

Open University of Cyprus

FACULTY OF ECONOMICS AND MANAGEMENT

«*MASTER IN BUSINESS ADMINISTRATION*»

Master Thesis



The Impact of E-Commerce on the Sales of Small Enterprises

Xanthos Neofytou

**Supervisor's Name
Dr. Christos Bouras**

November 2020

Open University of Cyprus

FACULTY OF ECONOMICS AND MANAGEMENT

«MASTER IN BUSINESS ADMINISTRATION»

Master Thesis

The Impact of E-Commerce on the Sales of Small Enterprises

Xanthos Neofytou

**Supervisor's Name
Dr. Christos Bouras**

Individual thesis submitted in order to complete the requirements for the Master in Business Administration (MBA in English) of the Faculty of Economics and Management of Open University of Cyprus

December 2020

This page intentionally left blank

Contents

Abstract	5
1. INTRODUCTION.....	6
1.1. Background	6
1.2. Research problem.....	7
1.3. Aim and objectives.....	9
1.4. Thesis outline	9
2. METHODOLOGY	11
2.1. Research approach.....	11
2.2. Research method	12
2.3. Data collection	13
2.3.1. Secondary data	13
2.3.2. Primary data	14
2.4. Research model outline	15
3. THEORETICAL BACKGROUND	16
3.1. Introduction	16
3.2. Definition of e-commerce	17
3.3. Development of e-commerce and the process of adoption	18
3.4. E-commerce and marketing strategy	20
3.4.1. Product	20
3.4.2. Place	20
3.4.3. Price.....	21
3.4.4. Promotion.....	21
3.5. Benefits of e-commerce adoption in small companies.....	22
3.6. Barriers for e-commerce adoption in small companies.....	24
3.7. Summary of the literature review	25
4. FINDINGS	27
4.1. Electronic development in Europe	27
4.2. E-commerce usage in small-size companies (location Cyprus).....	29
4.3. Interview Questions and Overall Results	32
4.3. Development of e-commerce in the interviewed companies – location Cyprus	33
4.4. The reason beyond e-commerce development	34
4.5. Barriers for e-commerce adoption.....	35
4.6. Benefits from e-commerce adoption	36

4.7. Benefits and barriers – before and now.....	37
4.8. The impact of e-commerce on the business strategy.....	37
5. DISCUSSION	39
5.1. E-commerce development in small-size companies – Location Cyprus.....	39
5.2. The reason beyond e-commerce development	40
5.3. Barriers for e-commerce adoption.....	41
5.4. Benefits from e-commerce adoption	44
5.5. The impact of e-commerce on marketing.....	46
6. CONCLUSION	48
References	50

Abstract

Small enterprises are struggling to be heard and convince customers to purchase their promising services and solutions. Liaise with customer's expectations and offer suitable services and solutions is an issue to address. Attracting several customers though is the major issue. E-commerce it is essential nowadays for a small enterprise to promote and sell those promising services and solutions to the open market. eBay, Amazon, Uber and Booking.com are some of the examples demonstrating of how e-commerce can help a business grow.

The purpose of this thesis is to examine the impact of e-commerce on the Sales of Small Enterprises. This thesis describes what influenced the e-commerce adoption and what are the limiting factors for the companies when kicked off the transformation process. To collect some answers, I performed a qualitative research and an abductive methodology was utilized. The results of this research and the theory were linked through an extensive analysis process. Remote meetings with small companies were led so as to address some concerns. This study shows that the examined companies have adopted e-commerce already, but the gap between small and large companies is still visible.

The decisions for e-commerce adoption are dependent on the knowledge of the owner /manager and e-commerce is extensively used as a marketing tool. Internal efficiency and information exchange between customers (B2C, B2B) or colleagues are the main benefits of e-commerce adoption. The cost is not anymore, the major challenge but lack of knowledge is. Also, many companies are not encouraged enough to make improvements, because of lack of customer demand.

1. INTRODUCTION

The aim of this thesis and the research performed included in this chapter. E-commerce is something that must be explored, and the reasons are well presented. Thesis' target is also described and lastly the content of all thesis is presented.

1.1. Background

Many facets of business and social life are being reshaped by e-commerce. Small business and in general companies, if they want to be competitive in the marketplace, they need to adapt their strategies to the current realities. E-commerce is a modern way of doing business and its importance increases every year (S., 2008). Dave Chaffey defines the word 'e-commerce' as all transactions that are electronically facilitated between the business and third parties (Dave, E-business and e-commerce management – Strategy, implementation and practice. Fourth Edition, 2009). At the same time, e-commerce not only offers a vast amount of data to enterprises, increases transaction speed and lowers costs, but also reshapes their marketing strategies and practices. Implementing an e-commerce strategy can be different for each company (Xu & Quaddus, 2009). In large enterprises the main motivation is to enhance a lean setup internally to achieve efficiency on their processes, in small business the main target is to be competitive. Applying e-commerce strategies and solutions it is a “painful” process for many companies. This varies of course based on the culture of the company, the industry, decision makers, demographics of employees, current setup, level of education etc. Thus, adoption processes need to start simple and move to more complex stages of e-commerce to achieve successful integration within a company (Brand, 2008). Clearly, any firm starting the method of e-commerce transformation will confront numerous problems and obstructions. Supervisors within the little companies have to overcome the obstructions and realize the benefits from e-commerce to ensure that they will anticipate the risk of competitive impediment in their businesses (Abid, Rahim, & Scheepers, 2012). In this thesis I will try to describe the effect of e-commerce in small business which are either operating in my home country or in the global environment. There are no boundaries in business especially when implementing such e-commerce strategies and have the willingness and the advantages to compete internationally. The reasons why the small business have begun to integrate e-commerce will be presented. Emphasis will be given to the benefits and barriers related to this integration. That said, a detailed review of the literature and data will be performed. In addition, interviews of small business will be made. The accessed companies can be described as small, with numbers of employees from 10 to 49 and annual turnover below 10 million euro.

To study the adoption of e-commerce we interviewed eight (8) companies and their profiles are briefly presented in the following paragraph and are as described in their websites. The names of the companies are irrelevant for the study and will not be disclosed.

Company A *“A leading IT solutions and services organization in the Eastern Mediterranean region with offices in Cyprus and Greece”.*

Company B *“R&D company located in Cyprus that specializes in the development of custom-made optical fibre sensors, and monolithic fibre lasers, whilst also working on niche optical sensing solutions using Artificial Intelligence”.*

Company C *“is a company committed to providing integrated and comprehensive satellite communication services to customers operating in remote and isolated locations. Their services include satellite communications, hardware, IT solutions, cyber security, and network design, to airtime services, integration solutions, and more”.*

Company D *“Delivering the kind of bespoke maritime satellite communications solutions our customers need.”.*

Company E *“Leading provider of technical, crew management and value added services to the offshore and maritime industry”.*

Company F *is a hair salon which provides its services such as haircut, styling, colouring etc. As per the firm “Not the average hair salon”*

Company G *“is the first interactive marketing communications company in Cyprus that brings over a decade of experience in both traditional and digital marketing. The company has been created to bridge the gap between offline and online communications in the region, by providing first class internet marketing services that are directly linked with sales”.*

Company H *“provides an extensive range of satellite services and associated products, including Digital Platforms on selected satellites, Satellite Turnaround Services covering diverse areas around the globe and associated fibre connectivity products. These services are made available on both permanent and occasional basis”.*

1.2. Research problem

This paper will explore the impact of e-commerce on small business companies based in Cyprus but operating globally by recognizing the seen obstructions and benefits for e-commerce integration in their processes. The think about is imperative, since it tosses lights on the one of a kind and ever-changing variable affecting the companies. There were assessed to be around 25.1 million small business within the European Union in 2018, with the tremendous lion's share of these undertakings micro-sized firms which as it were utilized less than nine individuals. Additional 1.47 million enterprises were small firms with between 10

and 49 workers and around 236 thousand were medium-sized firms that had 50 to 249 employees. Small business are an important part of the European economy, but their value to each country varies quite significantly e.g. small business contribution the economy in Malta may be 81% versus 41.7% that you may find in the Republic of Ireland. In general, small business contribution to the European Union's economy is around 56%. (Clark, 2020).

The market is dynamic, and the technology is continuously evolving. The trend now changed and instead of having the technology leading the change we have the demanding applications to push technology on aligning expectations. Within such agile environment the e-commerce adoption is critical for small business to satisfy the needs of collaboration exchange and customer centric business. The integration of e-commerce may develop opportunities in the global and local markets but at the same time may increase the access to resources and talents that can add value to a small business services or decrease spent. Whereas for the non SMEs the motivation to integrate e-commerce is to enable a lean setup where efficiency is the main target, small business are triggered to enable e-commerce to increase be competitive in an ever changing environment (Xu & Quaddus, 2009). Managers will need to have the correct understanding and capture the benefits by overcoming the obstacles and resistance of their small business to ensure that they will be able to deploy properly an e-commerce strategy.

The effort to study the topic “***Impact of E-Commerce on the Sales of Small Enterprises***” and the reasons that directed me to this decision are the following:

- Implementing e-commerce strategy in small business it may need of course an initial cost and recurring costs which may include personnel, technologies, digital solutions, integrations, consulting etc. This sometimes is a factor that can push back the SMEs to get into this road but is it something that nowadays we really have a choice? As per Charles Darwin's quote “*It is not the strongest of the species, nor the most intelligent that survives. It is the one that is most adaptable to change.*” Small business need to adopt into this change to survive – the level of adoption and the level of change is something that can be a discussion by itself and maybe a big subject for another study.
- The companies that are explored within this thesis are well established small business that are based in Cyprus. Cyprus is a politically stable country – member of EU - with open, free-market, service-based economy with some light manufacturing mostly promoting its geographical location as it may serve as the link between Europe, Asia and Middle East. Cypriots are well educated and at a very high percentage English speakers. The island is easily accessible and have moderate cost of living and good airline connections and telecommunications (Wikipedia, 2020). The eight (8) companies selected have various backgrounds. We have four ICT companies (3 are in

satellite communications and one in IT), a company which is involved in the hair and beauty industry, a company involved with R&D, a company involved in Ship management services and the last one which is involved in digital marketing. All companies have their customers in the international market and/or local market.

- E-commerce is not something new. It is an evolving “tool” though and monitoring the status of implementation at a certain area (small business in our case) is critical. We need to know where we have been before, where we are now and where are we heading in the future. Examining this evolution is interesting and essential at the same time.

1.3. Aim and objectives

The aim of this thesis is to examine the “Impact of E-Commerce on the Sales of Small Enterprises”. This of course includes the research of the influence, barriers and benefits when e-commerce is integrated in the daily processes of small business companies in Cyprus and most probably reflected in the global environment as well. That said, the following activities will be performed:

1. Review the impact of e-commerce through past publications
2. Examine the benefits and limitations based on the small business understanding/experience
3. Interview/survey small business in Cyprus

The questions that we need to answer with this thesis are the following:

1. What is the level of development and the impact of e-commerce on small business (in Cyprus)?
2. What are the perceived benefits from e-commerce adoption?
3. What are the perceived limitations for e-commerce adoption?

1.4. Thesis outline

Chapter 1: Introduction. The chapter presents the essential concept of the study, the significance of the subject and the point and targets. The questions that this thesis is called to answer are set.

Chapter 2: Methodology. The chapter presents the methodology utilized and the tasks performed towards this research. The method utilized is explained. In this chapter emphasis is given on the techniques used to collect data. Main information and secondary are explained

and the reasons that are used is well described A research model is developed and presented to provide clarity to the readers of the steps followed.

Chapter 3: Literature review. The chapter presents the concept and the background theory to support the following parts. The concept and the impact of e-commerce versus legacy marketing strategy is described. The pushbacks and the benefits by utilizing e-commerce strategies are further clarified and explored and a summary of the literature findings is provided.

Chapter 4: Research. The chapter presents the discoveries as a result of the data research. The research starts by initially exploring the available information to ensure that we are aware of the current level of development of e-commerce in small business and then we proceed on the findings of this thesis from the research made. The results are based on the information received by interviewing eight (8) small companies in Cyprus.

Chapter 5: Discussion. The chapter presents the experimental discoveries in terms of the literature about the problem and tries to reply the questions set. Observational discoveries are related and compared to the theory in order to answer the questions set in this thesis.

Chapter 6: Conclusion. The chapter presents a summary of the results and recommendations for further study of this subject.

2. METHODOLOGY

The chapter presents the methodology utilized and the tasks performed towards this research. The method utilized is explained. In this chapter emphasis is given on the techniques used to collect data. Main information and secondary are explained and the reasons that are used is well described. A research model is considered and presented to provide clarity to the readers of the steps followed.

2.1. Research approach

There are various research methods in social sciences and a feature of research designs are the approach to the logic that they include. Three main research approaches are the deductive, inductive and abductive. The reasonings are well explained and presented below with diagrams:

- **Deductive Reasoning:** This method is described by reviewing the past literature and then obtain logical conclusions based on hypothesis and prepositions. Then all hypotheses and prepositions are tested, and conclusions are made that can be accepted or rejected (Business Research Methodology, n.d.)

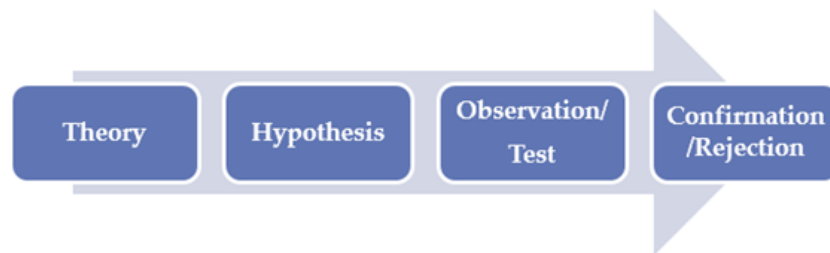


Figure 1. Deductive reasoning - Diagram

- **Inductive Reasoning:** This method starts initially by observations and tests until we end up into a pattern and propose the theory as the result of the research process (Business Research Methodology, n.d.)

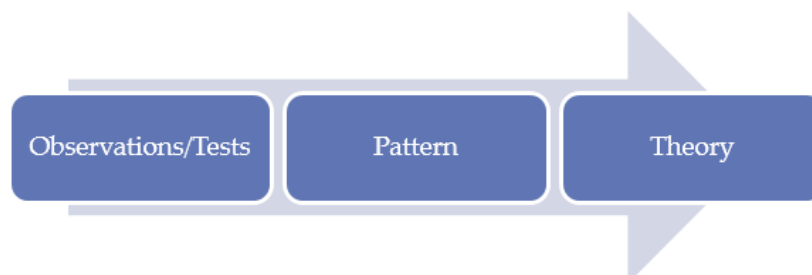


Figure 2. Inductive reasoning - Diagram

- **Abductive Reasoning:** This method is designed to accommodate the issues of the two (2) above mentioned methods. Thus, in this reasoning a more realistic approach is made to overcome the lack of clarity of deductive approach and the absence of an amount of empirical data of inductive reasoning (Business Research Methodology, n.d.)

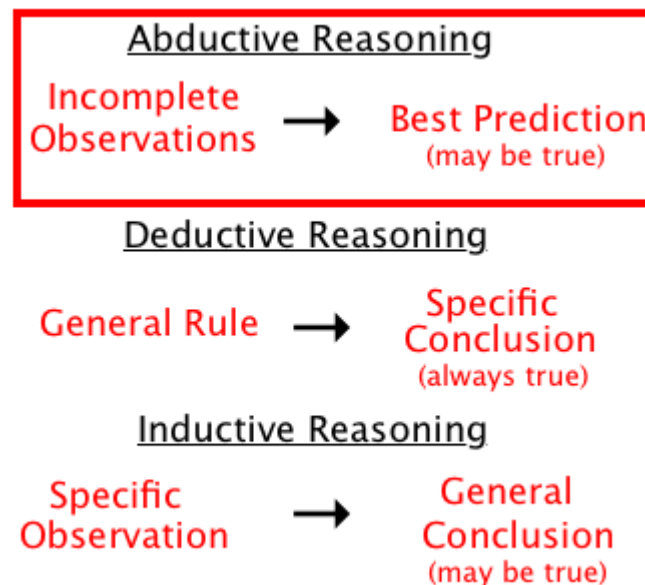


Figure 2. Abductive reasoning - Diagram

With the above reasonings in mind I selected the last one (abductive) in this thesis. This seems to be more suitable since e-commerce is initially made its presence in 1960s and thus there is already available theoretical framework to be used. The way forward within this thesis is to review the literature, conduct my observations and finally present the results. All the results will be linked in a way where the research questions will be answered.

2.2. Research method

Various research methods can be used. Common research methods in literature are the qualitative, quantitative and mixed. **Quantitative** includes research in numeric data and statistics. The benefit in this method is that you can collect and review much more information. A disadvantage is that the reasons, context, emotions are not capture – “numbers talk themselves” approach. **Qualitative** data focus on “quality” and not “quantity”. This includes opinions, feelings, thoughts, behavior etc. The benefit in this method is that you have access to details about specific cases, people, groups. Main disadvantages are that you can’t make general statements, and that analysis is time consuming. **Mixed** method includes data from both quantitative and qualitative methods. A combination of those data will support the analysis and answer questions (Bryman, 2007). In this study qualitative methodology was applied and first and secondary information were used. The explanations to use a qualitative methodology are various. In small business, the decision making is predominately owned by

very few people and thus the human factor is very important. Thus, contacting people in small business with decision making force is easy to obtain accurate data and answer my research questions. Also, the scope of this thesis is to describe the e-commerce effect versus confirm or reject a hypothesis, the qualitative method is more suitable. In addition to the above, qualitative method allows more flexibility and adjustments and at the same time there are researches already made. Simultaneously, the available timeframe remained to deliver this thesis is limited and thus not possible to perform an extensive quantitative research. Therefore, I decided to conduct structured interviews having at the same time a questionnaire survey which is sent to interviewees to complete. The definition of European Commission for small business describes a small business as an independent company with 10 to 49 employees and less than 10-million-euro annual turnover. Independent is considered a company which is not owned by other enterprises and has more than 25% of the capital or voting rights (Eurostat, 2012) (Xu & Quaddus, 2009).

2.3. Data collection

The collected information is separated into primary and secondary. Secondary data considered the information that is collected from previous researches, journals etc. The primary data are the “fresh” data I collected for the purpose of this thesis from small companies in Cyprus (Bryman, 2007).

2.3.1. Secondary data

Secondary data collected by researchers, agencies and other sources can be used in this thesis. The data is the new oil nowadays and having access to those, in combination with the right understanding and technology in many times can be a very important tool in decision making. Thus, in business and management the secondary data are becoming essential (Bryman, 2007). The benefits of secondary data are many. Obtaining secondary data in many times is simple versus obtaining primary data. Also, since in most of the times the secondary data are available in a bigger volume and the research is made by experienced organizations, universities or governments, the accuracy of the results is much better. Thus, correlating primary and secondary data will result into better decision making (Crawford, 1997). As previously mentioned, the selected research method is the qualitative and thus receiving a good overview of e-commerce is required. At this point the secondary data are significantly contribute to the increase of knowledge for me to better formulate the interview questions.

Of course, there are some disadvantages from the use of secondary sources. The data are not always suitable for cross-national comparisons, since different variables may be taken into consideration and other definitions may be used. This is a limitation that within this thesis it may not be an issue. We are not discussing the e-commerce in various countries and thus no

comparison is made. We are to explore and compare the available data for a specific subject (e-commerce) and compare it with our primary data that is collected by small business.

Data sources used are official statistic and public documents, journals, articles, international statistic from “Eurostat” as well as information from companies’ web sites. Within this thesis the approach of Crawford (Crawford, 1997) is used and thus I initially examined the secondary data and then to collected and analysed primary sources.

2.3.2. Primary data

Primary data, as mentioned above, are the data that a researcher is obtaining directly from the source – in our case the data that I obtained by interviewing the eight (8) companies remotely. The benefit is that this information is “fresh” but at the same time limited. Thus, the right picture is not easy to be captured by just reviewing eight (8) companies in Cyprus. That said, a semi-structured interview is made which is suitable when the author has already sufficient knowledge about the topic and it supposes little variation of the questions and their sequence, or altering of the wording (Crawford, 1997). The interview prepared and performed consists from:

- **Yes/No questions:** in order to obtain information about the current level of e-commerce development in the companies. This input will support and answer the first research question and obtain a clear picture of the interviewed companies and their e-commerce usage.
- **Open questions:** open questions clarifying the effect, limitations and advantages from e-commerce integration into the small business.
- **Ranking Questions:** in order to understand the benefits and barriers as those are viewed by the small companies. Which barrier is the most challenging and which benefit is the best for a small company.

The interviews with each of the companies were less than one hour long and the interviewer asked from the interviewees to answer through emails in order to ensure that nothing is being modified due to miscommunication. The advantage is that there will not be any mistake due to miscommunications, but the disadvantage is that the companies had the time to think further of how to answer a question which may have differences versus a spontaneous answer. I am confident thought that since the answers where given by the top management of each company and that the name of the company will not be revealed or published there is no reason to receive inaccurate response intentionally. The following table shows the profile of the interviewed companies and the responder’s role. The time required was approximately 1

hour for each company. The author sent surveys through google forms and once completed he called the responders to emphasize a bit more and get the story behind their answers:

COMPANY	RESPONDER'S POSITION	COMPANY PROFILE
A	Senior Commercial Manager	A leading IT solutions and services organization in the Eastern Mediterranean region with offices in Cyprus and Greece.
B	Director	R&D company located in Cyprus that specializes in the development of custom-made optical fibre sensors, and monolithic fibre lasers, whilst also working on niche optical sensing solutions using Artificial Intelligence
C	Managing Director	is a company committed to providing integrated and comprehensive satellite communication services to customers operating in remote and isolated locations. Their services include satellite communications, hardware, IT solutions, cyber security, and network design, to airtime services, integration solutions, and more".
D	Operations Director	Delivering the kind of bespoke maritime satellite communications solutions our customers need.
E	Sales Infrastructure Manager (Group)	Leading provider of technical, crew management and value added services to the offshore and maritime industry.
F	Creative Director	Hair salon - Hair & Beauty industry
G	General Manager	is the first interactive marketing communications company in Cyprus that brings over a decade of experience in both traditional and digital marketing. The company has been created to bridge the gap between offline and online communications in the region, by providing first class internet marketing services that are directly linked with sales".
H	Head, Development of Satellite Facilities and Products	provides an extensive range of satellite services and associated products, including Digital Platforms on selected satellites, Satellite Turnaround Services covering diverse areas around the globe and associated fibre connectivity products. These services are made available on both permanent and occasional basis".

Table 1: Interviewed Companies – Primary Data

2.4. Research model outline

The approach utilized in this thesis is abductive. This means that it is necessary to perform this research to always keep in mind the theory, the analysis of primary and secondary data and always review the results. To easily refer to this process I designed a custom model of the methodology approach and this is demonstrated in Figure 3.

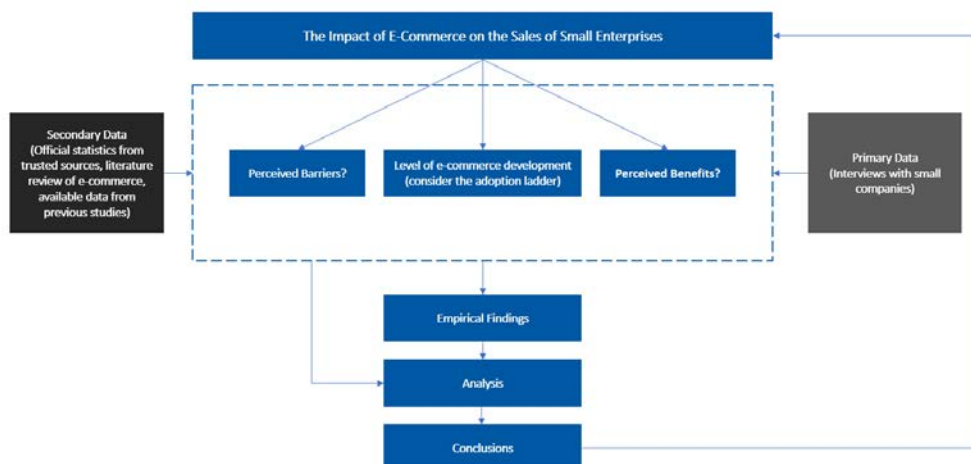


Figure 3. Researcher's Diagram – Process Followed

3. THEORETICAL BACKGROUND

The point of this chapter is to deliver a hypothetical base for better understanding of the e-commerce concept. The chapter starts with a definition of the term and describes the different formats of e-commerce. The advancement of the concept is being depicted. How the e-commerce affects the traditional marketing and the 4P's (Product, Place, Price, Promotion)? What are the advantages and limitations of e-commerce when integrated into small enterprises? Do they really impact sales? All those questions will be answered within this chapter.



Figure 4. Marketing Mix (4Ps)

3.1. Introduction

In 1969, CompuServe was founded by electrical engineer students. The company was utilizing a dial-up connection and it was the first company to drive the online service industry. Ten years after, CompuServe introduced to the market the first service offering electronic mail capabilities. A year after, in 1980, the company started the first online service to offer real-time chat online. At the same year, 1980, electronic shopping was founded by Michael Aldrich. In 1982, the world's first e-commerce company was founded and in 1992 online marketplaces were enabled by Book Stacks Unlimited. In 1994, web browser was launched by Netscape which made the online browsing easier. This gave a good field for Amazon (1995),

Ebay (1995), Paypal (1998), Alibaba (1999) to lunch. In 2000, Google launches AdWorks which is an online advertising tool. E-commerce grow rapidly and now the way that we do business it will never be the same. The reasons are obvious. In most of the cases there is free access to media for companies, they can now have more engaged and better volumes of audience ready to receive advertisements or to buy directly from a marketplace or both. This was a truly game changing development for all companies enabling access to the market without the need of a big investments. Nowadays e-commerce is considered as a promising tool for reaching companies' goals – increased sales and revenue – the competition though is now transferred on the web where there are no isolated markets. Small Enterprises still struggle to fully adopt to the new reality, and this is what this thesis is trying to research.

Year	Major Ecommerce Event
1969	The first major ecommerce company, CompuServe, is founded.
1979	Michael Aldrich invents electronic shopping.
1982	Boston Computer Exchange launches as one of the first ecommerce platforms.
1992	Book Stacks Unlimited launches as one of the first online marketplaces for books.
1994	Netscape launches Netscape Navigator, an early web browser, making it easier for users to browse online.
1995	Amazon and eBay launch.
1998	PayPal launches as an online payment system.
1999	Alibaba.com launches.
2000	Google launches AdWords as an online search advertising tool.
2005	Amazon launches Amazon Prime with expedited, flat-fee shipping for members.
2005	Esty, an online marketplace for handmade and vintage goods launches.
2009	BigCommerce launches as an online storefront platform.
2009	Square, Inc. is founded.
2011	Google Wallet launches as an online payment system.
2011	Facebook launches sponsored stories as a form of early advertising.
2011	Stripe launches.
2014	Apple Pay launches as a form of mobile payment.
2014	Jet.com launches.
2017	Instagram shoppable posts are introduced.
2017	Cyber Monday sales exceed \$6.5B.

Table 2: E-commerce Timeline (Moore, n.d.)

3.2. Definition of e-commerce

E-commerce as mentioned in previous sections was founded in 1969 and mostly started to grow and establishing its presence during 1990s and continues with high growth ratio since then. What exactly is e-commerce? The need to define e-commerce it is essential in this thesis since this is the main subject that will be examined. E-commerce is initially defined as the process of buying and selling goods over the internet. The term evolved and the sentence of “exchange of information” was added (S., 2008). E-commerce is the “process of buying, selling, transferring, or exchanging of products, services, and/or information via

computer networks, including the Internet” (Jr. & Cegielsk, 2011). As per (Dave, E-business and e-commerce management – Strategy, implementation and practice, Third Edition, 2007) e-commerce is “*all electronically mediated transactions between an organization and any third party*”.

Keeping in mind all the above in combination with other information found from the web and of course experiences of the author of this thesis we consider that e-commerce is can be defined based on the era that is used and based on the available technologies and applications of the specific era. That said, I consider that the definition of e-commerce in our era is more generic and can be the following: “e-commerce is the link between a supplier/company and customer/s through a digital platform/technology that is available at a certain era. The aim is always to increase visibility of a product and/or services or even to communicate with customers and increase engagement with the final aim to increase sales. How fast this can happen? Depends on each company’s approach, effort, strategy and well alignment/integration of its processes. Depends on how well a company can adopt or lead in this field”.

3.3. Development of e-commerce and the process of adoption

E-commerce developed into two (2) stages. The first and the second wave. The first wave called “landgrab” of e-commerce started in USA from large enterprises who at early stage realized the possibilities of e-commerce and they started adopting and developing towards this direction. Those companies had access to capitals from external sources mainly (Schneider Group, 2011). Achieving a return of investment and a profit was rare. At the same time small enterprises where suffering with losses. The technology was poor but simple and inexpensive. The campaigns unstructured and the integration of e-commerce within the processes of enterprises, inefficient (Evans & Wurster, 1999).

The “second wave” that followed 2001, was affected by the technological innovation. Mobile broadband, fast Internet connections at low cost. The enterprises that were using e-commerce within the first wave, they had many benefits and thus they were considered key players and they focused on keeping this reputation and maintaining their position. With this competitive advantage established the enterprises now had to develop further their e-commerce integrated strategies (Evans & Wurster, 1999). The small enterprises were utilizing their internal resources to adopt e-commerce in their strategy. Adoption started with baby steps and certain difficulties arise – difficulties that enterprises had to overcome to enjoy the benefits of e-commerce adoption. The motivation to adopt and innovate in any enterprise has as a main goal the increase of profit. The increase of profit can be achieved through e-

commerce by increasing the customer volume and thus try to achieve more sales or by decreasing the cost. E-commerce can decrease the “cost of production” since admin work is automatically performed, less travelling is required – logistics are simple, capacity of resources is increasing, storing cost is raised, etc. As per (Dave, E-business and e-commerce management – Strategy, implementation and practice. Fourth Edition, 2009) there are various drivers of e-commerce adoption and those are separated in two main categories

- **Cost/efficiency drivers**
 1. The speed of supply acquisition
 2. The speed of dispatching the required goods
 3. Reduced sales and purchasing costs
 4. Reduced operating costs
- **Competitiveness drivers**
 1. Customer demand
 2. Services – enhance quality and range
 3. Avoiding losing market share to businesses already using e-commerce

The above-mentioned drivers are important for the companies and adoption is relying a lot on them. The adoption process is a time-consuming process. It starts with simple tasks and continues with more sophisticated e-commerce, reaching more and more complex levels of innovation. Especially in small business the adoption is gradually increased by starting with simple logical consequences. In large companies this can be much faster since more resources can be made available and the initial or recurring investment can be higher (Brand, 2008). Enterprises are passing through a number of phases until they finally transform their organizations. Normally may start with e-mail, progress to website development and then e-commerce. We consider those phases as steps of a ladder and we consider that this ladder has 4 steps/levels which are demonstrated in figure 5 below. On the way to e-commerce adoption, enterprises are increasing the ICT skills, innovation and adoption too.

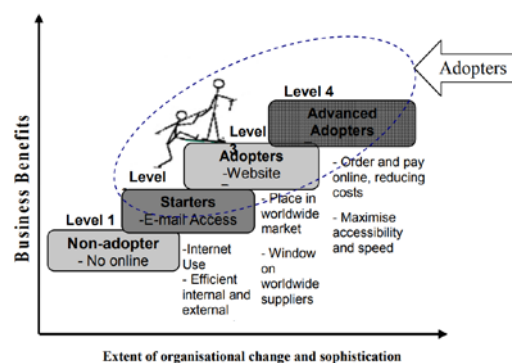


Figure 5: E-commerce adoption ladder in small companies (Xu & Quaddus, 2009)

3.4. E-commerce and marketing strategy

As I specified within the previous section, one of the foremost common reasons for small companies to integrate e-commerce procedures in their businesses is to be more competitive in the market (Xu & Quaddus, 2009). Marketing strategies are transforming with certain difficulties such as the innovation and technology enablement. E-commerce is not bridging the principles of marketing. The principles of marketing are still honoured with the only difference to be the involvement of technology and applications (Stockdale & Standing, 2014). The impact of e-commerce can be explained through the traditional marketing mix of 4Ps. E-commerce is the electronic marketing and the term needs to be clearly explained to make sure that this is not a conflicting strategy but mostly an additional tool in the toolkit of the modern marketeers.

3.4.1. Product

In traditional marketing the product can be either tangible or intangible. That means that it is either a physical product such as material goods (e.g. shoes, clothes, devices etc.) which you can touch and feel, or it may be services which users may buy to enjoy. Product can be at any form or it can even be an idea. The product is what can be offered to the market, to satisfy a pragmatic or a developed need of individuals, groups or companies. It is a very broad term and the figure 6 below can demonstrate the forms of some possible products (Išoraitė, 2016).

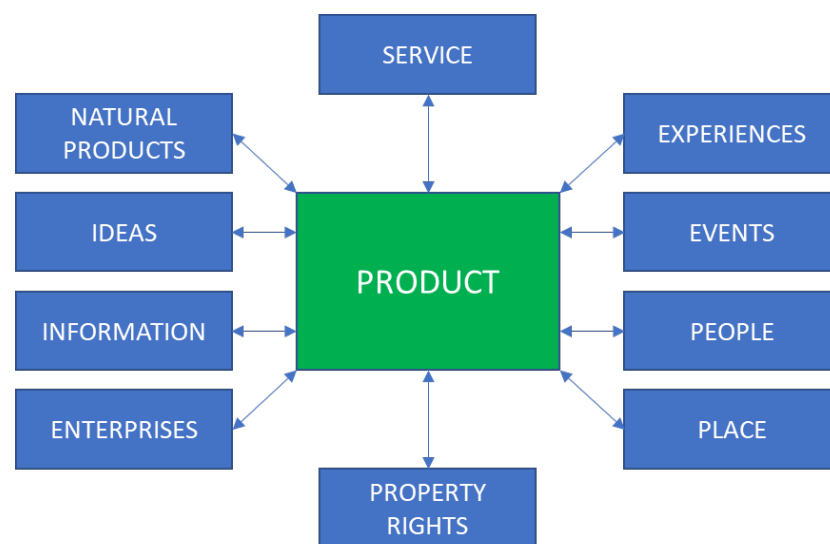


Figure 6: Product perception (Išoraitė, 2016)

3.4.2. Place

The place in the traditional marketing mix is the answer to the question “how the products are made available to a company’s customer”. Thus, fairly the “place” can be defined as the link between the product and the customer. This link can be more efficient if it is “wrapped” with the right methods and processes. Place includes, distribution channels,

warehousing facilities, mode of transportation, location, assortment, convergence, logistics, and inventory control management. Focusing a bit more on the distribution channels, it is important to understand that enabling efficiencies and new or modified methods can be a very powerful tool for a company. The reasons are various, but all have the same core – how to better reach the buying audience. E-commerce can accommodate those needs in a more modern digital way if the correct processes are set and integrated well. Internet and e-commerce as a “place” allow a company to reach out to prospective or existing customers and promote or sell its products. The benefits are many and obvious such as efficiency, cost savings, sales increase etc. At the same time though there are some issues and mainly the big competition even in isolated markets. That said, companies need to make sure that they will develop accordingly the “place” in order to be able to compete with others, get access to more customers and win opportunities. (Badi, 2018)

3.4.3. Price

Price is the marketing mix element which is adjustable. This element generates revenues for the company, and it is critical to be set properly. Production/admin cost, market levels, regions are only few parameters that a company may consider when setting its price to the market. Companies must research well their capabilities and capture possibilities and avoid threats. Internet and in general information sharing increase the customer’s awareness and thus benchmarking each solution/service or product is much easier nowadays. This creates a price standardization globally (Allen, 2001). A price standardization for a specific product/service/solution increases the competition and shrinks the margins. Companies to maintain their margins and be competitive need to think and act fast and try to minimize their expenses and need of non-automated/digital resources. Thus, e-commerce strategies and solutions it is essential and can impact significantly the sales increase and at the same time minimize their costs either to be more competitive or score better and higher margins (Dave, E-business and e-commerce management – Strategy, implementation and practice, First Edition, 2002).

3.4.4. Promotion

Promotion is the way of communicating company’s messages to the customers either to inform them about a discount, demonstrate features and capabilities of a product or to raise brand awareness. Traditional methods such as attending to exhibitions and events or meet with potential customers face to face of course have a big role to play in the promotion of a company’s products/services. Some people still value a lot the traditional methods including the author of this thesis but at the same time no one can underestimate the power of the internet and e-commerce. Consider the challenges that nowadays almost every company is facing especially with the COVID-19 outbreak. Companies without e-commerce integrated in

their marketing mix they were barely visible in the market and their activities are more limited. A good digital marketing strategy is not necessarily expensive. Social Media are free to use, and a company can directly reach to decision makers without the need to travel or to attend at face to face meetings. Decision makers are normally people in the top management and being able to book a slot in their heavy schedule is sometimes impossible. Not with the utilization of internet and e-commerce of course. Relying only on e-commerce and online promotion have its limitations too. Customers are still resistive to answer to strangers on the web, sometimes they feel that their privacy is compromised and that the intentions of the person contacting them are not clear (Evans & Wurster, 1999). That said, we consider e-commerce and in general internet promotion the door opener to reach a customer at the initial stages and eventually arrange a face to face meeting when and if possible. Once the relationship is established than it can be utilized even more.

The traditional marketing is adopting to the new strategies where technology and innovation have a significant role to play. There are almost no isolated markets anymore and every company is in the run to utilize all possible tools and methods to ensure business continuity and profitability. We live in the era of information and this is a double-edged knife. Companies are informed of what is happening in their market but from the other way around consumers also have information to compare between companies and products. Thus, companies must continue being competitive by adjusting their offerings. Traditional business experienced difficulties in collecting and using data since this used to be time consuming and cost inefficient. Investing in data nowadays is not that expensive considering the ROI (Evans & Wurster, 1999). The traditional marketing focuses internally versus the e-commerce which is a direct link between the companies and the customers which by itself is a competitive advantage (Evans & Wurster, 1999).

3.5. Benefits of e-commerce adoption in small companies

The e-commerce benefits are increasing in the last few years as per the research made at small size companies. Of course, there are variances on the results between countries, company culture and the industry that a company may adopt, belong and operate. The benefits from e-commerce may be tangible or intangible as per (Chaffey, 2015) – table 3 below. Tangible benefits can be measured since there are directly connected to the increase of sales, cost reduction, brand awareness in various markets. Intangible benefits are more difficult to be seen but there are related to the tangible. Those can be efficiency in product development, quality etc. Difficult to be measured directly but affecting the cost reduction (e.g. efficiency in

product development equals less resources or effort) and sales increase (e.g. customers will prefer a better-quality product versus other especially if the price is similar).

Tangible benefits	Intangible benefits
<ul style="list-style-type: none"> • Increased sales from new sales leads giving rise to increased revenue from: <ul style="list-style-type: none"> – new customers, new markets – existing customers (cross-selling) • Marketing cost reductions from: <ul style="list-style-type: none"> – reduced time in customer service – online sales – reduced printing and distribution costs of marketing communications • Supply chain cost reductions from: <ul style="list-style-type: none"> – reduced levels of inventory – shorter cycle time in ordering • Administrative cost reductions from more efficient routine business processes such as recruitment, invoice payment and holiday authorisation 	<ul style="list-style-type: none"> • Corporate image communication • Enhancement of brand • More rapid, more responsive marketing communications, including PR • Faster product development lifecycle enabling faster response to market needs • Improved customer service • Learning for the future • Meeting customer expectations to have a website • Identifying new partners, supporting existing partners better • Better management of marketing information and customer information • Feedback from customers on products

Table 3: Tangible and intangible benefits from e-commerce and digital business (Chaffey, 2015)

Following the strategy of this thesis and exploring more information in other publications we can demonstrate a more holistic view of the research made for the positive impact/benefits of e-commerce. The most important benefits are not only to save costs as someone may expect, but it is also to compete in the market. That said, as per (Abid, Rahim, & Scheepers, 2012) the main benefits from e-commerce is the “*increased sales*” and the “*increased ability to compete*”. Small companies are utilizing e-commerce as the mean to improve their performance and reach into other markets. In addition, small companies with e-commerce can “upgrade” their products/services in a way that they can compete with larger companies (Xu & Quaddus, 2009) something which is critical for their survival.

The adoption of e-commerce as per (Wagner, Fillis, & Johansson, 2003), has tremendous benefits with the main being the communication improvement and the efficiency from supplier to customer. Those benefits at a certain level are similar to the benefits that a large company enjoys. The main difference in small companies is that the flexibility to adjust and tailor made a service for a customer is there. Something that it is not so common in large organizations. Similar approach can be found in (Stockdale & Standing, 2014) ‘s article. Small companies have the right volume to tailor made a service, a process or a product for their customers. This adjustability can happen fast, and it is aligned with e-commerce’s flexibility. Better customer service, better quality in fact and at the same time cost savings are important benefits for small companies when implementing e-commerce in their strategies

(Abid, Rahim, & Scheepers, 2012). Cost savings are mainly because of the improved customer service, and thus less resources to maintain the customer's operation as well as decreased material expenses – better efficiency. Just imagine how simple is nowadays a digital payment compared to a traditional way of paying. Few clicks are enough to perform such an action today versus being in a queue at a cashier/bank etc to arrange a payment. Decreasing a queue traditionally would need a big number of cashiers. Being able to compete in a market with other vendors is a big concern. However due to the availability and transparency of data, companies can identify or present better their unique selling points and ensure that they can capture the attention of their potential customers or even maintain the existing.

Summarizing, the positive impact from e-commerce and in general digital business are many but various. One shall not expect that the positive impact to a company can be identical to another company. This is because of the differences between company cultures, industries, regions/countries, company type and resources, strategies and processes. A company to achieve sustainable positive benefits from e-commerce should show patience since this is a long-term investment.

3.6. Barriers for e-commerce adoption in small companies

E-commerce without a doubt is not that easy to be adopted by small companies. There are various reasons of course and within this section few may be presented based on several author's opinions and research. Small companies are more resistive in utilizing e-commerce solutions versus larger companies/organizations (Arendt, 2008). The risks and potential benefits must be measured carefully when applying e-commerce. Every company has its mission, vision, slogan and values. All the above serve as beacon for a company in every single activity, strategy and decision. This means that the employees of the company need to have this in their credo and at the same time brand the same to the customers. This is what makes a company in practise unique especially if we are looking at companies that are in the same industry – most probably similar services. That said, implementing e-commerce strategy requires big changes internally for a company. An e-commerce strategy that is not aligned with a company's mission may end up into a big failure with bad customer experience and low return of investments. This may affect big companies, but it has bigger impact into small companies where in most of the times there is lack of experience/knowledge and limited capitals. Security and order delaying are also some of the issues faced (Arendt, 2008). There is still a gap between small and large companies. Barriers can be categorized into macroeconomic and microeconomic. The absence of innovation is one of the main

macroeconomic barriers. Companies are not triggered to introduce innovation due to the lack of reward (Arendt, 2008). The process of innovation and development of the strategy are not really encouraged in many small companies (Stockdale & Standing, 2014). In addition, some managers consider the participation in the electronic marketplace to be inappropriate and irrelevant to the business (Chaffey, 2015). Implementing an ecommerce strategy powerful enough to compete in the e-marketplace requires some serious capitals – this in combination with the above factors are main macroeconomic barriers. Apart from macroeconomic barriers, there are microeconomic barriers as previously mentioned. The lack of awareness, skills and experience are the main factors, even more important than the financial cost (Arendt, 2008). Researches made on SMEs resulted to the conclusion that the leading barrier is the initial investment and then the recurring costs. This is basically small companies mostly rely on their own capitals. Nowadays though with the innovation and development of the technology, the initial investments are decreasing. Solutions which are licensed based, or SaaS are developed eliminating the initial cost that a company used to pay for setup purposes. Thus, the most important barriers now are the lack of skills and knowledge (Arendt, 2008). In small companies the top management is normally getting all the decisions – not only for important subjects. This means that if an owner or manager cannot see any value to implement e-commerce strategy and then this is a “no go” development within a company (Ian Fillis, 2003) (Duan, 2012). Overcoming the barrier of the resistive top management requires two main ingredients – the right people and the correct knowledge. This is critical and thus companies must be willing to invest on training programs to ensure smooth implementation of e-commerce strategy (O’Toole, 2003). Opening a door to the digital world includes many security risks with the first being the cyber-attacks – something that can really impact company’s sales and sustainability. The timing is important here. There are companies that are never hit by a cyber-attack. There are some others which they are, but they overcome the issue and continue better and stronger. If such an attack happens at the pre-mature stages of e-commerce adoption the process of implementation may be terminated (Oh, Anderson, & Cruickshank, 2012).

3.7. Summary of the literature review

The impact of e-commerce on the sales of small Enterprises based on the literature is significant. We leave in the era of ICT innovation and the marketplace adjusted to the new facts. Utilizing technology is a necessity. Ecommerce is not something that needs to run in addition to a company’s strategy – it is an integrated part of the strategy which will enhance

the business performance. There are barriers to overcome and those we are described in the previous section and listed below:

- Lack of awareness
- Lack of long-term business strategy
- Lack of innovation culture
- Resistance of top management to adopt
- Lack of finance resources
- Long process of return on investments
- Lack of experience and knowledge
- Unsuitability for the type of business
- Lack of consumer demand
- High level of complexity
- Lack of time
- Business risk Security factors

Simultaneously though there are important benefits too as described in previous sections:

- Improved day-to-day efficiency
- Cost saving
- Reaching large number of customers
- Improved customer service
- Increase ability to compete
- Increased sales
- Improved distribution channel
- Increased flexibility of communication
- Better access to information
- Better customer satisfaction through unique products

It needs for a company to understand the benefits in order to ensure that they can overcome the barriers and successfully compete in the new marketplace with significant return of investment.

4. FINDINGS

In the previous chapters we discussed about the primary and secondary sources. This chapter will present the findings from those sources. I will start with information related to the ICT/e-commerce penetration in Europe (to narrow down a bit the market region). This will support the answer to the research questions providing a more accurate picture of the problem. Data regarding the small companies in Europe will be presented and differences between SMEs and large companies will be explored. Then, I will present the data from the interviews/surveys conducted with local small size companies which have European customers and targets.

4.1. Electronic development in Europe

Starting from the very beginning, what enabled the technology and ICT in general in my opinion was the curiosity of the researchers and scientists but at the same time was the need to satisfy and simplify their lives. Now we are in the era where this is achieved, and we indeed live a simple life – we are digital this is not something that we are still figuring out anymore. What is it then the driving force for technological innovation and adoption? In my humble opinion the driving factors are the following:

- **Competition:** If you are not leading an industry, follow the trends. This is critical for a company's sustainability (e.g. if the competition is utilizing tools and technology to make more efficient operations and automate processes then you must consider doing the same – at least to consider at the beginning)
- **The market:** If the market is changing you need to adopt to those changes. If the market is more digital/online then you must adopt your strategies as well to promote your services too
- **Applications:** When there is an application that you will need to use then the right technology will be developed. Applications are really driving the technology to faster innovation!

That said, the use/penetration of e-commerce in a country/region can be measured by reviewing the market and activities. Generally speaking, we can see in the following figure that the online retail sales in goods between 2000-2014 increased tremendously – exponentially and exceeded the 200 Bln (Euros) in 2014 (Duch-Brown & Martens, 2015).

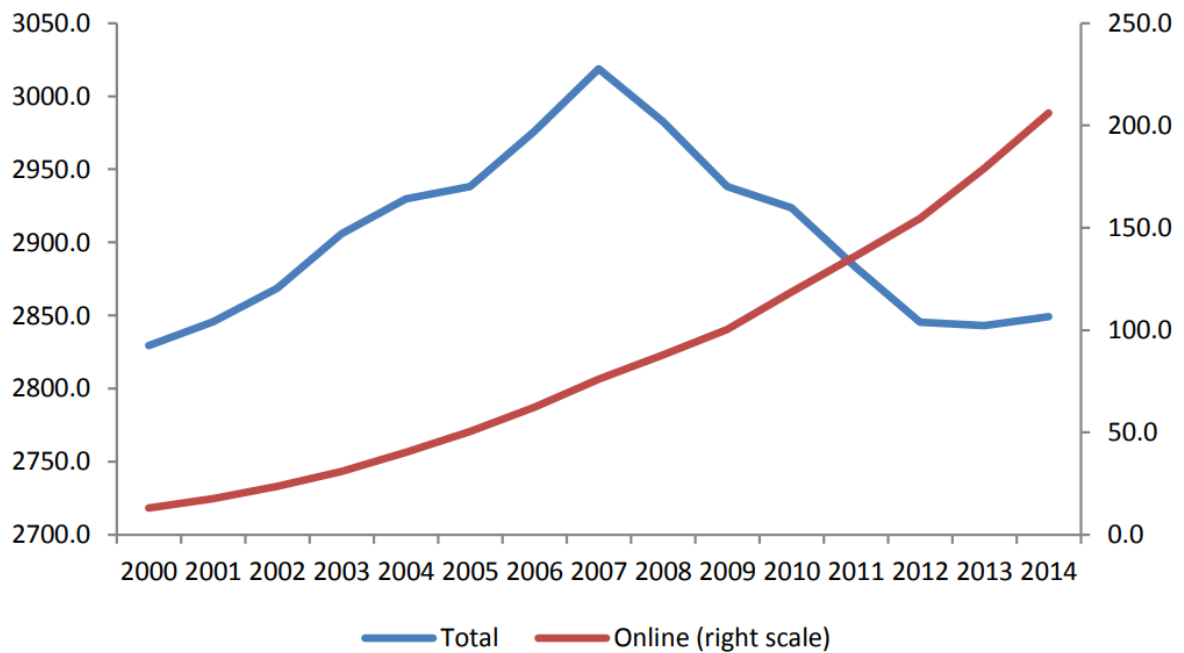


Figure 7: Evolution of total and online retail sales in travel and tourism services, 2000-2014 (Bln €) (Duch-Brown & Martens, 2015)

The online market is one of the largest globally in goods and services. Europe consist of 27 countries (UK is not part of EU anymore but still market wise it can be analysed). The market it is fragmented and not really interconnected between all those countries. The fragmentation factors are various such as the preferences for local products, the communication and logistics barriers such as language, product distribution methods, high logistic costs, switching costs and network effects etc. In the following table it is demonstrated the evolution of ecommerce in goods by member state. Austria, Finland and Malta are increasing their penetration rates in 2014 compared to 2000. UK in 2014 was the largest market in EU both in terms of volume and market penetration. Cyprus is the country at which the companies are interviewed. Cyprus’s share is below average considered the rest EU countries (including UK) – ranks 21st. Summarizing, even that Cyprus doesn’t hold a ranking over the average compared to the rest EU countries, we can see that there is an increase of 100 Million Euros spent on ecommerce in the examined period 2010-2014. Like all EU countries, there is a constant growth on the online market which means that ICT is following this trend too. Thus, there is a potential for companies to place themselves in this market.

	Million euros			Share of total		
	2000	2014	Change	2000	2014	Change
Bulgaria	4.3	97.4	25.0	0.04	0.83	23.3
Croatia	3.2	94.4	27.3	0.02	0.78	29.4
Czech Republic	63.5	2326.8	29.3	0.22	7.47	28.7
Estonia	20.8	261.6	19.8	0.87	5.50	14.0
Hungary	16.9	1074.4	34.5	0.05	3.78	36.4
Latvia	5.2	178.6	28.7	0.14	3.39	25.6
Lithuania	1.9	321.0	44.3	0.04	4.19	38.7
Poland	156.2	6114.9	29.9	0.19	6.24	28.1
Romania	20.6	601.4	27.3	0.09	1.96	24.5
Slovakia	52.8	781.2	21.2	0.42	5.14	19.6
Slovenia	20.1	194.1	17.6	0.29	2.66	17.0
Austria	957.0	3734.6	10.2	1.37	5.78	10.8
Belgium	316.0	5082.5	21.9	0.39	5.83	21.4
Cyprus	22.4	124.0	13.0	0.48	3.50	15.2
Denmark	126.9	5400.5	30.7	0.28	11.46	30.5
Finland	1463.2	4181.8	7.8	4.29	9.51	5.8
France	1221.8	31995.8	26.3	0.28	6.69	25.6
Germany	2509.6	42026.5	22.3	0.46	8.06	22.7
Greece	69.8	1264.8	23.0	0.12	3.07	25.8
Ireland	282.9	3092.0	18.6	0.84	9.14	18.6
Italy	402.4	7974.3	23.8	0.11	2.40	25.0
Luxembourg	52.7	343.8	14.3	0.64	4.49	15.0
Malta	47.8	76.8	3.4	3.33	6.05	4.4
Netherlands	391.5	9382.6	25.5	0.34	8.71	26.1
Portugal	57.1	2093.1	29.3	0.10	4.27	30.5
Spain	654.8	6861.8	18.3	0.27	3.25	19.3
Sweden	298.2	6118.1	24.1	0.48	7.71	21.9
United Kingdom	3767.0	64201.9	22.5	0.87	13.17	21.4

Table 4: Evolution of e-commerce in goods by Member States, 2000-2014 (in Mln € and %) (Duch-Brown & Martens, 2015)

4.2. E-commerce usage in small-size companies (location Cyprus)

In table (4) of the previous section we demonstrated the penetration of e-commerce in EU countries. Cyprus is not the leading country in ecommerce adoption. Since our interviewed companies are based in Cyprus (even if there are trading globally) it is important to localize a bit our statistics in order to compare more accurately the results and get the right conclusions. The Cypriot economy was affected by a financial crisis in 2012-2013 and it is recovering since then. In 2016, SME value added, and employment remained 23.2% and 9.6% below the levels of 2008. In 2013-2016 though the SME value added and employment increased by 6.3% and 5.4% respectively. The forecast for SMEs in the non-financial business economy is positive (European Commission). Cyprus ranking is below EU average regarding access to finance and single market, while in environment and internationalisation the country

performs better than the average. Important steps have been made in 2008 to support SMEs but the growth-enhancing action plan has been only partially implemented. However, implementation of the actions under the 2015 Policy Statement for the Enhancement of Entrepreneurship is progressing well, with 45 % of the actions completed in 2016 (European Commission). In table 5 below you may find the number of enterprises based on their categories, number of persons employed under each category of business and the value added in billion euros to the economy.

Class size	Number of enterprises			Number of persons employed			Value added		
	Cyprus		EU-28	Cyprus		EU-28	Cyprus		EU-28
	Number	Share	Share	Number	Share	Share	Billion €	Share	Share
Micro	45 706	93.3 %	93.0 %	84 532	38.3 %	29.8 %	2.1	26.3 %	20.9 %
Small	2 762	5.6 %	5.8 %	53 335	24.2 %	20.0 %	1.9	24.1 %	17.8 %
Medium-sized	447	0.9 %	0.9 %	45 288	20.5 %	16.7 %	1.7	22.1 %	18.2 %
SMEs	48 915	99.9 %	99.8 %	183 155	83.0 %	66.6 %	5.7	72.5 %	56.8 %
Large	63	0.1 %	0.2 %	37 566	17.0 %	33.4 %	2.2	27.5 %	43.2 %
Total	48 978	100.0 %	100.0 %	220 721	100.0 %	100.0 %	7.8	100.0 %	100.0 %

These are estimates for 2016 produced by DIW Econ, based on 2008-2014 figures from the Structural Business Statistics Database (Eurostat). The data cover the 'non-financial business economy', which includes industry, construction, trade, and services (NACE Rev. 2 sections B to J, L, M and N), but not enterprises in agriculture, forestry and fisheries and the largely non-market service sectors such as education and health. The following size-class definitions are applied: micro firms (0-9 persons employed), small firms (10-49 persons employed), medium-sized firms (50-249 persons employed), and large firms (250+ persons employed). The advantage of using Eurostat data is that the statistics are harmonised and comparable across countries. The disadvantage is that for some countries the data may be different from those published by national authorities.

Table 5: SMEs — basic figures (European Commission)

It is clearly demonstrated that the companies that are registered in Cyprus are mostly SMEs and to be more specific Micro companies. In total, Cyprus in 2016 had around 49K registered SMEs from which around 3K were small companies. Analysing a bit further the number of small companies we may see that the share of 5.6% is almost the same as in Europe (5.8%). The same applies also for the percentage of the employees which holds a share of 24.2% - a bit higher than Europe's (20%). Finally the value added in Cyprus (24.1%) from small companies is reasonably higher than Europe's (17.8%) since in Cyprus we have only a very small number of Large companies and a much lower number of Medium companies (European Commission). For e-commerce to thrive the innovation in ICT is important. That means that if the backbone is set and available then operations over the internet can run smoothly. In the following figure (8) we may see the variations from the EU average (set to 0) and Cyprus's performance. Cyprus is not well known for its high performance in innovations – most of the times Cyprus performs below the EU average. Following the results of figure 8, as it seems Cyprus performs in line or slightly higher than the EU average only on few of the elements shown. Ecommerce is a new opportunity for Cyprus since as we may see from the

graph, only 12.37% of the Cyprus SMEs selling online versus the 17.24% of the SMEs selling in Europe. The data for small companies as such are not available here but normally either they follow the same trend or even worst. Important to mention is that in order for SMEs to sell online more they need the correct and educated audience. SMEs in Cyprus are not really purchasing online either. Only 11.75% of the SMEs in Cyprus are purchasing online something which is much lower than the EU average (23.55%). Last but important point for this thesis is the turnover from e-commerce in Cyprus which holds around 4.7% versus 9.37% which is the EU average. All the above are clearly state that e-commerce was/is not that popular in Cyprus yet and there is a field for improvement. The above-mentioned numbers are conflicting with the Cyprus' average in people employed with ICT skills. In Cyprus a 23.41% of the people employed have ICT skills versus 18.83% which is the EU average.

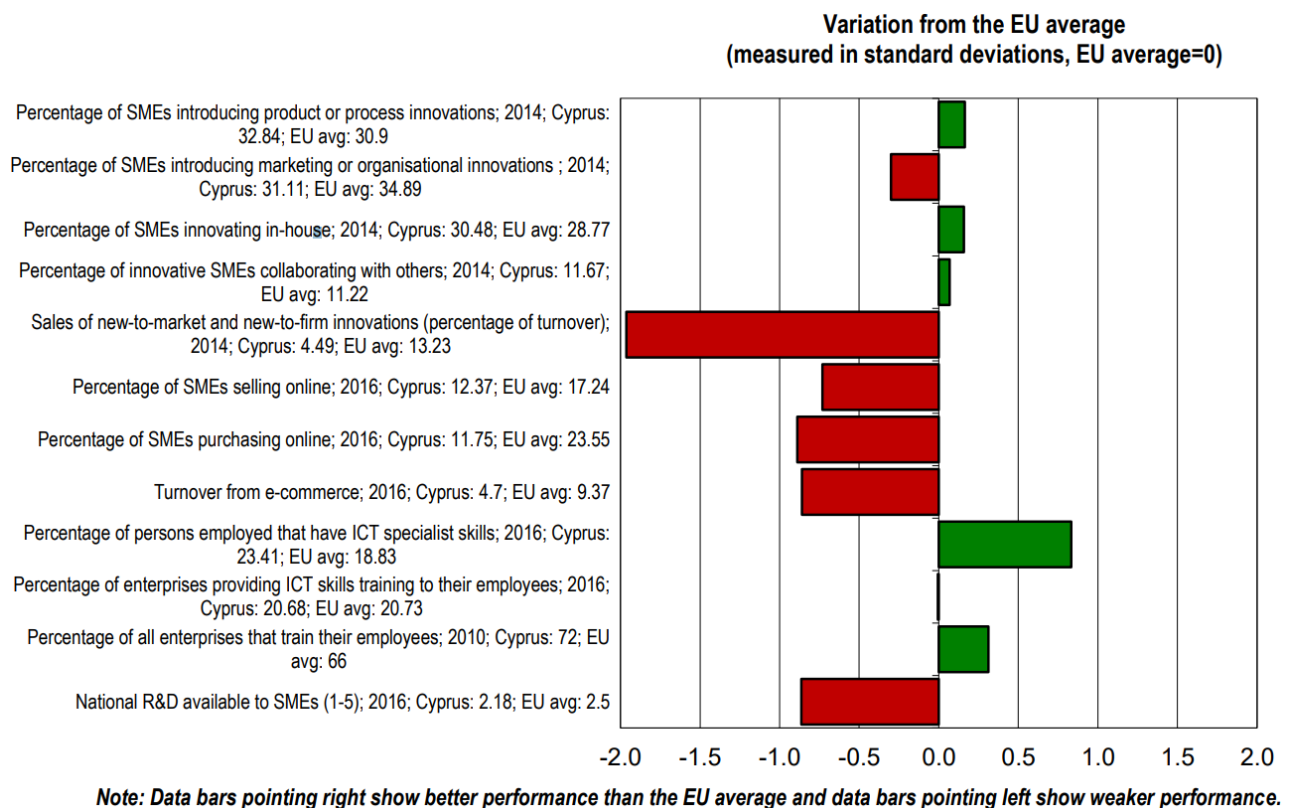


Figure 8: Skills & innovation in Cyprus and Europe (European Commission)

Some measures are taken into consideration in 2008 including innovation programmes with no success. Recently due to tax decrease for innovative companies there is some progress. E-commerce is an open opportunity for Cypriot SMEs if they are willing to attract new customers locally and globally (European Commission).

4.3. Interview Questions and Overall Results

In the following table – table 6 (consist of 4 parts – total 13 questions) – someone may find the aggregate responses in the interview questions related with the e-commerce development, the reasons beyond e-commerce and the driving force for adoption, the barriers/benefits of e-commerce as perceived by the interviewed companies and the marketing strategy development/integration, at small sized companies in Cyprus:

Interview Questions	Overall Results	
Responder's Position	Top and Senior Management	
Company's Profile	Industries covered: IT and Software development, R&D, Digital Marketing, Telecommunications, Maritime, Hair and Beauty	
1. How do you use e-commerce in your company?		
Have an internet connection	8x Yes	0x No
Have a website	8x Yes	0x No
More than one language on your website (e.g. Greek, English)	4x Yes	4x No
Email communication inside the company	8x Yes	0x No
Email communication with partners and customers	8x Yes	0x No
Publishes information on web pages such as products, catalogues, brochures	7x Yes	1x No
Using Internet and website to promote company's products	7x Yes	1x No
Using internet to search for new suppliers	7x Yes	1x No
Electronically interaction between the company and government agencies	7x Yes	1x No
Company fill in and send electronic forms	8x Yes	0x No
Send electronic Invoice	8x Yes	0x No
Receive electronic Invoice	8x Yes	0x No
Using electronically technologies to share information about sales for use for inventory control, accounting or distribution channel	7x Yes	1x No
Customers can place orders by website	3x Yes	5x No
Customers can place orders by other forms, like e-mails, EDI type messages or others	7x Yes	1x No
Customers can pay electronically	5x Yes	3x No
The company can order electronically from suppliers	7x Yes	1x No
Using electronic technologies for administrative procedures inside the company	8x Yes	0x No

Table 6/1: Interview questions and overall results

2. Who is the driving force for e-commerce adoption in your company (e.g. CEO, CCO, Marketing Manager etc)?	Top and Senior Management
3. What is the reason beyond starting electronic technologies in your business? Is it the reason cost /efficiency or the need to improve competitiveness?	Cost /efficiency and the need to improve competitiveness
4. Which are the biggest barriers to future e-commerce improvement in your company?	Various Answers: - Complexity - Lack of skills and knowledge - Legal - Market limitations - Lack of awareness
5. To which degree is the cost factor important to adopt more e-technologies?	4 companies consider the cost as the main factor for adoption, 3 medium, 1 depends on ROI
6. What do you consider the most challenging barrier to overcome in order to enhance e-commerce at your company?	

Table 6/2: Interview questions and overall results

7. Rank on a scale from 1 to 5, where 1 means less challenging barrier and 5 means the most challenging barrier, on implementing e-commerce at your business	MIN	AVG	MAX
Lack of awareness	1	2.25	4
Lack of experience and knowledge	1	2.75	4
Lack of long-term business strategy	2	2.75	4
Unsuitability for the type of business	1	2.38	4
Lack of innovation culture	1	2.50	4
Resistance of top management to adopt	1	1.75	2
Lack of consumer demand	1	2.38	4
High level of complexity	2	3.25	5
Lack of finance resources	1	2.63	4
Lack of time	2	3.00	4
Long process of return on investments	2	2.75	4
Business risk Security factors	2	3.38	5
Cost or Lack of finance	2	2.75	4
8. Did the actual barriers delayed or blocked your efforts to apply e-commerce at your company?	Delayed mostly		
9. What do you consider the most important benefit for your company from e-commerce?	increase revenue, reduce cost		

Table 6/3: Interview questions and overall results

10. Rank on a scale from 1 to 5, where 1 means less beneficial and 5 means very beneficial, if you already enjoy the following benefits from ecommerce	MIN	AVG	MAX
Improved day-to-day efficiency	2	3.63	5
Increased sales	2	3.38	5
Cost saving	3	4.00	5
Improved distribution channel	2	3.25	5
Reaching large number of customers	2	3.88	5
Increased flexibility of communication	3	3.88	5
Improved customer service	3	3.88	5
Better access to information	3	4.00	5
Increase ability to seal a deal	2	3.38	5
Better customer satisfaction through unique products	1	3.25	5
11. Did the actual benefits meet your initial expectations (if you applied e-commerce at your company)?	5 said Yes, 3 at a certain level yes		
12. Were you aware of the potential benefits and barriers before you started using e-commerce?	7 companies answered Yes, 1 No		
13. Have you made changes to your long-term business strategy because of e-commerce?	3 Yes, 5 No or not yet		

Table 6/4: Interview questions and overall results

4.3. Development of e-commerce in the interviewed companies – location Cyprus

Based on the results of Table 6 above, all companies are connected to the internet and have websites publicly available. Half of those companies (four companies) have bilingual websites. In addition, all of them are using email communication with customers and partners and only one is not publishing information on their websites about their services, products etc. Seven out of the eight companies are using internet to search for new suppliers and the same number is also electronically interact with the company and government agencies. All (eight) companies can send and receive electronic invoices and only one company is not using electronic technologies to share information about sales for use for inventory control accounting or distribution channel. Five companies are not allowing customers to place orders by website maybe due to the complexity of their services. One company is not allowing customers to place order by emails/EDI etc. Payments electronically are not available in three companies and only one company is not ordering electronically from suppliers. All companies are using electronic technologies for administrative procedures inside the company.

4.4. The reason beyond e-commerce development

The driving force for e-commerce adoption as it seems through the eight interviewed companies is the senior and top management and the reasons cost/efficiency and competitiveness improvement are definitely well known to them when they were considering implementing electronic technologies. Specifically, in **Company A** I interviewed the Senior Commercial Manager (SCM) who explained that the e-commerce development is led by his role and the General Manager of the company. Based on his response the reasons to develop and adopt e-commerce within their company was the cost efficiencies and the productivity monitoring. As SCM stated:

“The right technology for us is not an issue. We are a well-recognized IT company who provides services in Cyprus and beyond. We strongly believe that the we technology can support productivity and enable cost efficiencies. This is what we also sell to our customers and we need to show the way forward”

The CEO and Founder of **Company B** believes that the most important reason to start e-commerce and implement the right technologies is the cost reduction and the better control of its services/products. He is the driving force to e-commerce adoption within his company. The Managing Director of **Company C**, the Head, Development of Satellite Facilities and Products of **Company H** and the Sales Infrastructure Manager of **Company E**, consider that both cost/efficiency and competitiveness are the main reasons for implementing electronic technologies. The driving force behind the e-commerce adoption is the CEO, the Retail Sales Manager and the CCO & COO respectively. As per the Sales Infrastructure Manager of Company E: *“The main reason is to promote our services better than our competitors. This of course brings at the same time cost efficiency since less travelling and logistics are required”*. **Company D’s** Director of Operations agrees with Company C and H about the reasons, but he also adds the word “necessity”. As he stated: *“in a world where everyone is moving towards the same direction you either need to do things better and move faster or at least follow and adopt. It is becoming necessity to implement electronic technologies in order to enable efficiencies and compete into the global market”*. The driving force within the Company D for e-commerce adoption are the various departments which are sharing the responsibility to support this effort. Lastly, **Company F’s** Creative Director and **Company G’s** General Manager agree that the most important reason for them is to improve efficiencies.

4.5. Barriers for e-commerce adoption

The most challenging barrier as per the questionnaire varies between the eight interviewed companies. As noticed from the answers even that companies implemented e-commerce, at a certain level, some of them don't really understand the barriers which of course it is a consideration since it will make it even more difficult to overcome them in the future. Some others of course are more familiar with the barriers that they are facing. Based on the response, Company A considers the biggest barriers to be the “Complexity of work and cost, Legal issues”. Company B’s responder expressed that he doesn’t really know yet. Cost is the main barrier for Company C and G. For Company D is the constant demand and the rapid change of technology. Company E’s responder mentioned, “The legal part. We are heavily dependent on BIMCO agreements. In addition, maritime industry is a complex market and an agreement includes big risks and of course at the same time the cost to the company and the customer is big as well. That said, is not easy to just buy a product from a website. It is a long process. Parts that can be digitalize and serve the purpose are progressing well, but it is not possible today to apply e-commerce end to end”. Company F mentioned that the main barrier is the customer adoption and finally Company H considers as the main barrier the limited/isolated market that they operate in. Out of the eight companies interviewed, four consider that the cost is important factor for e-commerce adoption, three of them consider the cost as a medium level barrier and one company connects the cost with the return of investment which is not clear from the beginning. In addition, in the questionnaire used to interview the eight companies the following barriers were presented and asked from the responder’s to rank on a scale from 1 to 5, where 1 means less challenging barrier and 5 means the most challenging barrier, on implementing e-commerce at their business: The responds where the following:

7. Rank on a scale from 1 to 5, where 1 means less challenging barrier and 5 means the most challenging barrier, on implementing e-commerce at your business	COMPANY							
	A	B	C	D	E	F	G	H
Lack of awareness	1	3	1	3	2	4	2	2
Lack of experience and knowledge	1	3	2	3	3	4	3	3
Lack of long-term business strategy	2	3	2	3	4	4	2	2
Unsuitability for the type of business	1	4	2	4	4	1	2	1
Lack of innovation culture	1	3	2	4	3	3	2	2
Resistance of top management to adopt	2	1	2	2	2	1	2	2
Lack of consumer demand	1	2	3	2	4	3	2	2
High level of complexity	5	2	2	3	5	3	3	3
Lack of finance resources	2	3	2	4	2	3	4	1
Lack of time	4	2	2	4	3	4	3	2
Long process of return on investments	4	3	2	3	2	3	3	2
Business risk Security factors	5	4	2	3	4	3	3	3
Cost or Lack of finance	2	4	2	3	2	3	4	2

Table 7: Interview question 7 – results

Based on the results we noticed that each company considers some barriers more challenging than others. Considering the averages of their answers we noticed that in general the less challenging barrier is the *“Resistance of top management to adopt”* and the most challenging barrier is considered the *“Business risk Security factors”*.

4.6. Benefits from e-commerce adoption

The most important benefit as per the questionnaire varies between the eight interviewed companies. Company A and C considers the most important benefit to be the efficiency in all aspects. Company B’s responder consider that the implementation of e-commerce has a more attractive cost than the extra manpower and at the same time this will support his company to sell internationally. Company D, again as part of the necessity he believes that they need to “keep up with the industry”. Company E and G consider a major benefit the capability of e-commerce to reach larger number of customers and enables efficiencies. Maximize visibility and enable brand awareness is the main benefit for Company F and for Company H is a more general benefit – to increase revenue and cost.

As in the previous section, the questionnaire used to interview the eight companies asked from the responder’s to rank on a scale from 1 to 5, where 1 means less beneficial and 5 means very beneficial, if you already enjoy the following benefits from ecommerce, on implementing e-commerce at their business: The responds are the following:

10. Rank on a scale from 1 to 5, where 1 means less beneficial and 5 means very beneficial, if you already enjoy the following benefits from ecommerce	COMPANY							
	A	B	C	D	E	F	G	H
Improved day-to-day efficiency	5	2	2	4	3	5	4	4
Increased sales	4	5	3	3	2	3	3	4
Cost saving	4	5	4	4	3	4	4	4
Improved distribution channel	2	5	4	3	3	2	4	3
Reaching large number of customers	4	5	4	2	4	5	4	3
Increased flexibility of communication	4	3	4	4	4	5	4	3
Improved customer service	5	5	4	4	3	4	3	3
Better access to information	4	3	4	5	4	5	4	3
Increase ability to seal a deal	2	5	3	3	4	3	4	3
Better customer satisfaction through unique pro	5	5	2	4	2	1	4	3

Table 8: Interview question 10 – results

Based on the results and we noticed that each company considers some benefits more important than others. Considering the averages of their answers we noticed that in general the most important benefit are considered the *“Better access to information”* and *“Cost saving”* and the less important are the *“Improved distribution channel”* and *“Better customer satisfaction through unique products”*.

4.7. Benefits and barriers – before and now

The responders of almost all Companies as expected, explains that the actual barriers delayed or even blocked their efforts to apply e-commerce. The responder of Company B as he stated: *“We are a fairly new company and our targets were not really including e-commerce for this year thus we didn’t really explore the benefits of e-commerce. We developed our website and we can see that we have a decent presence. Customers can find and contact us electronically. This is what matters for us now. Next year it may be something else. Thus, it is not the barriers that really blocked our efforts, but we just developed our website as everyone else. Exploring e-commerce it is not our current priority”*.

In regard to the benefits, all companies except from company B and E seem that they meet the initial expectations at a good level. Company B and C seems to be on the right track. All the responds for questions 8, 11 and 12 are demonstrated to the following table:

COMPANY	8. Did the actual barriers delayed or blocked your efforts to apply e-commerce at your company?	11. Did the actual benefits meet your initial expectations (if you applied e-commerce at your company)?	12. Were you aware of the potential benefits and barriers before you started using e-commerce?
A	Delayed	Yes	Yes
B	No	moderate	No
C	Yes	Yes	Yes
D	Some what yes	yes	yes
E	Yes. All the above at a level block or delay the ecommerce application.	Moving towards the right direction	Yes - most of them
F	Delayed	Yes	Yes
G	Some times delayed, in some times actually blocks the development	Yes	Yes during cost benefit analysis to justify development
H	Delay	yes, but challenges need not be underestimated	yes

Table 9: Interview question 8, 11 & 12 – results

4.8. The impact of e-commerce on the business strategy

The responder of Company A, B, D, E and H they didn’t applied any strategy so far which will integrate e-commerce in their marketing activities and at the same time connect their business-related efforts. As most of the Companies mentioned, we are active in our website we enabled the right technologies, but we expect that our brand awareness will eventually develop leads. The Company E seems to move towards the right direction though: *“this year we are taking marketing seriously. The department is now merged with the business development department under the same manager. This automatically connect the efforts of marketing with the business development as it supposed to be. Strategies are proposed already and will focus on two main pillars – attract candidates/crew and attract new business. Website is already transformed to a lead generation machine and technologies*

are employed for better data analysis, market intelligence and actionable tasks". Companies C, F and G already consider that e-commerce is important, and it is embedded in their business strategy to support and increase sales. As they mentioned, e-commerce supports their companies to increase the advertisement and reach more customers. Paid advertisements and targeted audience are their main tools that they broadly use along with the organic growth in their e-presence (Social media, website etc). All the above as per the companies which answered "yes" are analysed and important actions for their products/services are set.

COMPANY	13. Have you made changes to your long-term business strategy because of e-commerce?
A	No
B	No
C	Yes
D	no
E	We will apply this year
F	Yes
G	Yes
H	not really

Table 10: Interview question 13 – results

5. DISCUSSION

Chapter five (5), will present my analysis via a comparison of the results obtained by interviewing eight (8) companies versus the theoretical chapter. Through the comparison of the empirical and the literature I will try to answer the research questions.

5.1. E-commerce development in small-size companies – Location Cyprus

Going back to the theoretical model presented in section “3.3. *Development of e-commerce and the process of adoption*” and more specifically to Figure 5 where the E-commerce adoption ladder in small companies (Xu & Quaddus, 2009) is presented the author tried to place the interviewed companies into the relevant levels. This effort is demonstrated below:

1. How do you use e-commerce in your company?									
#	Interview Questions	A	B	C	D	E	F	G	H
1	Have an internet connection	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Have a website	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	More than one language on your website (e.g. Greek, English)	Yes	No	No	Yes	No	Yes	No	Yes
4	Email communication inside the company	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Email communication with partners and customers	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Publishes information on web pages such as products, catalogues, brochures	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
7	Using Internet and website to promote company's products	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
8	Using internet to search for new suppliers	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
9	Electronically interaction between the company and government agencies	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
10	Company fill in and send electronic forms	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
11	Send electronic Invoice	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Receive electronic Invoice	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	Using electronically technologies to share information about sales for use for inventory control, accounting or distribution channel	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
14	Customers can place orders by website	No	No	Yes	Yes	No	No	No	Yes
15	Customers can place orders by other forms, like e-mails, EDI type messages or others	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
16	Customers can pay electronically	No	No	Yes	Yes	No	Yes	Yes	Yes
17	The company can order electronically from suppliers	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
18	Using electronic technologies for administrative procedures inside the company	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 11: Interview question 1 – results

Based on the answers provided from the eight (8) interviewed companies shown in table 11 and considering the levels of section 3.3 (Figure 5) it is clearly that all companies are in level 3-4. The author categorizes the companies as follows – Figure 9:

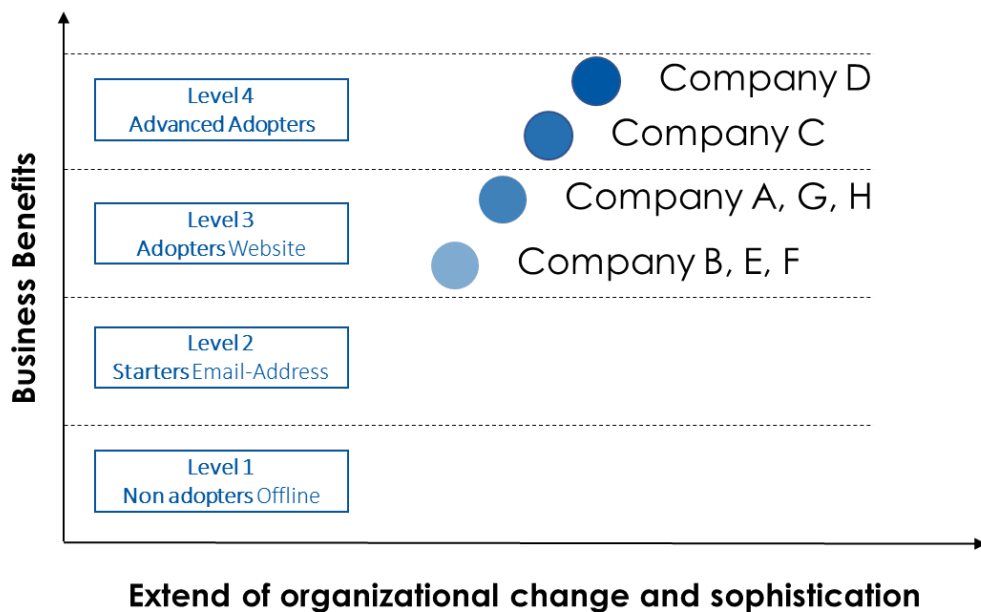


Figure 9: Level of e-commerce development in the interviewed companies

The comparison between the levels described by (Xu & Quaddus, 2009) shows that all the examined companies are above level 3. Which means that they at least have a website and email communication and are to the right path of adoption. Company C and D are in level 4 since both stated that they can order and sell online. Comparing the results with the data presented in section 4.2 (Figure 8), we may see that 2 out of the 8 (25%) companies interviewed are able to buy and sell online. This is almost double the amount captured in 2016 for Cyprus (sell: 12.37%, buy: 11.75% - overall is 12.06%) and almost the same with the EU average (sell: 17.24, buy = 23.55 – overall 20.395).

Summarizing, most of the small size companies are still developing its e-commerce and are using it primary for communication and as a marketing tool – level 3. There are no companies on level 2, they are present online, but not use e-commerce intensively. The usage is mainly through e-mails usage and searching of information.

5.2. The reason beyond e-commerce development

From my research I found first that the driving force for e-commerce adoption is the senior management which in many cases are either shareholders/owners. This is in accordance with the results from the literature review - the decisions for adoption of e-commerce strategy are concentrated in the top/senior management and thus more flexibility is observed versus the bigger companies. All the interviewed companies have made some improvements leaded by a single decision from the manager. On the other hand, the lack of knowledge from some of the managers can lead to ignoring some good ideas within the company. In small

companies as mentioned before, the driving force for e-commerce adoption is the top management. That said, I will describe what triggers them to start this process. Speaking about the different motives for implementation, (Evans & Wurster, 1999) explained, the main driver for small companies is the need to “defend the land”, or in other words to be more competitive. On the other hand, almost all the interviewed companies claimed that the reason beyond e-commerce adoption is to improve efficiency and decrease costs. There are only two companies that they added also competitiveness. about which factors are more important.

5.3. Barriers for e-commerce adoption

Following the responses from the eight (8) interviewed companies, I tried to understand of which barriers are considered more difficult for a small company to overcome. I would like to remind also that in the questionnaire, companies needed to rank on a scale from 1 to 5, where 1 means less challenging barrier and 5 means the most challenging barrier, on implementing e-commerce at their business. Various responses were received from the different companies. To this end, from the scale set between 1 to 5, I considered “fair” to calculate the average rank of each barrier and he ended up to the following table (table 12) which the results are sorted from the most challenging to the less challenging barrier.

7. Rank on a scale from 1 to 5, where 1 means less challenging barrier and 5 means the most challenging barrier, on implementing e-commerce at your business	Average
Long process of return on investments	3.38
Lack of consumer demand	3.25
Cost or Lack of finance	3.00
Lack of innovation culture	2.75
Business risk Security factors	2.75
Lack of long-term business strategy	2.75
Lack of time	2.75
Resistance of top management to adopt	2.63
Lack of finance resources	2.50
Lack of experience and knowledge	2.38
High level of complexity	2.38
Lack of awareness	2.25
Unsuitability for the type of business	1.75

Table 12: Interview question 7 – results

According to the responses received, the “*Long process of return on investments*” seems to be the most challenging barrier. Managers are not sure of the positive outcome as a result of the e-commerce improvements and especially even if they are positive, they are not willing sometimes to wait. At this point through, I would like to emphasize that the interviewed companies/responders in many cases provided conflicting answers. Specifically, I correlated the data received including the adoption level of each company shown in Figure 9 of the previous section. The results are demonstrated into the following table (table 13):

Interview Questions	Company A	Company B	Company C	Company D	Company E	Company F	Company G	Company H
Rated Level based on adoption (from Figure 9)	Level 3	Level 3	Level 4	Level 4	Level 3	Level 3	Level 3	Level 3
5. To which degree is the cost factor important to adopt more e-technologies?	High	moderate	Top	medium	The most important factor i would say	Medium	Is the biggest factor	there needs be a reasonable return on investment
7. Rank on a scale from 1 to 5, where 1 means less challenging barrier and 5 means the most challenging barrier, on implementing e-commerce at your business								
Lack of awareness	1	3	1	3	2	4	2	2
Lack of experience and knowledge	1	3	2	3	3	4	3	3
Lack of long-term business strategy	2	3	2	3	4	4	2	2
Unsuitability for the type of business	1	4	2	4	4	1	2	1
Lack of innovation culture	1	3	2	4	3	3	2	2
Resistance of top management to adopt	2	1	2	2	2	1	2	2
Lack of consumer demand	1	2	3	2	4	3	2	2
High level of complexity	5	2	2	3	5	3	3	3
Lack of finance resources	2	3	2	4	2	3	4	1
Lack of time	4	2	2	4	3	4	3	2
Long process of return on investments	4	3	2	3	2	3	3	2
Business risk/Security factors	5	4	2	3	4	3	3	3
Cost or Lack of finance	2	4	2	3	2	3	4	2
8. Did the actual barriers delayed or blocked your efforts to apply e-commerce at your company?	Delayed	No	Yes	Some what yes	Yes. All the above at a level block or delay the ecommerce application.	Delayed	Some times delayed, in some times actually blocks the development	delay
13. Have you made changes to your long-term business strategy because of e-commerce?	No	No	Yes	no	We will apply this year	Yes	Yes	not really

Table 13: Interview question 5,7,8,13 and results from Figure 9

Based on my analysis through the results obtained by the interviewed companies there are some misleading information which shows uncertainty and maybe lack of awareness despite the answers. That’s why it worth analysing the answers of each company to demonstrate that indeed there is an issue in the data quality which is of course expected since it may lead into other conclusions.

Company A is rated with Level 3 (figure 9) for its e-commerce development. Cost factor as a very important factor to their e-commerce adoption. At the same time, their most challenging barriers to implement e-commerce are the “*High level of complexity*”, “*Business Risk Security Factors*” (both rated with 5) and then followed by the “*Lack of time*” and the “*Long process of return on investment*” (both rated with 4). The conflict here is that even that they consider that the cost is at a “high” degree important to adopt e-technologies (question 5), in question 7 they rated cost as one of the less challenging factors (rated with 2). This response maybe due to that they didn’t embed e-commerce in their long-term strategy as per question thirteen’s (13) response and thus they don’t really know.

Company B is rated with Level 3 (figure 9) too. Cost is affecting at a moderate level their adoption to e-technologies. Their response in question five (5) is almost align with their answer in question seven (7) where one of their most challenging barriers is the cost (rated with 4 – can be considered as “moderate”).

Company C is rated with Level 4 (figure 9), which is the higher level of adoption and as per (figure 9) it is ranked second versus the other companies. Cost seems to be very important for them to adopt e-technologies. On the other hand, as per their response in question seven (7) it is not the most challenging barrier for them. Company C, integrated e-commerce in their long-term strategy as per question thirteen’s (13) response.

Company D is rated with Level 4 (figure 9). Company D, is the “leader” in e-commerce adoption versus the other interviewed companies. Cost is “medium” important for them to adopt e-technologies. On the other hand, as per their response in question seven (7) the most challenging barriers (rated with 4) seems to be the “*Unsuitability for the type of business*”, “*Lack of innovation culture*”, “*Lack of finance resources*”, “*Lack of time*”. Company D did not integrated e-commerce in their long-term strategy as per question thirteen’s (13) response.

Company E, a Level 3 company regarding the e-commerce adoption, considers cost as the most important factor to the adoption of e-commerce technologies and as the most challenging barrier (rated with 5) they consider the “*High Level of Complexity*”. They didn’t include e-commerce in their long-term strategy yet, but they are planning to do so.

Company F, a Level 3 company regarding the e-commerce adoption considers that cost is not the main factor for e-commerce adoption – “medium” as stated. The most challenging barriers (rated with 4) are “*Lack of awareness*”, “*Lack of experience and knowledge*”, “*Lack of long-term business strategy*”, “*Lack of time*”. I will mostly stand to the barrier mentioned above “*Lack of long-term business strategy*” since this is conflicting with their response in question thirteen (13) where they mentioned that they included e-commerce in their long-term strategy.

Company G, a Level 3 company considers that cost is the “biggest” factor for e-commerce adoption. The most challenging barrier (rated with 4 in question 7) is the cost and lack of finance which aligns with what they mentioned in their response in question five (5). They included e-commerce in their long-term strategy.

Company H, a Level 3 company considers that cost is not that important in adopting e-commerce technologies if there is a reasonable return of investment from e-commerce. The most challenging barrier (rated with 3 in question 7) is the “*High level of complexity*”, “*Business risk Security factors*” and “*Lack of experience and knowledge*”. They didn’t make any changes in their business strategy because of e-commerce.

Reviewing all the responses from the eight (8) companies apart from a couple of cases, in my understanding there are many conflicting answers. As stated, before the “***Long process of return on investments***” seems to be overall the most challenging barrier but this vary from company to company. Through the inconsistency and uncertainty on the answers received, I strongly believe that, it is the lack of knowledge, the awareness of the e-technologies and at the same time the absence of the integration of e-commerce in the long-term business strategy who leads the responders to provide conflicting/misleading answers. This is obvious in almost all companies even if they mentioned that they embedded e-commerce in their strategies.

Going back to question seven (7) of table 13, you will notice that intentionally I included two (2) barriers with the same meaning to ensure that the responders really understand the concept and pay attention to all questions. Those are the “*Lack of finance resources*” and the “*Cost or Lack of finance*”. Company B, D and H provided different rating between those two (2) barriers.

The major separating factor between small and large companies is the culture to innovate (Arendt, 2008). Companies without the expected rewards from the market are resistive or not motivated to future developments (aligns with the overall answer for the “*Long process of return on investments*”).

As per (Stockdale & Standing, 2014), the companies have to change their long term strategy and integrate in their processes e-commerce in order to overcome the barriers. The results from the experimental part lead to one important conclusion: small companies consider the cost factor very important if they do not have enough knowledge and cannot see the positive results from the new strategy. The influence of the cost factor is decreasing because of the developing of the technologies and thus the initial investment is lower (Arendt, 2008). Therefore, even if the companies consider the “*Long process of return on investments*” as the most challenging barrier, I think that the lack of knowledge is with utmost importance (considering also the conflicting responses provided). In general, the main barriers can be found internally, within a company. Those include strategy, management and skills/training. According to (Stockdale & Standing, 2014) if the environment does not encourage the innovation process, small companies can abandon or stop the e-commerce improvements. Many companies are operating primary in B2B market, which does not encourage online payments. This reason was also stated from one of the responded companies. Through the literature I have found that the awareness of the companies for the necessity of increasing the knowledge is closely connected with their intention for innovation and improvements (Brand, 2008). E-commerce adoption can be achieved at a higher level if the awareness is increased within the companies. This was observed in the interviewed companies. The company which had a clear vision of the barriers and especially of the need of knowledge managed to improve their e-commerce capabilities in a short period of time and to benefit from it.

5.4. Benefits from e-commerce adoption

Companies may enjoy benefits from the adoption of e-commerce. Following the responses from the eight (8) interviewed companies, I tried to capture the benefits that the interviewed companies are enjoying already. In the questionnaire, companies needed to rank on a scale from 1 to 5, where 5 is the most beneficial impact from ecommerce at their

business. Various responses were received from the different companies. As in section 5.3, I calculated the average rate of each benefit. Table 14 demonstrates the average rates sorted from the higher to the lower rated benefit for the interviewed companies.

10. Rank on a scale from 1 to 5, where 1 means less beneficial and 5 means very beneficial, if you already enjoy the following benefits from e-commerce	Average
Cost saving	4.00
Better access to information	4.00
Reaching large number of customers	3.88
Increased flexibility of communication	3.88
Improved customer service	3.88
Improved day-to-day efficiency	3.63
Increased sales	3.38
Increase ability to seal a deal	3.38
Improved distribution channel	3.25
Better customer satisfaction through unique products	3.25

Table 14: Interview question 10 – results

According to the responses received, the “*Cost savings*” and “*Better access to information*” seems to be the most important benefits that the companies are already enjoying followed closely by “*Reaching large number of customers*”, “*Increased flexibility of communication*” and “*Improved customer service*”. Also, as per the main benefits stated in question nine (9) of the following table, efficiency is the main benefit for all companies. As in the previous section, at this point, I would like to further analyse the results from the questions that are related to the benefits and the level of e-commerce adoption in the interviewed companies. The results are demonstrated into the following table (table 15):

Interview Questions	Company A	Company B	Company C	Company D	Company E	Company F	Company G	Company H
Rated Level based on adoption (from Figure 9)	Level 3	Level 3	Level 4	Level 4	Level 3	Level 3	Level 3	Level 3
9. What do you consider the most important benefit for your company from e-commerce?	Efficiency	Low cost and sell internationally	Efficiency	Keeping up with the industry	Reaching large number of customers & efficiency.	Maximize visibility and brand awareness	Improve efficiencies and access to resources worldwide	increase revenue, reduce cost
10. Rank on a scale from 1 to 5, where 1 means less beneficial and 5 means very beneficial, if you already enjoy the following benefits from e-commerce								
Improved day-to-day efficiency	5	2	2	4	3	5	4	4
Increased sales	4	5	3	3	2	3	3	4
Cost saving	4	5	4	4	3	4	4	4
Improved distribution channel	2	5	4	3	3	2	4	3
Reaching large number of customers	4	5	4	2	4	5	4	3
Increased flexibility of communication	4	3	4	4	4	5	4	3
Improved customer service	5	5	4	4	3	4	3	3
Better access to information	4	3	4	5	4	5	4	3
Increase ability to seal a deal	2	5	3	3	4	3	4	3
Better customer satisfaction through unique products	5	5	2	4	2	1	4	3
13. Have you made changes to your long-term business strategy because of e-commerce?	No	No	Yes	no	We will apply this year	Yes	Yes	not really

Table 15: Interview question 9, 10, 13 and results from Figure 9

Efficiency is the main benefit that Company A and D are enjoying. Company B’s responder mentioned that low cost and international sales is what they currently receive from

e-commerce. Company D's benefit is to "keep up" with the industry. In Company E's response apart from efficiency, reaching bigger volume of customers is the additional benefit. Company F's benefits are their brand awareness and visibility. Company G like company A and D is enjoying the benefit of efficiency and additionally the access to worldwide resources. Finally, Company H's benefits are the revenue increase and the cost reduction which again in my view results into overall efficiencies. As I notice, barriers seem more complicate to be realized from the companies but the benefits are more obvious and appears to be more consistent between all companies.

Again, through my empirical study apart from the efficiency and cost savings, the possibilities for finding and attracting customers are one of the main benefits for the companies. At the same time, companies value higher the increased information. Both the theory and the empirical study show that this is very important for a company. The most popular answer in question ten (10) was Cost Savings but when we asked from responders to answer question nine (9) they mostly added efficiency. With efficiency someone may achieve more sales, reach bigger audience and resources and eventually reduce costs. Reducing costs and increasing sales can only result to the biggest benefit for a company – increase margins. According to the literature, the increased ability to exchange information and cover larger customer area is among the main benefits (Xu & Quaddus, 2009). I also found that companies are dependent in higher degree than before on electronic technologies as a simple method to reach into bigger customer audiences. The traditional advertising can be replaced by e-commerce and the expenses automatically will decrease. Regarding the costs, the literature describes only decreasing of day-to-day expenses and operational costs as a result of e-commerce, but do not describe the huge impact on the advertisement costs. As it seems companies are not aware of the positive impact from e-commerce adoption. Companies utilizing social media were surprised by the impact on the competitiveness. One of the respondent companies cannot even imagine their business now without e-commerce. Through the study and discussion with the interviewed companies, most of the small companies start e-commerce with limited expectations but during the time they start to realize the bigger impact and possibilities from e-commerce. As per (Brand, 2008), when the benefits are visible to the managers then the innovation will continue. Knowledge is very important here as well in order to adopt e-commerce in the long-term business strategy properly.

5.5. The impact of e-commerce on marketing

E-commerce is utilizing the same principles with marketing (Stockdale & Standing, 2014). According to my empirical study, this is true for companies using not so sophisticated

forms of e-commerce – in the early stage of the adoption ladder. Five (5) of the examined companies have not made any significant changes to their strategy including companies that are well positioned in the adoption ladder. Pure luck, coincident or well-developed culture may be the success factor. In my opinion, for companies using more advanced e-commerce, there is a need to adapt the long-time strategy so that they can benefit in higher degree from e-commerce. Information is equally important to the product itself as per (Evans & Wurster, 1999). Through my questionnaire and interviews, I have found out that small companies excessively use the electronic technologies to exchange information and to inform customers about their products and just 2 of them are using e-commerce to sell their products too. According to (Allen, 2001) e-commerce offers a new way to interact with customers and by connecting with the traditional advertising techniques the effect can be doubled. I strongly believe that in many cases it is possible for the companies to rely almost entirely on e-commerce, and to reduce to minimum the old forms of advertising especially in a B2C markets. Of course, this cannot be done without a new way of thinking and a vision for the future. Results from the interviews highlight one important possibility for the small companies - to expand the product line by cooperating externally with partners. This is an option that small companies may utilize. There is no need for maintaining storage places or spent enormous amounts on purchasing volume. Through e-commerce and a virtual store, where the products can be placed, a small company may simply utilize well e-commerce and promote products from different vendors in a back to back agreement, that can be made available to buyers in a certain amount of time, even if they are not yet manufactured. Price (marketing mix) is less impacted from e-commerce versus the rest of the marketing mix elements. Companies consider that they can sell into the same level even if their expenses are less. This is an effort for them to maintain consistency in their markets and when possible to gain more margins. The impact of e-commerce on prices would be visible when the competition is higher, and the product is not complex. “Place” is considered the element with the most visible impact versus the other three elements of the marketing mix. (Dave, E-business and e-commerce management – Strategy, implementation and practice, First Edition, 2002) explains the big opportunities for covering large customer area and international expansion. The interviewed companies reported this effect. As per my study, companies still rely at a certain level to their distribution channels if they are not using sophisticated forms of e-commerce. On the other hand, companies who use e-commerce in a more advanced way are more likely to find their customers on the Internet. This in turn can lead to a decrease of the administrative and other related costs.

6. CONCLUSION

This chapter concludes the thesis. Based on the theoretical, empirical and analytical findings previously presented, the research questions are answered. The chapter further points out the limitations and gives recommendation for further studies. This study shows that small companies can be characterized with relatively well-developed e-commerce adoption comparing with the literature review and the statistics utilized. The driving force for e-commerce adoption and development in small companies is the owner/top management. Today, most of the small companies use e-commerce as a marketing tool and putting much importance on the information exchange and informing customers for the products and services. This study shows that the improved internal efficiency and increased information exchanges are the main benefits from e-commerce for the small companies. By increased information exchange companies can cover a larger customer area and attract new customers. Being more informed for the characteristics of the products, customers are more satisfied and more willing to make orders. This study highlights that companies are shifting to a new way of finding customers which allows decreasing of their expenses for advertisement. At the same time companies experience cost saving by improved day-to-day operations. The most important barriers for the small companies are the lack of innovation culture and knowledge. Even if some companies still consider the cost factor as most important this is because of insufficient understanding for e-commerce and the positive effect of it. This in turn leads to non-consistency or stopping the process of innovation. Other important barrier is the lack of customers demand. Further, the study shows that many of the small companies will not gain substantial benefits from these improvements because of the character of their businesses or market which does not encourage the process of innovation.

Limitations and further research

This thesis has its limitations. The major drawback in this thesis is the limited number of interviewed companies, therefore the findings cannot be taken as representative for all small-size companies. At the same time, the interviewed companies were all located in Cyprus even if some or most of them have international customers. Thus, this thesis does not draw conclusions about differences between industries or regions and cannot be considered as the overall global picture. The examined companies have already started the process of e-commerce adoption. Therefore, this thesis does not explore in detail the barriers experience from non-adopters – most of the companies were on Level 3 as per their responses and two (2) out of the eight (8) companies were on Level 4 already. Further studies can be carried out in many areas. A more detailed research focused on a specific industry and in various

countries/regions would provide valuable information and show the differences between industries and countries/regions. It would be interesting to conduct a quantitative research and explore if there are any differences between companies in different stages of e-commerce development. It is also interesting to analyse the influence of e-commerce on the process of internationalization in the small companies.

References

- Abid, A. A., Rahim, M. M., & Scheepers, H. (2012, March 12). *Experienced Benefits and Barriers of e-Business Technology Adoption by SME suppliers*. Retrieved from <https://ibimapublishing.com/articles/CIBIMA/2011/791778/791778.pdf>
- Allen, E. &. (2001). E-commerce marketing strategies: an integrated framework and case analysis. *Logistics Information Management*, 14, 14-23.
- Arendt, L. (2008). Barriers to ICT adoption in SMEs: how to bridge the digital divide? *Journal of Systems and Information Technology*, 10, 93-108.
- Badi, K. S. (2018). The Impact of Marketing Mix on the Competitive Advantage of the SME Sector in the Al Buraimi Governorate in Oman.
- Brand, M. &. (2008). Into the drivers of innovation adoption. *European Journal of Innovation Management*, 11, 5-24.
- Bryman, A. &. (2007). *Business research methods 2 ed*. Oxford University Press.
- Business Research Methodology. (n.d.). *Business Research Methodology*. Retrieved from <https://research-methodology.net/research-methodology/research-approach/deductive-approach-2/>
- Chaffey, D. (2015). *Digital business and E-commerce management : strategy, implementation and practice*. Edinburgh: Pearson.
- Clark, D. (2020, September 25). *Statista*. Retrieved from <https://www.statista.com/statistics/878412/number-of-smes-in-europe-by-size/>
- Crawford, I. (1997). *Marketing Research and Information Systems. Food and Agriculture organization of the UN*. Retrieved from <http://www.fao.org/docrep/W3241E/W3241E00.htm>
- Dave, C. (2002). *E-business and e-commerce management – Strategy, implementation and practice, First Edition*. UK: Pearson Education Ltd.
- Dave, C. (2007). *E-business and e-commerce management – Strategy, implementation and practice, Third Edition*. UK: Pearson Education Ltd.
- Dave, C. (2009). *E-business and e-commerce management – Strategy, implementation and practice. Fourth Edition*. United States: Prentice Hall.
- Duan, X. (2012). Evaluating the Critical Determinants for Adopting E-Market in Australian Small-and-Medium Sized Enterprises. In X. Duan, *Management Research Review Vol.35* (pp. 289-308).
- Duch-Brown, N., & Martens, B. (2015). *The European Digital Single Market*. Europe: JRC Science Hub.
- European Commission. (n.d.). *European Commission*. Retrieved from <http://ec.europa.eu/DocsRoom/documents/26562/attachments/6/translations/en/renditions/native>

- Eurostat. (2012). European Commission: Information society Statistics.
- Evans, P., & Wurster, T. S. (1999). *Harvard Business Review*. Retrieved from <https://hbr.org/>:
<https://hbr.org/1999/11/getting-real-about-virtual-commerce>
- Ian Fillis, U. J. (2003). A Conceptualization of the opportunities and barriers to e-business development in small firms Vol. 10. In *Journal of small business and Enterprise development* (pp. 336-344).
- Išoraitė, M. (2016). "MARKETING MIX THEORETICAL ASPECTS. *International Journal of Research – Granthaalayah*, 4(6), 25-37.
- Jr., R. K., & Cegielsk, C. G. (2011). *Introduction to Information Systems: Enabling and Transforming Business*. Danvers, MA: Don Fowley.
- Moore, K. (n.d.). *BigCommerce*. Retrieved from
<https://www.bigcommerce.com/blog/ecommerce/#ecommerce-timeline>
- O'Toole, T. (2003). E-relationships – emergence and the small firms. In *Marketing intelligence & planning, Vol.21-2* (pp. 115-122).
- Oh, K.-Y., Anderson, A. R., & Cruickshank, D. (2012). Perceived barriers towards the use of e-trade processes by Korean SMEs. *Business Process Management Journal*, 43-57.
- S., C. (2008). Success in electronic commerce Implementation, A cross-country study of small and medium-sized enterprises. *Journal of Enterprise Information Management No5, 21*, 468-492.
- Schneider Group. (2011). *Electronic commerce. Ninth Edition. Course technology, Cengage Learning*. World Scientific Publishing Co.
- Stockdale, R., & Standing, C. (2014). Benefits and barriers of electronic marketplace participation: an SME perspective. *The Journal of Enterprise Information Management*, 301-311.
- Wagner, B., Fillis, I., & Johansson, U. (2003). E-business and e-supply strategy in small and medium sized businesses (SMEs). *Supply Chain Management: An International Journal*.
- Wikipedia. (2020). *Economy of Cyprus*. Retrieved from
https://en.wikipedia.org/wiki/Economy_of_Cyprus
- Xu, J., & Quaddus, M. (2009). *E-Business in the 21st Century: Realities, Challenges and Outlook*. Retrieved from <https://booksc.xyz/ireader/46017819>