

BUSINESS DEVELOPMENT THROUGH eACCESSIBILITY'S GROWTH TO DIGITAL ECONOMY

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Abstract:

Even if the idea of discussing e-accessibility (electronic accessibility) is mainly in reducing digital discrimination for people with disabilities, it can be transposed on business relationship with online business environment. Increased e-accessibility is supported by a high level of ICT adoption in the enterprise. Thus, considering the implications of ICT in the digital economy, we analyze the effect of ICT adoption in enterprises on the level of their economic development. This is because, among the factors leading to the development of enterprise, technological progress is not the main solution but the degree and intensity of ICT adoption across the entire enterprise. Inability of enterprises to access and use ICT is the main factor generating electronic exclusion and promoting the digital divide.

Key words: e-accessibility, business development, ICT adoption, SMEs

JEL classification: O16, M10, M21, D83

There are many discussion about E-accessibility on EU level, especially on health domain. E-accessibility refers in principle to the access of people with disabilities, disadvantaged or older to the information and communication technology (ICT) without discrimination. In fact, when it comes to e-accessibility to social level, we refer to reducing "digital discrimination", providing equal rights to the benefit of use ICT, to all people regardless of geographic location, health or age. E-accessibility as components of e-Inclusion program is necessary for reasons of social justice, to ensure fairness in the knowledge society (European Commission, 2007).

However, in the present work will transpose the idea of e-accessibility in business. Thus, e-accessibility or electronic accessibility in a digital economy, considered to be the degree to which a company can use ICT to attract benefits which will generate enterprise development. There has always been and there will be a difference between enterprise from different geographical areas, between those in different stages of development or between those carrying out economic activities less suitable to online environment.

In the past decade, advances in information and communication technology (ICT) had strong effects on the global economy and on society in general. The main extensive change, generated by intensive use of ICT in the increasing number of companies, has been on the business climate. Changing business environment provided a virtual world where businesses can generate economic activities, information and communication activities in business. A second change occurs within enterprises, the level of production, distribution and promotion, enabling enterprises to use new means of communication both internally and with the external environment by increasing production quality and efficiency, creation of new axes to promote enterprise, etc. Early 2000s came with a wave of change in the world economy, a shift from predominantly industrial society to the informational society, defined by a set of rules that lead to what is called digital economy.

Given the increasing globalization and liberalization worldwide, we believe that ICT is for companies (but to refer especially to SMEs, given their contribution to the national economy) one of the most important tools to improve cost / efficiency, facilitate access to new markets, attracting new customers and maintenance of relationships with suppliers and buyers.

Macroeconomic productivity growth is not only a result of technological progress but, even more, is an effect of ICT diffusion across the economy. (Pilat and Lee, 2001) show that an economy does not need to have an ICT manufacturing sector, in order to draw benefits from ICT. ICT adoption, in terms of SMEs is an important pawn in sustainable economic development. It also should not overlook the importance of adopting ICT policy support, considering that it is important that businesses can successfully absorb and apply knowledge gained.

Increasing SME e-accessibility in the digital economy remains an important issue when comparing their level of development according to geographic location, stage of development of the nation, stage of enterprise development, the availability of the line of business, etc. Studies on the adoption of information and communication technology have increased attention to SMEs but most of them were based on models developed from the study of large companies. Applicability to SMEs, of the findings and elaborated models by studying large firms, is limited because SMEs cannot be considered miniature versions of large companies. Therefore, finding viable solutions to increase e-accessibility for SMEs depending on the level of development of each, is essential to analyze the factors that inhibit SMEs and facilitates the digital divide.

For an enterprise to draw benefits from economic activities in the digital economy, it is imperative the availability of accessible ICT at reasonable prices and the ability to use them (European Commission, 2007). Currently, many companies (especially those in developing countries or underdeveloped) cannot fully benefit from the possibilities offered by ICT because these preconditions are not met. Inability of enterprises to access and use ICT is the main factor generating exclusion in the digital economy. Companies that have developed the ability to create, acquire and disseminate knowledge in a digital economy, have received competitive advantage, subjecting other companies to the effect of digital divide. Thus, in the current economy, an economic system that is not based on knowledge is not possible (Mutula, 2009). Generation of enterprise e-accessibility, the increasing access to knowledge (especially external know-how) available by using the Internet and ICT is essential to sustainable development of the enterprise.

As we said ICT can have a significant impact on SMEs and how to organize them. Thus we tested the hypothesis that use of ICT in enterprises has a direct impact on their turnover. In testing this hypothesis we used pilot analysis undertaken on 100 SMEs in the development center area.

In analyzing the use of information and communication technology in SMEs we consider a score achieved by using six variables. The index of Intensity of ICT use by enterprises, is designed as in the formula below:

$$\mathbf{ICT_i = (ICT_u + ICT_n + IT_u) * N + SiteU + Obs}$$

Where:

- ICT_i - index of intensity of ICT use;
- ICT_u - index of ICT use;
- ICT_n - index of proportion of employees who use ICT;
- IT_u - index of intensity of Internet technology use;
- N - total number of employers;

SiteU - utility index of own website
 Obs - overall level of ICT adoption barriers

The **index of intensity of ICT use** (ICTi or Index of ICT intensity) indicates the extent to which businesses use technology based on services and technologies available.

The **index of ICT use** (ICTu) highlights the internal infrastructure of SMEs in terms of information and communication technology. For each SME facility was awarded 1 point. Total of 10 points can be obtained by summing the 10 facilities like: digital assistant device, laptop, computer or other terminal, Internet, e-mail, Intranet, Extranet, local network, wireless network, electronic data interchange.

The **index proportion of employees who use ICT** (ICTn) highlights the degree to which employees use ICT during activities in the enterprise. We calculated this index by summing percentage points depending on the class in which each analyzed SME framed for the facilities like: computer, Internet, e-mail, Intranet.

In calculating the adoption level of the Internet in SMEs have used **index of intensity of Internet use** (ITu) by employees. Companies were questioned about activities such as: looking for general information on the Internet, searching for information about the market (competitors, suppliers, customers), access to external databases, purchase of digital goods or digital services, ordering or purchase of non-digital goods, use after-sales service, online payment, use online financial services, online chat (instant messenger), discussion forums, videoconference, training and education (online learning), communication with public administration. This index is calculated by totaling the points depending on the activity undertaken and its importance. Index of intensity of Internet use does not involve the use of Internet by employees outside company or private purposes.

Utility index of own website is calculated through their website quantitative aggregation of the number of services offered through the company's own website (information about the company, partners, etc., detailed information about products, prices, etc., advertisement, demand or supply digital products, supply or sale of non-digital, after sales service, mobile internet services, online electronic payment, job offers).

The **overall level of ICT adoption barriers** is calculated by summing obstacles depending on how important they generated in the enterprise. For example: security issues, uncertain economic value, operating and maintenance costs, investment volume too high, lack of qualified personnel, internal reluctance, incompatibility with existing infrastructure, insufficient awareness of management, difficult to adapt the organization, technical standards unclear, etc.

To test a possible link between the use of ICT intensity index and turnover on analysis time, we conducted a descriptive analysis of the correlation between these two variables. Correlation test is shown in the table below.

Table 1 - correlation between ICTi and Turnover

Index of intensity of ICT use (ICTi)		Turnover
Pearson	Correlation coefficient	,781**
	Sig. (2-tailed)	,000
Kendall's tau_b	Correlation coefficient	,519**
	Sig. (2-tailed)	,000
Spearman's rho	Correlation coefficient	,694**
	Sig. (2-tailed)	,000

Since correlation is significant at the 0.01 level (2-tailed), we see that the amount of significance (Sig.) corresponding "Z statistics" is below the significance level of 0.01 which shows a significant correlation between the analyzed variables. The power of established correlation between the two variables is given by Pearson correlation coefficient which has a value of 0.781, showing a strong link between analyzed indicators.

To determine the extent there is a tendency for ICTi to influence Turnover we analyze the multiple correlation coefficient square value, i.e. R^2 . (See table 2)

Table 2 - Model Summary: dependent variable Turnover and independent ICTi

R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.781 ^a	.611	.607	.57930	.611	153,635	1	98	.000	1,793
<i>a. Predictors: (Constant), ICTi b. Dependent Variable: Turnover</i>									

As shown in the above table in about 61% of cases meet a strong influence on the turnover of index of intensity of ICT use.

Based on the previously stated we develop a probabilistic prediction model between the two variables and analyze deterministic time variation of the model.

Table 3 – ANOVA test and Coefficients: Turnover and ICTi

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	51,559	1	51,559	153,635	.000 ^b
Residual	32,888	98	.336		
Total	84,447	99			

a. Dependent Variable: Turnover

b. Predictors: (Constant), ICTi

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
(Constant)	.257	.067		3,840	.000	.124	.390
ICTi	.005	.000	.781	12,395	.000	.005	.006

In the analysis of variance for the regression model observed the model is significant. The T-test statistics corresponding value is less than 0.05, meaning that the slope of the regression corresponds to a significant relationship between the two variables. The regression result is: $\text{Turnover} \approx 0.257 + 0.781 * \text{ICTi}$

Concluding this analysis we can say that: ICT are significant factors for SMEs to access the digital economy and contribute positively to generate income; possession and use of ICT is clearly linked to higher labor productivity.

Conclusions

Increased e-accessibility of SMEs in the context of the digital economy is, that as we know, a main concern at the European Union. Between 2007 and 2013, the European Union, through cohesion policy programs supported the creation and development of SMEs, including facilitating activities and accessibility to finance, research and innovation, transfer of new technologies, availability of information and communication technologies.

That the level of ICT adoption (that allows us to measure the degree of e-accessibility) influence turnover is expected, given that among benefits from ICT

adoption in SMEs include: increasing enterprise competitiveness, increasing productivity work, reduce costs, facilitate communication, reduce information redundancy, expanding markets. Importance of SMEs in the economy is widely recognized and indisputable. Although we have shown that between 56-66% of enterprises are influenced, in terms of turnover, by the adoption and use of ICT, we must not forget that we are talking about SMEs (not big companies), companies in for which forecasting is difficult because of the size, evolution, management and availability and creating a common model would be applicable only on small areas and types of SMEs.

When is desired a digital economy and an e-accessibility control, internal measures of SMEs must go in the direction of increasing awareness of ICT adoption and intensity of use.

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