

Towards the information society

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SUMMARY

A new social class of the XXI century, the information society, is emerging as a result of the convergence of telecommunication, information technology and electronic media called infocommunication technologies (ICT) and it is based on the developing information networks. It is characterized by the globalization of the world economy, the appearance of new products and services, the introduction of new work structures and changes in the labour force, bilateral communication based on the use of information resources all over the world and new tools for practicing democracy. It is impossible not to take into account these extended processes as a result of globalization. On the contrary, taking an initiatory and active part in it, nations and generations can take economic and social advantage of it. For Hungary it means increasing chances of integration by breaking out of the past and bridging the gaps, thus, all efforts must be made to ensure the necessary conditions for it.

This process has been given priority in every country and has become the most essential issue in determining long-term objectives promoting the development of activity strategies in each country. It has become the issue that the European Union intends to look at as a significant weapon in the promotion of integration. That is the reason why accession to the initiatives of the Information Society has become of utmost importance in the European Union.

Only the person capable of using and producing information in huge amount in the interest of future society will become a real citizen of the European Union, as information is its most valuable product. At present the technological development is well ahead of the conscious development of human beings. The new information systems as well as the systems of informatics bring about changes in the ways the society operates, ensuring a wider field of activity for an independent person who is ready to participate.

The information society can emerge only if the majority of individuals in society can take part in it own ICT devices and know how to use them.

OPPORTUNITIES FOR HUNGARY

The current state of development of the Union is considered to be the starting point for the e-European project of the European Union. We cannot but share this

point of view from the framework of the e-Hungary project, and we would like to give an overview of the realistic activities expected to be carried out in the distant future taking into account the current state of the Hungarian economy and society.

On the basis of the Hungarian gray market as well as the innovation capacity there is a real opportunity to take the 'advantages of late comers' in order to utilize sophisticated technologies and target oriented methodologies, to ease the tension arising from 'the narrow cross-section' hindering the development of the country and to join the 'new economy' at the turn of the XXI century. Only a conscious and fast accession into the IT society can ensure a successful exploitation of developing and growing potential of Hungary. In addition, the application of new technologies promotes the growth of the competitive force of economy and improves the living standard of society in Hungary.

In the age of globalisation only a country that is able to create a modern, innovative and, thus, competitive economy can provide and improve the welfare of its inhabitants. In the global world economy only the national economy based on competitive society can be successful. Members of a competitive economy have to be ready and be able to communicate, cooperate, acquire new skills and knowledge, find solutions to new problems and phenomena emerging in a completely new environment at non-governmental or non-profit levels during their whole lives.

A competitive economy 'is served' by an efficient and professional state, which provides administrative, innovation and educational services, health and social care at 'competitive' prices and costs in the world market for its members and economic units working in the country. All this cannot be imagined without the application of the results and achievements of the most sophisticated IT and technology in our 'everyday lives' and on a wide scale.

Hungary possesses considerable achievements in the development of the IT society which can be of great importance for the Union and its member states. It encompasses Internet programmes used in public education, initiatives exercised in distance learning, networks of telehouses and the great results achieved in the dynamically developing mobile telecommunication industry.

Several professional and political projects have been launched targeting the development of the IT society in Hungary. But because of their slow implementation or non implementation we experience a considerable lagging behind the developed countries.

TENDENCIES IN DEVELOPMENT

The development of the information and communication sector of industry has been amazing in the past several years compared to other sectors, thus contributing considerably to the growth of economy in the EU.

According to forecasts there will be a dramatic increase in the ICT market. More favourable prospects and a common development of the export market will promote this phenomenon. The rate of employment is not likely to drop and the inflation rate will probably remain low in most European countries. These factors alongside with the increase in demand will promote secure business and provide favourable conditions for ICT investments.

As for the USA, it still plays a dominant role in the information technology market and its economic development is healthy. In 1998 the real value of GDP increased by 4.3%. The pace of development experienced in Ireland was 8.9% and Finland it was 5.6%. The real value of GDP in the EU was 2.7%.

*Table 1. ICT market of big regions by products, 1999.
(Million Euros according to the rate of exchange in 1998)*

	Western Europe	Eastern Europe	USA	Japan	Other	World total
IT hardware	98652	4189	141163	44313	55310	343627
Software	43517	813	68216	13172	23265	148982
IT services	77646	1621	141389	37082	43635	301372
Telecommunication eq.	58091	3190	23808	12073	44374	141535
Transfer eq.	192135	13255	189650	64646	197575	657261
Total:	470040	23067	564225	171285	364159	1592777

Source: EITO 2000

As the evaluation of certain ICT markets in big regions shows that the United States plays a dominant role. Its world market share was 35.4% in 1999, whereas the European countries had 31%. Japan also has a big share. Having a closer look at the European market the market share of Western Europe is much bigger than that of Central or Eastern Europe. Compared to 31% of the share, which is 493,109 million Euros Eastern Europe owns only 4.7% that is 23,068 million Euros. At the turn of the

century the greatest challenge for Central and Eastern European countries was to create a reliable infrastructure in order to be able to preserve their stability and economic growth. Several countries carried out reforms in legislation and regulation so as to attract investors in key sectors of industry (administrative, banking, finance and telecommunication). In 1999 the costs amounted to 23.1 million Euros in the examined seven Central European countries (Table 2.).

Table 2. ICT market in Central and Eastern Europe by country (million Euros)

	Czech Republic	Hungary	Poland	Russia	Slovakia	Slovenia	Estonia
Computer	474	362	1014	981	122	132	76
Office machine	41	43	81	144	20	12	6
Data transfer hardware	138	98	173	201	29	23	20
IT hardware total:	652	502	1268	1326	170	167	103
Software	180	153	238	116	57	46	23
Services	456	336	397	257	109	48	18
IT software and services	636	489	635	373	165	94	42
IT total:	1288	991	1902	1700	335	261	144
Telecommunication equipment	540	422	921	840	252	121	95
Transfer services	1487	1700	4155	4731	644	312	226
Telekommunication total:	2026	2121	5075	5572	896	433	321
ICT total:	3315	3112	6977	7271	1231	695	465

Source: EITO 2000

In almost every country of the region where the survey was conducted emphasis was laid on the sign transmission services. Russia had the highest figures at 65%. The figures showing IT software and related services in the Czech Republic and Hungary were 19.2% and 15.7%. In other countries it was under 15%. This indicator was the lowest in Russia where it was only 5.1%.

Regarding the number of inhabitants in Russian and the Ukraine the market of both countries is looked at as a potentially the biggest ICT consumer, especially with the increase in demand for telecommunication and IT devices such as printers, PCs, office machines and so on.

Due to their stability and market liberalisation the smaller countries like Czech Republic, Hungary, Poland, Slovenia and Estonia have great demands for more sophisticated systems, communication devices and related services. Foreign investors have also contributed to this process as companies they have set up in these countries have established processes similar to the ones in their western parent companies.

Despite economic and political stability on the ICT market of the region the Russian share amounts to 31.5%, Poland is rated as the second largest market taking into account the number of its population and Hungary has a share of 13.5%.

The ratio between IT and GDP, or the IT expenses per capita shows how widespread IT is in a particular country (Table 3.). On the basis of these data we get the structure discussed above. The ratio between IT and GDP in the USA was outstandingly high (1998), in Japan it was 2.7%, in EU the average ratio was 2.54%, although it should be noted that in Western Europe this figure varies considerably for example in Sweden it was 4.2%, but in Greece it was only 0.9.

In the UK, Denmark, the Netherlands and Switzerland this figure is above 3%. Only in Portugal and Greece does this figure not exceed 1.5%.

In Eastern Europe the expenses spent on information technology have increased considerably in the past ten years despite the fact that its ratio compared to GDP is still lower than in other western countries. As for its ration it is the highest in Estonia (3.2%), Czech Republic (2.7%) and Hungary (2.5%), but in Russia it is only 0.6%.

Looking at IT expenses per capital the backwardness of this region is even more striking. According to the data this figure is 123 Euro/capita in Slovenia, 119 Euro/capita in Czech Republic, which is even higher than in Greece where this figure is 91 Euro/capita compared to the average which is between 142 – 1157 Euro/capita.

Table 3. Popularity of IT technologies in 1998

	IT/GDP (%)	IT expenses per capita (Euro)	PC per 100 inhabitants (piece)
Western Europe	2,54	514	21
EU	2,51	499	20
Germany	2,41	560	24
France	2,71	590	20
UK	3,31	694	25
Italy	1,59	289	11
Spain	1,73	218	9
Austria	2,21	518	22
Belgium/Luxembourg	2,40	532	18
Denmark	3,02	891	43
Finland	2,69	576	32
Greece	0,91	91	7
Íreland	1,90	370	20
Netherlands	3,07	654	35
Norway	2,79	816	43
Portugal	1,49	142	8
Sweden	4,17	952	46
Switzerland	3,41	1123	39
USA	4,38	1157	51
Japan	2,72	725	13
Central and Eastern Europe
Bulgaria	1,19	13	..
Czech Republic	2,74	119	..
Hungary	2,50	90	..
Poland	1,49	46	..
Romania	0,56	7	..
Russia	0,61	14	..
Slovakia	1,90	60	..
Slovenia	1,64	123	..
Estonia	3,21	82	..
Croatia	1,35	45	..

Source: EITO.IDC, OECD

CONCLUSION

The emergence of the information society is a process promoting positive effects and decreasing or eliminating the negative ones while making the unfavourable unknown results serve society in different stages of its development in various extend. It forms the basic values of every society. Political authorities are expected to contribute to this process. Responsible institutions are expected to take an essential part in it. Regulations applied should promote the social solidarity. Companies, institutions and individuals should be involved in taking on responsibilities in this process as well. The concerned should be guided by principles serving the interests of society in the long run when decisions are made, measures are taken and actions are carried out.

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Zusammenfassung

Als Ergebnis der Konvergenz der Fernmeldetechnik, der Computertechnik und der elektronischen Medien, also der Infokommunikationstechnologien (IKT) entfaltet sich jetzt die Gesellschaftsordnung des 21. Jahrhunderts: die Informationsgesellschaft. Die Gesellschaft charakterisieren die Globalisation der Weltwirtschaft und damit die Herausbildung neuer Produkte, Dienstleistungen; die Erscheinung neuer Arbeitsstrukturen und die Umgestaltung des Arbeitsmarktes sowie die zweiseitige Kommunikation mit den Informationsquellen in irgendwelchem Teil der Welt und damit die neuen Mittel der Ausübung der Demokratie. Sich von diesem bedeutenden Porzeß zu verschließen ist wegen seiner Globalität nicht möglich, aber er kann bei einer anregenden, aktiven Teilnahme den einzelnen Nationen zahlreiche Möglichkeiten zur Besserung ihrer wirtschaftlichen, gesellschaftlichen Position bieten. Für Ungarn bedeutet das die Chancen des Ausbruchs, der Aufschließung, Integrierung, deshalb müssen seine Bedingungen noch um den Preis großer Anstrengungen gesichert werden.

Összefoglaló

A távközlés, a számítástechnika, és az elektronikus média, együttesen infokommunikációs technológiák (IKT), konvergenciája eredményeként kialakuló információs hálózatokra ráépülve most bontakozik ki a XXI. század társadalmi rendje: az információs társadalom. E társadalmat a világgazdaság globalizációja és ezzel együtt új termékek, szolgáltatások kialakulása, új munkastrukturák megjelenése és a munkaerőpiac átalakulása, valamint a világ bármely részén lévő információforrásokkal való kétoldalú kommunikáció, és ezzel a demokrácia gyakorlásának új eszközei jellemzik. E nagymérvű folyamat elől elzárkózni, globalitása miatt, nem lehet, ám kezdeményező, aktív részvétel esetén számos lehetőséget nyújthat az egyes nemzeteknek gazdasági, társadalmi pozícióik javításához. Magyarország számára ez a kitörés, felzárkózás integrálódás esélyeit jelenti, ezért ennek feltételeit még erőfeszítések árán is biztosítani kell.