

Barriers of ICT implementation within SMEs in service sector in Albania

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Abstract. The aim of this paper is to discuss the barriers faced by SMEs in service sector in Albania in implementing ICT. The study consisted on face-to-face interview with decision-makers in twenty SMEs in service sector. A number of external and internal barrier are listed and are discussed for the importance level for decision-maker of SMEs.

Based on the research results are given some recommendations for managers in facing obstacles and problems that follow the decision process for ICT implementation.

Keywords: ICT benefits, ICT implementation, barriers, SMEs

1 Introduction

The use of the Internet along with a range of other information and communications technologies (ICT) is transforming how business is done locally and globally. Small and medium enterprises (SME's) in Albania need to be able to figure out how, when, if, and where to use electronic commerce techniques to reap more benefits. They face obstacles and constraints in implementing ICT, which are perceived as external and internal barriers.

2 Methodology

This paper is based on primary and secondary data. Primary data are results of a decision-maker survey about ICT implementation within SME-s in service sector in Albania. Secondary data are results of literature review and other studies in this field.

The study consisted on face-to-face interview with decision-makers in 20 SMEs in service sector. The decision-maker in the enterprises targeted by the survey was normally the person responsible for ICT within the company. The survey was carried out as an enterprise survey, that is data collection and reporting focus on the enterprise rather than on the establishment.

The sample drawn was a random sample of twenty enterprises (SMEs) from the service sector. The set of ICT and e-business indicators for which data were collected in this survey was organized into the following modules:

- Background information (basic company data, innovation activities).
- ICT infrastructure and e-skills development in the company.
- E-commerce and e-business activities (internal business process automation, procurement and supply chain integration, exchange of standardized data between trading partners, marketing and sales activities, use of e-business software)
- Impact of e-business (impact of selling and procuring online, perceived effects on work processes, satisfaction with outcome)
- Assessment of future importance of various e-business technologies)

3 What is ICT

Information and communications technology or information and communication technology [5], usually called ICT, is often used as a synonym for information technology (IT) but is usually a more general term that stresses the role of telecommunications (telephone lines and wireless signals) in modern information technology. ICT consists of all technical means used to handle information and aid communication, including both computer and network hardware as well as necessary software. In other words, ICT consists of IT as well as telephony, broadcast media, and all types of audio and video processing and transmission. The expression was first used in 1997 in a report by Dennis Stevenson to the UK government and promoted by the new National Curriculum documents for the UK in 2000. Today we can encounter different definitions for ICT like: "Information and Communication Technologies broadly refer to set of activities that facilitate - by electronic means - the capturing, storage, processing, transmission, and display of information[4]. Information and Communications Technology is "an umbrella term that includes computer hardware and software; digital broadcast and telecommunications technologies as well as electronic information repositories such as the World Wide Web or those found on CD-ROMs (Selwyn 2002). It represents a broad and continually evolving range of elements that further includes television (TV), radio, mobile phones, and the policies and laws that govern these media and devices".[12]

The concepts, methods and applications involved in ICT are constantly evolving on an almost daily basis. It's difficult to keep up with the changes - they happen so fast. Any how, the term ICT is now also used to refer to the merging (convergence) of telephone networks with computer networks through a single cabling or link system. There are large economic incentives (huge cost savings due to elimination of the telephone network) to merge the telephone network with the computer network system.

According to the European Commission, the importance of ICTs lies less in the technology itself than in its ability to create greater access to information and communication in underserved populations.

4 ICT use and its benefits for SME

Based on SMEs needs and access for ICT, its usage differs regarding to their degree of complexity from basic technology such as radio and fixed lines to more advanced technology such as email, e-commerce, and information processing systems (figure 1).[6]

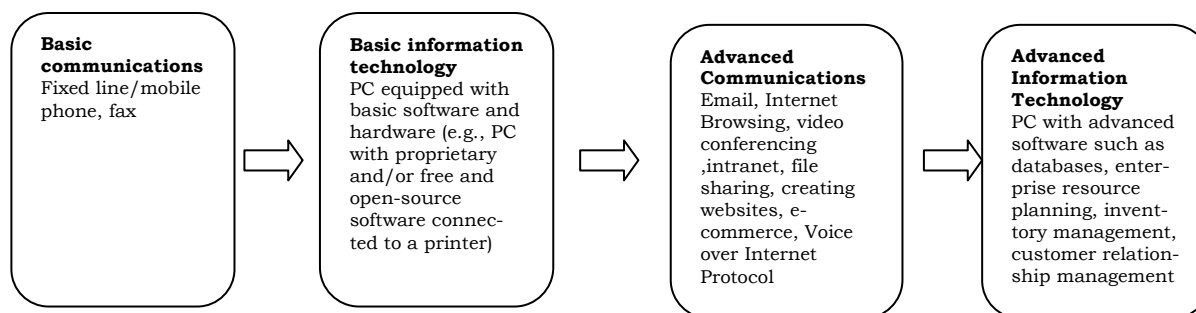


Figure 1. Progression of ICT adaption[6]

UNDP-APDIP’s e-Primer on e-Commerce and e-Business defines e-business as “The transformation of an organization’s processes to deliver additional customer value through the application of technologies, philosophies, and computing paradigm of the new economy”. [1] Using advanced ICT to improve business processes falls into the category of e-business. [1] Other definitions for “e-business” (or Electronic Business) describe it as the usage of Web-based technologies for doing business. This includes both e-commerce (buying and selling online) and the restructuring of business processes to make the best use of digital technologies. It could be defined as any business process that relies on an automated information system. [11] The term “e-Business” was coined by Lou Gerstner, CEO of IBM [11]: “E-business is using the network and distributed information technology, knowledge management, and trust mechanisms to transform key business processes and relationships with customers, employees, suppliers, business partners, regulatory parties, and communities. E-business is about changing business models to create new or increase value for the customer” [3]. In practice, e-business is more than just e-commerce. While e-business refers to more strategic focus with an emphasis on the function that occurs by using electronic capabilities, e-commerce is a subject of an overall e-business strategy[11] and often involves the application of knowledge management systems. E-business involves business processes spanning the entire value chain: electronic purchasing and supply chain management, processing orders electronically, handling customer service, and cooperating with business partners. Special technical standards for e-business facilitate the exchange of data between companies. E-business software solutions allow the integration of intra and inter firm business processes. E-business can be conducted using the Web, the Internet, intranets, extranets, or some combination of these.

The ICT tool that almost all SMEs adopt, considered as more economic and convenient in having basic communications is a fixed line or mobile phone. SMEs which use ICT agree about the positive impact that ICTs, such as computer terminals, e-mail and the Internet and their applications can have on their business. [10] Many types of business software can improve information and knowledge management within the firm, leading to more efficient business processes and better firm performance making communication within firm faster and management of firm’s resources more efficient.[1] Using communication tools leads to improvement of external communication, in either B2C or B2B contexts, and result in a reduced transaction cost, increased transaction speed and reliability, and extract maximum value from each transaction in the value chain.

At inter-firm level, the Internet and e-commerce have great potential for reducing transaction costs and increasing the speed and reliability of transactions.[11] They can also reduce inefficiencies resulting from lack of co-ordination between firms in the value chain. Internet-based B2B interaction and real-time communication can reduce information asymmetries between buyers and suppliers and build closer relationships among trading partners. [7]

5 Albania's SMEs sector [13]

SMEs dominate Albania's economy, representing 99,6% of all registered businesses. The share of the SME sector in GDP is about 73% and the sector employs 71% of all workers. SMEs in Albania concentrate on the local market and lack export competitiveness. Less than 1.3% of the small and less than 5.3% of the medium companies in Albania have undertaken joint ventures with foreign partners over the last three years.

SME development in Albania is below regional average. The main challenges for improvement of National competitiveness remain in fields such as investment climate, law enforcement, corporate governance (both on the macro and enterprise levels), management skills and business enabling infrastructure.

Micro companies dominate the Albanian SME sector in number, turnover and total value added. However, Small and Medium sized Enterprises are more productive and economic efficiency increases with size.

From a sector perspective, SMEs are concentrated in the trade sector. The sectors of services and trade are dominated by micro and small enterprises, whereas the sectors of industry and construction are dominated by medium sized businesses.

The highest concentration of SMEs is in the capital Tirana, central Albania and in the coastal areas. More than half of the SMEs are operating in the Tirana-Durres corridor, which is emerging as a potential powerful economic pool. Other regions with strong SME presence are the cities of Korça, Fier and Vlora. There is very weak business activity particularly in the northern part of the country.

Albania's position in the regional context - The SME Policy Index is measuring the "Progress in the Implementation of the European Charter for Small Enterprises in the Western Balkans. The 2009 Report makes the following observations about Albania:

"Albania's policy performance over the last two years has been remarkable and has allowed the country to join the second group. Albania record of policy implementation has improved in all ten dimensions; in particular, in all the policy areas linked to the general operational environment (such as company registration, regulatory reform, access to finance and export promotion).

The weak points in Albania's performance remain human capital development and technological capacity of SMEs.

6 Extent of ICT usage among SMEs in Albania

Internet is most commonly used by SMEs in Albania for communication and research; the Internet is least used for e-commerce. Even though e-mail is considered an important means of communication, the use of it is limited by the SMEs' recognition of the importance of face-to-face interaction with their buyers and suppliers, and only after this first experience there is an increase in the level of the confidence of using e-mail for communication. E-mail, therefore, becomes a means for maintaining a business relationship, it allows a firm to access information and maintain communications with its suppliers and buyers. This can then lead business to more advanced e-commerce activities.

ICT usage patterns among SMEs in Albania show a progression from the use of the Internet for communication (primarily e-mail) to use of the Internet for research and information search, to the development of Web sites with static information about a firm's goods or services, and finally to use of the Internet for e-commerce. Many firms use the Internet to communicate with suppliers and customers only as a channel for maintaining business relationships. Once firms develop a certain level of confidence on the benefits of e-mail in the conduct of business transactions and the potential of creating sales from its use, they usually consider the option of developing their own Web site.

Among the reasons why SME-s in Albania use internet, the most important are the following:

- Wide use of the Internet for e-mail because of the recognized cost and efficiency benefits.
- Use of Web sites more for promotion than for online sales or e-commerce, indicating that SMEs in Albania are still in the early stages of e-commerce.
- Common use of the Internet for basic research.
- Inclination to engage more in offline transactions than in e-commerce because of security concerns.

6.1 Obstacles, problems and issues faced by SMEs in Albania. Research results

According to the survey conducted within SMEs in services industry in Albania the barriers for implementing ICT are divided in two groups, external and internal.

The perceived external barriers to e-commerce include:

- the unfavorable economic environment
- the high cost of ICT
- security concerns

The internal barriers to e-commerce include:

- poor internal communications infrastructure within SME firms
- lack of ICT awareness and knowledge as well as inadequacy of ICT-capable and literate managers and workers
- insufficient financial resources
- the perceived lack of relevance or value-added of ICTs to their business

The table below shows rating of barriers and overall intention to implement e- business within SMEs in Albania.

Table 1. Rating of barriers and overall intention to implement e-Business

Barriers	Mean (a)	Std.dev (b)
External barriers		
<i>Cost of implementation within my company</i>	4.49	1.91
<i>Security concerns</i>	4.11	0.72
<i>Customers are not familiar with this mode of trade</i>	3.63	0.90
<i>Willingness of trading partners to participate</i>	3.37	1.01
<i>Legal concerns</i>	3.35	1.12
Internal barriers		
<i>Shortage of well-trained staff</i>	4.28	0.62
<i>Lack of e-Business competences</i>	3.81	0.93
<i>Inadequate financial resources</i>	3.59	0.95
<i>Time it takes to implement changes</i>	3.51	1.06
<i>Company is too small, with no staff or technical capability</i>	3.21	1.21
<i>Compatibility for hardware and software</i>	2.81	1.19
<i>Lack of interest/management support 1,93</i>	2.71	1.13
<i>Overall intention to implement e-Business</i>	2.62	0.91

(a) 5-point scale from 5 (most important) to 1 (not important at all).

(b) 5-point scale from 5 (highly likely) to 1 (highly unlikely).

According to this survey the most serious external barriers was cost of implementation (mean rating = 4.49) followed by security concerns.

Cost is considered a crucial issue. The initial investment for the adoption of a new technology is proportionately heavier for small than for large firms. The high cost of computers and Internet access is a barrier to the uptake of e-commerce. SMEs in Albania, faced with budgetary constraints, consider the additional costs of ICT spending as too big an investment without immediate returns.

Ensuring security of payments and privacy of online transactions is key to the widespread acceptance and adoption of e-commerce. While the appropriate policies are in place to facilitate e-commerce, lack of trust is still a barrier to using the Internet to make online transactions. Moreover, credit card usage in Albania is still relatively low. Also, consumers are reluctant to use the Internet for conducting transactions with SMEs due to the uncertainty of the SMEs' return policy and use of data.

But also the other barrier variables which were rated above 3, indicate that the respondents consider these variables when deciding to implement e-business.

According to this survey the most serious internal barriers was the shortage of well trained staff (mean rating = 4.28). People play a vital role in the development of e-commerce. However, technology literacy is still very limited in Albania and there is a shortage of skilled workers among SMEs in service sector, a key issue in moving forward with using information technology in business. There are also doubts about whether SMEs can indeed take advantage of the benefits of accessing the global market through the Internet, given their limited capabilities in design, distribution, marketing, and post-sale support. Other barrier variables which were rated above 3, indicate that the respondents consider these variables when deciding to implement e-business. Barriers ranking below 3, can be considered as less influential in the decision process, but are still important elements for the companies as they are still considering the issues, but do not consider them influential in the decision-making process.

Based in the results of this study it is possible to understand that the interest of e-business and implementation willingness is regarded as a potential for the individual enterprises. Since e-business is generating benefits for SMEs in the services sector, they should consider the change in business models. Organizations should focus internet usage by final customers to overcome the listed barriers. They also overcome barriers of costs, trained staff and competences by using systems that are designed to meet their needs. The security concern and the reluctance due to the customer unfamiliarity are issues that will fade out, as e-business is becoming more and more integrated in everyday life.

7 Conclusion

Over the last decade the ICT and internet have brought about significant changes in the economies and societies.

This paper contributes in the discussion about the identification of the barriers faced by SMEs in service sector in Albania in implementing ICT, rather than in finding solutions for obstacles and problems that follow the decision process for them.

SMEs in Albania are usually rational in their decision process, they look for outcome benefits from each investment they have to make. Because SMEs have limited resources available to evaluate benefits and justify the value of implementing ICT and e-business solutions, information should be made available for the them to gain an understanding of how ICT and e-business can be beneficial.

Understanding the important of ICT adoption, manager's ICT knowledge and skills could be the most important factor that organization must consider before implement ICT. Overall, ICT integration amongst SMEs in service sector in Albania can be improve and enhance in future by cooperation across various parties. Besides government, SMEs should diversify their current business's activities through uptake of broadband Internet and bring the digital divide into organization. With a better understanding of the potential benefits that ICT can bring, managers should develop a more favorable attitude and become more receptive to the idea of adopting the Web.

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