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The Potential of E-commerce for SMEs in a Globalizing Business Environment

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Abstract

In an era of globalizing economies many markets become increasingly international and competitive. Technological progress in logistics and distribution enables nearly every business to buy, sell and cooperate on a global scale and even smaller and locally oriented businesses are forced to see themselves in a global context to survive in this new challenging business environment. Although common sense is that the globalization expose SMEs to many challenges the recent literature argues that SMEs can benefit the new environment via e-commerce. In this framework this study presents the issues the SMEs can face in changing business environment and the potential of e-commerce in this new environment. The findings of the study shows that although their size is a disadvantage for SMEs to compete in global platform e-commerce can help them make up however there are several barriers that limit or prevent them from getting into e-commerce which can be handled with public and private support.

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1. Introduction

Commonly defined as the spread and connectedness of production, communication and technologies across the world, Globalization has also involve the interlacing of economic and cultural activity. In the recent period, the effect of globalisation on businesses and especially small businesses has been the topic of conversation in academic environment.

Globalization creates new structures and new relationships, with the result that business decisions and actions in one part of the world have significant consequences in other places. It is argued that the enterprises operating on a global market can take advantage of enhance their international competitiveness via economies of scale, exploitation of lower input costs, risk compensation, optimality of market segmentation. However it is a fact that not all the firms take the advantage of globalization equally and it put pressure on small and medium enterprises (SMEs) which can't easily find an organisational solution to cope with global business opportunities without suffering from limited resources.

The effect of globalization on SMEs has received a lot of attention in international circles because although they are small, in both developing and developed countries these enterprises make significant contributions to the economy. For many SMEs, instead of competing against large multinational companies SMEs can take the advantage of opportunities afforded by e-commerce to access new and often distant markets or global value-chains. This study presents how the new business environment originated by globalization affect enterprises and if SMEs can use the potential of e-commerce to handle the difficulties of the new environment.

The findings of the study shows that SMEs have already been making use of e-commerce in creating value-added, new services and new business models, expanding their business and compete in global markets. However despite its benefits, there are a number of technical and non-technical limitations associated with ecommerce that limit or prevent SMEs getting into use information technology and e-commerce operations. Because many of these SMEs can't cope with these limitations such as technical, economic and legal barriers by themselves, they need public and/or private support.

2. Globalization of Enterprises

An incredible increase in production, technological developments, increase of speed of transportation, and ease in communication helped capital, labour, information and technology movement to get intense between countries besides goods and services following the Industrial Revolution. As a result national economies connected to each other with movements which are gradually getting more complex and dense (Ekodiyalog, 2012).

Globalization is the tendency of investment funds and businesses to move beyond domestic and national markets to other markets around the globe, allowing them to become interconnected with different markets. Accordingly globalization provides organizations a superior competitive position with lower operating costs, to gain greater numbers of products, services and consumers. This approach to competition is gained via diversification of resources, the creation and development of new investment opportunities by opening up additional markets, and accessing new raw materials and resources (İncekara and Savrul, 2012:24)

Economic activities are certainly moving in the direction of globalization and the production and distribution system is evolving worldwide. In this course the role that international trade plays in connecting countries around the world is clear. Globalization creates new structures and new relationships, with the result that business decisions and actions in one part of the world have significant consequences in other places. Underlying and reinforcing these globalization trends is the rapidly changing technological environment, particularly in information processing, and telecommunications. Changes in telecommunications and data processing capabilities make it possible to coordinate research, marketing and production operation around the world. Almost instantaneous communications make it possible to trade financial instruments twenty-four hours a day, and thus more return-sensitive are location of resources within firms, industries and countries (Muhammad et. al, 2010:66).

A working definition of globalization is the global integration of economies through trade and investment flows, as well as the production of goods and services in order to enhance international competitiveness. The economic profile of globalization includes the development of global corporations and global networks; the widespread internationalization of all forms of economic activity in production, marketing, consumption and capital, standards; the development and wide diffusion of lean production methods and a much greater disaggregation of production; the migration of labour-intensive, standard-technology production to low wage economies; the migration of highly educated and skilled labour to countries of advanced information technology; the successful integration of a

multinational and multicultural workforce in order to strategically deploy the economic and social benefits of diversity; the re-orientation of large-scale production in high wage economies from economies of scale to economies of scope; the shortening of product cycles; the integration of outside financial and other services into the production cycle; and the rapid growth and diffusion of service and knowledge-intensive activities particularly in advanced industrial economies (Passaris, 2006).

Other definitions include the process of accelerating international integration of markets that result in an integrated global market without national economic borders. A firm operating on a global market can take advantage of four main sources of benefits vis-à-vis competitors operating in only a local context (Mundim et.al, 2000);

- economies of scale;
- exploitation of lower input costs;
- risk compensation;
- optimality of market segmentation.

Trade economists agree now that the new feature of globalization is an explosion of world trade in intermediate goods and in foreign direct investment, while the trade exposure of rich has not increased over the last 100 years. The raise of trade in intermediate goods and in foreign direct investment are the signs of the new way firms organize their activities. The value chain has become global. The global firm produces one stage of production in one location and exports the input for refinement to a second location. The refined input gets further refinement in a third location. During this refinement process intermediate goods are traded from one location to the next. This way, the international organization of production leads to the observed increase in trade in intermediate goods and in foreign direct investment. Parallel to these changes in the world economy the corporate sector in rich economies has gone through an enormous amount of reorganization (Marin and Verdier, 2003:337).

In an era of globalizing economies many markets become increasingly international and competitive, however the story is different for SMEs than it is for multinational corporations (MNCs) (Muhammad et. al, 2010:66). Globalisation is a source of opportunities as well as a source of threats. Specific advantages derived from operating in a global market seem to be exploitable only by large organisations unless SMEs can find an organisational solution allowing them to cope with global business opportunities without suffering from limited resources and without exposing themselves to the risk of direct investment (Mundim et.al, 2000).

An increase in the number of exporters or MNCs implies more intense competition. The overall effect of competition on the performance of SMEs is unclear, however. On the one hand, increased product market competition may cause SMEs to reduce their price mark-ups. On the other hand, the “learning by competition” analogy suggests that the pressure to survive may speed up the adoption of new technologies and thereby enhance the productivity of SMEs. With regard to the labour market, higher wages paid by multinationals and exporters may have spill over effects to other industries, resulting in an increase in the cost of production for SMEs (Asiedu and Freeman, 2007: 368).

3. Changing Business Environment of SMEs

Private SMEs typically account for more than 95% of all firms outside the primary agriculture sector, constitute a major source of employment and generate significant domestic and export earnings in the OECD, transition and developing countries. Improved SME competitiveness could obviously contribute to economic and social development and poverty reduction (OECD, 2004:9).

In both developed and developing countries, SMEs make up a majority of business and employ the majority of workers in both manufacturing and services sectors. SMEs cater mostly to their domestic market and their contribution to GDP, although normally very small, can vary greatly depending on the value of the goods or services they produce. While less than 6 per cent of the formal work force is employed in manufacturing in SMEs in Azerbaijan, Belarus and Ukraine, this share is more than 50 per cent in other developing countries such as Ghana, Turkey and Ecuador. Studies has indicated that countries with large SME sectors also tend to benefit from the significant contribution which SMEs make to GDP (WTO, 2013: 1).

However the business environment of SMEs has been changing in a drastic way with the emergence of globalization. Technological progress in logistics and distribution enables nearly every business to buy, sell and cooperate on a global scale. Customers also have the chance to access global markets to find the best offer. Consequently, even smaller and locally oriented businesses have to see themselves in a global context. In this regards, the globalization of economic activity has a dual impact on SMEs. For some, it provides new opportunities for

expansion and growth by taking advantage of international market potentials. For the majority, however, growing economic globalization is increasing the competition with foreign enterprises and it is an inward process that brings competitive challenges and threats. For those SMEs globalization brings risks that they unlikely survive in their present form without improving quality, cost competitiveness and management practices (Hwang, 2007).

It is up to the SMEs to implement competitive business operating practices and business strategies. However, the options available to SMEs are also closely related to the quality of institutions, markets and organizations that constitute the business environment. It is the efficiency and effectiveness of institutions, markets and organizations that encourage or discourage SMEs to take their cues for learning new ways of doing business, compare their own competitive characteristics with those of their rivals, and make their decisions to invest, including the introduction of innovations into their business strategies (OECD, 2004:9).

In globalization context, SMEs' chance of success is up to the SMEs to implement competitive business operating practices and business strategies. However, the options available to SMEs are also closely related to the quality of institutions, markets and organizations that constitute the business environment. Also distinctive character of SMEs limit their options to adopt the new business environment. The Australian Bureau of Statistics defines the organisational characteristics of a small to medium enterprises as follows (Jentzsch and Miniotas, 1999:435);

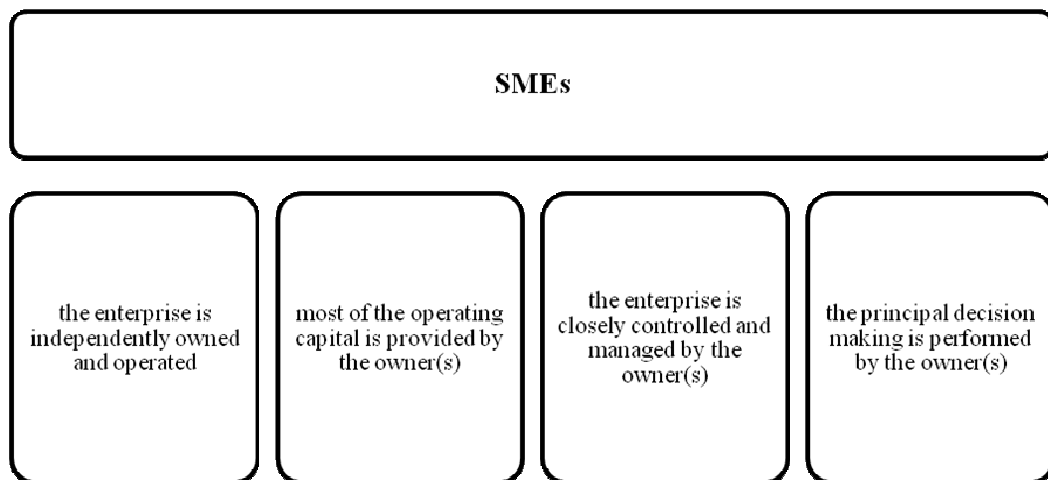


Fig.1. Typical Characteristics of SMEs

The figure clearly shows that SMEs are mainly operated by the owners and decisions at different levels are made by the same persons. Although this makes operations of SMEs vibrant and rapid, and keep them away from cumbersome organizational structure, success of SMEs are stick to the owners horizon. Typical characteristics of SMEs are not only shaped buy the owner type but also the size of organization which may lead to disadvantages and advantages in the process of globalization.

Table1. The Advantages and Disadvantages of SMEs over Large Enterprises

Characteristic	Advantages	Disadvantages
Dependence on a limited number of people	Long-term thinking, perspectives Stability No pressure for short-term success High identification with the business, stable culture High commitment	Static thinking, limited to the experiences and the knowledge of the owner(s) Difficulties to adapt corporate culture to new situations and challenges Potential conflicts between corporate and personal objectives
Close relationships to customers and business partners	Stable basis for further business Ability to cooperate successfully for mutual advantage Ability and willingness to enter partnerships	Risk to focus too much on existing basis of business
Simple structures	High flexibility and adaptability Short reaction times Cross-functional communication and cooperation within the organization	Not suitable for the complex planning and implementing of international activities Low willingness to introduce more sophisticated structures
Small size	Basis for specialization, often successful with niche strategies	Limited resources Limited funds to finance investments and initial operating losses for new activates Spending for market research and market entry take a much higher proportion of total spending in SMEs than in larger businesses Limited number of staff for additional tasks Lack of internationally experienced employees

Dagmar Recklies, Small and Medium-Sized Enterprises and Globalization, 2014

Although globalization expose some challenges for SMEs such as foreign competitors entering domestic markets, and domestic competitors' reducing their costs through global sourcing, moving production offshore or gaining economies of scale by expanding into new markets, the new environment can let SMEs access to new markets and participate in global production networks. The innovative and dynamic aspects of globalization include increased market access, increased access to capital, and increased access to technology and information which have led to greater income and employment opportunities. SMEs also may take the advantage of their being small in size by offering customized and specialized goods and services. However many SMEs cannot make use of cost advantages in mass production and some types of costs are not variable in relationship with company size (Hauser 2000; Totonchi and Manshady, 2012:83).

In this context instead of competing against large MNEs, SMEs are encouraged to use electronic commerce technologies to expand their market size and to access global markets.

4. The Potential of E-commerce for SMEs in a Globalizing Business Environment

Electronic commerce (e-commerce) technologies have the potential to lead to significant productivity gains at firm level. Especially when applied to business-to business relations, electronic technologies can lead to rationalisation of business processes and cost savings. As an immediate impact, these technologies allow automation of common processes, such as distribution, sales, after-sales service and inventory management (OECD, 2000a). There are a variety of ways by which the internet and e-commerce are useful for SMEs (Wikibooks, 2014):

- It facilitates the access of artisans and SMEs to world markets.
- It facilitates the promotion and development of tourism of developing countries in a global scale.
- It facilitates the marketing of agricultural and tropical products in the global market.
- It provides avenues for firms in poorer countries to enter into B2B and B2G supply chains.
- It assists service-providing enterprises in developing countries by allowing them to operate more efficiently and

directly provide specific services to customers globally .

Numerous studies claim their findings on the benefit and impact of E-Commerce. Those findings can be summarized as follows (Nejadirani et.al, 2011:757);

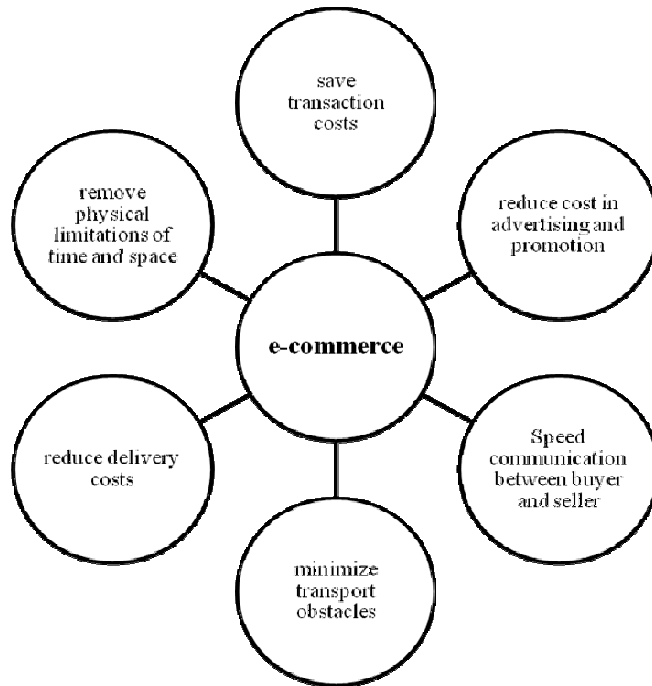


Fig.2. Potential Benefits of E-Commerce

Evidence from case studies shows that the ways SMEs carry out electronic commerce varies. Internet start-ups invent new ways of creating value-added, new services and new business models, while established small firms use the Internet to develop e-commerce strategies geared to expanding their business, often internationally, and increasing their effectiveness. In addition, groups of small firms are entering into electronic partnerships with large firms which are their customers or suppliers or with industry-wide associations (OECD, 2000b: 3).

For many SMEs in developing countries, support can be crucial to taking advantage of the opportunities afforded by e-commerce, whether it be in tapping a bigger clientele, new and often distant markets or global value-chains. Online trade in China alone has grown by 120% a year over the last ten years. In Latin America, e-commerce has grown from US\$ 1.6 billion to US\$ 43 billion in the past decade, with Brazil accounting for 59% of the Latin American market. E-commerce allows developing countries to compete in international trade, but the full potential of its benefits can be realized only when governments create business environments that harness the power of the internet (International Trade Centre, 2013).

When these models are reduced to firm size level the EU example is as follows;

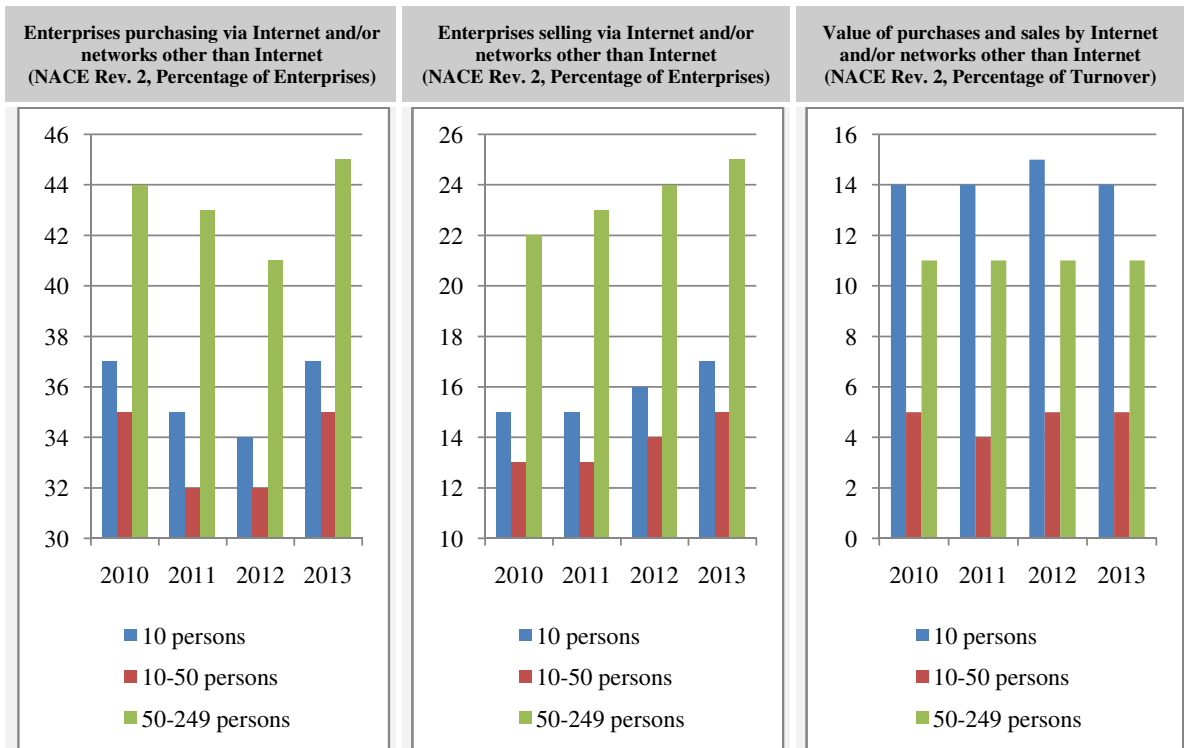


Fig.3. Enterprises purchasing via Internet and/or networks other than Internet (NACE Rev. 2, Percentage of Enterprises). Fig.4. Enterprises selling via Internet and/or networks other than Internet (NACE Rev. 2, Percentage of Enterprises). Fig.5. Value of purchases and sales by Internet and/or networks other than Internet (NACE Rev. 2, Percentage of Turnover). Eurostat, Information Society Statistics, 2014

Figures 3 and 4 show that more than 40% the medium enterprises employing 50 to 249 persons purchase via internet and similar channels and more than 20% of them are selling their goods on the same platforms. The enterprises employing 10 or less people are the second most active firm size in the list and roughly 35% of them use internet for purchasing and 15% for selling. As seen in both figures the enterprises with 10 to 50 persons are the least active firm type in purchasing and selling via internet and similar channels.

The Figure 6 displaying the value of purchases and sells tells a different story. Although they aren't at the top of the list in purchasing and selling, the commerce they did on internet provides more turnover value to smallest enterprises than the other firm sizes. When the tables are evaluated collectively, it can be inferred that if not as the large ones, the small firms are more willing in e-commerce and can provide more gains by using it.

Despite its benefits, there are a number of technical and non-technical limitations associated with internet-based electronic commerce. The two major technical limitations are related to security concerns and infrastructure. The main issues that keep SMEs from use information technology and e-commerce in their operations can be visualized as follows;

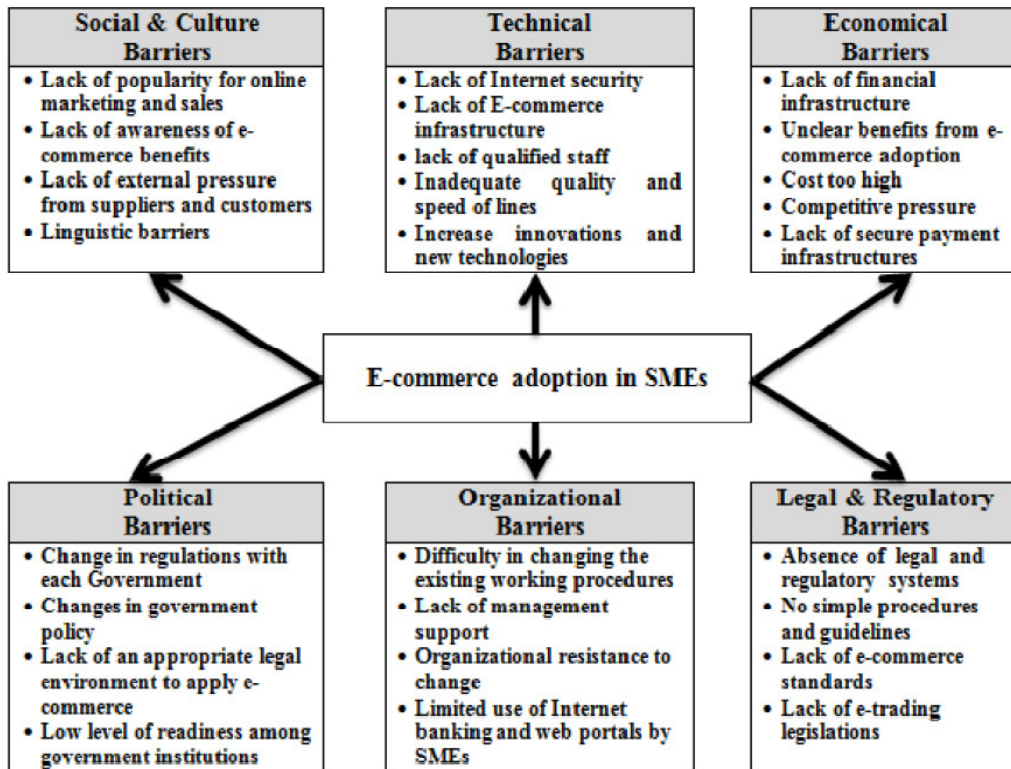


Fig. 6. Conceptual Framework for E-Commerce Adoption Barriers in SMEs. Zaied, Abdel Nasser H. Barriers to E-Commerce Adoption in Egyptian SMEs, IJ. Information Engineering and Electronic Business, 2012, 3, 9-18, p.12.

Especially in developing countries, most SMEs start out e-commerce or use information technologies sufficiently since they don't realize how e-commerce can enrich their businesses. Another issue is that technology literacy is still very limited in most developing countries which cause shortage of skilled workers among SMEs and complicate them to move forward with using information technology in business. In some cases even if the SMEs are willing to use information technologies more the physical infrastructure of many developing countries is characterized by relatively low tele-density which stands as a major barrier to e-commerce. Connection costs to the internet, the cost of adequate hardware/software, set-up and maintenance costs may be deterrent for some SMEs because the initial investment for the adoption of a new technology is proportionately heavier for small than for large firms. Lack of trust is another barrier to using the internet to make online transactions, 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 (Kaynak et.al, 2005; NETCOACH, 2014; Wikibooks, 2014).

In EU context the obstacles that obstruct SMEs get into e-commerce is listed under 5 captions (Eurostat, 2014);

- The enterprise's goods or services are not suitable
- Problems related to logistics
- Problems related to payments
- Problems related to ICT security or data protection
- Problems related to the legal framework

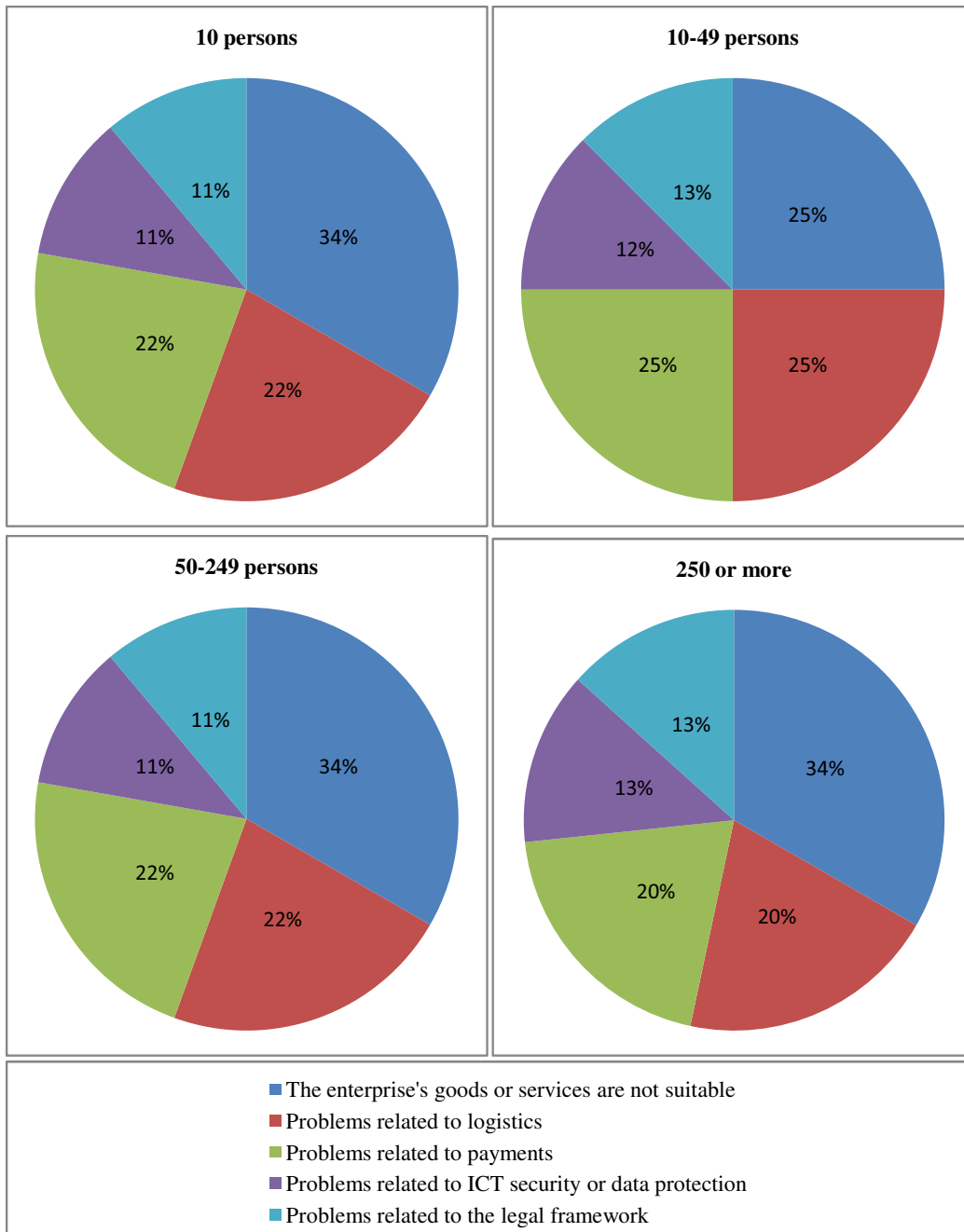


Fig.7. Obstacles that limit/prevent the enterprise from selling via a website. Eurostat, Information Society Statistics, 2014

The SMEs in the EU report that their foremost issue that limit their operation in electronic platforms is that their goods or services are not suitable to e-marketing. Furthermore assessment based on firm size shows that secondary problems for the enterprises in all sizes are the problems related to logistics and payments. The issues related to security and legal framework are the latest problems that obstruct the firms getting into e-commerce.

5. Conclusion

SMEs play dominant roles in terms of employment generation and economic development in this regards the effects of globalization on them and their prosperity in new business environment created by globalization is of a particular important to both developing and developed economies. In this framework this study presents how globalization affect enterprises and if SMEs can use the potential of e-commerce to handle the difficulties of the new business environment. The study also contributes to understanding of the internet as a medium for commercial use.

The case studies shows that SMEs carry out electronic commerce to invent new ways of creating value-added, new services and new business models, to develop e-commerce strategies geared to expanding their business, often internationally, and increasing their effectiveness and enter into electronic partnerships with large firms which are their customers or suppliers or with industry-wide associations. The EU practice demonstrate that more than 40% the medium enterprises employing 50 to 249 persons purchase via internet and similar channels and more than 20% of them are selling their goods on the same platforms. The enterprises employing 10 or less people are the second most active firm size in the list and roughly 35% of them use internet for purchasing and 15% for selling. As seen in both figures the enterprises with 10 to 50 persons are the least active firm type in purchasing and selling via internet and similar channels. Additionally turnover values show that e-commerce is responsible for more turnover share than the ones of largest firms.

Despite its benefits, there are a number of technical and non-technical limitations associated with internet-based electronic commerce. The SMEs in the EU report that their foremost issue that limit their operation in electronic platforms is that their goods or services are not suitable to e-marketing. Furthermore assessment based on firm size shows that secondary problems for the enterprises in all sizes are the problems related to logistics and payments. The issues related to security and legal framework are the latest problems that obstruct the firms getting into e-commerce.

Other issues that hinder SMEs from getting into e-commerce is reported as lack of awareness about e-commerce and e-commerce business models, lack of knowledge of e-commerce, trust and confidence problems, legal and regulatory framework, poor information infrastructure access, security issues and high costs. Although SMEs can handle some of the obstacles automatically by the changing business environment, the ones such as legal and regulatory framework, poor information infrastructure access and high costs can't be resolved by the efforts of SMEs.

In dealing with mentioned issues promotion of government and private industry is necessary. Besides educational assistance, facilitation of technological infrastructure and legal framework, a climate that will foster the commercial application developers to provide product features that support a broader range of e-commerce technologies to a broader range of business enterprises will contribute to accomplishment of SMEs.

References

- Abdel Nasser H. Zaid, Barriers to E-Commerce Adoption in Egyptian SMEs.
- Among Smes In Malaysia, *Journal of Business Economics and Management*, Volume 12(2), pp.375-399.
- Asiedu Elizabeth, James A. Freeman (2007), The Effect of Globalization on the Performance of Small- and Medium-Sized Enterprises in the United States: Does Owners' Race/Ethnicity Matter?, AEA Conference, Chicago, May, pp.368-372.
- Ekodiyalog, (2012), Uluslararası Ekonomik İlişkiler, http://www.ekodialog.com/uluslararasi_siekonomi/uluslararasi_ekonomik_iliskiler.html (24.05.2012).
- EUROSTAT (2014), Information Society Statistics.
- Hans-Eduard Hauser (2000), Institut für Mittelstandsforschung (IfM)/1Bonn, IFM.
- Hussain Atiya (2013), E-Commerce and Beyond: Opportunities for developing country SMEs, International Trade Centre, <http://www.tradeforum.org/article/E-Commerce-and-Beyond-Opportunities-for-developing-country-SMEs/#sthash.MZdJV6J3.dpuf>
- I.J. Information Engineering and Electronic Business, 2012, 3, 9-18
- Incekara Ahmet, Mesut Savrul (2012), "The Effect Of Globalization On Foreign Trade And Investment In Eurasian Countries", International Conference On Eurasian Economies 2012, 23-30, Almaty, Kazakhstan Republic (October, 11th–13th 2012).
- ITC Communications International Trade Centre (2013), Realising the potential of e-commerce for SMEs, E-commerce in developing countries requires more governmental support to reach its full potential, ITC Executive Director tells WTO workshop, <http://www.intracen.org/news/Realising-the-potential-of-e-commerce-for-SMEs/#sthash.tl3QiUZn.dpuf>
- Jentzsch Ric, Audi Miniotas (1999), The Application of E-commerce to a SME, Proc. 10th Australasian Conference on Information Systems.
- Kaynak Erdener, Ekrem Tatoglu, Veysel Kula (2005), An analysis of the factors affecting the adoption of electronic commerce by SMEs Evidence from an emerging market *International Marketing Review*, Vol. 22 No. 6, pp. 623-640
- Marin Dalia, Thierry Verdier (2003), *Journal of the European Economic Association*, Vol. 1, No. 2/3, Papers and Proceedings of the Seventeenth Annual Congress of the European Economic Association (Apr. - May), pp. 337-344.
- Mundim Ana Paula Freitas, Rossi Alessandro, Andrea Stocchetti (2000), SMEs in Global Market: Challenges, Opportunities and Threats, BEJE, Recife, June 26.

- Nejadirani Farhad, Masoud Behavesh, Reza Rasouli (2011), Developing Countries and Electronic Commerce the Case of SMEs, *World Applied Sciences Journal* 15 (5), pp.756-764.
- NETCOACH (2014), Problems of adopting e-commerce in SMEs, <http://www.netcoach.eu.com/index.php?id=212>
- OECD (2004), Promoting Entrepreneurship And Innovative SMEs in A Global Economy: Towards A More Responsible and Inclusive Globalisation, 2nd OECD Conference of Ministers Responsible for Small and Medium-Sized Enterprises, 3-5 June 2007, Istanbul, Turkey.
- OECD (2000a), "A New Economy? - The Role of Innovation and Information Technology in Recent OECD Economic Growth", DSTI/IND/ STP/ ICCP(2000)1/REV1.
- OECD (2000b), Enhancing The Competitiveness of SMEs, In *The Global Economy: Strategies And Policies*, Conference for Ministers Responsible for SMEs and Industry Ministers Bologna, Italy, 14-15 June.
- Passaris Constantine E. (2006), The Business of Globalization and the Globalization of Business, *Journal Of Comperative International Management*, Volume 9, Number 1.
- Recklies Dagmar (2014), Small and Medium-Sized Enterprises and Globalization, [themanager.org](http://www.themanager.org/strategy/global.htm), <http://www.themanager.org/strategy/global.htm>
- SMEs in Germany: Facts and Figures.
- Totonchi Jalil, Gholamreza Kakamanshadi, (2011), Globalization and E-Commerce, 2nd International Conference on Networking and Information Technology IPCSIT vol.17, IACSIT Press, Singapore.
- Wikibooks, E-Commerce and E-Business/E-Commerce in Developing Countries, http://en.wikibooks.org/wiki/E-Commerce_and_E-Business/E-Commerce_in_Developing_Countries#How_important_is_e-commerce_to_SMEs_in_developing_countries.3F_How_big_is_the_SME_e-business_market.3F
- Won-Gyu Hwang (2007), Changing Business Environment of SMEs in the Era of Globalization, APEC SME Innovation Center, No.4, December [http://www.apec-smeic.org/news letter/newsletter_read.jsp?SEQ=506](http://www.apec-smeic.org/news_letter/newsletter_read.jsp?SEQ=506), pp.12-31
- World Trade Organization (2013), *E-Commerce In Developing Countries Opportunities and Challenges For Small And Medium-Sized Enterprises*, Switzerland.
- Zulkifli Mohd, Muhammad Abdul Kamal Char, Mohd Rushdan bin Yasoa, Zakiah Hassan (2010), Small and Medium Enterprises (SMEs) Competing in the Global Business Environment: A Case of Malaysia, *International Business Research*, Vol.3 No.1.