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OBSTACLES FOR ENTERING E-BUSINESS: THE GENDER ASPECT

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ABSTRACT

Women entrepreneurship is an important research field while women have been underrepresented to the most fields of the economy. The present article attempts a first literature review to the women obstacles in e-business enterprises. Moreover we present the results of a conducted qualitative research for the women's opinion in net entrepreneurship and the obstacles that they face. The research confirms what international literature states and shows that women face more obstacles and problems than men do in entering and developing an e- entrepreneurial life. This is observed because women should combine family and professional life playing different roles, while they are obliged to face gender stereotypes that are still exist in our society. Future research should focus on the opinions of the entrepreneurs researching them in a quantitative way.

INTRODUCTION

In Amsterdam, the European leaders signed a convention which sets entrepreneurship, especially women's entrepreneurship, a basic topic for the union development policy. So, all the member countries are encouraged to support women to find their own enterprise or to be self employed. Indeed, all countries tried to go toward this direction, but despite these efforts and the support of the European Union funding there have still been big differences between women and men entrepreneurship. One of the main objectives of the European Union is to withdraw the obstacles that female entrepreneurs face. However, according to Eurostat, the enterprise demography in the European Union appears to consist of important differentiations, according to the gender of the entrepreneur (Table 1). Thus, we note that except the retail sector, the hospitality business and other services, male entrepreneurs hold bigger shares in the entrepreneurship activity. This probably is due to the obstacles, which female entrepreneurs encounter in the beginning of a business activity or in its development. The international bibliography reports detailed the obstacles that female entrepreneurs encounter regarding a series of parameter such as social comprehension of entrepreneurship as well as financial and psychological factors.

Table 1: Alteration of entrepreneurship activities according to gender

Business Sector	Male	Female	Avrg
Industry	10	7	9
Construction	13	9	12
Wholesale	7	6	6
Retail	18	29	21
Hospitality / catering	7	9	8
Repairing	4	1	3
Transportation	6	4	5
Financial Services and Insurance	2	2	2
Business Services	20	17	19
Other Services	13	16	15
	100	100	100

According to Carter (2000) there are four main areas of questioning economic obstacles that female entrepreneurs face. The first one concern the diminished ability to detect and utilize investments start-up funds, the second is the high guarantee that moneylenders demand, the third one is the lack of continuous financing of the business and finely, the negative relation between female entrepreneurs and financial institutions. Indeed, Carter & Rosa, (1998) support that female entrepreneurs use less start-up funds than male entrepreneurs and this, of course, have negative results.

In addition, the problems that female entrepreneurs face, according to their importance, are the following:

Lack of start-up funds
Lack of business development financing
Discrimination by the suppliers
Lack of marketing and sales skills
Weakness to enter new markets
Lack of management skills
Bureaucracy
Insufficient access to new technologies
Insufficient access to supportive mechanisms

It is remarkable that in the same research, family reasons are reported to prevent the growth of female businesses, such as the inability of combining family and business life, the lack of places for child keeping or high costs for all these. Some social obstacles are also pointed out, such as the perception of society for the female entrepreneurship with effect on the diminished opportunities for the female in contrast the male and the lack of trust to the female entrepreneurs.

ICT and its interpenetration from the enterprises

One of the main problems for the entrepreneurship development, as mentioned above, is the weakness to utilize the ICT and there are many researches that, from time to time, have published,

concerning the adoption of the information technology and e-business from the enterprises. In most of them, Greece is reported to have lowest performance in many of the indices for the adoption of Information Technology and e-business development, in comparison to other European countries as well as to others. For instance, according to research for E-commerce and the Internet, in European businesses (Eurostat, 2004), the companies that used personal computers in the year of 2002 were 94% for the European Union, while for Greece there were 88%. In addition, the companies that were connected to the Internet were 27% for the EU and 23% for Greece. By doing an analysis according to the business activity sector, we make sure that the biggest gap is reported in the tourism sector (hotels and hospitality services in general), where personal computer used in companies was only 81% in Greece, while in the rest of the European Union was 95%. There have been similar results in the industry sector, where reports reveal much lower percentages, comparing to similar European enterprises (85% for the Greek enterprises, 93% for the European enterprises).

E-Business

According to a recently published research (e-business-watch, 2005) the enterprises in the EU that buy products or services online, arise on 51%, from which 24% accomplish more than 5% of their supplies through the Internet. In the same research it appears that the enterprises that sell their products or their services online constitute a part of 17% of total, with only 7 % of these to accomplish online sales that would correspond in more than 5% of their turnover. In the category of small enterprises having 1 to 9 workers the most, only 15 enterprises out of 100 sell online. (Table 2)

Table 2: Internet purchase and sales in the EU

Internet purchase	51%
Internet sales	17%

Source: e-business-watch, 2005 \

In general, it could be mentioned that in the EU, enterprises offer their products to other companies through the internet to other companies in a percentage of 62% and to the consumers 18% (Table 2). From this comes out that the majority of the enterprises prefer to do business to business (B2B) e-commerce and not to sell directly to the consumers (B2C - business to consumer) (Table 3).

Table 3: Sales Through the internet – destination

Business (B2B)	62
Consumers (B2C)	18
N/A	20

Source: Eurostat, 2004

Regarding Small and Medium Enterprises (SMEs), (with personnel till 250 employees) it could be allegated that the percentages of ICT use in Greece are similar to the European average: Computer ownership 92%, Internet connection 82% and company internet presentation 48% while the European average for the year 2002 was 94%, 83% and 52% respectively. The percentages of the enterprises, which utilize electronic transactions for online VAT, Insurance or TAXIS, are 57%, 50% and 50% respectively. The enterprises that utilize internet transactions run to 34%, for internet purchases or services 14% and at last for ecommerce just 5% (EDET, 2003).

Reasons for activating through the Internet

Dedhia (2001), Poon & Swatman, (1999) and Chappell & Feindt (1999) reported that e-business can offer important benefits to small enterprises and these can be the following:

- Decrease of the operational expenses (Venkatraman, 1994; Poon & Swatman, 1997; Kalakota, 2000; Chappell & Feindt, 1999).
- Time saving (Fink, 1998; Chappell & Feindt, 1999; Lancioni, Smith & Oliva, 2000). It is reported in the eurostat's (2004) research, that in the EU 65 % of the enterprises have access to the Internet and use it for ebanking compared with a 60 % in Greece.
- Customer relationships improvement and the abolition of intermediaries (Currie, 1998; Kalakota, 2000).
- Product or service quality improvement (Currie, 2000; Chappell & Feindt, 1999).
- Strategy improvement (Poon & Swatman, 1997).
- New markets approach (Greaves, Kipling & Wilson, 1999).

Enterprises obstacles to enter the digital economy

Obstacles to use the ICT

According to ebusinessforum (2002), research about the obstacles that enterprises face in entering the digital economy, reports that, besides the problems from the use of the computer technology and the necessary skills, there are also problems concerning the technology acquisition costs. The majority of the companies mentioned that they face no problem to adopt ICT (Table 4)

Table 4: SME's problems to adopt New Technologies in their enterprise

No Problem	44
Computer usage difficulties	9
Special training needed for the use of new technology	7
I am not interested / I do not need new technology - computer	5
Big cost	4
Advising absence	3
Skills absence	3
Adaptation difficulties	2

Ignorance of the application of the new technologies	2
N/A	19

Source: ebusinessforum, 2002

Companies' obstacles for adopting e-business

In order to find the obstacles that the small and medium enterprises face entering the digital economy and especially doing e-commerce, it should be referred to the literature review, that Jones, Beynon-Davies and Muir (2003) undertook. In this review, the obstacles that SMEs face in order to adopt e-commerce are reported as follows:

- Deficiency of financial resources or high installation costs.
- Not clear sense of time needed to be spent for e-commerce.
- Inadequate knowledge or information about the benefits, and also uncertainty of the bruit means
- Absence of specialization in the informatics, inappropriate skills, training and personnel.
- Fear and anxiety for security maters.
- Competition.
- Company's impotence to adopt e-business.
- Legal obstacles.
- Obstacles related to the company's philosophy and culture as well as obstacles related to its infrastructure.
- Management's absence of vision.
- Disinclination of the employees to utilize new systems.
- Priority matter.

The above obstacles that came out from literature were categorized, creating an examination instrument and an effort was made to record their effect in the SMEs. The research's results are reported in the following table (5) with an analysis of the company's size.

Table 5: Companies' obstacles for adopting e-business

Obstacles	Total	1-9 micro	10-49 small	50-250 medium
Lack of time to develop and maintain a website	48	53	53	25
Lack of special skills (IT/WWW)	27	36	28	11
Lack of financial resources	30	44	31	8
Lack of information, consulting and support	15	25	11	6
Lack of understanding and trust	13	11	17	8
Organization structure and culture	8	8	8	6
Fear of possible ascendancy from the big enterprises	2	0	6	0
Not enough customers or suppliers	28	36	31	8
Concerning for security	25	31	31	6
Not applicable in the company	10	11	11	6
Other	2	0	3	3

N/A	12	6	14	8

Source: Jones, Beynon-Davies and Muir (2003)

Regarding the problems that Greek enterprises face in order to enter the digital economy, the working group B3 from the e-businessforum (2002) recorded the following as basic:

- Deficient and inadequate information diffusion for ebusiness matters,
- The lack of specialized human resources,
- The very low level of sensitisation, know-how and business readiness by the companies' staff,
- The problems deriving from the legal context,
- The lack of adequate motives,
- The lack of technological infrastructure in the SMEs for immediate transition into e-commerce,
- The inadequate connection of research and academic work with the market, in matters of new economy as well as the lack of propaganda for e-business.
- Investigating the enterprises and referring to the same research, it has to be mentioned that the problems concern:
- The limited resources of technological infrastructure of the SMEs,
- The limited use of the informatics, especially in the fields of accounting and logistics,
- The small and not exactly defined markets.

In addition, in the Eurostat's (2004) report, it is mentioned that the factors that hold back Greek enterprises from selling or buying their products online through the Internet, according the opinion to the entrepreneurs are:

Table 6: Obstacles to enter e-commerce

	Companies that not selling through the Internet: (%)	Companies selling through the Internet: (%)
Products not marketable through the internet	34	44
Consumers or other companies not ready yet	47	81
Security problems according to internet payments	43	73
Uncertainty for the legal context	41	75
Accounting problems	24	43
Other obstacles	2	5

Source: Eurostat, 2004

Differences between male and female entrepreneur to enter the digital economy

New technologies and entrepreneur's gender

New technologies (information technology), as an important factor of the entrepreneurship, can contribute to entrepreneurship development or shrink of many small or big enterprises. The alteration between male and female entrepreneurs in the use of information technology is important and this is reported in the data of the European Observatory for the SMEs (ENSR, 2002). It is

obvious that male entrepreneurs use the information technology much more than their female colleagues in the enterprises (Table 7) and that, could possibly be, a serious obstacle for further development.

Table 7: Use of new technologies in the company per entrepreneur sex (% of the SMEs)

	Male	Female	Difference
Credit Card Reader	34	45	-9
Mobile Phone	84	74	10
Use of Computer	70	63	7
Use of computer connected to the internet (with server for use of applications within the company)	50	39	11
E-mail / Electronic Data Interchange (EDI)	72	56	16
Intranet	19	14	5
Internet	75	60	5
Web Site	44	33	11
Non of the above	3	6	4

Source: ENSR, 2002

It can be noticed that women entrepreneurs use new technologies less than their male colleagues. Respectively, there are no significant differences reported in the communication of male and female entrepreneurs with the Public Authorities, with men to communicate a bit more frequently. (Table 8)

Table 8: Use of the new technologies: data interchange with the public authorities. (% of the SMEs that use electronic data interchange with the public authorities) per entrepreneur sex

	Male	Female	Difference
Email communication with the public authorities	21	18	3
Gathering information from the public authorities' web sites	30	27	3
Document download from the public authorities' web sites	26	21	5
Requested information upload to the public authorities' web sites	18	15	3
Non of the above	60	65	-5
N/A	2	1	1

Source: ENSR, 2002

All of the above data demonstrate the imbalance in the use of information technology and e-business between male and female entrepreneurs. In order to investigate further the differences in Greece, the following qualitative research took place and its results have been analyzed as follows.

Qualitative research studying the obstacles

The aim of the qualitative research was the in-depth study of gender differences in the use and adoption of information technologies and especially e-business by the entrepreneurs.

Qualitative research methodology

In order to decide on the sample of the research, the theoretical sampling was used, according to which, individuals or groups are selected for examination based their characteristics and relevance to the research questions (Mason, 1996). Moreover, the sample of the qualitative research was selected on the base of the following catalogue with proportional objectives of the qualitative sampling.

Proportional objectives of the qualitative sampling
Total sampling size: 20 Entrepreneurs. The sample contains:

- Ten male entrepreneurs, self-employed or with personnel from one to ten employees the most
- Ten female entrepreneurs, self-employed or with personnel from one to ten employees the most
- Ten entrepreneurs that use information technology
- Ten entrepreneurs that don not use information technology
- Two male entrepreneurs doing e-commerce
- Two female entrepreneurs doing e-commerce

According to the above catalogue, the **Qualitative research** is held in five female and five male entrepreneurs through a semi-constructed interview of open questions and observation of their business operation. An observation sheet was used while the interview has been recorded.

The axes of interview

The researchers produced an interview leaflet containing questions and axes of the interview. These questions were popped out from the international literature review as an exploratory method (Mason, 1996). So, with the qualitative research we tried to examine closely:

- The new technology and e-business solutions degree of use by the micro enterprises.
- The reasons that these enterprises use e-business solutions and the forms they use
- The obstacles they face entering the new economy and the ways of removing them.
- The gender differences in e-entrepreneurship.

Results of the qualitative research

The qualitative research confirmed and enriched the data of the international literature. The outcome of the research appears that the main reason of using the Internet is not to sell or to buy goods, but it is seen as a means to promote their business. With regard to the obstacles that entrepreneurs encounter in their entrance into the digital economy, especially in the use and

utilization of electronic commerce, qualitative research recorded important points of view of the entrepreneurs. Some of them consider as the most suspending factor in a small enterprise, mentioning that «*..in order to activate e-commerce you need to invest a lot of money»* while others focus on the difficulties in selling a good online, and characteristically pointed out that «... *we are not familiar with the internet yet. It is still difficult in Greece to do e-commerce in comparison to other countries*». A very interesting opinion of a female entrepreneur who sells internet services, mentions:

"... it is difficult to sell services over the internet, but if we have a product we will do it because it will be so manageable, have no delivery costs, it is downloaded, the client can pay for it and it is over. We promote the product, the client can go to the site and see it, and they call us to ask about it and to order. There is not an e-paying process, it is a part of e-commerce but we have not operate it yet."

Additional reasons that deter a micro-enterprise to expand to electronic commerce are reported as follows:

- The ignorance of the e-commerce and information technology by entrepreneurs
- The lack of knowledge about entrepreneurship matters
- The different demands that an internet company has, compared to a traditional one
- The difference in the cost accounting of products
- The lack of market research before activating the internet
- The fact that the entrepreneurs are not ready to pay more for changes in their business in order to build a successful e-commerce site

Except for the reasons above, personal characteristics of the entrepreneur and his or her personal targets set play an important role.

> *«...The clients think that they will make a fortune with e-commerce, which does not happens from one day to another, they get disappointed and leave it. While others work on that, follow it, work for the ecommerce operations, conceptualize the potential of ecommerce, they stay and continue».*

As for the differences in gender reported I relation to their entrance in the digital economy, the research shows that female entrepreneurs encounter bigger problems than the male ones. In the beginning it is stated that «… *men use the technology much more. Women take care more of the customer, are more communicative and perceive the matters better*». The absence of the personal contact between the customer and the salesperson is more against the women. It is pointed out that female have less time to dedicate to the development of an electronic business as they have multiple roles in society (family, wife, motherhood) and this constitutes an important obstacle against the electronic entrepreneurship. From all the above, we can find out that the qualitative research confirms the research data of the international literature, according to the obstacles that entrepreneurs encounter entering the digital economy, especially the female ones.

CONCLUSIONS

The present research study emerge the problem coming out of the use of the information technology between male and female users. Especially, it is focused on the obstacles that male and female encounter in order to enter the digital economy. It is reported that this matter is extremely important and constitutes a field on which considerable differences are reported over male and the weakness of female to follow the progress in this section. As a conclusion, we could support that micro enterprises encounter many and important obstacles in their total entry in digital economy. As confirmed from literature review that came out before, as well as from the qualitative research, the problems and obstacles that the entrepreneurs face in the use and utilization of the ICT, seems to be the same in all over the world. Thus, it is important for the government, the international community and organizations to take actions in order to eliminate the obstacles that set back the development of entrepreneurship as well as the development of society in general.

FUTURE RESEARCH

The present study is one of the first efforts that defines the field of female e-entrepreneurship and its obstacles. So, future research should be focused on male and female opinion differences. Consequently, this effort should be continued, carrying out a quantitative research of this matter, especially placing emphasis on the relation between the e-business and the obstacles that entrepreneurs face, as well as their proposed solutions.

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OFFSHORE OUTSOURCING – POINT OF NO RETURN

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INTRODUCTION

The American information technology industry has seen a steady erosion of its workforce over the last 10 years due to offshore outsourcing. Much of the lost jobs have been in the help desk, database administration, and small application development areas. According to Forrester Research, in 2005, about 24% of North American companies used offshore providers to meet some of their software needs, according. The pace of outsourcing is not abating any time soon – IDC studies have suggested that over the next five years, spending on offshore IT services is set to increase at a compound annual growth rate of 18%. The common conclusion drawn by many is that offshore outsourcing is bad for our nation's economy and the job market. While the loss of jobs is indeed real, outsourcing has enormously benefited numerous American organizations – but only those that have understood the many advantages and opportunities created by outsourcing.

The purpose of this paper is to identify the reasons that make offshore outsourcing not only a compelling option but also a necessary strategy for successfully competing in the global economy.

REASONS FOR OUTSOURCING

Outsourcing is the practice of relocating a whole process, a piece of a process, a function, or a discrete piece of work outside of its own corporate boundaries [Bernstein 2005]. Companies seeking to focus their management, workforce, capital, and other resources on their "core competencies" examine their business processes for work that can be performed effectively and cost-advantageously outside the company while preserving the company's competitive strengths and maximizing financial gain. These business processes include accounting, human resources management, call centers, research, and information technology operations. ***Offshore*** outsourcing (or Offshoring) refers to outsourcing of an activity to an organization that is located in a different country.

In the current global economy, outsourcing is often more the norm for large US organizations, rather than the exception. The best run companies leverage outsourcing to maximize their competitive advantage.

Reduced cost of Operation. The allure of reduced operating costs is one of the original compelling reasons for offshore outsourcing. The difference in labor costs was simply too good to pass up.

Staff Scalability. The global economy, while providing more opportunities, also increases the volatility of the business environment. The sudden changes in market conditions allow outsourcers to rapidly vary the size of their workforce.

Access to Global Employee Skills. It is not easy, nor cheap for a country to develop all the skills necessary to thrive in a global economy. It is far more efficient to simply acquire the available skills by hiring employees with the required skill sets from any part of the globe. Some of the current favorite places include India, China, and the Central/Eastern European regions.

Time Zone differences. This allows 24/7 operations, in which work can be handed over to a center in a different time zone (as the work day ends in one zone), so that business operates continuously without any interruptions or incurring overtime payments.

First to Market. An organization can attain competitive advantage by selectively outsourcing specific IT and business processes. First, by using global resources in an optimal fashion, an organization can be the first to market a product or service. This would allow for an initial advantage, and give the company the opportunity to quickly corner the market.

Market Expansion. By outsourcing to offshore centers, an organization gets an opportunity to learn about local markets in various parts of the planet. This allows the company to expand its current business in other markets, or even identify new opportunities for businesses and services.

Focused and improve core competencies. By outsourcing non-core business processes, the distractions associated with dealing with non-core operations and processes are removed. This allows an organization to focus and improve on its core competencies. It is also possible that the outsourced jobs are done more efficiently at a lower cost.

Timely Customer Service. Last, but not least, an organization can provide a lower costing, and a higher quality customer service experience by globally outsourcing call centers. It is essential that the outsourced call-centers are reliable, well trained, and of high quality (Dell had recent problems when it did not do this).

SUMMARY & CONCLUSIONS

In the near future there will probably be no large organization that is solely based in one country. Each organization will maximize their efficiency by carrying out different business processes in the most cost-efficient geographic regions. This will be an essential strategy to survive and thrive in the new global world. In essence, the outsourcing juggernaut cannot be stopped now, and more importantly should not be stopped. There is no return to closed, protectionist economies.

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THE IMPACT OF DOMAIN-SPECIFIC STOPWORD LISTS ON ECOMMERCE WEBSITE SEARCH PERFORMANCE

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Shoppers on eBay log more than 400 million searches per day for any one of more than 25 million available products. Search time is an important determinant of e-service quality, which is widely recognized as an important determinant of a customer's electronic commerce (e-commerce) experience. One factor contributing to a negative experience is long waiting times. In fact, consumers have a tendency to abandon slow websites if waiting time becomes intolerable, which can occur in as little as two seconds. Much like an index in the back of a book facilitates searching, a similar index, called an inverted index, facilitates searching in a digital environment. Smaller indexes result in faster searches. One way to accelerate search time is to reduce the index size by removing common words like the, and," or with. These words, called "stopwords," offer little searchable meaning. Words on standard stopword lists are frequently removed from indexes. However, e-commerce sites also contain high-frequency, low-value words that are domain-specific and should be added to standard stopword lists. For example, high frequency words in eBay's furniture category include please, shipped, damaged, auction, charged, accept, buy, and paying. These are high-frequency words buyers don't tend to search for.

To assist in the creation of our domain-dependent stopword list, we first created a corpus of over 36,000 eBay products in the furniture category and then used linguistic analysis to drive the stopword list algorithm. We tested our domain-dependent stopword list against a standard stopword list and a control group. We experimentally generated furniture category queries and executed a random set of these queries against the three indexes and recorded the search times. A repeated-measures ANOVA was used to analyze results. The queries tested using the domain-dependent index performed nearly 5.6% faster than the same queries run against the index with a standard list of stopwords removed, and nearly 20% faster than the control index with no stopwords removed. The effect of the index size was significant [$F(1.061, 33.945)=3.761$, $p=.059$] at an alpha level of .10. Paired T-Tests were also conducted and showed that the times (in milliseconds) for queries run against the domain-dependent index were significantly faster than both those run against the index with the standard set of stopwords removed [$t(32)=1.996$, $p=.055$] and those run against the index with no stopwords removed [$t(32)=1.999$, $p=.054$].

This study makes several important contributions to the ecommerce field. First, the study uses a large corpus of nearly 20 million words comprising just over 36,000 products from eBay, an important ecommerce website. Second, it considers the language that consumers use in the online auction marketplace when implementing techniques that accelerate website searches as the stopword list algorithm is based on a linguistic analysis of consumer-provided product listings.

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