# *FIRST RELEASE*

**CROATIAN BUREAU OF STATISTICS**
10000 ZAGREB, ILICA 3, PHONE: +385 1 4806-111, P.O.B. 80, CROATIA

**ISSN 1334-0565**

**YEAR: XLV.** **ZAGREB, 19 SEPTEMBER, 2008** **NUMBER: 2.1.11.**

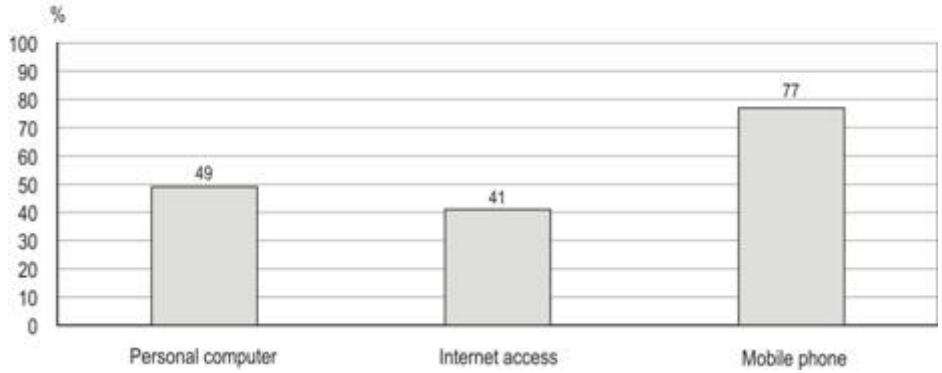
**OBLIGED TO NOTIFY DATA SOURCE**


## USAGE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) IN HOUSEHOLDS AND BY INDIVIDUALS, 2007, FIRST RESULTS

**Tendencies**

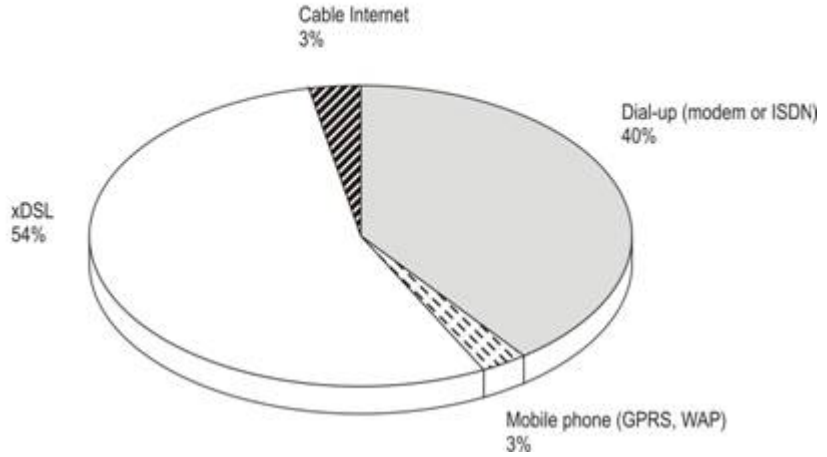
- Relatively low number of households equipped with the ICT
- Accessibility of broadband Internet access is satisfaying only in larger metro areas and densely-populated areas with more than 500 people per km2
- Computer and Internet usage is satisfying only with younger population, up to age of 24
- Low level of using on-line services such as E-banking and E-government
- Underdeveloped commerce via the Internet; only 7% of individuals purchased goods or services via the Internet during last year
- E-skills are at rather low level; younger population, up to the age of 24, is leading the way again, while knowledge decreases quite drastically, proportionally to the age of each individual

G-1. HOUSEHOLDS EQUIPPED WITH ICT, FIRST QUARTER 2007



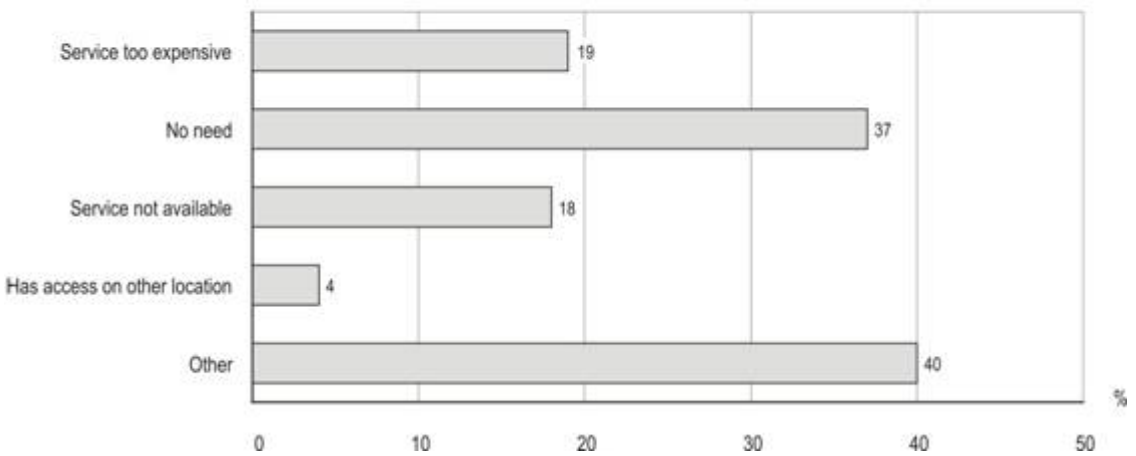

Survey results showed that households in Croatia are relatively poorly equipped with the ICT. Spotted trend shows that households with children are more likely to have a computer and Internet access unlike households without children. In comparison with other EU countries, Croatia is positioned in the lower part of the list together with south Mediterranean and Baltic countries (Italy, Spain, Greece, Estonia, Lithuania...).

G-2. TYPES OF INTERNET CONNECTIONS IN HOUSEHOLDS, FIRST QUARTER 2007



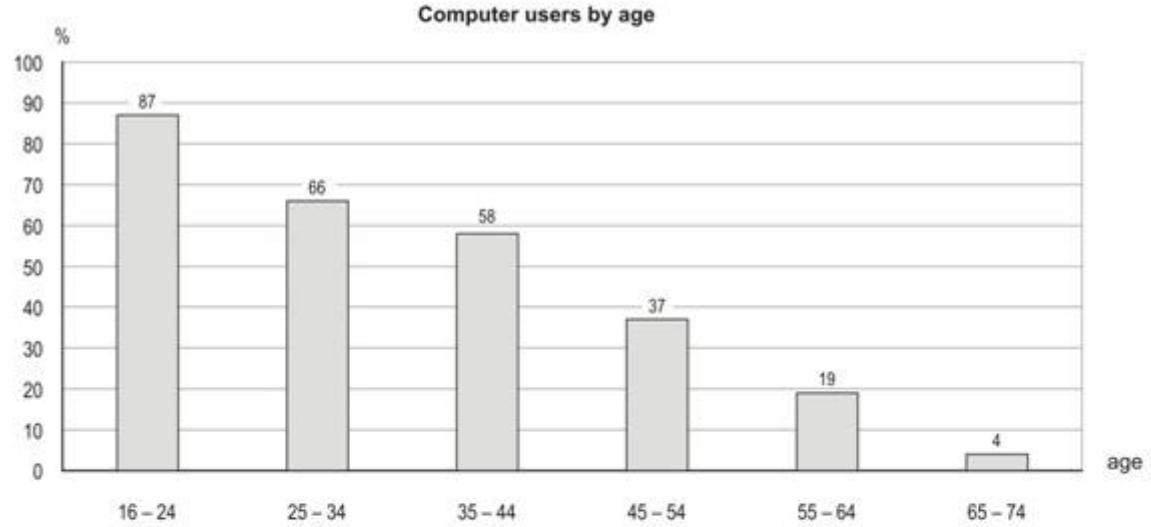

Broadband Internet is often unavailable to many households. That is particularly visible in thinly-populated areas with less than 100 people per $km^2$. xDSL technology is most often available only in metro areas, while 40% of households uses dial-up access as the only available option.

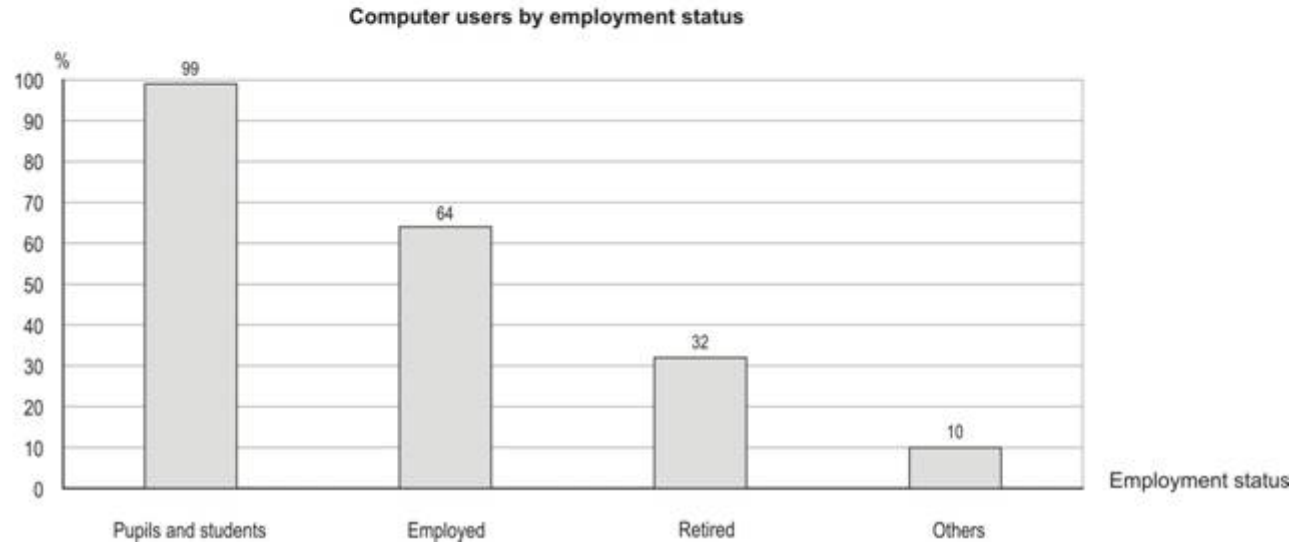
G-3. OBSTACLES FOR NOT HAVING BROADBAND INTERNET CONNECTION IN HOUSEHOLDS, FIRST QUARTER 2007




73% of households which do not have broadband Internet access available live in thinly-populated areas with less than 100 people per $km^2$. Relatively high share of households stated that they do not have need for broadband Internet (37%), while services not being available and service cost were represented on much lower scale than it could be expected.

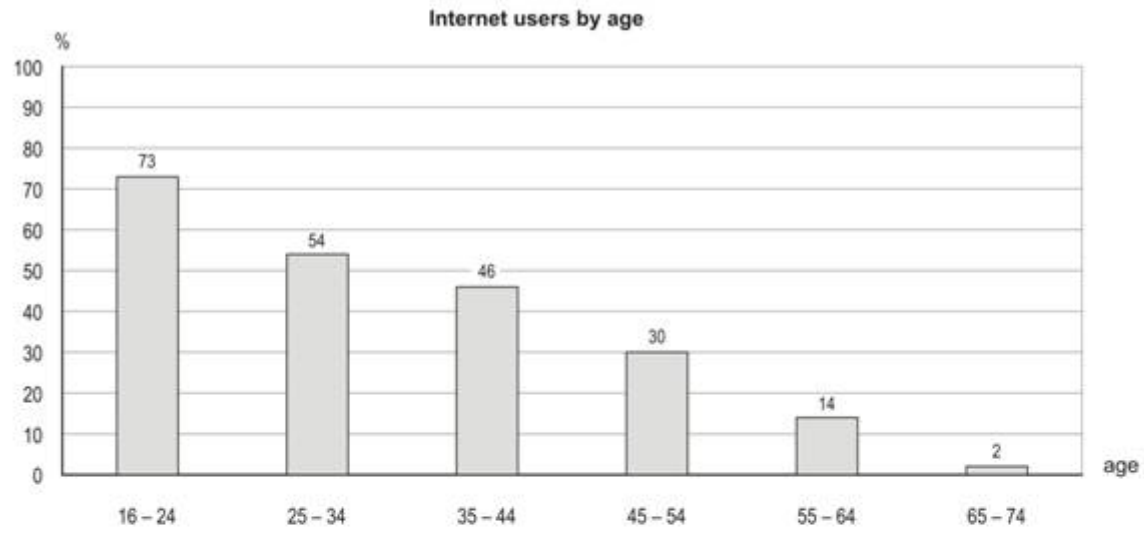
## G-4. USAGE OF COMPUTERS BY INDIVIDUALS, FIRST QUARTER 2007

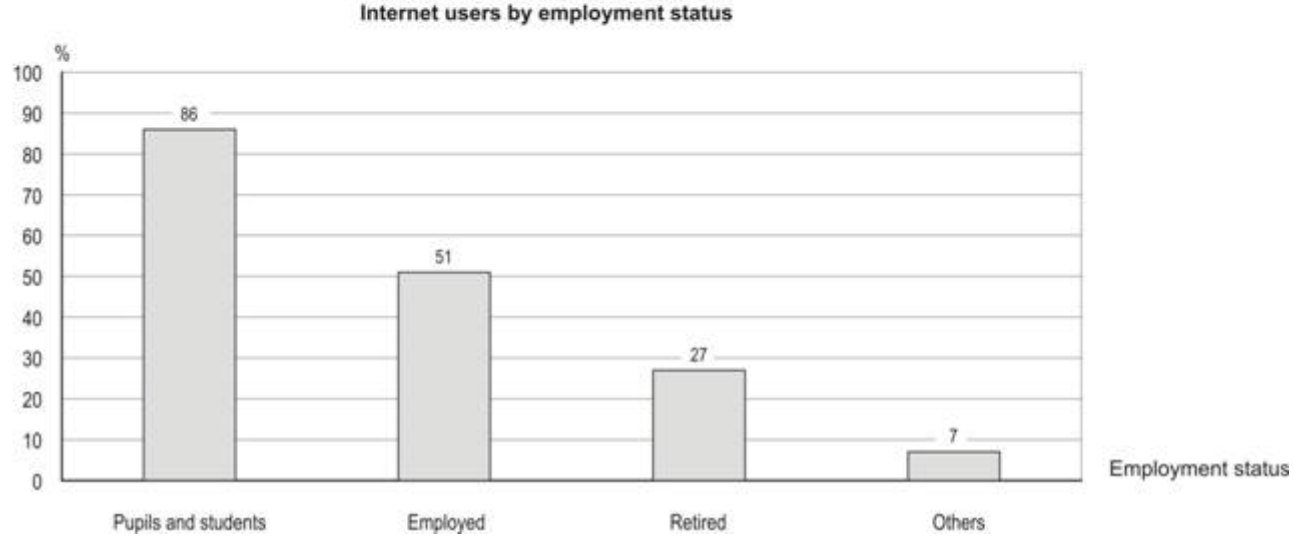


The survey showed that 47% of individual's used computers often (every week) in 1st quarter of 2007, while 31% used them every day. Trend shows that the ICT is mostly used by younger population, pupils and students, and younger working people, while mature and older people are not inclined to frequent the ICT usage.

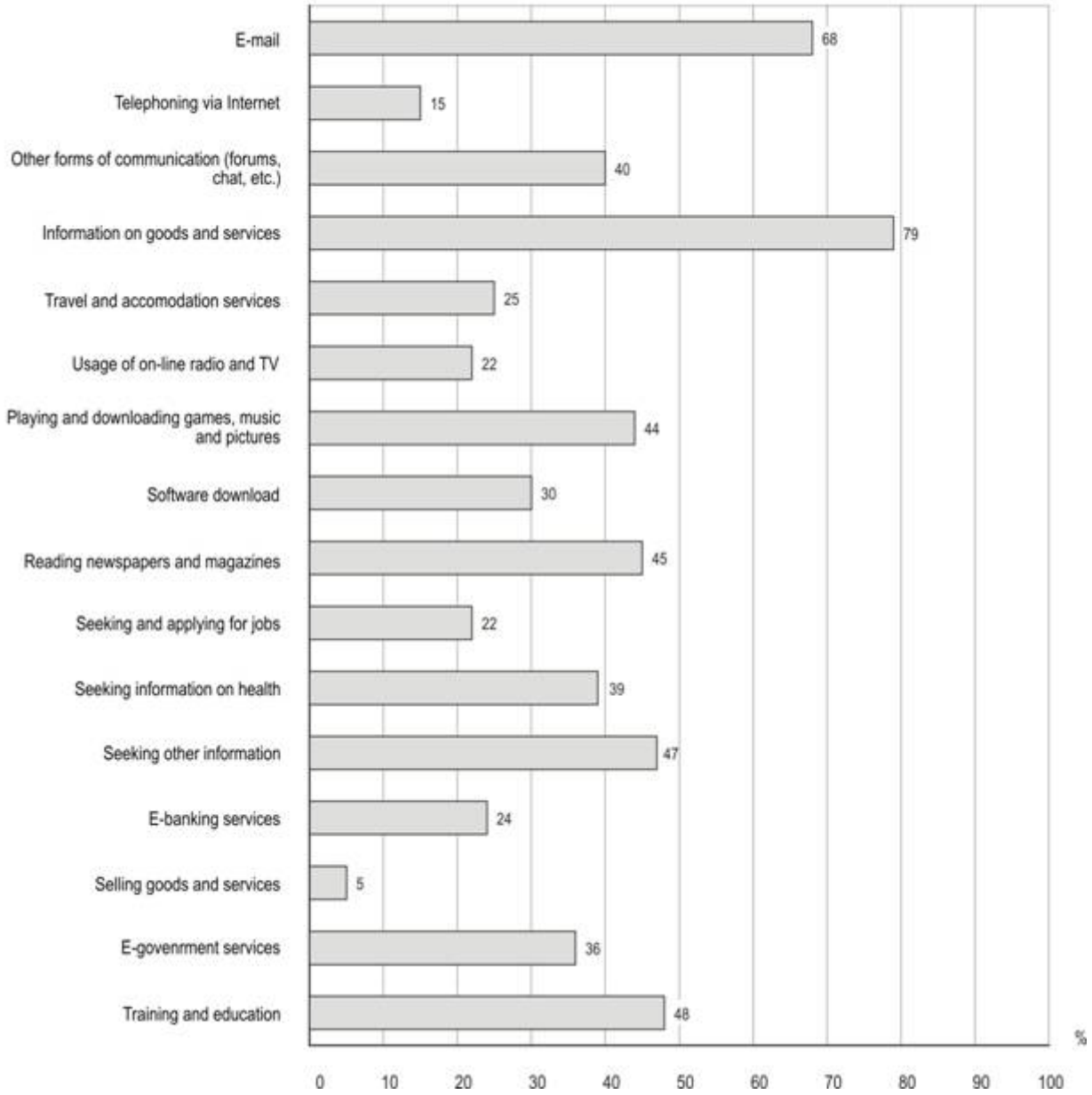
G-5. USAGE OF INTERNET BY INDIVIDUALS, FIRST QUARTER 2007



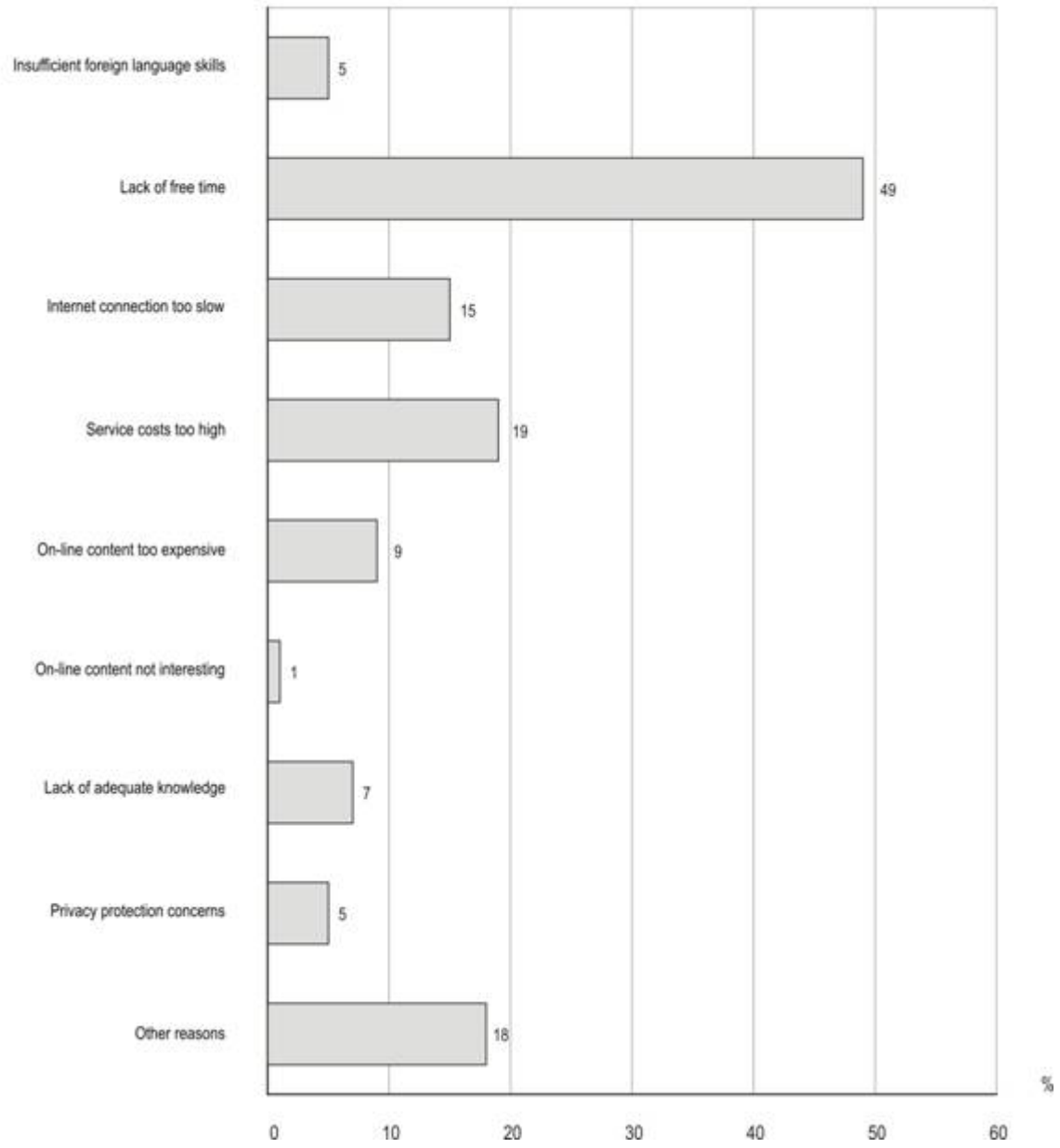
Survey showed that 38% of individuals were using the Internet often (every week) in 1st quarter of 2007, while 31% used the Internet every day. Trend of the Internet usage is very similar to trends of computer usage, mentioned in the previous chapter.

**G-6. PURPOSE OF INTERNET USAGE BY INDIVIDUALS, FIRST QUARTER 2007**



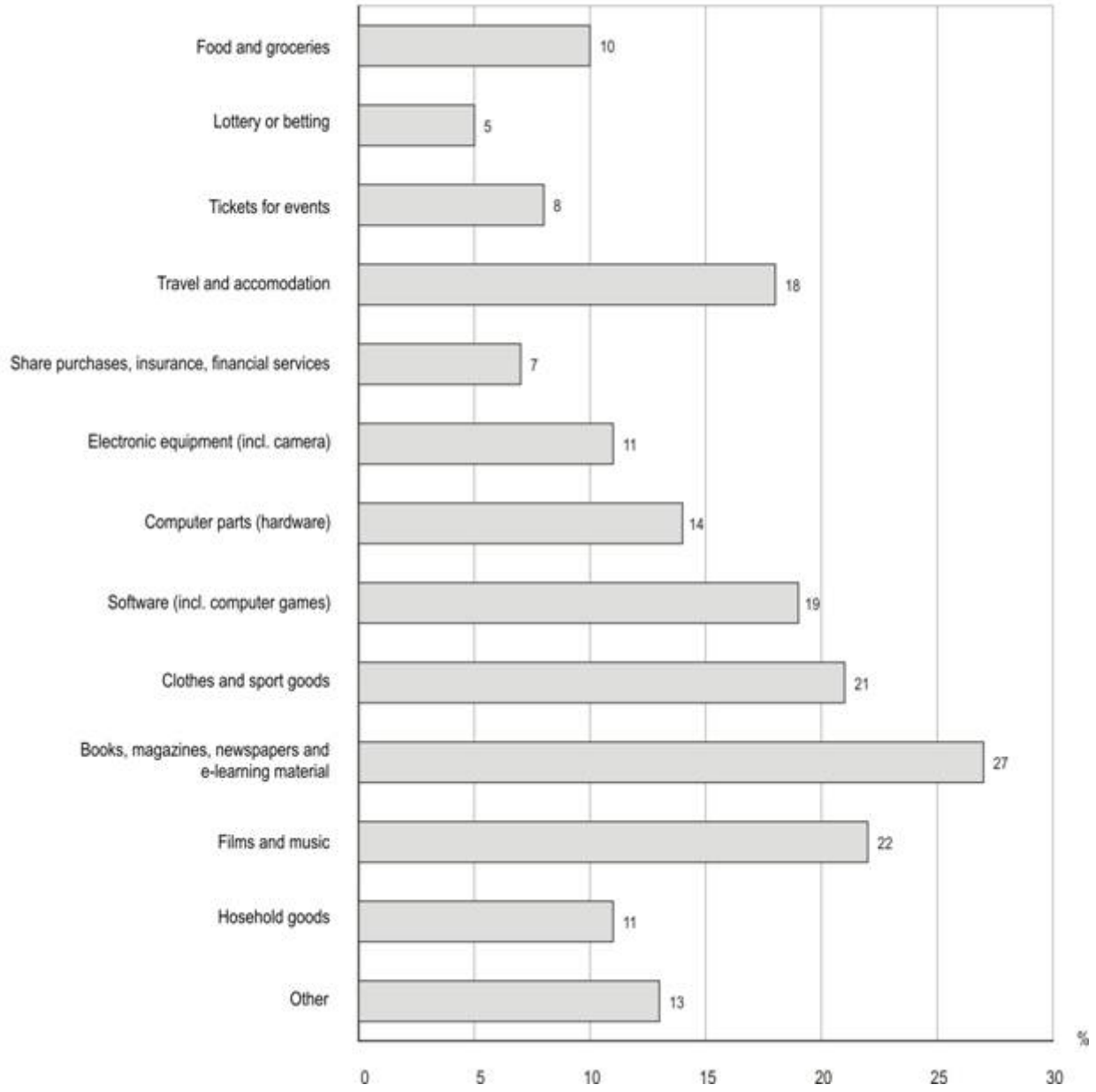
As we see, individuals mostly use the Internet for obtaining information's on goods and services (79%) and for sending electronic mail (68%). There is also relatively high share of individuals who use the Internet for reading daily news and magazines (45%) and for educational purposes (48%). Popular is also multimedia content, together with on-line communication via forums or chat applications. A relatively low share usage of E-banking and E-government services shows that on-line services have not yet became widespread.

## G-7. REASONS WHICH PREVENT INDIVIDUALS FROM USING INTERNET MORE OFTEN, FIRST QUARTER 2007



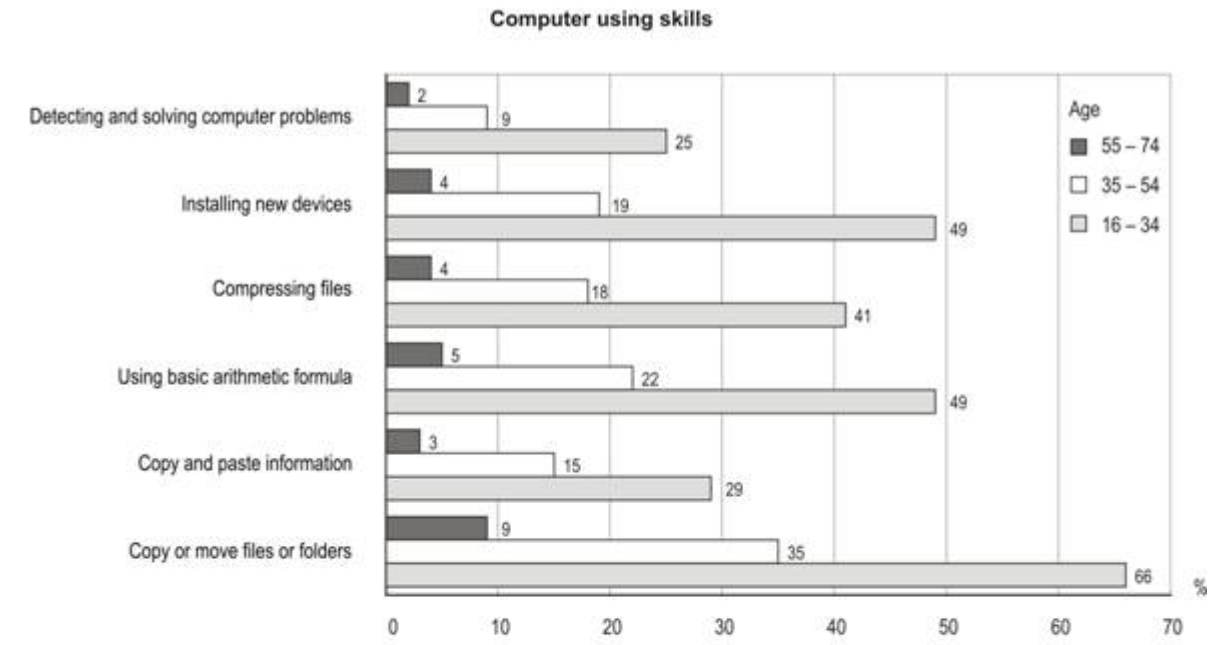
42% of individuals stated that they would like to use the Internet more often, but for some reason they are not able to do it. A lack of free time was stated as the biggest obstacle, while slow Internet connection and high service costs were considered as some of top obstacles.

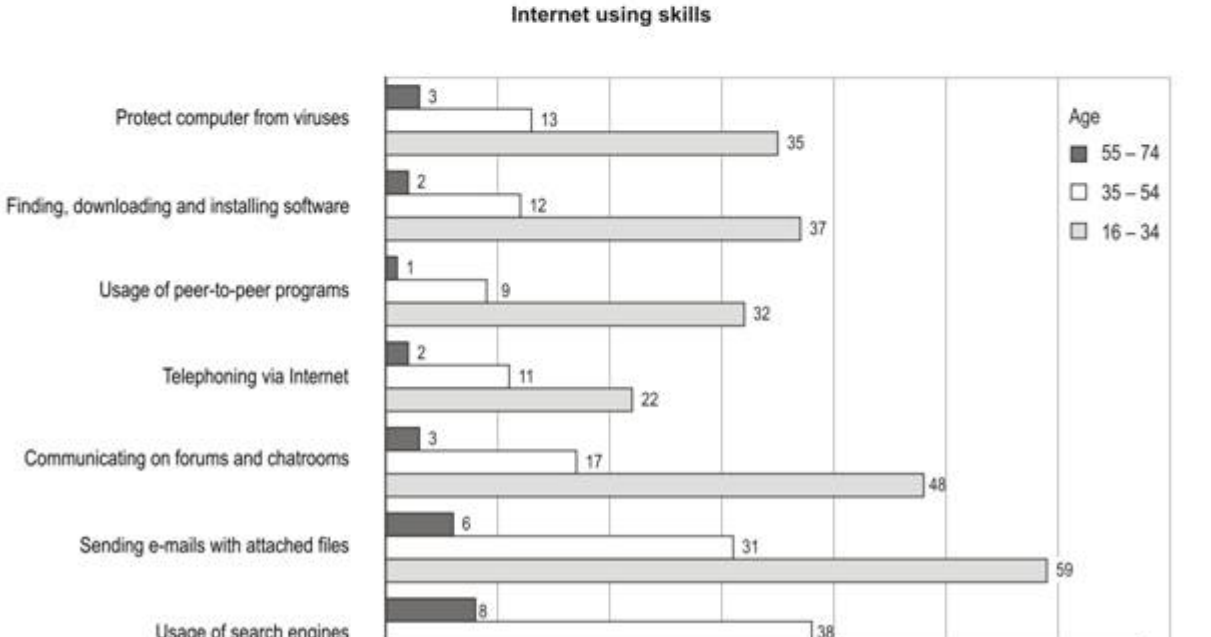
**G-8. PURCHASES VIA INTERNET BY INDIVIDUALS, FIRST QUARTER 2006 – FIRST QUARTER 2007**



Survey results show that commerce via the Internet is not represented as much as it should be; only 7% of individuals purchased goods and services via the Internet. Most purchases were books, magazines and educational material (27%), which is not available on the local market, together with movies and music (22%). A fair share of individuals made travel arrangements (18%), bought clothes and sports equipment (21%), computer software (19%) and hardware (14%)

## G-9. E-SKILLS – KNOWLEDGE IN COMPUTER AND INTERNET USAGE BY INDIVIDUALS, FIRST QUARTER 2007



IT skills of individuals are on a rather low level, with the young population leading the way, as it should be expected. More IT knowledge was expected from the middle-aged population, while population over 55 years old has difficulties in obtaining very basic knowledge.

# METHODOLOGiCAL NOTES

## Purpose of the statistical survey

Data shown in this publication are estimates obtained with the IKT-DOM survey, which is the annual survey on the usage of Information-Communication Technologies (ICT) in households and by individuals. It gives the information about computer and information literacy of the Croatian population. The goal of the survey is to measure the usage of computers and other ICTs, how many people in Croatia are Internet users and for what purposes they use the Internet. The data are an important source for conducting the policies in the field of information society in Croatia and in the European Union.

## Legal framework

The IKT-DOM survey was conducted, in the frame of the Eurostat guidelines, for the first time in 2007 and was carried out on the legal basis of the Law on Official Statistics (NN, No. 103/03.). It was conducted by Puls d.o.o. agency, in the name of the Central Bureau of Statistics of the Republic of Croatia. Harmonised surveys are conducted in all EU member states, and therefore, the data are internationally comparable. The international data are available on http://epp.eurostat.cec.eu.int, Themes Science and Technology Data. Concepts and definitions used in IKT-DOM survey are in line with EU Methodology for Statistics on the Information Society, 2007.

## Observation units

The observation units are persons aged 16 to 74 and their households.

Selected persons should answer the questionnaire. In case of their absence some other household member can answer instead, but in the name of the selected person.

## Sample size

The sample size was 5,000 persons who were at the time of data collection (01 April to 15 May 2007) aged 16 to 74 years.

## Sampling frame

The bases for the sampling frame Population Census of Croatia 2001.

## Methods of data collection

The data were collected in the field with a paper questionnaire and with computer assisted telephone interviewing. The reference period was the first quarter of 2007.

## Non-response rate

In the sample size (5,000 units) there were 3,906 eligible units and 3,078 persons took part in the survey. That means that the response rate was 79% and the eligibility rate was 78.8%. The non-response rate was 21% and the refusal rate was 7.7%.

## Weighting

With weighting we calculated unbiased estimates and achieved the representation of the sample for the whole population. The data in the survey refer to persons and households, therefore we calculated two weights:

- weight for individuals and
- household weight

RIM weighting procedure (iterative proportional fitting) was used for grossing-up individuals. Variables we used for grossing-up were as following: region, settlement size, gender, age and level of education.

Rim-weighting procedure was used for grossing-up households as well. Extrapolation weight was calculated for each household that participated in the survey and calculation method has taken into account: region, settlement size and number of household members.

We extended the calculated weights for persons to the whole population of the persons aged 16 to 74. On 31 December 2006 there were 3,426,813 people aged 16 to 74 in Croatia.

We extended the calculated household weights to the population of the households, i.e. households with at least one person aged 16 to 74. On 31 December 2006 there was 1,451,730 households with at least one person aged 16 to 74.

## Definitions and explanations

**Blog** is an Internet diary. The expression is English: WEB + LOG = WEBLOG, BLOG. Blog is a diary written on the Internet.

**Wireless connection** is a connection with the Internet without wire using radio-frequency, infrared, satellite, microwave connection, wimax, etc. One of the most frequent uses of wireless connection is with a mobile phone.

**Palmtop or PDA (Personal Digital Assistant)** is a computer with a screen, usually colour, sensitive for touch. Touch sensitive screen or virtual type device on a screen serve for data entering. It uses memory card for storing data and has at least one type of connectivity: infrared, Bluetooth, WiFi. Handheld computer is less efficient as personal computer in the same price class, but can be used as mobile phone (smart phone), e-mail client, to browse Internet or as media player.

**Digital television** enables transmission of the television and radio programs in a digital format. The transmission enables high quality signals and the television viewer can enjoy the quality of the picture like they are having it in the television studio.

**xDSL** Broadband technology are designed to increase bandwidth available over standard copper telephone wires; includes ADSL, SDSL, HDSL, RADSL, VDSL, DSL-Lite, etc. A DSL line can carry both data and voice signals and the data part of the line is continuously connected. ADSL is one of the xDSL technologies, which enables asymmetrical transmission of data, meaning that the speed of downloading is much faster than the speed of uploading.

**Broadband** are technologies or connections which enable rapid transmission of data, respectively films, games, video-conferences over the Internet network (e.g. ADSL, cable connection, UMTS, optical connection, VDSL, leased lines).

**Internet café** is a public place that offers access to the Internet. It is one of the public Internet points.

**e-Commerce** means buying or ordering of goods and services over the Internet. Typed e-mails are not considered as e-commerce.

**e-Learning** means education via the Internet.

**GPRS** known as 2.5 G technology, which makes it possible to send/receive blocks of data from/to mobile phone. GPRS provides an "always-on" connection to the Internet and users are charged according to the volume of data transmitted rather than the time spent connected.

**ICT** (Information and Communication Technology) is software and hardware used for data communications (e.g. computer, fax, Internet, fixed, mobile phone).

**Internet** is a worldwide network of computers, communicating on the standard Internet protocol and providing users with exchange of textual and audio-visual information.

**ISDN (Integrated Services Digital Network)** is a digital network that enables transmission of voice, picture and data at the same time (128 Kb/s).

**Public access point** is any information point that enables Internet access in a public place. Public Internet points are: library, youth center, school, cyber café, hotel, airport, etc.

**P2P (peer to peer)** is a network where data and information are distributed between multiple number of computers and are not limited on one central server. The network is used for sharing of files, movies and music using different programs (eMule, Kazaa, DC++).

**Firewall** is a combination of software and/or hardware that protects data and computers from harmful and malicious threats from the Internet.

**Set-top box or TV communicator** is a device that enables a television set to become a user interface to the Internet. The convergence between television and the Internet enables watching numerous domestic and foreign television programs and Internet usage through the usual television screen.

**UMTS** is also known as 3G technology that was designed as a successor to GSM. It enables users to transmit images, video, high volume of data through wireless connection and access to the Internet.

**Monthly net income** per household is calculated from the total monthly net income of the household: wages/salaries, pensions, income from activity, property, farming, unemployment benefits, scholarships, child benefit, etc. Regarding the amount of the household's income, the households are divided into quartiles. Households with the lowest incomes are included in the 1st quartile and households with the highest incomes are included in the 4th quartile.

**Localities** are divided by types into:

- densely-populated area, includes the local areas, each of which has a density superior to 500 people per square kilometre, where the total population for the set is at least 50,000 people.
- intermediate area, includes the local areas, each of which has a density superior to 100 people per square kilometer, with a total population for the set of at least 50,000 people or is adjacent to a densely populated area.
- thinly-populated area, includes the local areas belonging neither to a densely-populated nor to an intermediate area.

**Education** is divided into:

- low education, includes persons without school education or incomplete basic education and persons with primary education.
- medium education, which includes persons with lower or upper secondary vocational education, persons with upper secondary technical education and with upper secondary general education.
- high education, includes persons with higher vocational education, persons with professionally-oriented higher education, university education and persons with post-graduate education, masters and doctoral studies.

## Publishing

The results of the survey are published as the First Release on Information Society - ICT usage in households and by individuals. More detailed data will be published on the National bureau of statistics web portal: http://www.dzs.hr