

DIGITAL TECHNOLOGIES AND SOCIAL INCLUSION¹

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“It is a precondition for better economic performance that we create a society with greater social cohesion and less exclusion. [...] The emergence of new information and communication technologies constitutes an exceptional opportunity, provided that the risk of creating an ever-widening gap between those who have access to the new knowledge and those who do not is avoided.”²

Introduction

This paper shall present several aspects regarding a new type of exclusion and inequality that we might now identify. It refers to these phenomenon as they are the effect of new communication and information technologies. Several issues shall be tackled in this essay. The theoretical approaches coming from sociological background in what regards technical devices and their uses shall be presented as well as some approaches regarding the use of Internet as a means to enhance or diminish inequality.

The focus of our present paper is on the European dimension of this phenomenon, and especially on my home country, Romania. The issue of social inequality and the very well known term “digital divide” are key concepts in our endeavour at distinguishing between the old concept on inequality and the new one which now is treated by authorities with utmost interest and care.

We will also tackle some other aspects regarding “technological inequality”, such as the sources of such inequality, which to a given extent are the same as the ones which should be resolved by national states.

Although several theoretical approaches will undoubtedly consider the use of internet and new technologies as the “holly graal” in what regards inequality, this idealistic perspective will not be presented in this paper. We will try to distance ourselves from the extremist points of view and to present an approach which is closest to the current social realities.

The Internet - an egalitarian space?

This section of the present essay focuses on the issues of the influence of technology and its effects on its users. A special chapter is dedicated to the sources of inequality which are present in the world of the www. Although our presentation begins with some theoretical aspects regarding the Internet, they are by no means complete, and they should be considered as guidelines to the future discussion which we will continue in the future sections.

Theoretical approaches of the Internet

We will present three main approaches of the Internet, which are considered to be the most significant. They are perspectives as to the use of this technical device and on its effects.

¹ Paper presented at the ECSR/ICS Summer School Solidarity and Inequality: markets, states and communities, *Jonkerbosch Nijmegen*, The Netherlands, August 21-28, 2005.

² *Introductory Note to the Issues in the fight against poverty and social exclusion European Council*, 17 October 2000, www.einclusion-eu.org

The first perspective is that of the *omni-internet* theoreticians. They advocate for the extension of the Internet at world scale. Although this might be a significant goal for the future, they also attach several values to the Internet. The scientists which sustain this point of view, see in the Internet the birth of a new world, a world of equality and in which the technology «will solve all problems». The internet and the virtual space and especially the apparent freedom they provide, gives these theoreticians the embodiment of the internet as a «promised land», separated from the «real world» and the «real law», in which all «your dreams will come true». They are also considered to be the utopists of Internet and they regard this technical device from an idealistic perspective.

The second approach which I shall present is the one which is closer to my own perspective. It regards the *techno-realistic* point of view about the Internet. The technorealists think that although the Internet is a very good technical device, its effects, positive or negative, should not be exaggerated. Although, the Internet will help in the formal education, we cannot entirely depend on the internet to reduce inequality. Having just access to the internet in a poor village will not provide the inhabitants with a social inclusion similar to great cities. Also, they see the world of the internet as an interdependent world with the «real space» and they consider that there is enough cause for jurisdiction in the «virtual space». The main point that the technorealists want to stress is that technology does not solve social problems if they already exist.

The third theoretical position is that of the *technophobes*. They represent the theoreticians who are afraid of everything new and who see technology as a threat to everything which now exists. They are against the use of Internet which is considered very dangerous for the humankind. They usually exacerbate the negative effects and it makes us wonder whether their perspective is just the product of technological illiteracy.

Although we have presented several approaches to the Internet, we must point out that the technophobe perspective is long overdue.

We must stress that now there is no longer a debate on whether to implement the Internet or not. We have already passed this phase. The moment when a technical device has attained a certain acceptance level, it becomes indispensable and the people who do not use it will become marginalised. Now, most people cannot imagine their life without the use of a computer, the Internet or the mobile phone. Therefore, there is no longer a debate on using or not using the Internet, as it has already achieved a high level of consensus among people. *The Internet is here to stay.*

Sources of Inequality

A problem which shall be suggested by this chapter is the issue of Internet as a producer of equality or inequality among individuals. The main idea of this debate is that the Internet offers the same possibility of access to all individuals and therefore, it is going to annul all differences which are preserved by the «real world».

These issues include what we call "*digital divide*".

A comprehensive definition of the *digital divide* has been given by the OECD in 2001³ and this definition will be used in this paper. According to this definition, the digital divide is considered to be:

«the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies and their use of the internet for a wide variety of activities»

³ After Alakeson, V., 2003.

In fact, the «virtual equality» is rarely obtained in practice, because it reproduces a system of opportunities which already exists in the real world. There are many people excluded from the use of the internet and we are going to identify several factors which determine the virtual inequality.

A first source of inequality is based on the fact that the *national states are not developed to the same extent from the economic point of view*. For this reason, the citizens of these states do not have the same chance to connect to the internet and not even the same financial resources to do that.⁴ In the most developed countries, the internet connection is very frequent. For instance, in France, 50% of the households have an internet connection. Also, in Australia, the electronic vote is facilitated by Internet access in all households⁵. On the other hand, the access to Internet is conditioned by *literacy* and a large proportion of the world population is completely illiterate⁶. The distribution of illiteracy is not uniform on our planet. The large majority of illiterate individuals are found in Africa or Asia, but especially in the south part of the planet. Also, the gender distribution is not uniform: 2/3 of the illiterate are females and 1/3 are males⁷.

Therefore, the illiterate individuals have no chance of participating in the information exchange, since they do not know how to read and write and these are the fundamental conditions to use the internet. These persons are actually the first excluded from the virtual communication.

A second category of people excluded is that of persons who do not have sufficient knowledge to use the computer. We mention a specific category of illiterates, that is the *technological illiterates*, who do not have access to the internet because of an insufficient knowledge of the computer. This is caused by the fact that the technical education is not as generalised as the traditional education⁸. For instance, in the countries of Western Europe, 99% of the citizens are literate⁹. On the other hand, the proportion of persons who use the computer is smaller than the proportion of literate persons. The older population uses the computer and the Internet to a lesser extent than other socio demographic categories. In the same time, the young population has the most frequent Internet users.

So, the three categories that we have already mentioned have a significant impact on digital inequality. The financial scarcity, the «traditional» literacy and the technological literacy should always be taken into account as fundamental factors regarding the access to new technologies and digital inclusion. Therefore, the three characteristics that we have already mentioned limit the equality of the individuals. The Internet access is a very common thing in the United States or in the European Union, but it is not as common in the rest of the world. The access is limited by the economical situation of the national state, but also by the financial resources of the family. We fear that in this new world, the virtual space, the inequality to the access to information is not going to be reduced and that this inequality is going to develop and is going to consolidate the inequality structures already in place in the real world¹⁰. In this case, we are going to have a reproduction of the relations from the real world in the virtual space and not an autonomisation of the virtual space. In this new world,

⁴ Breton, Phillipe, 19, 2001.

⁵ After Internet Society (www.insoc.org)

⁶ See www.unesco.org or www.uis.unesco.org. The large proportion of illiterates is represented by women and they are the most marginalised regarding the access to a formal education and the access to an educational system.

⁷ www.unesco.org

⁸ Breton, Phillipe, 19, 2001.

⁹ www.unesco.org

¹⁰ Breton, Phillipe, 2001, 122.

we see an increased dominance of certain individuals, because they are the owners of technical devices which give legitimacy for power¹¹.

As we have already mentioned, the unequal access to information determines a certain over-representation of specific groupes and nations. A simple argument to justify our hypothesis is that the most used languages in «the real world» are Chinese and Spanish, English being only on the third place. If the Internet was a producer of equality, the majority of users and websites should be Spanish or Chinese. In reality, «the language» of Internet is English and also, the majority of websites are in English. According to the statistics by Google, almost 80% of the websites are in English.

So, the Internet is not a producer of equality for all, but is it a source of equality for those already connected to the «network»? Is an electronical democracy really possible? The Internet can be considered as a way to reconstruct the ideal democracy, that of Ancient Greece. In the Greque cities, the decisions were taken by citizens after a discussion in the public place, *agora*¹². Even if direct physical contact is impossible at the present time, because of the high number of persons, the Internet and especially the direct communication with the authorities can serve as a substitute for the direct interactions. In Romania, for instance, there are sites for electronic governance (*e-guvernare.ro* is the most well known site) or discussion groups on political issues.

Although the Internet can prove to be a significant device for facilitating communication between citizens and authorities, we must point out that the three sources of inequality already mentioned in the previous pages are in place even in this situation. If e-vote or e-governance become a standard in a society, the excluded persons will become even more «excluded», as they will not be able to influence the political factors and not even to express their own will in this respect.

Levels of literacy

There are two levels of literacy that we shall now present from the statistical point of view. We shall use the databases from UNESCO's Institute of Statistics for the information on traditional literacy and we shall use several reports of the European Union in what regards the technical literacy.

By «traditional literacy», we mean one's ability to read and write in his/her own language or in other languages. This term is a key concept in understanding the digital divide phenomenon.

The other term that we will employ is that of «technical literacy» which consists in one's ability to use the computer. This does not mean that the respective person must have a background in computer science. It simply implies that he/she is able to perform simple operations with a computer (e.g. typing, finding information on the Internet, saving information etc). In the following paragraphs, we shall give several information regarding the literacy levels. More in depth statistics can be found on the UNESCO website and or on the website of UNESCO's the Institute of Statistics.

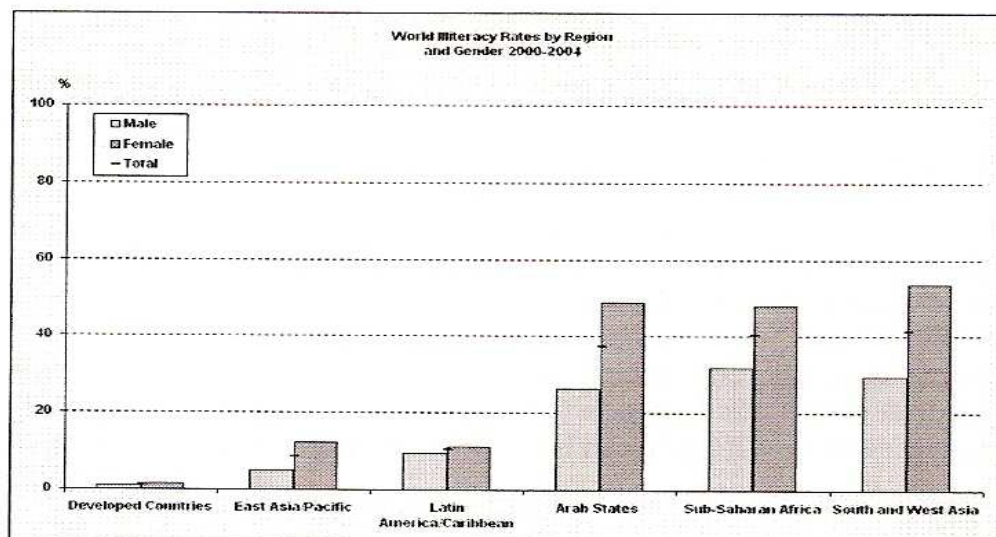
Traditional literacy

The first graph in this section emphasizes the general world situation in what regards illiteracy. We must point out that in the developed countries the illiterate population is under

¹¹ Breton, Phillipe, 2001, 123.

¹² The notion «agora», of Greek origin, is very much used in the articles on virtual communication. It signifies the information exchange in the public debates, but situated at a new scale: the planetar scale. The communicational agora is used by M. Mattelard, 2001, to suggest the intensity of the communication and in a certain way the rebirth of antiquity, one of the characteristics of the postmodernism.

5% of the total population, while in under developed states, the proportion of the illiterates can be around 40%. What we also want to mention is that in developed countries, there is no difference in what regards the male and female illiteracy. This fact is no longer true in underdeveloped countries. In these states, the female illiteracy is almost the double of male illiteracy. This is what we have pointed out already in our introductory chapters. The females are more excluded from new technologies than the men and also less developed countries are less likely to have access to the Internet. We must point out that in the European Union¹³, as well as in Romania¹⁴, the literacy level is around 99%.



Graph 1. World Illiteracy Rates by Region and Gender 2000-2004 Source: UNESCO, 2005

Technical literacy

According to the Internet World Statistics (www.internetworldstats.com/europa.htm), in the European Union there are 215,765,036 Internet users as of March 2005, which represent 46.9% of the population. So, we can estimate that at least 47% of the EU population is technically literate.

We must point out that there are several categories of the population which are less likely to be technical literates.

According to Alekeson, V., 2003, in a report published by the European Commission in 2002, a 34.3% penetration rate of Internet was the EU average in 2002. In the same time, the people below this average were the disabled, the elderly (55+), the people with a low income, the women and the persons residing in rural areas. In this way, we note that these categories have a lower technical literacy and in the same time they are more predisposed to social exclusion due to new technologies.

The same conclusion, that certain socio demographic categories are excluded, is pointed out by the 2005 eEurope report¹⁵, which suggests that especially the elderly are persons with a lower technological literacy.

In Romania, the problem of the technical literacy is tackled in the Barometer for Public Opinion (BOP), a survey which is taken at each six months and the latest one was held in May 2005. According to 2005 BOP¹⁶, 23% of Romanians have a computer at home and

¹³ www.europa.eu.int

¹⁴ www.edu.ro

¹⁵ www.europa.eu.int (the Information Society Programme)

¹⁶ www.osf.ro (Open Society Foundation) or www.gallup.ro

10% of them have Internet access at home. The national estimation for the Internet penetration is about 20% according to the May 2004 BOP, but this is considered to be an underestimation of the Internet access in Romania¹⁷. So, we can estimate that at least 23% of Romanians are technologically literate. Also, the excluded categories are the elderly and the people living in rural areas¹⁸.

Although the Romanian access to new technologies is more limited than in the EU, it is important to point out that the Romanian Internet access is around half of the European access rate. Also, in Romania most Internet connections are dial-up or cable connections, because of the low cost of the access. Even if other connecting devices are available, we must state that the other options are quite expensive for a regular Romanian.

We also should mention that there is a very different access to Internet according to the residence and the age of users. Rural areas in Romania have less access to the Internet, but even in the most remote villages you might find an Internet Café.

According to a Gallup study on the Romanian children in 2004¹⁹ (on the perception of radio and TV programs), it has been pointed out that families with young children have a higher Internet access rate and they also have more computers at home. In this study, around 70% of the households with a child aged 14 or less had a computer, and the Internet access was above the national rate.

In the same way, students access to the Internet is higher than the rest of the population. In a study that I have conducted in 2004 on the students of the University of Bucharest, I have found that more than 60% of them have Internet access from their dorm rooms²⁰.

Social indicators

I shall focus explicitly on the Romanian case. In the case of the EU, a lot of statistics are available at Eurostat in order to present several key economic issues.

EU social indicators

For the EU, the GDP/capita is about 20 000 euros, with some differences between countries. Also, the monthly salary differs from country to country. If in Portugal a monthly paycheck could be around 500 euros, in the UK a paycheck of about 1800 pounds (about 2770 euro) is considered normal.

Also, there are significant differences between the employment rates in different countries as well as between the ratio between the adult population and the elderly²¹.

We must point out that the income received by a person working in the EU is by far superior to a non-EU paycheck. In the case of Romania, the difference is really significant, up to a few times the Romanian salary.

Romanian social indicators

As the main indicators for the Romanian economic situation, I have chosen the index of consumption prices (Indicele preturilor de consum –IPC), which shows the inflation of the

¹⁷ A better estimation of Internet access in Romania is about 33% and not 20% which are the official percentages. We must also note that 33% of Romanians have a mobile phone and most mobile phones can be used for internet access.

¹⁸ See the BOP from May 2004

¹⁹ www.gallup.ro

²⁰ The reason for this high Internet access from student dorms is the low cost of the cable Internet connection. A monthly rate of about 5 euro is the usual fee for unlimited Internet access in a student dorm. In Romania, the price of a computer is about the price of a TV, and most students use their computer also as a TV or a radio.

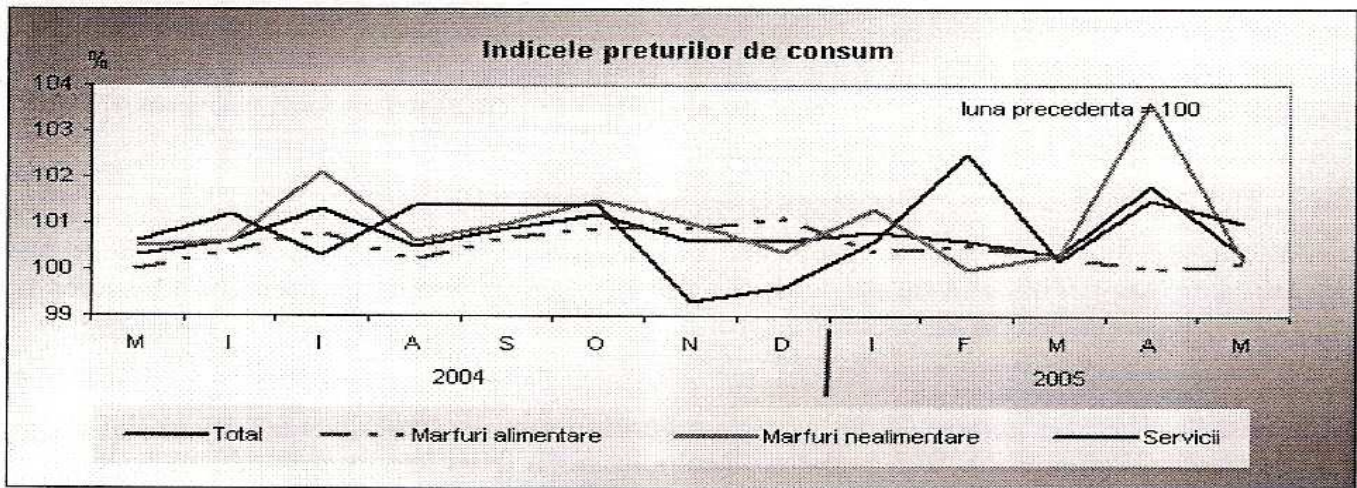
²¹ For more information see Eurostat – the statistics for the European Union. They are not the focus of our presentation.

main products from one month to the other. IPC is calculated by considering 100% to be the previous month.

A second indicator that I have selected is the indicator for net average paychecks for each month. They show the value of the monthly salaries by considering 100% the salary from the previous month. We might also point out that the unemployment rate in May 2005 in Romania was about 5% with small gender differences.

Also, in order to have a comparative picture with the EU, we must state that the average monthly pay in Romania is about 200 euro with very large differences depending on the level of education and of the position within a company²². A very good salary in Romania is considered to be 1000 euro.

The index of consumption prices (IPC)



	2004									2005			
	M	I	I	A	S	O	N	D	I	F	M	A	M
Total	100,3	100,6	101,3	100,5	100,9	101,2	100,6	100,6	100,8	100,6	100,3	101,8	100,3
Marfuri alimentare	100,0	100,4	100,8	100,2	100,7	100,9	100,9	101,1	100,4	100,5	100,3	100,0	100,1
Marfuri nealimentare	100,5	100,6	102,1	100,6	101,0	101,5	101,0	100,4	101,3	100,0	100,3	103,6	100,2
Servicii	100,6	101,2	100,3	101,4	101,4	101,4	99,3	99,6	100,6	102,5	100,2	101,5	101,0

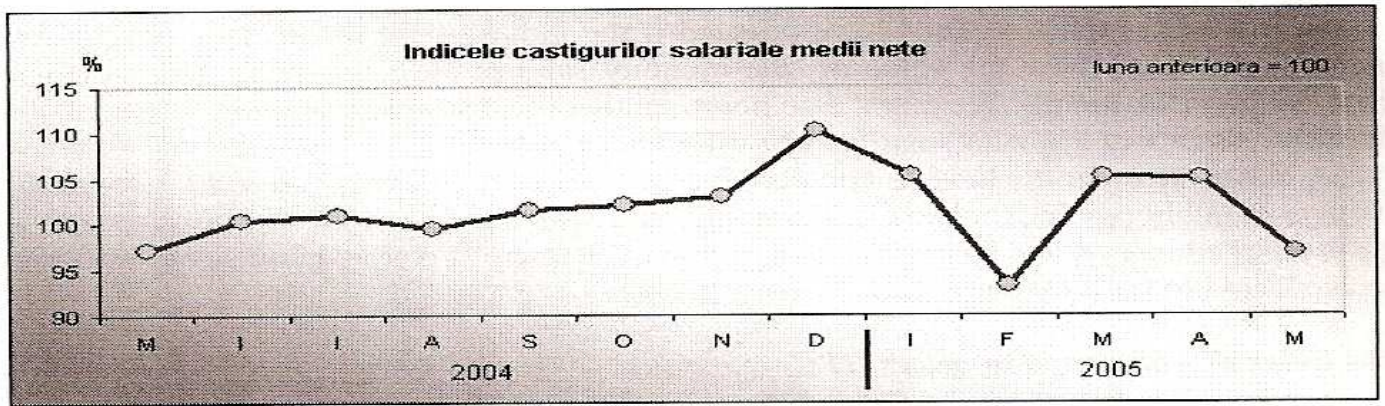
Source: The Institute of Social and Economic Statistics, 2005 (www.insse.ro)

Graph 2. The index of consumption prices in Romania – May 2004- May 2005 (preceding month =100) The dark line represents the total, the red line - food products, the pink line- non-food products, the blue line represents services

The index for consumption products shows that on average there has been a significant inflation from one month to the other. According to the National Romanian Bank, the estimated inflation for 2005 is going to be about 7%. We shall note in the following paragraph the situation with the Romanian salaries in the same period of time.

²² www.insse.ro (National Institute for Social and Economic statistics)

The index of net average monthly paychecks (average salaries after taxes)



	2004								luna anterioara=100 2005				
	M	I	I	A	S	O	N	D	I	F	M	A	M
Indicele castigurilor salariale medii nete	97,2	100,5	100,9	99,6	101,5	102,1	102,9	110,1	105,2	93,2	105,1	105,0	96,9

Source: The institute of Social and Economic Statistics, 2005

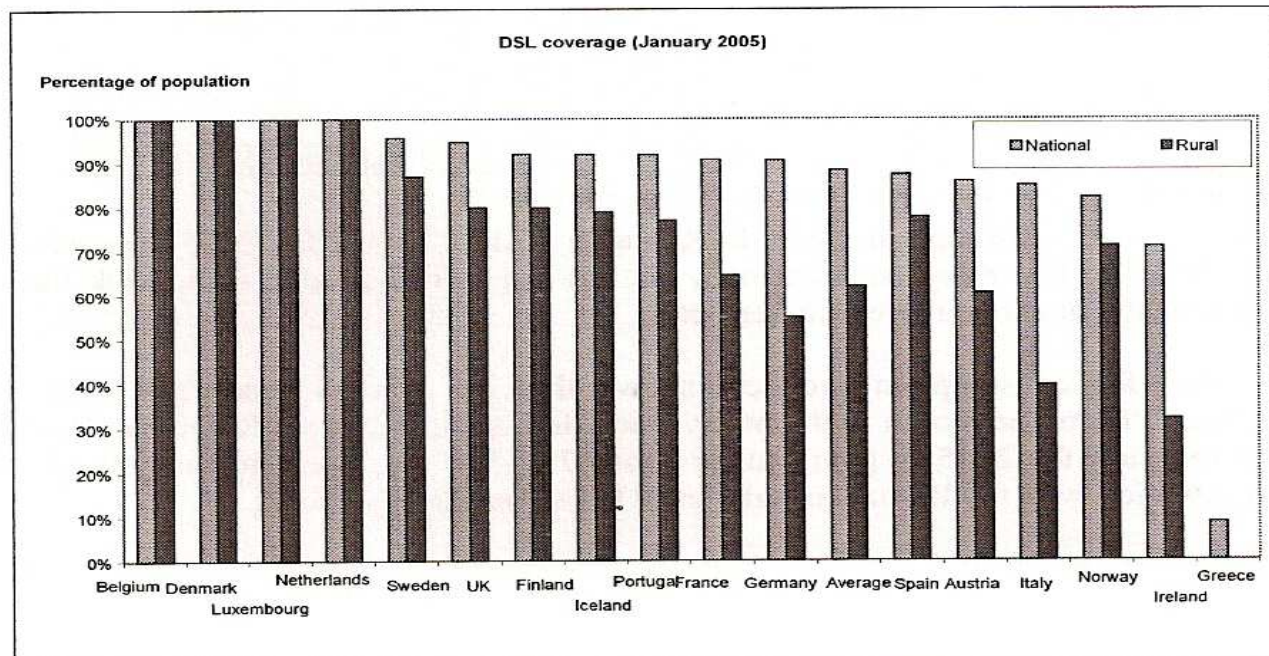
Graph 3. The Average salaries after taxes (previous month =100)

We notice that compared to previous months the monthly paychecks have decreased or they are stationary. This can be difficult for the Romanian people as their income does not increase and the prices are on an ascending trend.

Access to new technologies

We have already presented many of the aspects regarding new technologies access in the chapter regarding technological literacy. We shall therefore point out a few ideas on this subject.

Access to new technologies in the EU



Source: "Digital Divide Forum Report: Broadband Access And Public Support In Under-Served Areas", European Commission, 2005, www.europa.eu.int

Graph 4. DSL access in urban and rural areas

The previous graph shows the situation of 12 Member States in what concerns DSL access in urban and rural areas. We must point out that the access in rural areas is by far less extensive than in urban areas. Only four countries: Belgium, Denmark, Luxembourg and Sweden have a 100% penetration of DSL. For the other countries we notice a significant difference between the rural area access and the national situation. Greece, for instance, does not have the data for the rural access. So, we might identify a digital divide between the rural and urban areas of Member states.

Access to new technologies in Romania

As we have previously pointed out, Romania, although it is not in the EU has quite a high Internet access rate of about 20% and possibly higher. The Internet access can be achieved by cable or dial-up which are the most common because of the low cost, but also by mobile phones, wireless Internet or satellite connections which are quite expensive for Romanians.

The difference between rural and urban areas is also very significant. The rural area comprises almost half of the population, but it is not very technically advanced. The large cities have usually the best Internet access and most of the home computers in Romania. The issue is that almost everyone can buy a computer in Romania as most computer shops offer a monthly pay system for computers which could be around 5 euros/month.

The main problem in Romania is that there is a huge gap between the people with low salaries and those who have quite large ones. For the first category, owning a computer is not their «life goal» as their main concern is to survive from one day to the next. For the second group, having a computer at home becomes essential and is highly desirable.

Also, having Internet at home is becoming much wide spread as was previously thought possible. For many people it becomes indispensable to be able to check their email at any time. In the May 2005 BOP, 10% of Romanians have Internet access at home. Compared to the May 2004 BOP, only 6% of the population has Internet access in their household. We notice a significant increase of the proportion of people having Internet access at home, from 6% to 10% and this increase is only within one year.

Open questions

Several questions should be left open for answering:

1. Romania has a monthly paycheck of about $\frac{1}{4}$ of the EU salary. Why do Romanian citizens have an Internet access rate which is about $\frac{1}{2}$ of the EU Internet access?
2. How could we close the digital divide between the rural and urban areas?
3. If «technical literacy» becomes available on a larger scale, even outside EU, would this make digital divide obsolete?
4. Should we set up a programme «a computer for everyone²³» or «Internet for all» in order to limit the digital divide?
5. Is access to new technologies reinforcing the «old social order»?
6. Could we use Internet access as a means of counter-balancing the social inequality?

²³ This programme was already in place in Romania in 2004. It offered 200 euro for a computer for each child with social needs attending school. This programme was stopped as the Romanian budget could not bear such a financial burden.

7. Should access to Internet be guaranteed to everyone and should it be part of a legislative provision like the «Declaration of Human Rights»?

Conclusions

The present paper had as a main aim to present the issue of digital divide with a focus on EU and one of the accession states, Romania. Although the Romanian situation from the economic point of view is not at all similar to the EU states, we have noticed that Romanians enjoy a high Internet access rate. We have identified several factors which might be responsible for the digital divide: the traditional illiteracy, the technological illiteracy and the financial situation. Furthermore, we have noticed that there is a digital divide between countries or regions of the world, but also there is a gap within countries. This refers to the gap between different regions (rural and urban areas in particular having different access rates), as well as a gap between individuals, age and gender being very important characteristics in ascertaining if a person is likely to be «technologically excluded».

The main point that I want to make is that probably in the future we will be forced to acknowledge the right to Internet access as a fundamental right of human beings. If all of us will be online, should that mean that no one will suffer anymore from social exclusion? We'll just have to wait and see about that.

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- www.isoc.org (Internet society)
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- www.europa.eu.int (for the information on the European legislation and for the reports on the information society)
- www.insse.ro (The Romanian Institute for Social and Economic Statistics)
- www.edu.ro (The Romanian Ministry of Education)
- www.osf.ro (Open Society Foundation- Romania) for the May 2004 BOP and May 2005 BOP
- www.internetworldstats.com/europa.htm
- www.einclusion-eu.org
- www.gallup.ro (Gallup Romania)