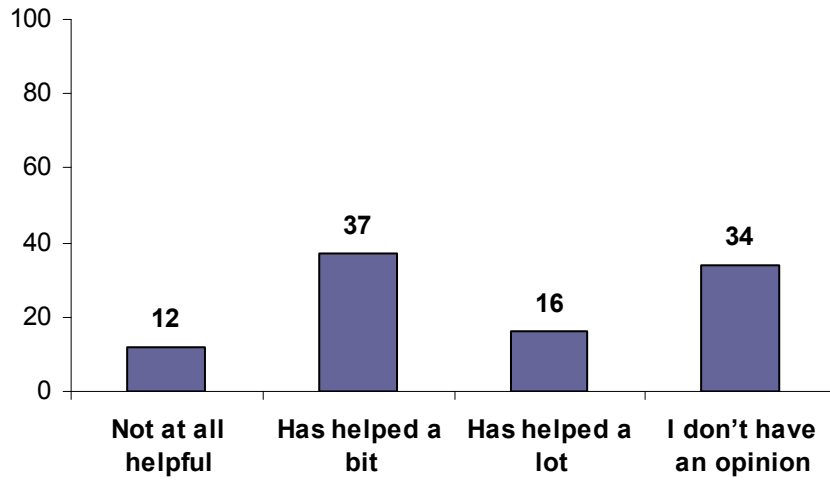


*N = 1200

Table.23. Awareness of HAKOM, by age, gender, region and type of settlement, in %

		N	Yes	No
	Total	1200	21%	79%
Gender	Males	588	20%	80%
	Females	612	22%	78%
Age	18 to 30	323	18%	82%
	31 to 45	410	19%	81%
	46 to 65	467	25%	75%
Region	Zagreb	307	18%	82%
	Northern Croatia	216	24%	76%
	Eastern Croatia	206	18%	82%
	Lika and Banovina	101	33%	67%
	Northern Adriatic coast and Istra	144	17%	83%
	Southern Croatia	226	23%	77%
Settlement type	Urban	739	20%	80%
	Rural	461	23%	77%

Graph.54. Perception of HAKOM, in %



*N = 254

Fixed line incidence among mobile phone users

Sample description

Table.24. Demographic characteristics of main sample

		%			%
Gender	Males	49%	Age	18 to 30 years old	36%
	Females	51%		31 to 45 years old	31%
Region	Zagreb	25%		46 to 65 years old	33%
	Northern Croatia	10%	Education	Without primary school	1%
	Eastern Croatia	15%		Primary school	14%
	Lika and Banovina	13%		High school	68%
	Northern Adriatic coast and Istra	10%		University	17%
	Southern Croatia	27%		Don't know	0%
Marital status	Married/Living with partner	58%	Working status	Employed	51%
	Divorced	4%		Unemployed	20%
	Single	31%		Retired	15%
	Widow/er	5%		Student	11%
	Don't know	1%		Housewife	3%

*N = 206

Table.25. Demographic characteristics of main sample

		%			%
Number of persons in household	One	8%	Number of children in household from 7 to 14 years old	Zero	72%
	Two	17%		One	15%
	Three	24%		Two	9%
	Four	26%		Three and more then three	4%
	Five	14%		Don't know	0%
	Six and more then 6	11%	Number of children in household from 15 to 18 years old	Zero	81%
	Don't know	0%		One	14%
Number of children in household up to 6 years old	Zero	80%	Number of persons in household older then 65 years old	Two and more then two	5%
	One	15%		Don't know	1%
	Two	3%	Zero	84%	
	Three and more then three	1%	One	13%	
	Don't know	0%	Two and more then two	3%	
			Don't know	0%	

*N = 206

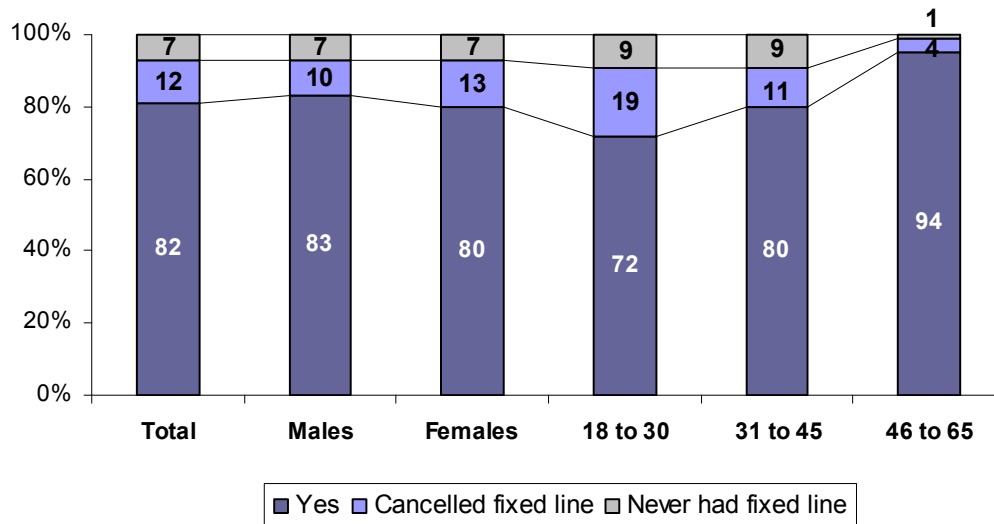
Table.26. Demographic characteristics of main sample

		%			%
Personal monthly income	Up to 1000 kn	7%	Personal monthly expenditure on mobile phone	Up to 50 kn	18%
	1001 - 2500 kn	17%		51 to 100 kn	22%
	2501 - 4000 kn	20%		101 - 200 kn	25%
	4001 - 5500 kn	12%		201 - 300 kn	13%
	5501 - 7000 kn	11%		More then 300 kn	17%
	7001 - 8500 kn	5%		Don't know/Refuse to answer	5%
	8501 - 10000 kn	1%			
	More then 10000 kn	4%			
	Don't know/Refuse to answer	23%			
	Monthly household income	Up to 1000 kn	1%	Household monthly expenditure on fixed line and Internet	Up to 100 kn
1001 - 2500 kn		7%	101 - 150 kn		17%
2501 - 4000 kn		13%	151 - 200 kn		18%
4001 - 5500 kn		13%	201 - 250 kn		13%
5501 - 7000 kn		12%	251 - 300 kn		11%
7001 - 8500 kn		11%	301 - 500 kn		19%
8501 - 10000 kn		9%	More then 500 kn		2%
10001 - 12000 kn		8%	Don't know/Refuse to answer		6%
12001 - 14000 kn		7%			
More then 14000 kn		8%			
Don't know/Refuse to answer		11%			

*N = 206

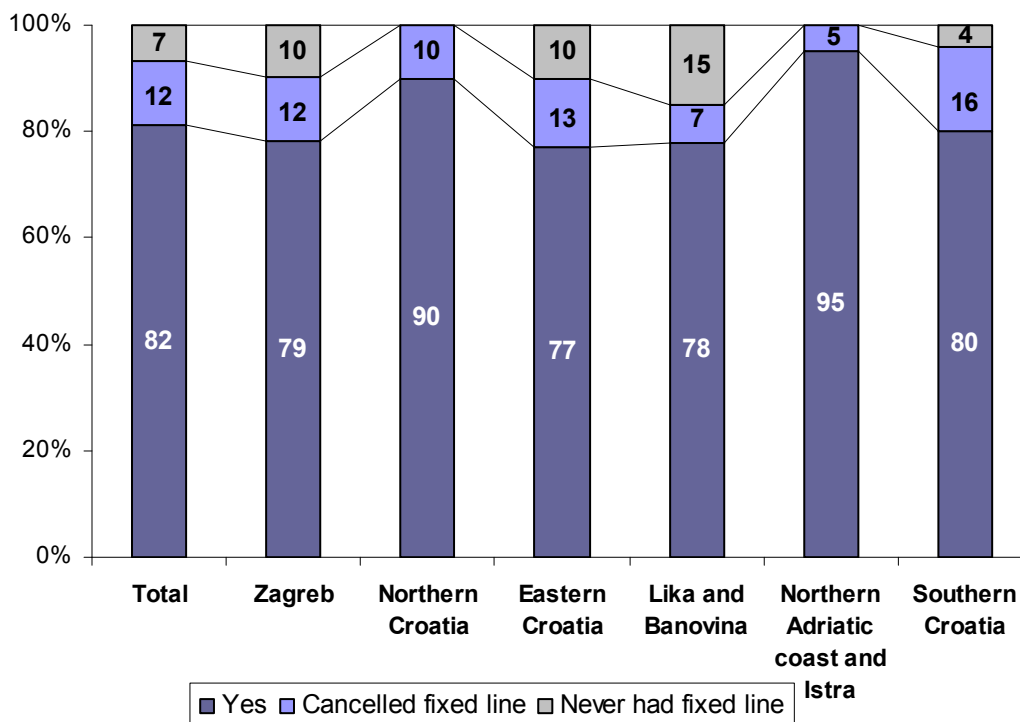
More than 80% of respondent have fixed line at their household. Fixed line is more present in households of older respondents. Northern Croatia and Istra and Northern Adriatic coast are regions with highest penetration of fixed phone line. Lika and Banovina have the highest percent of households which never had fixed line. Younger respondents are in higher extent ready to cancel their fixed line. Main reasons for fixed line cancellation are financial reasons, lack of need for fixed line and sufficiency of mobile phone (Table 27).

Graph.55. Fixed line possession in household by gender and age



*N = 206

Graph.56. Fixed line possession in household by region



*N = 206

Table.27. Reasons for fixed line cancellation (due to small number of respondents,

N=24, table shows counts of respondents)

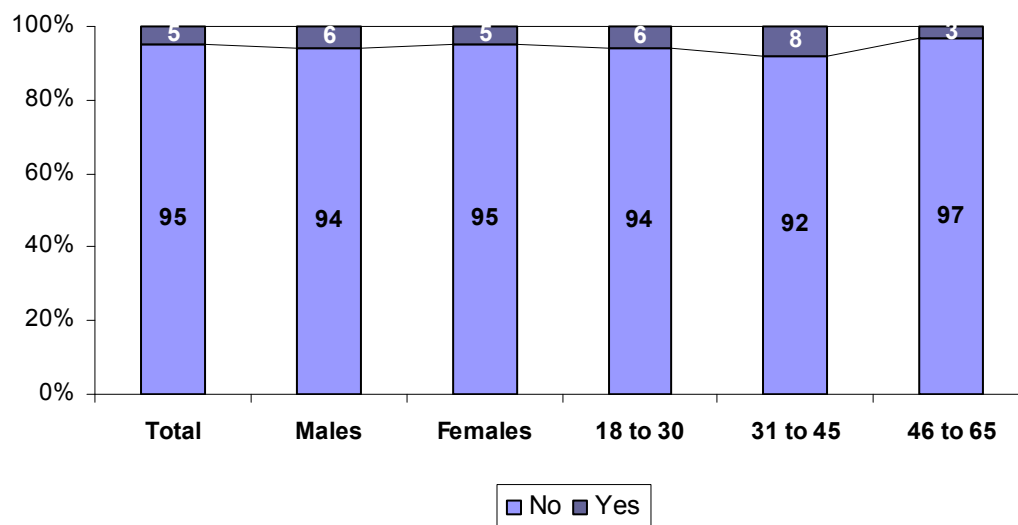
N=24	frequency
Financial reasons / It was too expensive	11
We had no need for it	8
Mobile phone is enough	6
Other reasons	3

Fixed line future

Majority of respondents do not intend to cancel fixed line in next 12 months regardless age or gender. Only 9 respondents intend to cancel fixed line mainly due to financial reasons.

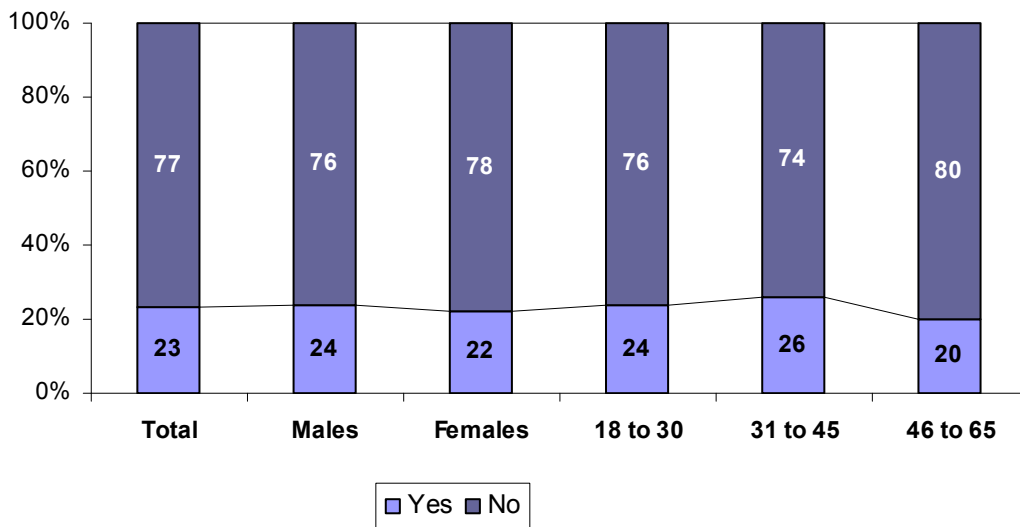
But as we can see on Graph 58 just one quarter of respondents sees fixed line as futile. There are no considerable differences among demographic segments.

Graph.57. Cancellation of Fixed line in next 12 months by gender and age



*N = 168 (respondents with fixed line in Household)

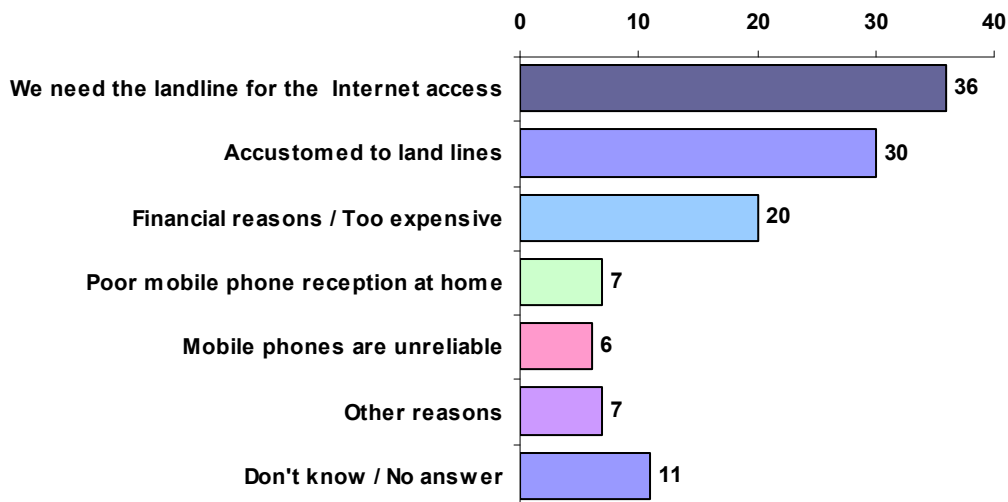
Graph.58. Giving up the landline and managing with just a mobile phone in the future by gender and age



*N = 159 (respondents which do not intend to cancel fixed line in the next 12 months)

Why is fixed line so popular although all respondents were mobile phone users, and if we look at mobile phone penetration which is very high (especially among younger population) and new mobile broadband Internet offers. We asked our respondents why they do not see mobile phone as substitute for fixed line in the future, why they need fixed line? Main reasons for fixed line usage are Internet access, habit and financial reasons.

Graph.59. What are the reasons that you would not get by with just a mobile phone?



*N = 123 (respondents which do not intend to give up fixed line in the future)

