

E-READINESS OF ROMANIAN SMEs

FLORIN MARTIN¹, MARIAN CRISTESCU¹, LAURENTIU CIOVICA², LIVIU CIOVICA¹

¹“LUCIAN BLAGA” UNIVERSITY OF SIBIU, ROMANIA
5-7 VICTORIEI BLVD., SIBIU, ROMANIA. 550024

²ECONOMIC INFORMATICS DEPARTMENT, ACADEMY OF ECONOMIC STUDIES,
BUCHAREST, ROMÂNIA

florin.martin@ulbsibiu.ro, mp_cristescu@yahoo.com, laurentiu.ciovica@gmail.com,
ciovica.liviu@gmail.com

Abstract:

It is undeniable the importance of SMEs in economic growth since they play their proper role in the emerging digital economy. But also have to consider the electronic preparation of these, their ability to absorb knowledge and to profit from their use, the e-accessibility and value added goods/services through ICT. Analysis capacity of SMEs to participate in the digital economy is essential in defining the level of digital divide and the critical determinants, allowing overcoming the inhibitors adoption factors of ICT by SMEs. E-readiness allows measuring the ability of SMEs to participate in digital economy, develop new channels of communication and to achieve sustainable economic development.

Key words: e-readiness, ITC, SME, digital economy

JEL classification: O16, M10, M21, D83

Currently, in most countries of the world, has been adopted proactive policies priority to create a favorable environment for the sustainable development of information technology and communications. Investments in businesses digitization and daily life digitization have following an upward trend. The technology is increasingly present in peoples' lives, and mare in businesses life.

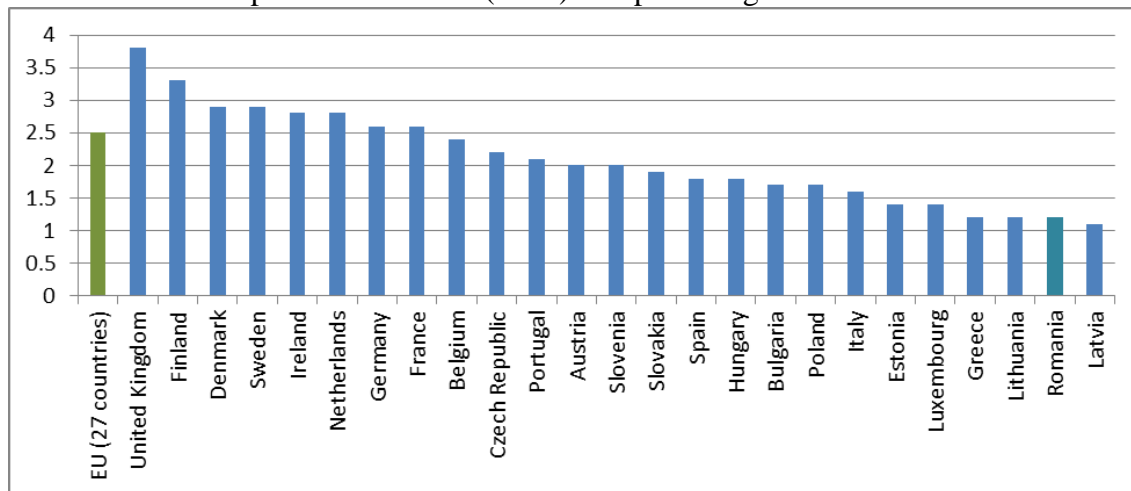
Digitization effects are observed in all industries, primarily due to the effects generated on the economy, and secondly on the social level. In terms of economic level, ICT becomes a pawn more important in increasing economic efficiency, productivity, competitiveness and generate new ways to develop business. In addition, the development of knowledge economy and globalization has a positive effect on those businesses that have adopted ICT and were able to capture electronic business opportunities. The effects of ICT adoption are felt, in fact, within enterprises. ICT adoption enables enterprises to communicate more easily, increase productivity, develop new business opportunities and connect to a global network of knowledge. Usefulness of ICT is generally recognized, but problems arise when it comes to availability enterprises to use these technologies. Are businesses in Romania ready to join the digital economy?

Success in the digital age, nationwide, depends on the spread of ICT in the society. The adoption of these technologies, mainly to SMEs, creating new business opportunities and increase competitiveness, imposing efficacy as a final goal. Since an emerging economic system, that is not based on the use and generation of knowledge, is not possible (Mutula, 2010), is empirically that companies have access to ICT, to implement these technologies and know-how advantage.

Digital economy is the generator of many changes at the micro and macro economics level. Perhaps one of the most important changes is related to changing business climate. In the old economy, businesses were made on the strategy carried out locally, thus watched vertical development and then to achieve a horizontal

development, namely accessing new markets. Currently, on the emerging economies, the two stages of development occur simultaneously. ICT and specialized human capital gives firms access to world markets, foreign know-how and many other resources. Moreover, all of this, help reduce the digital divide. In Romania, the digital divide effects are intensely felt. If we look compared to the ICT expenditure (as percentage of GDP), we see that Romania spends 1.2% of GDP for IT hardware, equipment, software and services Other (Chart 1).

Chart 1. Expenditure for TIC (2010) as a percentage of GDP



Source: Eurostat ([tsiir090](#))

Digital divide is a combination of factors with social and economic effects. Feel the digital divide primarily due to inaccessibility of some groups and organizations to current technologies, mainly due to high costs and geographical positioning. And, secondly, because the level of population knowledge in information technology (mainly managers and other employees in the decision level)

Electronic accessibility create obstacles that still exist even if all other indicators start to minimize their impact. Such obstacles may include: accessibility to facilities in other areas with a reduced price or free, the opportunity to benefit from discounted access to a network, the ability to use technological advantage, etc. The obstacles may come from five different directions:

- *Geographical location* - existing digital differences between geographical areas, largely caused by their degree of technology and the investments in the region infrastructure;
- *Equity* - it greatly affect access to information and communication technology because it is not sufficiently developed the manager's innovative thinking in this direction;
- *Belonging to an ethnic community* – there are significant differences at entity level and race. Note that in many countries ethnic communities suffer from poor technology development
- *Government policies* - they can motivate organizations to invest in technology. The existence of differences in adoption measures to support the digitization of government organizations and public administration creates differences on the global level;
- *Education / Skill* - a great influence on accessibility, education seems to be psychological engine of technological development. The higher the educational level is higher, the more need for computer and Internet access is higher.

At the European Union level, Romania's position is not favorable at both companies and individual levels. In Romania, information and communication technology is an early level of development. In many analysis indicators, Romania's position is less than the European Union average (table 1). Even if in 2007 Romania enjoyed a broadband penetration rate of almost 100% (EC, 2008), Romania's position is currently 27 of 27 (last of the EU Member States, with a broadband penetration rate 14.0%).

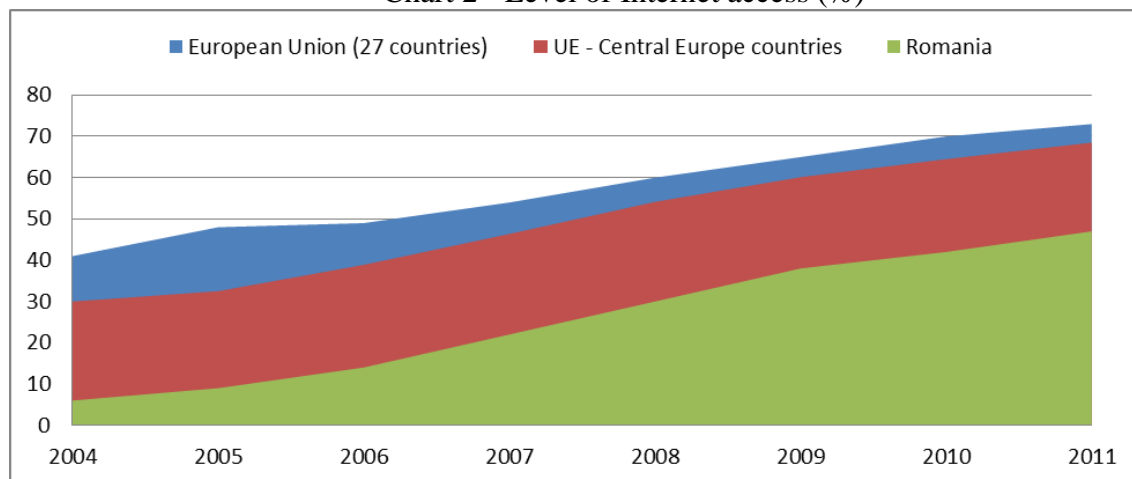
Table 1 - Comparison between Romania and EU

	EU	RO		
Enterprises using Intranet	33	28	2010	Percentage of enterprises
Enterprises using neither intranet, nor extranet, nor lan, nor wireless	18	25	2010	
Enterprises with Internet access	95	79	2011	
Enterprises who use the Internet for banking and financial services	82	58	2010	
Enterprises Internet connection: fixed broadband access	87	54	2011	
Enterprises having a web site or homepage	69	34	2011	
Enterprises with website providing product catalogues or price lists	34	20	2011	Percentage of enterprises
Enterprises selling online	13	4	2011	
Enterprises purchasing online	19	9	2011	
SMEs using Intranet	31	27	2010	
Enterprises who share electronically information within the enterprise	50	39	2010	Percentage of individuals
Enterprises sharing electronically information on sales or on purchases	30	21	2011	
Individuals who have never used the Internet	26	55	2011	
Individuals who have done at least one of the computer or Internet activities	75	47	2011	Percentage of individuals
Individuals - Internet banking	37	4	2011	
Individuals - selling goods or services	17	3	2011	

Source: Own analysis from <http://epp.eurostat.ec.europa.eu/>

The beginnings of the digital economy in Romania were marked by a surprising increase in the number of digital technologies users (both enterprises and individuals). Even if this increase was maintained until now, growth rate has not varied too much. Thus, at present, Romania has a level of Internet access of 47%, compared to EU average of 73% (Chart 2).

Chart 2 - Level of Internet access (%)



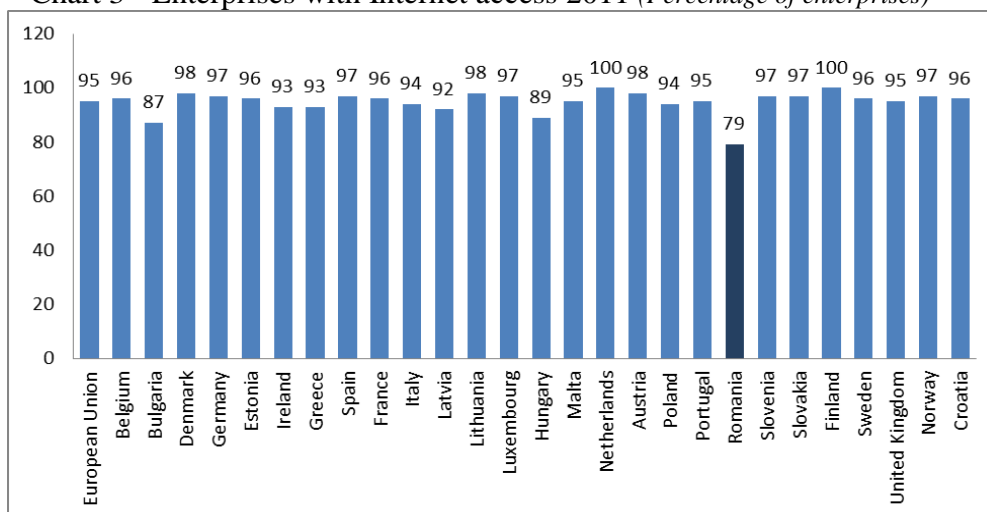
Source: Own analysis from Eurostat (isoc.silias.ro)

Digital development of the economy, in a region or country, it must be seen first, from the viewpoint of Internet access and connectivity. To facilitate these services for the enterprises (especially SMEs) would enable them to develop both on the domestic market as well as the new markets found following digitalizing their network business. The opportunity for the development of enterprises, in the digital economy, it is comparative to the degree of access to the global network. In "World Information Society Report 2007: Beyond WSIS" is presented the Digital Opportunity Index which ranks Romania at 50th place out of 181 analyzed countries. The Digital Opportunity Index allows us to create a clear understanding of ICT diffusion and the influence exerted by these technologies. Complexity and utility of this index is from the fact that analyzes three axes of interest: opportunities, infrastructure and ICT use.

Positioning Romania in 50th place, according to the Digital Opportunity Index, is an effect of rapid growth in the number of users, which actually did for Romania to be among the top five states with the largest increase in two in 2004-2006 (ITU , 2007). But six years later things are different. As we presented in Table 1, Internet usage at the individual level is below the EU average. In 2011, 55% of Romania's population has never used the internet, so worrying given that the EU is 26% and Iceland (first place) has only 6% of individuals who have never used the Internet.

Given the importance of ICT, inability to access or to use them, is one of the main forms of social and economic exclusion. Using ICT in enterprises (SMEs in this case) is important economically. The idea of e-business is not primary when we talk about using ICT, but refers to accessing, providing and sharing information within business networks; namely making business in an emerging digital economy. But given the situation presented above, it is expected that Romania's position in terms of percentage of enterprises with internet access, is expected to be disappointed. As shown in Chart 3, only 79% of companies in Romania have Internet access. This ranks Romania on the last position in the European Union.

Chart 3 - Enterprises with Internet access 2011 (Percentage of enterprises)



Source: Own analysis from Eurostat (isoc_ci_in_en2)

ICT still has a limited role in the Romanian economy. Information and communication technology has a complex impact not only on the economy and its effectiveness, but also on society. Lack of accessibility to ICT generates many forms of economic exclusion for SMEs. Romanian SMEs participation in the digital economy requires: the existence of an infrastructure that allows access to ICT and existing SME knowledge to use these technologies.

Rapid advancement in a digital economy affects SMEs on the one hand as negative, because those enterprises that have adopted ICT will have trouble surviving. The effects of globalization, such as increased competitiveness, will undermine the market power of local SMEs. The possibility to enter into partnerships will be low or without effect, given that most of these tend to be made online or require the use of ICT by businesses desired to be partner.

The concept of e-readiness in the business environment in Romania allows highlighting the digital divide when it is subjected. The e-readiness of SMEs allows the analysis capacity of SMEs to develop new channels of communication, marketing and distribution of goods / services and to achieve sustainable economic development.

In analyzing the e-readiness of business in Romania, compared with EU countries, we used business readiness pillar of "The Global Information Technology Report 2010-2011". This predicts ability and readiness to adopt and use ICT in the enterprise.

Table 2 - Business readiness rank (138 analyzed countries)

Country	Score	Rank
Switzerland	5.70	1
Sweden	5.69	2
Finland	5.52	3
Germany	5.27	4
Singapore	5.26	5
United States	5.23	6
Netherlands	5.20	7
Belgium	5.17	8
Denmark	5.14	9
Ireland	5.08	10
Hungary	4.05	58
Romania	3.98	63
Russian Federation	3.70	90
Bulgaria	3.52	107
Moldova	3.44	111

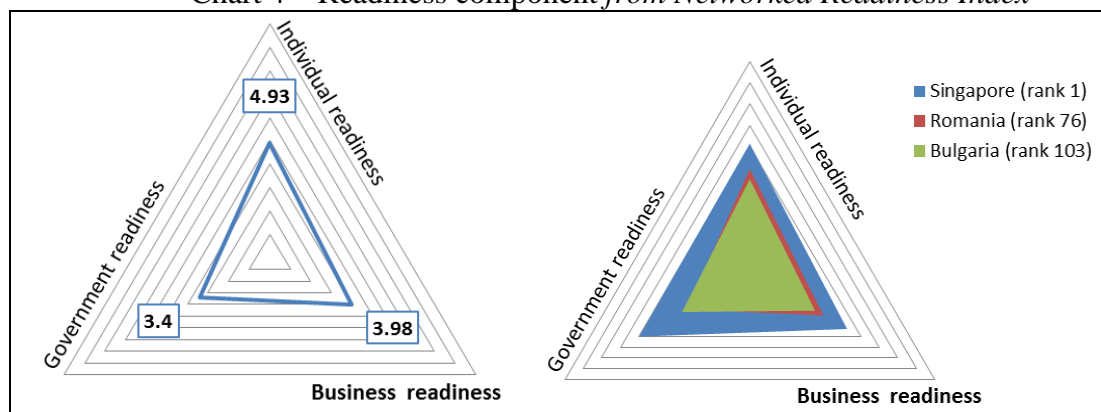
Source: The Global Information Technology Report 2010–2011 (WEF, 2011)

According to the Business Readiness Subindex, Romania ranks 63; ahead in this regard countries like Russia, Bulgaria, Turkey and Greece. But in the same report, the Usage Subindex, which shows the degree to which ICT is used throughout the country - placing Romania after the countries mentioned above. This shows that although Romania is investing in ICT, the ability to use these technologies is not fully developed. If, at the individual level, the usage of these technologies placing Romania at the 72 rank, when we talk about using technology at the enterprise or public administration level, the score is not gratifying (business usage - rank 70, government usage - rank 74).

Following own analysis undertaken in 2010 on SME from the Development Region Centre of Romania, revealed that 10% of surveyed businesses believe "insufficient government support" an obstacle to ICT adoption. Government can create an environment where e-commerce implementation and adoption of ICT by SMEs, allow them to develop on the potential of their investment. Improvement and extension of existing infrastructure, the motivation of SMEs through tax exemption, the development of the population confidence and the increase of ICT-related knowledge that can be acquired from public education, would help significantly to facilitate ICT adoption.

On Chart 4, we see that the governmental sector of Romania is not sufficiently prepared for adoption and use of innovative technologies. This has indirectly effect on government policies to support ICT use by enterprises. Bulgaria has managed to digitize some public administration and exceeds Romania in terms of governmental readiness. It is expected that in the next period, the Bulgarian business environment readiness for ICT adoption to increase, enough to overcome the current position of Romania.

Chart 4 – Readiness component from *Networked Readiness Index*



Source: Own graphic from The Global Information Technology Report 2010–2011 (WEF, 2011)

Conclusions

Importance of SMEs in the economy is widely recognized and indisputable. Therefore, they must be supported in their development efforts in research and innovation purposes. When is desired a digital economy and a digital divide control, government measures have to primarily affect positive the SMEs.

E-readiness should be viewed nationally but the effects should be tracked on SMEs level. SMEs should be the main target of government policies to encourage the use of ICT. The necessity of ICT adoption must be oriented to SMEs level, but the effects will be visible at national level.

In conclusion, the Romanian SMEs are ready to take part in a global digital economy but are not motivated by government measures. Perhaps there are lacks of digitization knowledge on managerial level, but the government should guide enterprises to this area, and not as an incentive to increase GDP but a desire to improve Romania's position globally.

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