UNIVERSIDADE CATÓLICA PORTUGUESA . PORTO

FACULDADE DE ECONOMIA E GESTÃO

MESTRADO

Gestão de Serviços

Modalidade de Trabalho

Dissertação

Tema

The impact of e-services on firm internationalization

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Novembro/2012

Trabalho Final de Mestrado submetido no cumprimento parcial dos requisitos para o grau de Mestre em Gestão de Serviços da Faculdade de Economia e Gestão da Universidade Católica Portuguesa.

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“It is not the strongest of the species that survives, nor the most intelligent. It is the one that is the most adaptable to change.”

Charles Darwin

Acknowledgments

I would like to thank my parents for their patience and support throughout my life and in the process of my education.

A special thanks also to B., for his understanding and motivation to go further and for all sacrifices done so I could accomplish one more goal in my life.

Finally, I want to express my appreciation to Professor Doutor Ricardo Morais for his guidance and recommendations.

Thank you all!

Abstract

The aim of this work is to give a new perspective on services that can be delivered online and to identify the one that have more chances to be easily exported.

Technological advancements in the actual knowledge and information society and the increasing dissemination of the Internet in daily lives offer new opportunities and challenges for companies and cannot be ignored or postponed.

Furthermore, the increasing importance of services' sector, not only in developed countries but also on developing ones, justifies that countries and companies closely follow the transformations that are occurring in the international competitive context.

Therefore, it is of utmost importance the adaptation of countries and companies to new technologies and the promotion of new means of communication, especially the Internet and its new functionalities, as a delivery channel for their services.

To achieve this work main objective, actual theoretical context on e-services is analyzed, seeking a definition for the concept, as well as previous literature about internationalization of services that can be delivered on a virtual environment.

Nevertheless, the focus is on the review of literature on services' classification topic in order to theoretically support the framework developed to identify the different types of e-services that can be found in the Internet and that will be used to conclude about which type of e-services are easier exported.

This study contributes to the current literature by extending research on e-services classification and their contribution for the internationalization of companies.

Keywords: e-services; internationalization; literature review

Resumo

Este trabalho procura apresentar uma nova visão dos serviços que podem ser entregues *online*, identificando que tipo de serviço terá maior propensão para a internacionalizar.

Os avanços tecnológicos na atual sociedade de conhecimento e informação e a crescente relevância da Internet no quotidiano, quer em termos sociais quer a nível corporativo, oferecem novas oportunidades e trazem novos desafios aos quais as empresas não devem ficar indiferentes.

Além disso, a crescente importância dos serviços, não só nos países desenvolvidos mas também naqueles em desenvolvimento, justifica que países e empresas sigam de perto as alterações no contexto competitivo internacional.

Neste sentido, é essencial que países e empresas se adaptem às novas tecnologias e aproveitem o potencial dos novos meios de comunicação, em especial a Internet, como canal de divulgação e distribuição dos seus serviços.

Com vista a atingir o objetivo proposto, é realizada uma análise ao atual contexto teórico dos *e-services*, procurando uma definição para este conceito, e da literatura existente no âmbito da internacionalização de serviços que possam ser entregues através de plataformas *online*.

De seguida, uma revisão de literatura sobre o tópico da classificação de serviços é realizada, de forma a suportar teoricamente o quadro conceptual desenvolvido para identificar os diferentes tipos de *e-services* presentes na Internet e que permitirá tirar conclusões acerca do tipo que terá mais facilidade de ser exportado.

Este trabalho contribui para a atual literatura, uma vez que alarga a investigação acerca da tipologia de *e-services* e como os mesmos podem ser utilizados para expandir o negócio das empresas a nível internacional.

Keywords: e-services; internacionalização; revisão de literatura

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1. INTRODUCTION

In the actual dynamic and fast context of globalization, a nation's capacity to internationalize its businesses is particularly relevant and becomes a determinant driver for its development and consequent well-being of its population.

One of the main aspects for economic development is the increase of an economy's service sector; therefore, one of the main challenges of the actual economic context is how countries and national companies improve and capitalize their capacity for internationalizing services that can be traded over national boundaries. Nevertheless, services have been thought as solutions conceived for local purposes and traditionally considered non-tradable. However, and as a consequence of the elimination of some barriers to their exportation, significant changes on international trade laws and arguably progress of information and communication technologies, nowadays, many services are tradable and the service sector is increasingly expanding over national boundaries.

The evolution in information and knowledge society allows the transformation of economic relationships and is changing the way they are established among economical actors. The Internet is a platform that enables data and information flows with an incredible pace and efficiency.

Internet is a communication-based platform that generates and receives information, anytime, anywhere in the planet. From USA to India. From Norway to South Africa. Its great attribute? All of these relationships can take place in real time, taking advantage of interactive and multimedia means, which makes everything more dynamic and attractive, allowing its increasing ease of use and *learnability*.

The Web we know now fosters an interaction environment and promotes users' involvement in content generation and in the development of applications that capitalize network effects and all the potential of collective

intelligence, as the number of internet users is growing. For that, it is an alternative to the existent and traditional systems (Junqueiro, 2000).

For companies, the investment on information technology areas, which had hitherto been seen as a cost, is now considered to be a mean to reduce operational costs and as a fundamental path to get results. In fact, also in the service sector, through the improvement on service production processes, there is an increase in the perception of the customer service refinement, and it is faster and errors minimizer.

However, challenges are not restricted to service delivery tools. Trends like Cloud Computing, video evolution or social networks should be incorporated in companies' vision, and there must be made efforts in terms of real-time tracking and monitoring while they become more widespread in business, and then, according to the firm's capabilities, they can be more easily used to its advantage. For this reason, firms should have the adequate tools and know-how that enable them to maximize their presence in the Web, through the capitalization of its benefits, and to innovate their process implementation.

The need for change, as a result of technology, is correlated with the increasing low cost of computing power, storage or bandwidth availability. It is also recognized that, since there is a growing diversity of data sources that occurs at accelerating speed, organizations will continue to accumulate increasing volumes of data. All of these technologies and transformations already exist, but yet there are more to come, and firms' innovation capacity will reveal itself through the ways that organizations choose and are able to apply these current and new technologies for their benefit. This innovative process will continue to be recognized as the driver for radical changes in business models (RICOH, 2012).

Those companies that manage to have more flexible processes, more prompt structures, and that develop more adequate tools for their employees and customers will be able to make quicker adjustments, to be stimulated by technology changes to make their own choices and will have a lot of opportunities.

1.1. Electronic commerce

In this context, electronic commerce or non-presence sale (also known as e-commerce), where we can find virtual commerce, is a commercial transaction whose primary means is electronic equipment, like a computer, for instance. This kind of interaction can be seen among organizations, between them and individuals and among individuals. Through it is possible to acquire goods, products or services, and the transaction is complete when a payment is made through electronic means.

E-commerce involves research, development, marketing, propaganda, negotiation, sales and support. And through electronic connections with customers, suppliers and distributors, business communications are becoming more and more efficient, since the use of the Internet expands market participation and increments the businesses' feasibility on the long run.

In the beginning online commerce was based on the buying and selling of physical products, like CDs, books and other tangible products. Nowadays, this kind of products continues to be a major part of the transactions realized online. However, there is a new trend made possible by the emergent technologies and with them it becomes possible to operate with other types of businesses beyond products' trade and commercialization. Now it is feasible to deliver services over the internet, like touristic packages, for instance.

Concepts like e-commerce, e-business, web services, online services, e-services, virtual services, are becoming part of a new society, new technologies-based, with its epicenter in the Internet, and whose evolution is happening fast and is disruptive to what we have known and learned over past years.

1.2. Objectives

This master dissertation wants to answer the following research question:

What is the impact of e-services on firm internationalization?

There are different types of e-services, which demand different strategies, different business models and processes, so different challenges and opportunities. As a consequence not all businesses that can be developed in the Web follow the same pattern or methods, since they are different in their own nature.

Even though there are studies about services' internationalization, diversification and trends in services, and considering the increasing impact of the Internet in daily lives and in new business models, there are still few studies about e-services and the conditions that enable their exportation (Javalgi and Martin, 2007). As a consequence, there is the need to develop more research about the impact of services that can be provided over the Internet on the internationalization of a company (Knight, 1999; Etemad, 2010). As Rosson (2004) states,

> "Although the Internet has become accepted as a tool of business, relatively few companies have thought carefully about how it might be used to capture export business."

Following the need for theory development in this context, this work tries to bring a new perspective about e-services classification and their role in nowadays information- and technology-based society, reducing the gap that exists in the literature. Furthermore, it wants to draw attention to the possibilities that arise with a more efficient and effective use of the Internet and its impact on companies' export decision making.

1.3. Scope of the study

The purpose of the study is to identify what type or types of e-service there are and understand how they can affect a company's strategy definition, exploring what type or types are more feasible to export to other countries.

To achieve this goal there is a need to focus on e-services in the sense that there are other concepts that seem to mean the same and, consequently, be misunderstood, but if they are compared to e-services it is possible to identify some differences. It is the case of e-business or web services, for instance. So, intrinsically related to the subject of this work is the need to understand what e-services are and how they should be defined.

For that reason, a review of literature is made about e-services in the quest to find a definition that serves the purpose of this study and, in that way, separate e-services from other concepts.

Moreover it is required to give special attention to the internationalization of services through electronic means. In fact, e-services are delivered online, through the capitalization of information- and technology-based platforms that enrich services' production and consumption processes and influence the delivery of value to the final user. In this way, it is important to identify the main drivers for e-services exportation.

After answering what e-services are and defining their scope, and exploring the main factors that influence their exportation and those that may explain their success, it is presented a new way to classify e-services. Actually, its main objective is to determine what types of e-services are present online.

Then, an analysis is made to the types of e-services that are present in the web, based on the new classification provided, in order to identify which type is easier to export.

The focus is on firms whose main business is, in part or exclusively, online, taking into consideration if the company had already a local shop or store or not.

Out of the scope of this work is the identification of the ways that companies choose to entry on foreign countries, since it is implicit in this study that companies have already chosen to expand their businesses abroad. In addition, there is no intention to analyze the reality of exporting service delivery companies whose initial investment was to establish a local presence in the foreign country, with all the implementation costs and human resources' need associated.

1.4. Structure of the work

In the first section an introduction was made to the context of this work and it was also presented the research question that this work intends to answer. Finally, the scope of this study was identified, giving a brief explanation on the main issues addressed in this work.

In the next section, a review of literature about e-services concept is made and there are briefly discussed the differences between actual web-related concepts to understand how they differ from each other. As a result, in the end of that literature review, a definition for e-services is given and that will be the one consider answering this thesis research question. In the same section, some observations are made about the two types of firms that have an online presence: "pure-clicks" and "brick-and-clicks".

In the third section, the theoretic context on services' internationalization is reviewed, focusing the attention on the internationalization by electronic means. Therefore, and through the review of theoretical background on the subject, an analysis is made on the drivers for services' internationalization and then an approach is made to e-services special case, focusing on the impact of electronic commerce on actual businesses and in what are the main drivers for e-services exportation and, finally, the reasons that may explain their accelerating evolution are given.

In the fourth section, a review of literature is made on services classification topic, based on previous research on traditional services' classification (Erramilli, 1990; Lovelock and Yip, 1996; Clark and Rajaratnam,

1999; Ball *et al.*, 2008) and also in more recent studies' that presents new perspectives about services traded in a virtual platform, like the Internet (Rahman, 2004; Ting-Peng Liang *et al.*, 2004; La *et al.*, 2005; Javalgi *et al.*, 2009).

In the fifth section, it is presented the methodological approach to answer the research question and in the following section (chapter 6) a framework to classify online services, based on new criteria, is given. This part of the study is especially oriented to help answering the research question and it is based on the review of literature of previous section 4. Consequently, a comparison is made between the types of businesses identified in the framework, focusing on each one's advantages and disadvantages, and illustrating each of them with some examples, and in the end it is proposed a hierarchy between the types of e-services according to the expectations about their exportation's possibility.

Final conclusions are given in section 7. The dissertation concludes with the identification of this study limitations and suggestions for future research.

2. E-SERVICES

As marketplaces become more and more competitive, and in the advent of major changes in the ways firms' do business, services' sector can be seen as a way to gain competitive advantages. Given services special characteristics, that differentiate them from goods, traditionally it has been said that they could not be exported and this is what makes their internationalization more challenging. This is particular relevant to service firms whose actual markets are saturated or becoming obsolete (Winsted and Patterson, 1998).

In fact, it is possible to say that services are no longer unmanageable out of their traditional scope. By changing the ways that service encounters can be conceptualized and developed, e-services overcome some limitations of service marketing, and, therefore, create previously unimaginable opportunities for marketers.

The evolution on services' exportation is gradually changing earlier assumptions about the need for a physical presence worldwide if a firm wants to be present all around the world (Javalgi *et al.*, 2004).

2.1. Services versus e-services

There is no need to describe each one of the characteristics that distinguish services from goods, as they are already well-recognized and studied in earlier studies and specialized literature. However, it is of interest to this work the discussion about the special features that those characteristics have and to analyze them in the context of international possibilities for firms all around the world.

For Kötler and Keller (2009), and briefly described, these characteristics are:

1) **Intangibility** – since it is not possible to touch them, seen or physically transported.
2) **Inseparability** – there is a need to keep both production and consumption processes happening simultaneously.
3) **Perishability** – as it is not possible to stock them for future use or inventoried.
4) **Heterogeneity** – being people and location-based processes, their output and their quality is affected by the location, the service provider, the moment of interaction, among other factors.

According to Javalgi and Martin (2007), the main challenges that each of these aspects bring to services' companies are:

- Firstly, considering that services are intangible, there is a need to describe them without showing them. Internationally, this is particularly difficult because of language barriers and readability capacity of the destination country's market, and cultural differences, or the distance between service provider and customer, as well as different perceptions about risk taking (Winsted and Patterson, 1998).
- Secondly, inseparability implies the interaction between service provider and customer, so leverages the importance of interpersonal skills among other professional skills and cultural knowledge. In an international context this is especially important in terms of language, cultural background, experience with the service and knowledge about the services' delivery process.
- Thirdly, the balance between supply and demand is dependent on cultural norms, demographics and competitive dynamics, among other factors, which can affect the ability to understand and to manage variation patterns on the foreign markets.
- Finally, heterogeneity, particularly for labor-intensive services, can lead to the increase variation in service outputs, as it depends on customer actions that are random and unplanned. In a global

approach, these variations are magnified mainly because of the cultural differences between company and customers.

Järvinen and Lehtinen (2004) discussed how e-services characteristics fit to a traditional service approach. In that sense, they have limited their study on four characteristics:

1) Abstract nature of services, to refer their intangibility.
2) Process nature.
3) Inseparability.
4) Interactive nature.

In fact, they have eliminated from their analysis three other characteristics: heterogeneity, perishability and ownership. The last one was eliminated because the focus of their study was within the contents of services and not how they were obtained, so they did not examine this particular aspect in their work.

However, it is important to look at the reasons why they excluded the other two.

Heterogeneity was eliminated due to the fact that they consider e-services to be highly standardized and there is a lower influence of personnel variation in the delivery of the service. In addition, and following an idea of Lovelock, according to whom perishability can be considered the production capacity, Järvinen and Lehtinen argue against this particular aspect of services' nature, considering that it can be avoided if firms time resource's capacity or make possible to reserve beforehand. Furthermore, and supported in a study from Lovelock and Gummesson (2004), other concepts on the use of the e-service, like recording, replay and reuse, are also possible, namely for information-based services. So the authors consider that perishability can be excluded from their study on e-services.

Järvinen and Lehtinen (2004) found that inseparability and interaction varied across e-services. In their study, the latter can assume different formats, as it can be automated, when is no personal interaction and customers only interact with a computer or other electronic means, or

partially automated, when there is some form of personal contact. On its part, it was observed that inseparability could be only partially fulfilled, since for some e-services it is not possible to provide the service in-time basis.

On the other hand, intangibility and the processes' nature of services were consistent within all the services they studied (Järvinen and Lehtinen, 2004). About the first characteristic, all e-services studied can be considered as intangible in their nature. Following traditional services conceptualization, the delivery of an e-service comprehends a set of processes and procedures that must be followed in order to be successfully fulfilled.

2.2. E-services definition

During the beginning of the research for this dissertation, many definitions were found to describe the same concept. In short, e-services are those services that can be delivered electronically. Yet there is much more to say about them.

To Rust and Lemon (2001), e-service can be viewed as the role of service in cyberspace, in that sense they define it as

> "providing consumers with a superior experience with respect to the interactive flow of information".

For De Ruyter *et al.* (2001), e-service is

> "an interactive, content-centered and Internet- based customer service, driven by the customer and integrated with related organizational customer support processes and technologies with the goal of strengthening the customer-service provider relationships".

Also for Rust and Kannan (2002),

"e-service can be defined as the provision of service over electronic networks such as the Internet".

Surjadjaja *et al.* (2003) define an e-service as

“the interaction between the service provider and the customer through the Internet”.

Voss (2003) states that e-services are

“the delivery of service using new media such as the Web”.

And Järvinen and Lehtinen (2004) define e-service as

“a benefit providing object of transaction that can be characterized as an intangible process that is at least partially produced, marketed and consumed in a simultaneous interaction through electronic networks”.

As for Jeong (2007),

“e-service constitutes the online services available on the Internet, whereby a valid transaction of buying and selling (procurement) is possible, as opposed to the traditional websites, whereby only descriptive information are available, and no online transaction is made possible”.

In a broadest sense, Hassan *et al.* (2011) define e-services as

“the provision of service over electronic networks such as the internet”.

Furthermore, depending on the background of the author, the definition can be biased. As Stafford (2003) says, marketers view e-service

as if it is an extension of e-commerce, so as a much broader concept, but technology experts, for instance, see it as Web-based functionality.

In addition, there are also other terms that can be misunderstood in this context, such as e-commerce, e-business, web service, online service, virtual service, etc. Therefore, it is important to present the main characteristics that separate them from the concepts of e-services. In this way, a brief description of each is presented next:

- **Online services** are those services that are delivered over the Internet, exclusively.
  Example: search engines, online storage services, application service providers.
- **E-business** is related to the use of the Internet and related technologies to integrate and redesign company internal activities, processes and external relations in order to create new working habits.
- **E-commerce** is related to making use of the Internet to complete buying and selling transactions of products and services, and also includes online process of developing, marketing, selling, delivering, servicing and paying for products and services.
- **Web service** is a more technical concept and is related to web components that enable data transfers within different web applications that make use of different programming “languages”.

Both *e-business* and *e-commerce* can be included in the scope of e-services. The major difference among these concepts is that e-services are much more focused on a company’s clients and on the relationships between them, rather than on its internal processes (Zaninelli, 2007). In their nature, *online services* are focused on communication infrastructures. While *web services* are related to standardized ways of integrating Web-based application (Webopedia, 2012).

Considering the conclusions of the literature review on this topic, it is evident that there is no consensus about e-service’s definition neither there is one that is accepted within the same areas of expertise. This absence of

unanimity can be due to the relative novelty of the concept. Nevertheless, it is possible to say that there is an agreement about its main characteristics and how they are delivered. In that way, it is internationally accepted that e-services are interactive and delivered through the Internet, and for that they require the use of advanced telecommunications technologies and are supported by information technology infrastructures.

As Javalgi *et al.* (2004) say, not all services can be traded by electronic means; however, the evolution of the Internet has expanded the opportunities for trade in services internationally, exploring the use of e-services by both businesses and consumers. Through online services, services are electronically offered to enhance customers' online shopping experience, e-payment, and other online support.

In this work, **e-services** shall be defined as:

> *Services provided through electronic means, whose both production and consumption processes are conceptualized and developed to be entirely or partially completed within an electronic platform, such as the Internet.*

2.3. E-services characteristics

For Rowley (2006), in this kind of services, customer interaction with the organization is through technology. So, whereas in traditional businesses customers can rely on all their senses, online they are limited to sight and sound. On the other hand, e-services are available all day and are not restricted to a limited area, as traditional businesses are.

E-services typically have got the following advantages:

- They reduce marginal consumer acquisition and services costs, due to reduction in human intervention, and ease of e-service scalability.

- They are able to deliver information to consumers with higher quality, anytime, which can reduce consumer price sensitivity.
- They can support the capture of information relating to the search, evaluation and purchasing activities of consumers, so the company can know its clients better.

Beside Rowley's study (see Rowley, 2006) on e-service literature, there is a considerable amount of research efforts on the subject of e-services, namely on e-government aspects and public sector (West, 2003; Hassan *et al.*, 2011), or on specific scopes, like key drivers, quality, e-loyalty, trust, security and privacy (Rahman, 2004; Semeijn *et al.*, 2005; Trabold *et al.*, 2006; Aldás-Manzano *et al.*, 2009; Roca *et al.*, 2009), and more recently on the potential for small and medium enterprises to operate online (Scupola, 2009; Etemad *et al.*, 2010)

On this matter some of the major keywords are the following:

Acceptance

In his work, Wu adopts the Dillon & Morris's user acceptance of technology definition: "the demonstrable willingness within a user group to employ information technology for the tasks it is designed to support" (cited in Wu, 2009). It emphasizes the behavior behind acceptance, rather than the intention of use. Following this idea, acceptance can be seen as the willingness to adopt the e-service by the user or to choose when and how he wants to do it.

The internet has substantially reduced the search costs of companies and consumers, particularly in case of goods and services with "digital attributes". In addition, the Internet provides opportunities for almost costless distribution of information goods, which at least facilitates its adoption.

Accessibility

This is one very important aspect as it has to do with the ability and capability of the users to use and navigate through the website

and the ease of access. For example, Huang (2003) reports that e-government sites in general fail to deliver a good service to people with disabilities. As for Jaeger (2006), there is a need to improve accessibility to e-services and suggests some actions like the involvement of users with disabilities in the testing of the site.

In a report about State and Federal e-Government in the United States (West, 2003) one of the major findings was that about 89% of government websites were not easily accessible due to the fact that the level of literacy was much higher than that of the average American.

Digital divide

This is considered one of the main limitations to e-services' implementation. Despite the fact that advancements in technology and communications are happening at a fast pace, user's know-how and access to this new means of communication are not increasing at the same rhythm. So there is a need to educate people and increase the conditions of access to these new technologies and opportunities (Hassan *et al.*, 2011).

e-readiness

Generally defined as the degree to which a society is prepared to participate in the digital economy, it is possible to assess it through the determination of the relative standing of a society and its economy in those areas that are considered to be the most critical for its participation to the networked world. However, and following the opinion of Shalini (2009), e-Readiness can be a relative concept and it could be defined differently depending on each country's priorities and perspective. To him, "the results of the research project reveal that a high index may be only indicating that a country is e-ready in terms of ICT infrastructure and info-structure, institutions, policies, and political commitment, but it is a very poor measure of the e-readiness of citizens. To summarize the findings, it can be said that Mauritius is ready but the Mauritians are not" (Shalini, 2009).

Following Hassan *et al.* (2011) observations on the barriers that challenge the development of e-services it is possible to say that the major are:

- **Privacy and security risk barriers**

  These are serious concerns since if not well managed they can become a threat to e-services' viability. They account for data protection, misuse of personal information or secure financial transactions.

- **Legislative barriers**

  These limitations can be exemplified by concerns about electronic documents' submission, their liability and veracity, and making proof of those aspects or even giving them the same value, in comparison with paper versions. Moreover, licensing and other types of authorizations are other issues to address.

- **Administrative barriers**

  The limitations tend to be related with managing costs like productivity and progress monitoring and accountability, for example.

- **Technological barriers**

  Examples of these concerns are the minorities, the disabled and rural residents that have many difficulties to access or use new technologies or this is impossible. Furthermore, slow connectivity can reduce users' confidence and, in this sense, the reliability on the system.

- **Cultural barriers resistance**

  Sometimes, the way that e-service delivery process is designed and implemented does not take into consideration language or cultural background of its users, which implies misuse

and misunderstanding about the services and associated processes.

2.4. Pure-clicks versus Brick-and-clicks

There are differences between services companies and manufacturing companies; there are differences among traditional services companies and online services companies; and, among services' companies that deliver online is possible to distinguish between two types of firms:

- Internet-based firms, also known as "pure-clicks".
- Internet-enabled firms, otherwise known as "brick-and-clicks".

The reasons that explain this distinction are the dependency levels from Internet that both groups exhibit and the different approach that each group follow when delivering online service, namely on information provision, interactive communication and transactional facilitation dimensions (Shneor and Flåten, 2008).

2.4.1. Pure-clicks

"Pure-clicks" are those companies that exist online since their inception, so being online is a market entry strategy, while "brick-and-clicks" are already established firms in traditional businesses that seek an opportunity to develop their business on a new channel of distribution (Kötler and Keller, 2009). Competitiveness among this type of firms happens on the following dimensions:

- User interaction with the website.
- Product and/or service delivery.
- Responsiveness capacity when facing problems.

The main barriers to their development and success are:

- Little knowledge about their business environment.
- Low connectivity, network problems, informatics viruses and hackers threats.
- Poorly developed marketing strategy.
- Poor website design (not appellative).
- Little concern about clients' needs.

For Kötler and Keller (2009) this type of companies should:

- Focus their attention on building interactive and efficient websites;
- Deliver an excellent service to the customer, in order to compensate the fact that there is no human contact or sensitive experiences;
- Guarantee client's privacy and security;
- Build an adequate action plan to face issues and problems that can occur.

2.4.2. Brick-and-clicks

Internet presents itself as a powerful channel that brings new opportunities to get closer to customers and to enrich services with information, process automation and allows redesigning existent processes and procedures that enhance communication and knowledge sharing.

Companies need to capitalize their existing capabilities and disrupting habits so they can be more competitive and efficient. In this sense, an online presence is expected to migrate their businesses, at least in part, to a virtual space.

"Brick-and-clicks" are concerned with conflicts between their traditional business with their new online approach, especially on distributions channels (Kötler and Keller, 2009).

For traditional services firms, Ross *et al.* (2001) suggest that business success demand effective use of the Internet, and already established firms, when developing an online presence strategy, can leverage their strengths by:

- *Exploiting* their existing processes, through their automation, standardization and customer-focused.
- *Expanding* core processes in order to include adjacent businesses and new projects, and in that manner build new capabilities and develop new skills.
- *Extracting* management attention and human capital from obsolete processes and businesses.

2.4.3. Conclusions

Therefore, while "pure-clicks" strategy involves process conceptualization and development already prepared to face the challenges of being online, the migration from an existent business to an online format implies the leveraging of a firm's intangible assets and the adoption of new or enhanced management practices (Ross *et al.*, 2001).

Voss's study on new paradigms for services firms operating in a virtual environment (see Voss, 2003) makes a comparison between these two groups of online companies. To this author, "pure-clicks" are organizations dedicated to doing business in the Web, while "brick-and-clicks" use the Web as an additional channel to established businesses. Results on this study revealed that the latter seem to have more difficulties to migrate their service performance levels to the Web.

Even though it is not empirically proved, it is likely to assume that traditional businesses that move to the Web have some advantages over "pure-clicks". Kötler and Keller (2009) argue that traditional firms can be more successful than pure clicks if they build an online presence. To them, "brick-and-clicks":

- Are expected to have more financial resources and ease of access to banks and financial institutions than those firms that are new to the market.
- Develop a multichannel business model.
- Can benefit from an established brand name.
- Are expected to have a large customer data base.
- Have strong connections with key suppliers.
- Have more know-how and experience in the business.
- Can benefit from their physical establishments.
- After establishing their online presence, they are available all day, for the whole year.
- While online, can expand their business to a larger market, since the Internet allows that clients that cannot go to a physical shop or store virtually access to the firms' offers.

However, and as Voss subscribes, "brick-and-clicks" also face the following factors, which, at some extent, explain their barriers to deliver good service within the Web:

- Online business is considered a smaller part of firm's core business, so they dedicate it less time and resources;
- Difficulties related to the diverse cultures and sub-cultures that the firm needs to deal within a virtual environment and it is not prepared to successfully deal with them.
- The challenge of simultaneously deliver the same service or supplementary services in a multiplicity of distribution channels.
- Strategy developed for minimizing conflicting risks within different distribution channels.

In addition to these aspects, processes' standardization cannot be well implemented in an online environment, which affects service performance, as it is based on processes. Moreover, there is the risk of underestimating capacity need to handle with online demand (Voss, 2003).

In terms of internationalization, both groups are expected to follow different paths (Shneor and Flåten, 2008).

A “pure-click” has only one service channel, the Internet, so its intentions will be to serve the largest number of clients that is possible to achieve via this only channel. Following Quelch and Klein (1996) suggestion on how start-ups develop their websites, taking into consideration their resources’ limitations and revenues online-generated only, Shneor and Flåten say that, firstly, “pure-clicks” develop a transaction facilitating website and only later they invest on better information provision and on promotional tools. In this sense, they are expected to build a global shop first and only after will consider the development of specific-market websites, with customized contents and adaptations to the new market (Shneor and Flåten, 2008).

On the other hand, “brick-and-click” presence online will start via an informative website that can be used, and usually is, as a supporting promotional tool. To expand their online sales, they will rely on the support of intermediary agents and only after those sales grow to a desirable level the firm will consider the option of facilitating transactions through their own website. By doing this, it will be possible to develop a global shop, and as the demand grows this global shop can be adapted to different needs of foreign markets (Shneor and Flåten, 2008).

3. INTERNATIONALIZATION OF (E-)SERVICES

According to Ajami *et al.* (2006), an international business can be defined as follows:

> "In its purest definition, international business is described as any business activity that crosses national boundaries. The entities involved in business can be private, governmental, or a mixture of the two. International business can be broken down into four types: foreign trade, trade in services, portfolio investments, and direct investments. (…)
>
> In addition to tangible goods, countries also trade in services, such as insurance, banking, hotels, consulting, and travel and transportation. The international firm is paid for services it renders in another country."

In this section, it is presented theoretical background related to the internationalization of services, focusing the attention on services that can be delivered online and comparing their special characteristics with those that are served by traditional formats.

3.1. Internationalization of services: an e-services approach

The development observed in communication and information technologies and its rapid pace and innovation have made a major impact on a variety of businesses, including service-based businesses. All around the world there are more opportunities for the increase and development of service providers as they can take advantage from the improvements in telecommunications, multimedia, Internet access, connectivity and interactivity, among other factors. In fact, all these aspects account for a new economic reality, where countries have access to more and more information and where developing ones are enabled to become increasingly information-

and knowledge-based. Thanks to the rapid evolution of the Internet and new information technologies, both developed and developing countries are working to participate as equals in the virtual marketplace. Developing countries, such as India, China, Singapore, South Korea, or Turkey, are working towards gaining a competitive advantage in the international trade in services, especially in the information technology industry (Javalgi *et al.*, 2004).

There are many reasons why electronic delivery of services over borders is feasible (Winsted and Patterson, 1998; Clark and Rajaratnam, 1999; Grönross, 1999; Lovelock, 1999; Wymbs, 2000; Javalgi and Martin, 2007).

- Firstly, products such journals, magazines, games and media products, which traditionally have been delivered as goods, can now be consumed in a digital form (PDF files, websites, URL links).
- Secondly, there is a wide range of services like consulting, education, travel or financial that can be traded internationally by electronic means and can be delivered to businesses and consumers.
- Thirdly, worldwide organizations, like World Trade Organization, are focusing on the elimination of trade barriers and restrictions in services, so new opportunities are created.
- Fourthly, the establishment of regional blocks (for example, European Union or NAFTA) is creating even larger markets that enable the trade of goods and services across borders.
- And at last, but not least, the significant improvements in Internet speed, connectivity and electronic service networks and the continuous changes in personal computers and mobile devices promise the arise of more opportunities in this matter.

Wymbs (2000) presents the major reasons to which globalization in services can be attributed:

1) The need to follow customers that started to do business over national frontiers;
2) Closed markets' opening, like Russia;
3) Negotiations on the elimination of exportation barriers;
4) Economies' development and demand for more services;
5) Technology as a means of unification;
6) The power of the Internet to trade services and to improve transaction economics of others;
7) Concentration on firms' core competencies results in new perspectives about outsourcing services and its acceptance.

3.2. Changes and new perspectives

Electronic commerce is changing the ways to do business and are transforming, not only the conceptualization of services, but also the processes of internationalization that services industries are used to follow and challenging known management philosophies and practices (Lovelock, 1999; Wymbs, 2000; Javalgi *et al.*, 2004; Luo *et al.*, 2005; Ball *et al.*, 2008; Shneor and Flåten, 2008; Etemad *et al.*, 2010). This is due to the opportunities that information and communication technologies offer to service firms, expanding the markets available to do business and allowing even small and geographically isolated firms to define internationalization strategies.

Etemad *et al.* (2010) introduce the concept of "internetization" when referring to the process of adoption, diffusion and deployment of internet-based technologies and processes that are now enabling new ways for internationalization. According to these authors, "internetization" is about encompassing internationalization with richer values and at a faster pace, by relying in internet-assisted technologies and processes. In this sense, modern competitiveness within international markets is becoming more efficient and possible all around the world.

Internet also gives smaller firms, traditionally relatively resource-constrained, tools for their international activities (Ball *et al.*, 2008; Etemad *et al.*, 2010).

For Ball *et al.* (2008) there are reasons to believe that these conditions increase the potential to develop new foreign entry modes, based on lower involvement and less resource intensive processes. Furthermore, Internet can fulfill some main functions that support international marketing and the efforts on export development, like informational, transactional and communicational functions (Shneor and Flåten, 2008). In this sense, it enables less complex processes.

Furthermore, customers also benefit from the use of new technologies, especially the Internet. Unlike traditional businesses, online services are available anytime, anywhere, not constrained by distance or opening hours. They deliver convenience what gives users more control over their choices about buying decisions – acquisition channel, mode of delivery, etc. (Rowley, 2006).

According to Shneor and Flåten (2008), online services' firms will follow one of the four core strategic modes presented next:

1) **Web-presence** – its main goal is to promote the service, giving information about the company and its offerings.

2) **Alliances with online agents and distributors** – seen as commercial arrangements with online intermediaries.

3) **Global shop** – in this case, the website facilitates transactions and it is available for a global group of clients, without differentiation.

4) **Market-specific shop** – it is a transaction facilitating website, that serves a specific group of clients, and for this reason needs to take into consideration specific issues, like cultural, linguistic and environmental adaptations.

3.3. Factors influencing the export of e-services

The diffusion of e-services in international landscape depends on a diverse set of factors. For a better and comprehensive understanding of their growth and dynamics it is essential to know that structural factors. According to Javalgi *et al.* (2004) e-services diffusion processes depend on:

A. Technical infrastructures

Taking into account that e-services are and rely on innovative technologies, their existence depends on the effective readiness of their potential users.

In this sense, both home and host countries need high performance hardware, software and communications so the e-service delivery is successfully completed.

B. Governmental/regulatory infrastructure

There is still a concern about conducting business on virtual platforms, because of the perceived risks on lack of privacy, security and liability. Therefore, e-services exportation depends on the extent to which governments impose regulations to protect, support and educate their citizens in the use of the Internet and other electronic means of communication.

C. Economic/non-economic factors

The implementation of strategies based on the development of an electronic presence is seen as a way for cost savings and increasing efficiency.

D. Social/cultural factors

Acceptance of e-services implementation and development within a country largely depends on a country's cultural elements such as values, education, and religion that have powerful

influences on perceptions and attitudes towards the adoption of the Internet and new information and communication technologies.

Nevertheless, building an online presence is the result of a company's strategic vision and ambition. Edvardsson *et al.* (1993) state that the prerequisites for a company development and, consequently, for a successful internationalization process are:

- Technological competence;
- Financial resources;
- Internal and external networks and relationships;
- Image and expectations.

3.4. The internationalization speed of e-services related companies

The increasing growth on service sector and the constant evolution of business models demand questioning about existent paradigms and call for new directions (Grove *et al.*, 2003).

Earlier research on services internationalization is focused on the conditions that companies are required to fulfill to enter foreign markets or on the choice of foreign entry mode (Winsted and Patterson, 1998; Stare, 2002), and most of them try to establish a parallelism with the traditional view of internationalization processes and models within manufacturing industries. Actually, there are many studies that compare service businesses with manufacturing businesses and, in another level, try to accommodate the practices of the latter to services or, on the other hand, reveal what differences exist between them (Erramilli, 1990; Li and Guisinger, 1992; Kotabe *et al.*, 1998; White *et al.*, 1998; Cicic *et al.*, 2002; Ekeledo and Sivakumar, 2004; La *et al.*, 2005; Javalgi and Martin, 2007). Following this point of view, e-services are compared to traditional services, what can be problematic, since traditional services characteristics can be arguably

different from those of e-services (Järvinen and Lehtinen, 2004; Javalgi *et al.*, 2004). It is important to note that there are differences between those groups with respect to organizational and environmental factors, as well as idiosyncratic internal and external parameters (Voss, 2003; Rahman, 2004; Luo *et al.*, 2005; Rowley, 2006; Shneor and Flåten, 2008).

Nevertheless, considering these aspects, it reveals even more challenging to study e-services and to define successful competitive business strategies to operate on international markets. More than ever, competitive pressures in domestic markets and the dynamics of globalized economy encourage many firms to seek new opportunities, including service firms (Patterson, 2004), in a global marketplace where national borders are increasingly eliminated.

Since internationalization of e-services is through the use of electronic means of communication and information-based technologies, it is likely that the speed of entry in an external market is rapid (Luo *et al.*, 2005), compared to that of traditional businesses. Wymbs (2000) refers that one of the most significant effect of the Internet is the way that it enables interaction cost reduction. Here interaction is seen as actions like searching, coordinating and monitoring, which take people and companies' time but are relevant in the exchanging process of goods and services.

According to Luo *et al.* (2005), there are several reasons to justify the faster pace of e-services related companies' internationalization:

- **Flexibility and coordination**

  E-commerce systems are developed in ways that permit multidirectional flows of products and information, without the limitation of a physical place. In addition, they have lower costs in terms of coordination and communication between home and host country. These conditions affect the time to make decisions.

  This flexibility is guaranteed by the systematically reducing on transaction costs enabled by the Internet, which allows companies to simplify their business models and functions (Wymbs, 2000).

- **Synchronization capacity and responsiveness**

In e-services related companies information is exchanged and managed in real-time, which requires a system that is more synchronized than that of traditional companies. Moreover, some businesses do not depend on intermediaries and can rely less on host country local resources. As a result, they have a high level of responsiveness, which enables them to internationalize at a faster pace.

In this sense, also Wymbs (2000) refers that the Internet gives the opportunity to generate new and better ideas faster, while increasing the velocity of the dynamic change within the industry.

- **Physical and cultural constraints**

E-service related companies do not need to follow the same approach of traditional companies on new markets in order to reduce physical or cultural distances.

4. SERVICES CLASSIFICATION

Traditionally, in the literature, the debate is about the differences between goods and services and if their internationalization processes are different from each other or not, and in what way (Grönross, 1999).

Nevertheless, not only are services different from manufacturing goods, but also among services is possible to say that not all services are alike. For instance, a company can provide a variety of services that fulfill different roles to its main business, so we can distinguish between core services and supplementary services (Lovelock and Yip, 1996).

Following the advancements in society and technology, there are more ways to internationalize service businesses. Earlier research was found that recognized the existence of significant differences within the service sector (Lovelock, 1983; Erramilli, 1990; Patterson and Cicic, 1995; Lovelock and Yip, 1996; Clark and Rajaratnam, 1999; Rahman, 2004; Ting-Peng Liang *et al.*, 2004; La *et al.*, 2005; Javalgi *et al.*, 2009), derived from the diverse causes that help a company to choose exportation as a business strategy, and foreign entry modes. Furthermore, these distinctive characteristics affect globalization potential in different ways. To better understand each type of service and to define relevant strategies to market them successfully across national boundaries, there is a need to study those differences. Hence, a comprehensive understanding on the subject is essential for countries' competitiveness and for the development of effective global strategies, according to each service type characteristics.

In the following sub-sections a review of literature is made on the subject of services' classification. The authors selected have in common the focus of their analysis along the years of academic work, as their research is based on the globalization of services and on the classification of services according to specific criteria that allows them to better study this phenomena.

4.1. Erramilli's "soft" and "hard" services

In 1990, taking into consideration the choice of foreign entry modes, Erramilli presented a classification of services that distinguished between "hard" and "soft" services. The first type can be represented by those services whose production and consumption can be separated. Furthermore, there will be no need of local presence of the firm. The same is to say that this type of services is not affected by the inseparability characteristic of services. On the other hand, "soft" services are affected by this aspect, since service's production and consumption occur simultaneously. For this reason, it is required a local presence (Erramilli, 1990).

Further research revealed that, when choosing a foreign entry mode, "hard" services can be compared to manufactured goods, while "soft" services are seen as traditional services, as they are more difficult to export to other countries, especially because of its inseparability aspect that eliminates the viability of decoupling production and consumption processes (Ekeledo and Sivakumar, 1998; Blomstermo *et al.*, 2006). For example, hotels or management consultancies are contact-based services that require a local proximity from service providers and its buyers.

Erramilli (1990) distinguishes services based on their inseparability characteristic. Following his conclusions, and considering the object of this investigation, e-services can be mainly classified as "hard" services, since the majority does not require a physical contact to be completely provided.

4.2. Processes' tangibility versus clients' presence requirements

Lovelock and Yip (1996) make a distinction between three types of services, depending on two factors: (i) the nature of their process (tangible or intangible), and (ii) at what extent their clients need to be present during the production process (see Picture 1):

1) People-processing services

During the production process, customers need to be present. So, either they move to the store or shop – "the service factory" –, or the service provider travels to the customer (Lovelock and Yip, 1996). This means that production and consumption of the service cannot be separated.

This type of services involves physical interaction with customers and requires that either the clients or the service providers move to some place where the transaction can be completed. For so, there is a need for physical presence (Ojasalo, 2010).

Examples of these services are passenger transportation, health care, food service.

2) Possession-processing services

There is an intention to add value to physical objects that belong to the customer through tangible actions on those objects. Regarding this aspect, the object needs to make part on the production process, but the customer does not. There is a need for physical location, but advancements in technology permit some actions to be processed at distance, especially diagnostic procedures (Lovelock and Yip, 1996).

The delivery of these services happens at physical objects that belong to the client, what can represent a geographical limitation and local presence becomes a requirement. Nowadays, however, technology advancements allow that some processes can be administrated at a long distance, through electronic means (Ojasalo, 2010).

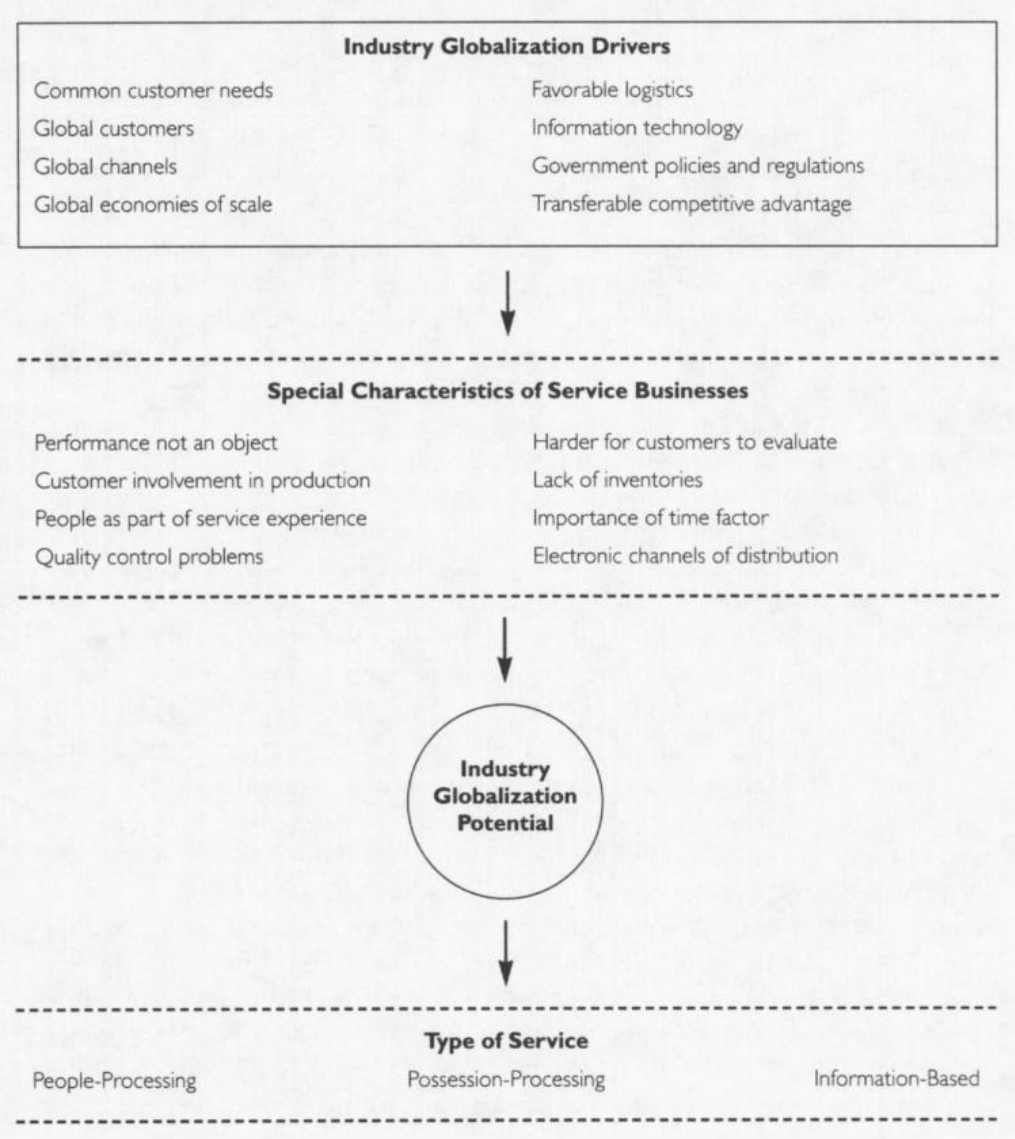
Some examples of this type of services are freight transport, laundry, car repair, equipment installation and maintenance.

3) Information-based services

The interaction with the customer is very limited while producing the service, so these services have a very low contact nature (Lovelock and Yip, 1996).

These services depend on data transmission and manipulation with the objective of creating value. Their targets are intangible assets. For this reason, local presence is not necessary and can be limited to a terminal (Ojasalo, 2010).

The examples include education, accounting, banking, consulting, legal services and news.



Picture 1: Processes' tangibility versus clients' presence requirements
Source: adapted from Lovelock and Yip, 1996

For Lovelock and Yip (1996), processes' tangibility and clients' presence during service delivery are the two main factors that contribute to services' differentiation. According to their findings, e-services can be mainly classified as possession-processing or information-based services. In fact, most of them require little contact with their providers and are intangible in their nature.

4.3. An international services' classification

Clark and Rajaratnam (1999) developed a classification scheme of four types of international services (see Picture 2). For them, the engagement of foreign culture is significantly determined by the mode that service crosses its national boundary, as services are people-based, so culture-sensitivity is more difficult to manage than it is with products. They also proposed a definition for international services that helps to better understand each one of the types they identify:

> "international services are deeds, performances, efforts, conducted across national boundaries in critical contact with foreign cultures".

Considering this definition, Clark and Rajaratnam identified the following types:

1) **International contact-based services**

   These are those services that to be completely fulfilled require that someone, service producers or consumers, cross national boundaries to conduct transactions in direct contact with the other interested parts. In other words, it is possible to say that these services present services' typical characteristics or they can be considered as the "purest" of the services that are internationally transacted. In fact, they are intangible in their nature; are heterogeneous because they can be customized to clients'

needs and preferences; are perishable as they cannot be stored; and they are inseparable, which means that they are consumed while they are produced.

Compared to the other three types of services, the main strength of international contact-based services is the possibility to interact directly with the customer and to make all necessary adjustments *in loco*. On the other hand, as they require the mobilization of human resources across national boundaries, they face more problems than objects, especially for economic and governmental reasons (Clark and Rajaratnam, 1999; Clark *et al.*, 1996).

2) International vehicle-based services

These services are delivered via facilitating "vehicles", like radio, television and satellite transmissions, or wires; same is to say through location joining properties. In this way, firms can create the effects of being present without a local presence on foreign soil.

The authors defend that this sector of international services trade is the most important, and underline its fast growing pace.

To evaluate the delivery of this type of services, the following parameters should be considered:

- "vehicle" carrying capacity, like cable volume or satellite channel.
- access limitations, for instance, contracts or licenses.
- specialized equipment need to access the "vehicle", like telephones, computers, servers.
- development pattern of the "vehicle".

Comparatively with the other services' classification, and considering the advancements in technology regarding the capacity of "vehicles" to transmit data and information, these services can rely on a theoretical wide ease of access worldwide.

Nevertheless, they should take into account that not all nations have equal conditions in terms of technology development. One of their major weaknesses is the limitation to information/ communication-based services (Clark and Rajaratnam, 1999; Clark *et al.*, 1996).

3) International asset-based services

For Clark and Rajaratnam (1999), these services are delivered on host countries through physically assets that are owned or just controlled from the home country, established as operating platforms tied to the firm's commercial ideas. In addition, these services are related to foreign direct investment, as it is a way to move national capabilities to a foreign environment.

Their strength is their permanent presence at the host country. However, they are more susceptible to depend on host country's whim (Clark and Rajaratnam, 1999; Clark *et al.*, 1996).

4) International object-based services

This type of services can be integrated in physical objects that will cross national boundaries.

Normally, services, like objects' modifications and/or repairs, can be included in this group but also the so called "embodied" services. The latter include contact-based services that can be fixed in an object, enabled by the advancements in technology.

Since these services can be compared to goods, there is the possibility to take advantage of goods' traditional exportation conditions, for instance, there is no need to move people, nor electromagnetic signs and not even funds to other countries. Nonetheless, they are easily copied, as a consequence of nations' different perspectives about intellectual property ownership (Clark and Rajaratnam, 1999; Clark *et al.*, 1996).

Issue	Type of international service			
	Contact-based	Vehicle-based	Asset-based	Object-based
What crosses the national boundary?	People	Electro-magnetic signals	Capital, organizing principles	Objects
Critical boundary crossing factors	Immigration/visa policy	Transborder data-flow policies	Foreign investment policy	Trade policy
Critical barriers to trade	Mobility	Transmission	Investment	Trade
Critical transaction variables	Culture communication	Transmitter/receiver availability	Equal treatment policies	Country-of-origin effects
Comparative strength	On-the-spot interaction and adjustment possible	Theoretical ease of access worldwide	Permanent presence	Indistinguishable from goods
Comparative weakness	People more difficult to move across boundaries for economic reasons than objects, etc.	Limited to information/ communication-based services	Permanent presence puts service providers at whim of host government	Easily copied
Examples	Project management, temporary labor	Insurance brokering, computer services	Retail banking, hotels	Video cassettes, computer software, air transportation

Picture 2: An international services' classification
Source: Clark and Rajaratnam, 1999

Clark and Rajaratnam (1999) classify services based on what crosses national boundaries in order to deliver the service, as it contributes to their heterogeneity. In fact, and according to their findings, in a transaction, people, communications, commercial service ideas or physical objects can move to another country and how it is done will determine its entry success.

Following their conclusions, e-services can be mainly classified as international vehicle-based services.

4.4. Orientation and level of customization

Rahman (2004) worked in a model which objective was to address two main issues: (i) at whom (or what) is the act directed and (ii) the extent to which the act can be customized. The result was a matrix with four quadrants, where the first issue (to whom/what) was evaluated between people and things and the latter between low and high, as you can see in Picture 3. According to this classification, we have the following four types of services:

1) **Service with high possibility of customization, delivered to people.**

   These are those services that can be highly customized and may, or may not, require direct contact of the service provider with the recipient. Rahman says these are services that demand confidence, since before their consumption is not possible to experiment them, but only describe them.

   According to Rahman's work, are examples of this type of services: medical advices and healthcare information; specialized information services, defined after an individual's interests and preferences; lawyer's advices – like trouble-shooting articles or forums where anyone can address his/her questions and doubts; online tutoring; broadcasting services, as they can be customizable given the individual's preferences; entertainment (games, chat,

music, movies, dating); financial services, not only giving access to clients' accounts and bank information, but also offering more variety of payment modes or the possibility of completing monetary transactions over the Internet; B2B and B2C consultancy, that offer customized solutions for small businesses or entrepreneurs; cards, flowers and gift items, that can be personalized and clients are offered a wide variety of options to choose from (Rahman, 2004).

2) **People are the recipient of service, with a low extent of customization.**

Since these services cannot be highly customized, they are the most economical to deliver. According to Rahman, the standard service will satisfy the majority of the customers. However, the fact that it is available online can offer some kind of customization and the service providers can rely on that possibility to offer other options taking into consideration clients' requests. Generally, it is not possible to complete service delivery process over the Internet.

Rahman considers as examples for this type of services the following: education – standard lessons and tutorials available online, anytime; public transport – general information on ticket pricing, online booking, timetables, availability; travel – their main advantages are the convenience and the best travel packages; movies – it is given the chance to book tickets in advanced and avoid queues at movie theaters; restaurants – ordering food or booking a table; branded clothing – it is offered the opportunity to choose from a catalogue, defining size and color wanted and order it online; museums and libraries – facilitating the access to their assets and works of art by making available pictures, papers and virtual tours.

3) **Things are the recipients of service with a high degree of customization.**

These services need the existence of a tangible possession of the customer so they can be completely delivered. For this

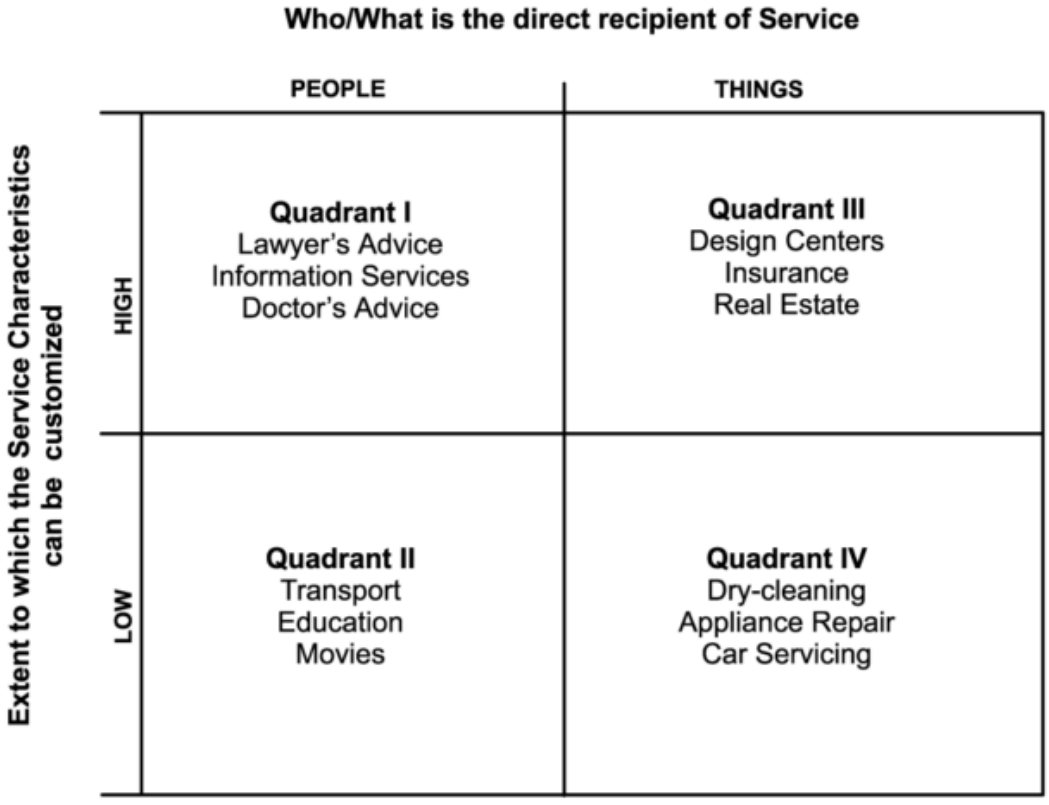
reason, they cannot be delivered over the Internet, but can be promoted or ordered.

Regarding these conditions, we can take as examples: insurance services; architectural design; real estate; design centers.

4) **Things are the recipients of service with a low degree of customization**.

Like services referred in the second quadrant, these services are offered as standard, and as the recipients are tangible assets they cannot be delivered online. Nonetheless, since the Internet is an interactive medium of communication, customers can rely on it to choose and order this kind of services comfortably from their home (Rahman, 2004).

Falling in this quadrant are: appliance repairs services; dry-cleaning; car servicing; accounting services.



Picture 3: Orientation and level of customization
Source: Rahman, 2004

Rahman's (2004) work is focused on e-commerce solutions. Customization and the recipient of the service are the main factors that allow the distinction between services that are available online. According to Rahman's conclusions, e-services can be classified as those services that are delivered to people, regardless their customization possibilities, since their delivery process is, partially or exclusively, online.

4.5. Online presence models

Ting-Peng Liang *et al.* (2004) in their investigation on why some industries are more beneficiated than others by electronic commerce and its impact in firms' performance provided an overview on the types of online business models, as there are many ways that a company can adopt in an online presence.

They have considered two main aspects: (i) the existence or non-existence of a physical store and (ii) the online presence's function (see Picture 4). The types are as follows:

1) The first type is characterized by the fact that there is no physical store and the only purpose of the online presence is to provide information. For the authors, this type did not have any interest to their work, as any transaction did occur. So it is omitted.

2) Information provision

Some brick-and-click firms use the Internet to show their catalogues and to provide other type of information to their clients. However, any type of online services is provided. Whereas the company has an online presence, its main business is done at local shops or stores. The Internet is considered just a means to show what is available and where it is available, and can present

customers' helpdesks telephone numbers or e-mail (not considered as on real time contacts).

This can be considered a reaction of the company to the actual need of being online (Dionísio *et al.*, 2009).

3) Pure web model

There is no local presence and products or services are offered on virtual stores (Ting-Peng Liang *et al.*, 2004).

These are the characteristics of dotcom companies. The website is not only a showroom of the company's business, but also allows clients to buy and/ or consume the product/service provided. In addition, while online, the client can choose what he/she is going to buy and has several modes of payment available, both online and offline (Dionísio *et al.*, 2009).

4) Hybrid model

The company offers its services or products both online and in a physical store. In the Web, the customers are offered not only information about services or products but also order processing services or payment facility services, among other functions (Ting-Peng Liang *et al.*, 2004).

		Online function	
		Information	**Transaction**
Physical store	**No**	-----	Pure online transaction
	Yes	Information provision	Hybrid model

Picture 4: E-business models
Source: Ting Peng Liang *et al.*, 2004

Ting-Peng Liang *et al.* (2004) classify firms' online presence based on the relation between the existence of a physical store and the online function of that same firms' presence in the Web. Both pure web companies and companies that already have a physical store can be present online, but the latter may only have a website to provide information to their customers. That is, they may not deliver any service that involves a monetary transaction.

4.6. Tangibility degree and face-to-face contact

Following the work of Patterson and Cicic (1995), La *et al.* (2005) reviewed their service classification scheme incorporating a series of propositions about the main drivers to a well succeed performance in exportation.

For now, we will restrict our analysis to the organizational profile of international service firms as seen by La *et al.*, based in the research of Patterson and Cicic (1995) and Vandermerwe and Chadwick (1989) (*apud* La *et al.*, 2005, pg. 381).

The following framework is based on two key aspects: (i) tangibility degree and (ii) required face-to-face contact (see Picture 5). The first two types of services can be called as "pure services", in the sense they have a very low degree of tangibility and require that production and consumption processes happen simultaneously. The other two can be generally classified as "services bundled with goods" because they have a high degree of tangibility and production and consumption may happen on different moments of time.

1) Location-free professional services

According to Patterson and Cicic (1995, *apud* La *et al.*, 2005, pg. 381), these services typically follow their major clients into external markets what gives them export opportunities.

They are location-free since it is not required a local, permanent presence on foreign ground, but involves the travelling of key personnel across national borders. Generally, they need low to medium contact with clients, are low customized and human resources should be abroad for a relatively short period of time.

For La *et al.* (2005), the following services can be classified as location-free professional services: executive recruitment, market research, environmental science consulting, transportation, finance and insurance, information technology, product design service.

2) Location-bound customized projects

This type of services generally requires longer term dedication projects and its main characteristics are high customization to clients' needs and requests, as well as significant interaction between customer and service provider until the end of the project. In addition, firms in this cell normally establish a local presence in the foreign market, while following their clients and the vision of key executives to externally expand their businesses are major drivers for internationalization (La *et al.*, 2005).

Project management, engineering consulting management consulting, human resource development consulting, larger market research firms, or legal services are examples of this type of services.

3) Standardized service packages

These services are highly standardized services and some of them can be embedded in some kind of tangible goods (like a compact disk or USB pen) and can be compared to goods. Their exportation tends to happen as a consequence of CEO's vision about internationalization, growth and potential profitability opportunities, and the saturation of the local market.

Taking into account their special characteristics, specially the fact that they can be treated as goods, these services do not

need a high face-to-face contact with their clients and can be exported in a more traditional manner (La *et al.*, 2005).

Examples of this type of services are software development firms, installation and/or testing of new hardware and/or equipment, distance education courses, compact disks.

4) Value-added customized services

Firms in this cell can be specialized in, for instance, on-site training, serviced offices, facilities management, accommodation services, catering, or software training and support. They require a high face-to-face contact with the client to be successful delivered, and have a high level of customization (La *et al.*, 2005).

Degree of tangibility	Low	*Degree of face-to-face contact* High
Low	**Cell 1** *Location-Free Professional Services* Typical firms: Executive recruitment, Market research, Environmental science consulting, Transportation, Finance and Insurance, Information technology, Product design service.	**Cell 2** *Location-Bound Customized Projects* Typical firms: Project management, Engineering consulting, Management consulting, Human Resource Development consulting, Larger market research firms, Legal services.
Pure Services		
Services Bundled with Goods	**Cell 3** *Standardized Service Packages* Typical firms: Software development, Installation/testing of new hardware/equipment, Distance education courses, Compact disks.	**Cell 4** *Valued-Added Customized Services* Typical Firms: On-site training, Serviced offices, Facilities management, Accommodation services, Catering, Software training and support.
High		

Picture 5: Tangibility degree and face-to-face contact
Source: La *et al.*, 2005

La *et al.* (2005) classify services according to their tangibility degree and the need for face-to-face contact with the service provider. Considering their findings, location-free professional services and standardized service packages are those types of services whose nature better describe services that can be easily delivered online.

4.7. "Soft" services revisited

Ball *et al.* (2008) adopted Erramilli's framework (1990) and made a finer distinction among soft services in an internationalization context:

1) Location-intensive soft services

These involve intangible actions on tangible products. Comparatively, Lovelock and Yip (1996) defined this kind of services as "possession-processed services".

In order to be delivered, there is a need for a local presence at the host country.

2) Information-intensive soft services

These involve intangible actions directly for customers, requiring the exchange of complex information and the ability to provide personalized solutions to customers. The authors argue that companies that provide this kind of services have more flexibility when making internationalization decisions.

Ball *et al.* (2008) do not agree with the suggestion that "soft" services are limited in their nature to internationalization and challenge the basic assumption that soft service firms need a physical presence in the host country if they wish to internationalize. So, they classify "soft services" taking into consideration location- and information-intensiveness. The need for a

local presence in the first type of services is a limitation to their internationalization, but those companies that offer information-based services have more opportunities to internationalize, thanks to recent advancements in technology. Some types of e-services can be categorized as information-intensive soft services.

4.8. Face-to-face contact and customization degree

Javalgi *et al.* (2009) also adapted Patterson and Cicic's (1995) scheme for services classification but their paper focuses on knowledge-based services, namely on education. So they modified that framework, maintaining the factor (i) face-to-face contact and including (ii) the degree of service customization (see Picture 6). The result is four types of knowledge-base services, as follows:

1) **Technology-enabled standardized services**

   These are services that require low levels of face-to-face interaction with customers and low degree of customization. So they are standardized services, whose basic attributes will be sufficient to satisfy customers' majority.

   They are services like software development, medical transcription, text editing, graphic design, survey data analysis, or legal document preparation.

2) **People-based standardized services**

   Taking into consideration that this type is people-based, there is a need for a high face-to-face interaction between customer and the service provider. Nevertheless, they do not require high levels of customization.

   They are, for example: software training and support, repair and maintenance of equipment/machinery.

3) Customized, "high-tech" services

These services require low level of face-to-face contact but it is possible to customize them according the customers' requests.

For example: engineering and technical support, tax preparation, technical consultation, accounting and legal services, financial and investment banking, marketing research.

4) Customized, "high-touch" services

The last type considered is characterized by high levels of face-to-face contact and high levels of customization.

For example: architectural or engineering consulting, management consulting, legal services, construction and project management, events planning.

Service Customization	Face-to-Face Interaction: Low	Face-to-Face Interaction: High
Low	**1. Technology-Enabled Standardized Services** **Examples:** Software development; medical transcription; text editing; graphic design; survey data analysis; legal document preparation; distance education courses and programs delivered online.	**2. People-Based Standardized Services** **Examples:** Software training and support; repair and maintenance of equipment/machinery; regular MBA program delivered on-site or customer/students attends main campus.
High	**3. Customized, "High-tech" Services** **Examples:** Engineering and technical support; tax preparation; technical/medical consultation; accounting and legal services; financial and investment banking; marketing research; customized distance education programs; online or telecommunications-based tutoring/coaching.	**4. Customized, "High-Touch" Services** **Examples:** Architectural/engineering consulting; management consulting; legal services; construction and project management; events planning; MBA or HR program, delivered on-site, and customized to host country's cultural environment and economic conditions.

Picture 6: Face-to-face contact and customization degree
Source: Javalgi *et al.*, 2009

Javalgi *et al.* (2009) classify services according to the need for personal contact and their possibilities for customization. Higher levels of

customization and face-to-face contact reveal that services with these characteristics are harder to provide in a long distant context.

4.9. Conclusions on literature review

As we can see from the literature review above, services can and should be categorized according to specific criteria. They can be distinguished based on:

- their need for physical location so they can be produced and delivered;
- customization possibilities;
- need for customer interaction;
- production and consumption separation possibility;
- tangible or intangible nature of their processes;
- or the business model they follow.

Knowing these characteristics allows companies and other institutions to better understand their businesses and to compare them with their competitors or partners. Furthermore, by understanding their market and the challenges that their services may face, companies can make better decisions and, by systematically analyze the main drivers affecting their industries, can develop effective strategies to go global, through the internationalization of their services.

However, and “despite the growing importance of trade and investment in services, it is acknowledged that the area of internationalization of services is relatively new and in terms of building and testing theories” (Javalgi and Martin, 2007).

Moreover, little is known and investigated about e-services types and there is a research gap about services that only exist due to the advancements on technology, and for that reason, are exclusively created, developed and delivered through virtual platforms. This lack of investigation

is particularly relevant especially taking into consideration the fact that service firms "are internationalizing faster than before, often relying on relevant studies conducted within the domain of the manufacturing industry" and even though "a number of researchers have pointed out the paucity of research progress in general and a lack of theoretical and empirical rigor of exciting studies in marketing services internationally" (Javalgi and Martin, 2007), namely Clark *et al.* (1996), Knight (1999) or Javalgi and White (2002).

Knight (1999) suggests further research on services that can be offered taking advantage of the use of telecommunications and the Internet, like distance learning or computer software, by exploring research questions like:

> *"What opportunities and challenges does the Internet hold for the marketing of services worldwide? What types of offerings are most amenable to marketing and distribution via the Internet?"*

Actually, even though Internet can be seen as a "liberator" for small businesses and is an important new channel for international market development, its impact on business expansion processes is subject of few studies (Léger and Cassivi, 2003; Rosson, 2004; Shneor and Flåten, 2008; Etemad, 2010). In fact, remembering Rosson (2004),

> *"Although the Internet has become accepted as a tool of business, relatively few companies have thought carefully about how it might be used to capture export business."*

Also Etemad *et al.* (2010) states that

> *"While e-commerce is one of the most discussed topics in contemporary international business, relatively little is actually known about the adoption and use of the internet by internationalizing SMEs, and although theorizing abounds, little empirical evidence is to be found. There is marked variation between firms as to the scope and extent to which they adopt ICT technologies, and it is necessary to focus on firms other than those who are born to the Web."*

5. METHODOLOGY

In this section, it will be presented a new way to classify services, focusing the attention on services that are traded online. There is no need to exclude those services that can be provided in a physical store, but the main focus of this framework is to classify services whose business is done online, exclusively or not.

Following that purpose, an analysis was made to the businesses that can be found on the Internet and that can be classified as international businesses.

Remembering, the research question was:

What is the impact of e-services on firm internationalization?

Early research that resulted in the literature review of the last chapter allowed to conclude that there is still a long path to understand how online services should be conceptualized as a successful means to internationalization. In fact, there are few studies about the possibilities to capitalize the opportunities given by online services. Academic research is focused on the services' entry modes in foreign markets or in their classification, but little is known about the types of services that exist online, their main characteristics, and how they can help a company to expand its area of business over national boundaries.

Concerning these aspects, the focus of the research was on businesses that can be developed in Portugal that have potential to expand to foreign countries, since it is expected that this classification will help Portuguese companies to explore their businesses and to take advantage of nowadays opportunities.

5.1. Considerations and specifications on research method and criteria

The main goal of this work is to identify what type of online business has more chances to be successfully exported. In that sense it was developed a framework based on new criteria to classify e-services that intends to address two main issues:

1) **Pre-existence of the service before the Internet.**
2) **Existence of a physical structure to support service delivery.**

Considering the conclusions on the review of literature, here is suggested that e-services should be also classified according to their previous existence in traditional formats. This is a result of the fact that the use of the Internet and other virtual platforms, as well as their continuous sophistication and the development of new features and applications have been generating new possibilities for doing business. Moreover, are also creating new professions and demanding the development of new skills. Consequently, there are services that only exist because the Internet exists.

For the development of this framework, the research was based on the premises given next:

a) It is mandatory that at least one payment is made so the service is provided. For example, a periodic subscription.

b) The businesses considered are not restricted to a special group in terms of business area. However, the focus is on business-to-consumer.

c) Transactions can be realized from one country to another, so it means that the payment is made from a bank account that does not belong to the service provider's country.

d) Physical element existence conditions:

i. The service does not have a physical component if every single action occurs on a virtual environment.
   To illustrate this situation, it can be consider the monthly subscription paid to access the PDF version of a newspaper, or an URL link to access via browser.
ii. The service has a physical element if face-to-face contact is required or if the customer or the service provider needs to move to somewhere else than home so the service process is completed.
   For example, the process of buying clothes online.

e) From this analysis were excluded online supermarkets as it is not possible to buy from a foreign country, not only in Portugal, but also on other countries.

f) Firms' size does not matter.

6. RESULTS

6.1. E-services classification framework

Addressing the issues presented and considering the premises defined for the scope of this work, the result is a four quadrant framework that can be seen in the matrix below:

	Do not need physical component	**Need physical component**
Pre-Internet	Type I	Type II
Post-Internet	Type III	Type IV

6.2. Framework analysis – Remarks on e-services types

In this section it will be presented the main conclusions obtained by the analysis of the types of e-services that are delivered in the Internet.

For each one of the types identified above, there will be made a brief explanation and there will be given some examples that best illustrate each type.

Type I

Pre-Internet delivered services with no need for physical component

This type of services can be found in major number all over the Internet. Traditionally offered offline, in stores and local shops, on paper or other communication channels, these services have taken advantage from technology advancements and companies started to provide them online. In fact, in this cell of the framework are those services that nowadays are mainly available online and other communication channel are becoming more and more residual or have been discontinued.

Some of the services that can be categorized in this cell may benefit from the elimination of front office processes that traditionally impose direct contact between service provider and consumer. The best examples are banking or ticket selling services that can deliver services by virtual means that some years ago were only possible on a face-to-face interaction.

Next, it will be presented some examples for this type of e-services, with a brief description of each:

1) **Newspapers and magazines**

   Most of the national newspapers are available online, and their readers can access them on their PC or other electronic means (like tablets or mobile phones) by paying a monthly subscription[1]. Nowadays a need still subsist for coexistence of both online and paper versions of newspapers and magazines, as new technologies do not affect readers' population in the same way. However, the evolution of society is showing that the trend is to eliminate the paper versions of these products[2].

[1] In Portugal, examples are **Público** or **Jornal de Notícias**, in newspapers businesses, or **Caras** in magazines. They follow the examples of other companies, like **The New York Times** (USA), **The Guardian** (UK) or **Le Fígaro** (France).
[2] The latest example is **Newsweek** magazine, a re-known north-American magazine that is considering moving on to digital, to face financial difficulties (The Guardian, 2012).

2) E-learning and school support for students

Firstly delivered as services embedded products (especially on CD-ROM), there are some educational services that are offered to students, teachers and schools through the Internet and are available in other countries too. The customers only need to pay an annually subscription that will give them access to the resources available for the disciplines bought for a limited period of time (normally, a year).[3]

3) E-banking

Due to the process nature of banking services, it is possible to move some of the work to the client. In that sense, and with the help of the improvements made to communication means and information technology, is now possible to have online banks that do not have any physical agency.[4]

4) Ticket selling

From trains to airplanes, it is possible to buy an online ticket without face-to-face contact with the service provider. The client only interacts with its computer or other communication means.[5]

5) E-books

More and more publishing companies are giving the chance to their clients to read a book without acquiring a paper version. These new reading experience only requires the use of specialized equipment, like e-readers or tablets with e-reading tools.[6]

[3] In Portugal there are some examples, like **Escola Virtual** (from Porto Editora) or **Nota 20** (from LeYa). There are also examples in foreign countries, and Brazil is one of them with its **Portal Educação**.
[4] In Portugal, there are **Activo Bank 7** and **Best**, from major bank groups, like Millennium BCP and BES, respectively. In USA, **ING Direct** is one of the examples.
[5] In Portugal, transportation companies like **CP** (trains) or **TAP** (airplanes) allows the customer to buy his/her trip through the Internet. All over Europe is possible to buy tickets to travel by **Easyjet** or **Ryanair**, two major companies in the UK.
[6] In Portugal, **WOOK** recently designed a new platform that allows the user to read e-books, but it has been selling other formats of books that can be read over digital platforms.

6) Music and movies

Traditionally sold in some kind of object, for example a CD or a video tape, it is now possible to listen to complete music albums or to watch a full movie without bringing home an object or download a file. All of that is possible to do through a browser.

The fast growing presence of this type of services in international services trade sector is related to the evolution of technology and to the changes on commercial paradigms. According to Clark and Rajaratnam (1999), the main drivers for the internationalization of these services are:

a) The increase in transmission's speed and volume, that results in more efficiency.
b) The expansion of accessibility conditions, not only geographically, but also in terms of vehicle's capacity to support data transmission, which has major impact on connectivity conditions all over the world.
c) Changes on signal's generation and transmission.

The major challenge that a company face when internationalizing this type of services is dealing with policies and protocols created by host countries' governments to protect national rights and even their sovereignty. Indeed, host countries can protect themselves with barriers such as licenses' policies (equipment, data transmission and reception, etc.), signal interception and the definition of special taxes over transactions.

The major advantages are the possibility to neglect mobility barriers, since there is no need for both producer and consumer to move from one place to another so the service can be completed (Clark and Rajaratnam, 1999), and, as a consequence of the fact that there is not the need for customization, they can be seen as more economical than other types of service delivery (Rahman, 2004). In addition, there are less maintenance costs and personnel costs and, since there is no need to store the service or products associated, the stock costs are reduced and even eliminated, compared to traditional ways to deliver the same type of services. For

instance, newspapers do not need to be printed and tickets are printed by the customer at home or workplace. Furthermore, the delivery process can be started and completely fulfilled within the Internet, without face-to-face contact or the need to move to a special location.

Type II

Pre-Internet delivered services with a physical component

Services in this cell are also widely present in the Internet. Like pre-Internet delivered services with no need for physical component, this type of e-services did exist before the appearance of the Internet and the evolution of information- and communication-based technologies, which drivers that allowed some of its processes to move to a Web channel. As seen in an earlier chapter, the presence in the Internet is seen as a new distribution channel for traditional firms that seek to maximize their market opportunities and expand their business to a larger number of clients.

The difference between pre-Internet delivered services with no need for physical component and this type services is the fact that the latter still need to be assisted by a physical component to be completely fulfilled.

Some examples are:

1) **Clothing and fashion accessories**

   Websites are designed to show brand's catalogue, in the sense they serve the information function, exposing new collection and giving detailed information about discounts, special offers and other relevant data about the company. However, they also offer customers the opportunity to choose what they want to buy, customizing their buying by entering special characteristics, like size and color. Along with these features, they are given the chance to buy what they want without leaving the comfort of their

home, as they can order online and even pay without leaving the website.[7]

2) E-banking

Also in this cell, e-banking can be found in the sense that to complete some services, and comparing with pre-Internet delivered e-banking services with no need for physical component, the customer needs to go to a physical bank agency. There are some financial products that the client can choose and customize as he/she wishes, but to complete it effectively he/she needs to physically interact with the service provider. For instance, mortgage loans.[8]

3) Book selling

The online service can be seen as a supplementary service, in the sense that the intention of the customer is to buy a book. Nevertheless, the customer searches and chooses a book online, using the firm's website, and even chooses the mode of payment. In order to complete the service, there is the need to send the book by other means, non-virtual, such as the national mail.[9]

This type of e-services can be categorized as "possession-processing services", a concept introduced by Lovelock and Yip (1996), and in the Quadrant 3 identified by Rahman (2004) – "things are the recipients of service with a high degree of customization" –, already developed in an earlier chapter of this work. In fact, pre-Internet delivered services with a physical component can be seen as the most tangible of the four categories

[7] Portuguese brands have websites that allows their visitors to benefit from these possibilities. **Lanidor** (clothing) and **Prof** (shoes) are two of those companies. Internationally, it is possible to visit and buy at **Mango** and **ZARA**, both from Spain, and **GAP** (USA).

[8] All Portuguese banks are available online: **CGD**, **BES**, **Millennium BCP**, **Crédito Agrícola**, etc. In this sense, all over the world there are examples like these. For instance, **Novagalicia Banco** in Spain.

[9] **WOOK** is a great Portuguese example of such services. Not only does it sell books, but also multimedia products and, more recently, e-books, which can be read in a new e-reading tool developed by the company (as seen earlier). In comparison, **Amazon** is undoubtedly the better example.

analyzed due to the fact that objects or tangible actions are involved in the production process of the service. In this sense, the service that is provided online should be developed in order to add value to the production process and to maximize differentiation that separates the company from its competitors (Lovelock and Yip, 1996).

The main disadvantages of these e-services is the need for a local presence or the need to rely on intermediaries for the fulfillment of the service process, so reducing the chances of these e-services delivery through the Internet, although they can be ordered by that channel (Lovelock and Yip, 1996; Rahman, 2004). Moreover, this need for physical presence provider-client contact can imply concerning with significant cultural differences or even, at least in a first expansion phase, the relocation of some personnel, meaning more investment and risk control (Patterson, 2004).

To expand these e-services to external markets, companies should take into consideration the following aspects, since they can difficult services concretization across larger distances and over borders (Lovelock and Yip, 1996):

- Transportation costs;
- Custom duties;
- Government regulations.

Type III

Post-Internet delivered services with no need for physical component, or "pure web services"

This is one type of services that did not exist before the Internet revolutionized communications and entered in people's daily life. Actually, their specifications need systems' infrastructure that is only possible to achieve with the use of the Internet or other web applications.

They are considered "pure web services" since there is no need to for a physical component (object or local presence) to complete the service

delivery process. They are also categorized as “pure-clicks”, as it was seen in an earlier chapter of this work (see section 2).

1) Music, movies and podcasts download

It is possible to download music or movies from the Internet and listen or watch it without leaving home. Some years ago, everyone that wanted to listen to the latest album of their favorite band or watch a new movie needed to go to the nearest music store or movie theatre.[10] This kind of service implies the download of a file to a personal computer or other proper equipment. This action – the download – is only possible after the advancements on the Internet and bandwidth characteristics.

2) E-mail providers

All over the Internet it can be found a lot of e-mail providers for free and with unlimited capacity. Yet there are also Internet Service Providers (ISP) that also provide e-mail services that demand payment for its use.[11]

3) Search motors

Their first goal was to help their visitors to find what they need by inserting the word or expression in the appropriate field, but then they move forward and started to provide other services like news, weather conditions forecast, and leisure activities, like games.[12]

4) Games download and servers

Nowadays is possible to buy online games without a physical support in order to be installed. New platforms permit to buy online and, in addition, playing the game online in several

[10] **iTunes** is the best example.
[11] For instance, **Yahoo** or **UOL**.
[12] In Portugal, **Sapo** is one of the best examples. In addition to the initial goal, nowadays it provides real time information, news, weather forecast, free games, and is also a real estate search motor, among other new functionalities. International examples are Google and Yahoo.

devices and solely relying on web servers. These platforms also provide the customer with unlimited space to save their games and allow progression comparison with the community and game match making with friends or same level of skill players.[13]

For O'Reilly (2007), these services are considered to be Web 2.0 companies' businesses and have the following characteristics:

- They are not packaged as software, with cost-effective scalability;
- They have control over unique and hard to recreate databases, which is enriched by collective participation;
- Their users can be seen as co-developers of better platforms and continuous improving.

To these post-Internet delivered services with no need for physical component, data management seems to be their main offering in comparison with other e-services types (O'Reilly, 2007) and they have more conditions to benefit from Web 2.0 facilitating process of creating value "by-the people" "for-the people", resulting in the minimization of system inefficiencies, avoiding of structural externalities and shortening time-to-market response (Etemad *et al.*, 2010).

Type IV

Post-Internet delivered services with a physical component

To be categorized in this cell, services must respect two conditions: (i) did not exist before the advent of the Internet and (ii) need a physical element to be completed. They are services that generate payments online but also offline. In this sense they create opportunities to develop a new way of doing business. Instead of offline to online businesses, like pre-Internet delivered

[13] The best examples in this category might be **Valve's Steam** and **EA's Origin**.

services with no need for physical component and pre-Internet delivered services with a physical component, this type of e-services imply an online to offline process.

The kind of e-services that can be found in this cell can be called "aggregators" since their main objective is to aggregate information about, for example, a specific business, like spas or restaurants, or discount opportunities within a certain area, in real-time.[14] Also social networks[15] can be seen as this type of e-services, since some of them offer premium access if a subscription is paid and promote further face-to-face contact and commerce on real world places and stores. This is a result of the fact that online commerce is becoming more social aware.

Their major advantage is the convenience they bring to customers, since they can find in only one place a large amount of information about something they want. For instance, post-Internet delivered services with a physical component may help them in taking shopping decisions and to engage in electronic purchase activities without leaving the comfort of their home.

They can differentiate from their competitors by providing detailed and up-to-date information about their offers and creating relevant content to capture their customers' attention.

[14] Such as **Groupon** or **SpaFinder**.
[15] Such as **Linkedin**.

7. CONCLUSIONS

7.1. Concluding remarks on e-services types

The aim of this research was to identify what kind of e-services has more possibilities to be successfully internationalized, analyzing how they affect firms' exporting decisions.

The literature review on the topic of services classification revealed that there is still a long path for a comprehensive understanding of e-services types and main differences between each of them, since there is little research on defining possible typologies of online delivered services, as seen earlier.

To reduce this gap on e-services literature, and considering the premises defined and the issues addressed in order to build a conceptual framework on e-services classification, this work presents a four typology matrix that classifies e-services according to their previous offline existence (meaning the traditional services that are or were served through non-virtual channels) and the need for a physical component (object, tangible action or local store) in order to be completed.

The analysis made concerning e-services types and their major characteristics enables a discussion about their impact on firms' internationalization decision making.

From the four possible types, it is expected that two of them will be more easily internationalized, namely **pre-Internet delivered services and post-Internet delivered services with no need for physical component**. This conclusion follows studied propositions on the need for face-to-face interaction and customization level that customers require during their buying experience (see Lovelock and Yip, 1996, and Rahman, 2004).

Pre-Internet delivered services and post-Internet delivered services with no need for physical component are e-services that can be standardized, in the sense that the same service design can be delivered to a wide group of clients but yet meeting their needs, which gives them more potential to be delivered over national borders. The same is to say that there is little space for customer involvement.

Through the delivery of standardized services that fulfill the expectations and needs of a large group of customers, these two types of e-services gain a competitive advantage in relation to the other two.

Nevertheless, differences arise among the services that can be categorized in each of these types. For instance, on **pre-Internet delivered services with no need for physical component**, while an e-book is delivered with the same characteristics to all its buyers, an e-banking transaction can be less standardizable. On the other hand, **post-Internet delivered services with no need for physical component** do not require high levels of customization. However, in some of the examples given, the user is usually see as a co-production agent of the service delivery, there is margin to customize the service to their preferences, by developing supplementary services that add value and differentiate them from their competitors.

Furthermore, the degree of customer involvement is particularly relevant on pre-Internet delivered services with a physical component. Once again, **pre-Internet delivered services and post-Internet delivered services with no need for physical component** have some advantages in this matter, since to them it is not raised the question about logistical needs. For **pre-Internet delivered services with a physical component**, the delivery process is not completely fulfilled within the Internet. Whereas it is possible to choose online and pay online, the service experience is only completed when a product is given to the customer or a tangible action is done (like signing a document at a bank agency). Companies that deliver **pre-Internet delivered services with a physical component** need to rely on external intermediaries such as national post delivery services of the host country and/or to invest in a physical presence, at least in the beginning of their internationalization process. Therefore, other questions arise like host

governments' legislation and regulation on the establishment of foreign companies.

Although **post-Internet delivered services with a physical component** deliver standardized information and experiences to their customer, they depend on local market characteristics in order to achieve a larger group of clients in host countries. In fact it is not of great use to offer the possibility to make a reservation at a restaurant by choosing one among a wide list of alternatives if they are not present in that country, for instance. In this sense, the main challenges for companies that deliver this type of e-services are market knowledge, in order to meet local requirements, and creating and nourish a network among local companies, so they have access to better business conditions. As a consequence, these companies should be concerned with cultural issues and differences and also with local legislation and regulation.

In terms of strategy challenges (Javalgi *et al.*, 2004), e-services providers should:

- Invest in human capital educational and technological skills so they are prepared not only for the use of information technologies but also to deal with cultural differences.
- Understand technological needs of customers and employees.
- Make use of new technologies in order to lower administrative costs, improve efficiency of supply chain logistics, increase responsiveness and improve service quality.
- Develop multilingual websites.

All four types of e-services studied can be internationalized, since there were found examples for each one of them in the World Wide Web that fulfill the premises consider when embracing this project. Even though this is true, it seems that some types of e-services are easier to spread and expand to other countries than others.

Since this study cannot quantify in what extent each one of these types of e-services can be internationalized, here it will be proposed a

hierarchical order considering which one of them have more conditions to easier expand their businesses.

In that sense, the following propositions are addressed:

P1: the more demand for physical presence and/or tangible actions in order to complete the service, the more limited is the global expansion.
P2: the more customer involvement, the fewer opportunities for globalization.
P3: the more demand for customization, the more difficulties a company has when deciding to expand its business to a foreign market.
P4: the more concerns exist about cultural and legislation differences between home and host country, the more difficult is the exporting decision.

Relying on the conclusions of the analysis on the different types of e-services it is expected that the following order will be verified, from the easiest to the most difficult to export:

1) Post-Internet delivered services with no need for physical component, or “pure web services”.
2) Pre-Internet delivered services with no need for physical component.
3) Post-Internet delivered services with a physical component.
4) Pre-Internet delivered services with a physical component.

7.2. Limitations of the study

This study was based on an analysis on e-services that are available in the Internet, taking into account earlier studies and research on the topic of services’ classification and the impact of new technologies and their continuous advances. The aim was to reduce the gap in actual literature

concerning the possible differences among services that are available online, developing a framework to understand what types of e-services are delivered in the Internet and discussing their main advantages and disadvantages, and how they contribute to the development of new opportunities and how they bring new challenges to businesses in general, especially on international expansion possibilities.

Theoretically, the framework presented is particularly beneficial to differentiate specific e-service systems and experiences, in order to question about e-services operations, what processes are involved in e-services delivery and what the role of customers in the production process is.

Nonetheless, some limitations are identified. Firstly, in the absence of specific case studies for each type of e-services, due to time and resources constraints, one major limitation of this study is the need for further investigation on actual conditions that work as drivers for a successful internationalization of e-services companies. Secondly, the generalization of the findings of this study is limited, since there is no empirical evidence tested and verified.

7.3. Suggestions for future research

To help further research, a set of propositions was presented in order to establish a hierarchy between the types of e-services that can be found online, since it is assumed that it is of interest for companies to better understand the potential that their businesses have, especially for small and medium size firms.

Additionally, the framework presented may be of interest to explore Portuguese national companies' conditions and their potential to create and develop online services that have potential to be internationalized. In the current context of uncertainty and economic crisis, companies and individuals must optimize spending and maximize revenues. The search for new

markets and the development of new channels of distribution may fulfill the first purpose. In this sense, traditional Portuguese service firms can look at this framework and revise their business models in order to incorporate new features to their core services and explore their potential on a new channel like the Internet, while start-ups can identify what type of business they intend to approach.

Moreover, Portuguese is one of the most spoken languages in the world, and countries such as Brazil, Angola, or Mozambique, where Portuguese is an official language and where a significant part of the population do not have sufficient knowledge of English or Spanish, are large markets to be explored.

Another topic with utmost interest is the exploration of services delivery through mobile devices. The use of smartphones and tablets is progressively expanding and intensifying throughout the world, with significant implications on people's lives and consequently new business strategies and exporting opportunities arise to firms all around the world. In fact, in a not so far future, offline and online realities shall converge, creating a whole new world where data and information is totally integrated in one's life.

Also, there is a new generation of e-commerce firms, whose main examples can be categorized as post-Internet delivered services with a physical component, and for them the offline world is considered as important as the online one. In fact, online businesses are becoming more social, especially due to the growth of local commerce in the Web (like Groupon). Consequently, the links between online and local stores are becoming stronger, since consumers are found in a virtual context and brought to real world stores. Considering the fact that social conditions are affecting existent perspectives on online businesses, bringing firms new challenges, and connecting them to the offline world, this new paradigm is an interesting and important subject for further research.

Finally, there is a trend to give more power and control to final consumers, in the sense that this group as to do "more work" during the

production phase of the service. It is called “unservice” (Briefing, 2012). Actually, there is an increasing number of “self-service” businesses that empowers the client to choose and manage his/her buying from beginning till the end, where there is no need for intermediaries. Additionally, online communities are highly creative and committed to the companies they follow. The existent tools of social media contributed to this connection and to the exchange of ideas between people and companies. On the other hand, companies are more exposed to people’s opinions (good or bad). In this context, co-creation of e-services can be seen as a way for companies explore new capabilities and learn more about their customers and their expectations about the services provided, on a regular basis.

This will bring new challenges that are worth studying, since there is a transformation on client roles, as they become more independent, and on established production processes with additional impacts on businesses management and control by the firms, others than lower costs.

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