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Offshoring of Business Services:

A study on companies' propensity to Location and Functional

Novelty

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ABSTRACT

Relying on the literature on business services offshoring, this study examines the relationship between three performance dimensions, namely *Effectiveness*, *Efficiency* and *Adaptability*, and the management of the tension between *exploration* and *exploitation* in companies decision making.

In particular, the analysis is implemented with a bivariate ordered probit regression on a sample of more than five thousand service offshoring implementations provided by the Offshoring Research Network Database.

The model encompasses two dependent variables, namely *location novelty* and *functional novelty* which are believed to be interdependent in the decision making processes of service offshoring. Both dependent variables are intended as measures of the degree of exploration or exploitation adopted by MNEs in their relocation. Specifically, location novelty is built on two parameters: the first is the previous experience of the company in the host location, the second is the cultural distance between company's home country and the host location. Coherently, functional novelty is built through two parameters as well, the first is firm's experience in relocating that specific business activity, the second regard the knowledge intensity of the offshored function. The findings demonstrate that companies pursuing long-term objectives, such as effectiveness enhancement and adaptability to changes in the industry, are prone to rely on exploration of either new host locations or new functions. On the other hand, it emerges that companies offshoring services with the intent of achieving short-term objectives, such as efficiency growth, are more likely to exploit the knowledge that they have accumulated in terms of host locations and type of offshore function.

The implications from the perspective of the literature are discussed, together with suggestions for potential future developments by other scholars.

Key words: Business Services Offshoring, Exploration, Exploitation, Novelty

ABSTRACT (ITALIAN)

Facendo riferimento alla letteratura sull'Offshoring dei Servizi, questo studio punta ad esaminare la potenziale relazione tra tre dimensioni di performance nell'Offshoring: efficacia, efficienza e adattamento, e la gestione della tensione tra l'istinto di esplorare nuovi scenari e la tendenza a fare affidamento sulle esperienze pregresse dell'azienda.

In particolare, questa analisi viene implementata attraverso un modello di regressione bivariata su un campione di più di cinquemila osservazioni, fornito dal Database dell'Offshoring Research Network.

Il modello comprende due variabili dipendenti: *location novelty* e *functional novelty*, che si ritiene essere due dimensioni correlate nel processo decisionale, che le aziende affrontano per rilocalizzare una funzione. La variabile *location novelty* è costruita sulla base di due parametri: il primo tiene in considerazione l'esperienza pregressa dell'azienda nella host location, il secondo riguarda la differenza culturale tra il paese d'origine e quello di destinazione dell'iniziativa di offshoring. Congruentemente, anche la seconda variabile dipendente è costruita sulla base di due parametri. In particolare, il primo annovera le esperienze pregresse dell'azienda nella rilocalizzazione della specifica funzione, il secondo invece tiene in considerazione la complessità della funzione trasferita all'estero.

Dai risultati di questa analisi emerge che le aziende che mirano al conseguimento di obiettivi di lungo termine, come quello di efficacia e quello di adattamento ai cambiamenti nel settore, sono propense ad esplorare nuovi scenari, in termini di nuove e più remote destinazioni e di funzioni a più alto contenuto tecnologico. Dall'altra parte, emerge che le aziende che perseguono obiettivi di breve termine, come aumentare la propria efficienza, siano più propense a fare affidamento alle passate esperienze, per quanto riguarda la scelta della destinazione e a rilocalizzare soprattutto funzioni a basso contenuto tecnologico.

I risultati sono vengono discussi attraverso la letteratura di riferimento, inoltre, vengono forniti dei suggerimenti per potenziali analisi correlate a questo fenomeno.

Parole chiave: Offshoring dei Servizi, Exploration, Exploitation, Novelty

EXECUTIVE SUMMARY

The essay that is being presented here is an examination that aims at contributing to the Literature on Offshoring of Business Services.

The offshoring of business services is nowadays a well-known phenomenon, which has been deeply assessed by a large group of practitioners. Most of previous researches have focused on the determinants of service offshoring implementations and on the different sourcing modes, such as captive offshoring and offshore outsourcing. However, smaller effort has been made, in order to examine the strategies that managers decide to pursue for the achievement of their objectives, hence the aim of this study is to fill this gap.

Specifically, this analysis is inspired by a conceptual study on foreign direct investments developed by Özsoy and Gençtürk (2003), in which the authors assess the different impacts of each learning capability on subsidiaries' performance. Coherently with Walker and Ruckert's (1987) research, their work assesses performance on the basis of three dimensions, effectiveness and adaptability, which are expected to arise in the long-run, and efficiency whose outcomes are expected to emerge in the short-run.

The study that is being presented here is innovative as it oversets the causality of the conceptual model, by investigating, which learning capability managers employ to follow each performance objective.

Hence, in the examination proposed here, the learning capabilities represent two offshoring strategies that are function of three independent variables, namely effectiveness, efficiency and adaptability.

Moreover, this analysis is innovative since it proposes a new operationalization of exploration and exploitation.

First, these two learning capabilities are considered as bi-dimensional. Indeed, as observed by van Rest (2006), the decisional process of an offshoring implementation involves two dimensions, namely location and functional, which cannot be considered independently, as they influence each other.

Second, they are related to the concept of novelty, which was adopted for the first time by Barkema and Shvyrkov (2007), as a measure of how much the location of an international FDI is new with respect to the firm's previous investment experiences and to the cultural differences existing between the firm's home country and the host country. In this study, the concept of novelty is extended also to the specific function that has been relocated.

The concept of exploration is referred to, as high location novelty or high functional novelty, whereas the concept of exploitation is renamed as either low location novelty or low functional novelty.

In particular, to assess in a more specific manner the degree of novelty adopted in each implementation, this study adopts two dependent variables, that can assume four different values.

Regarding *location novelty*:

- 1: when the firm selects a target location in which it has already implemented offshoring initiatives and that belongs to its very same cultural block;
- 2: when the firm selects a target location in which it has already implemented offshoring initiatives, but that does not belong to its very same cultural block;
- 3: when the firm selects a target location in which it has never implemented offshoring initiatives, but that belongs to its very same cultural block;
- 4: when the firm selects a target location in which it has never implemented offshoring initiatives and that does not belong to its very same cultural block.

Regarding *functional novelty*:

- 1: when the firm relocates a business activity that it has already offshored in the past and that belongs to the category of low-value added functions;
- 2: when the firm relocates a business activity that it has already offshored in the past and that belongs to the category of high-value added functions;
- 3: when the firm relocates a business activity that it has never offshored in the past and that belongs to the category of low-value added functions;

- 4: when the firm relocates a business activity that it has never offshored in the past and that belongs to the category of high-value added functions.

In order to explore the correlation between the different performance dimensions and novelty, in this thesis was utilized the Database provided by the Offshoring Research Network, which provides observations on service offshoring initiatives implemented by companies in developed countries, mainly in the United Kingdom and in the United States, between 1964 and 2009. Particularly, six hypotheses were tested:

1. **Hypothesis 1a:** Companies aiming at enhancing their effectiveness are more propense to high location novelty in their service offshoring implementations;
2. **Hypothesis 1b:** Companies aiming at enhancing their effectiveness are more propense to high functional novelty in their service offshoring implementations;
3. **Hypothesis 2a:** Companies aiming at enhancing their efficiency are more propense to low location novelty in their service offshoring implementations;
4. **Hypothesis 2b:** Companies aiming at enhancing their efficiency are more propense to low functional novelty in their service offshoring implementations;
5. **Hypothesis 3a:** Companies aiming at enhancing their adaptability are more propense to high location novelty in their service offshoring implementations;
6. **Hypothesis 3b:** Companies aiming at enhancing their adaptability are more propense to high location novelty in their service offshoring implementations.

In order to test these hypotheses, it was implemented a model using a bivariate probit analysis with the dependent variables developed as previously discussed. The explanatory variables, which are included in the model, are those representing the companies' performance dimensions expressed in the hypotheses: *Effectiveness*, *Efficiency* and *Adaptability*. Additionally, the control variables included in the model belong to four categories: *country-level*, *initiative-level*, *company-level* and *industry-level*.

The outcomes of the statistical analysis supported the direction of hypotheses 1 and 3. Nevertheless, through the implementation of the model, the second hypothesis has been demonstrated to be non-significant.

Nevertheless, this thesis provides some additional evidence found through the implementation of an ordered probit regression, which has a single dependent variable named Novelty. This variable was computed through the sum of location novelty and functional novelty for each implementation. Not only this second model corroborated hypotheses 1 and 3, but it also provided significant results to confirm hypothesis 2.

This study offers insightful implications for the managerial practices.

First, it argues that service offshoring should not be managed with a bottom-up approach or with a set of arbitrary initiatives, as it often happens with companies that have little or no experience in international relocations. Executives should prudently reflect on the two learning capabilities at their disposal when implementing their initiatives.

Second, it climaxes the interdependence between host location and relocated function of a service offshoring initiative, and, that managers must predict how these two influence each other, in their decision making process.

Third, it provides managers with a significant insight on the potential outcomes, that each of the strategies may produce, distinguishing between short-term and long-term performance dimensions.

CHAPTER 1

LITERATURE REVIEW

1.1 Introduction to Offshoring

The word offshoring indicates the process of sourcing and coordinating activities and business functions through national borders (Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011).

Offshoring practice encompasses both in-house (captive or international in-sourcing) and outsourced tasks, which are implemented by providers from outside the firm and which can be placed either onshore or offshore.

Today, offshoring is a common practice for both manufacturing and service tasks. In particular, the sourcing of manufacturing activities to low-cost destinations is commonly performed and properly comprehended (e.g. Dunning, 1993; Lee, 1986; Vernon, 1966). On the other hand, offshoring of services is a phenomenon in continuous development, which still needs attention by researchers (Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011).

On this regard, Sako and Tierney (2005) were the earliest to depict the difference between service and manufacturing offshoring, suggesting that the distinction between these practices was often ignored or fudged in the academic literature, when professionals transferred their empirical focus from manufacturing to business services. The authors asserted that the relocation abroad of manufacturing activities consists of a traditional vertical disintegration of the value chain, which implies only operational decisions, made at factory or divisional level. On the contrary, the offshoring of business services involves both vertical disintegration and decisions at corporate level, which, in turn, can affect the value generated for shareholders (Sako, Tierney, & Abigail, 2005). Therefore, decisions concerning

relocation of services are made by chief finance officers and corporate executives, to whom the outcomes of relocation are of great interest, since bonuses are related to cost savings and return on assets (Sako, Tierney, & Abigail, 2005).

The sourcing of manufacturing activities represents a deeply investigated dimension of the globalization of production, whereas the relocation of services is a more recent phenomenon and leaves space for further investigations, therefore this paper will focus only on the latter.

1.2 Offshoring of Services

Offshoring of services be explained as “the transnational relocation or dispersion of service related activities that had previously been performed in the home country” (Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011).

Offshoring of services (OS) is, since more than two decades, a noteworthy economic and social phenomenon in the scenario of international business (IB), as well as a segment of the recent globalization wave (Corbett, 2004; Peeters, 2006). According to researchers, OS is the newest wave of globalization, that influences a set of service activities, and has consequences at individual, company and country level (Contractor, Kumar, & Kundu, 2010; Lewin, Manning, & Massini, 2008). In the last couple of decades there has been a remarkable growth of the OS phenomenon (NASSCOM-McKinsey, 2009; UNCTAD, 2009) that has raised the attention of popular press, political spheres and professionals (Corbett, 2004; Baker & Kriplani, 2004; Drezner, 2004). Specifically, IB academics have examined OS-related subjects and most of them have concluded that these themes are on the frontier of IB philosophy (Luo & Jayaraman, 2012; Lewin, Manning, & Massini, 2008; Hahn, Doh, & Bunyaratavej, 2009).

The real birth of offshore service providers is probably owed to Tata Consultancy Services (henceforth TCS), an Indian service company that had opened its first international office in New York at the end of the 1960s. In that period TCS, which was a major Indian IT player, was developing software programs for the US on site, so in the United States, rather than in India. The first mile-stone of service offshoring came about ten years later, when in 1979 American Express outsourced its account receivable processes to TCS.

Later on, the second big OS achievement was reached in the mid-1980s when, for the first time, multinationals like Texas Instruments and Motorola established their captive technology centers in Bangalore, in order to benefit from an amicable political treatment and to access skilled and less costly pools of labor in Bangalore. These early experimentations were quickly followed by progresses in communication infrastructures, relaxation of tariffs and controls on imports by the Indian government, together with significant infrastructure investments mostly in the city of Bangalore (Lewin & Peeters, 2006). Thus, it was possible for Indian service providers to serve the US market directly from India (Lewin & Peeters,

2006). As a consequence of that, companies like British Airways, Citybank, Hewlett-Packard and Dell initiated, as well, to offshore services to India (Peeters, 2007). Furthermore, during the 1990s, General Electric (GE) also provided an important stimulus to the business process offshoring (BPO). Actually, in 1990, General Electric Medical Division established a joint venture with Wipro to create and sell to the market medical equipment. Although the outcome of this projects did not satisfy the expectations, GE was allowed to access to a noteworthy source of low-cost talented engineers and programmers. This experience further fueled BPO in the US and additionally, it had a solid influence on Indian service providers. Indeed, many managers in the Indian field acknowledged that they were capable of delivering high-quality service at low cost (Lewin & Peeters, 2006). Particularly, Ge's CEO represented a fundamental point of reference for Indian service providers, as he was able to spread the culture of cost-cutting and efficiency for more than twenty years.

Consequently, the positive outcomes experienced by the early OS adopters gained even more value with the burst of the dotcom bubble in 2001/2002, when an economic downturn drove companies to start examining cost-cutting strategies to relocate their non-core activities (Lewin & Peeters, 2006).

The following decades were characterized by an augmenting momentum of both outsourcing and offshoring of business services, which progressively made their way up across the value chain (Peeters, 2007).

Youngdahl and Ramaswami (2008) provided a further contribution by subdividing the phenomenon of services offshoring in three chronological phases. Initially, service offshoring was limited to highly-codified, transactional work such as call center functions, routine software coding and credit card processing, mainly in India. In fact, offshoring firms had acknowledged the advantage that could derive from an almost unlimited mass of well-trained English-speaking specialists, who could program and repair IT applications with pointedly lower costs.

The second round differentiates itself from the previous one, since it was characterized additionally by more technical offshoring ventures, which regarded more technical work and back-office activities such as payroll, accounting, mortgage, financial and legal search.

In the end, the third stage was featured by firms, which started relocating high-end activities that have always been considered core for the company, such as chip design, clinical trials and strictly regulated functions (like drug development) (Peeters, 2007; Massini & Miozzo, 2010).

Today firms select and transfer to emerging economies a widespread range of service tasks, from service development to medical transcription (Pisani & Ricart, 2008), regardless of the geographical distance between service providers and service consumers (Massini & Miozzo, 2010).

In the past, services used to be non-tradable (with the international economics meaning of unable to enter into international trade) (Sako, 2006). To be a service, an activity must have four features: intangibility, heterogeneity in outputs, perishability and indivisibility of production and consumption (Bessom, jr, & W., 1975; Di Gregorio, Musteen, & Douglas, 2009; Erramili & Rao, 1993). Obviously, the fact that it is impossible to detach service production from its consumption, constituted an impediment to potential relocations. Despite of that, the recent developments in information and telecommunications technology (ICT) and the advent of a global pool of labor, allowed to start relying on distant service providers. As a matter of fact, due to the fall of telecommunication costs, geographical remoteness stopped being an obstacle to the simultaneous production and consumption of some services (Sako, 2006).

Companies had the chance to transfer service tasks, which were considered non-offshorable in the past, to locations in which they could be performed in a more efficient way (Apte & Mason, 2009; Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011).

In addition to that, Peeters (2007) contributes to the literature, by arguing that, until thirty years ago, it would have been impossible to transfer core engineering jobs to an emerging nation for some basic reasons. First, engineers in developing countries were considered less competent by offshoring companies.

Second, they did not have access to the necessary computing infrastructures. And, third, the sharing of information and data was risky, costly and time-consuming. In fact, the growth of offshoring of services has been strictly bound to technological progresses in broadband connections and the internet (Lewin and Peeters, 2006). Only with the rapid progresses in

ICTs, it was possible to implement fragmentation and externalization of innovation processes through outsourcing and distant relocation of R&D teams and laboratories abroad (Howells, 1995; Massini & Miozzo, 2010).

US companies were among the first to initiate this wave of globalization targeting Europe and India initially, and then Canada and the rest of the world. European firms instead addressed, first, other members of the European Union, and extended, later, to the US and the rest of the world (Kuemmerle, 1999). According to “Technology Partners International”, by 2004 the number of offshoring ventures from European companies represented almost 50% of total contracts (against 46% for US companies).

There is no doubt that the biggest early beneficiary among the emerging countries was India, due to skilled programmers and software developers, which were also English-speakers. Moreover, the evolution of the service offshoring phenomenon led various firms to realize that India was endowed with a wide pool of talented people capable of undertaking also business process in finance, accounting and other back-office activities.

India’s technology and business services flourished during the last two decades, nevertheless, today, the nation is suffering from an aggressive competition coming from new entrants in such a profitable market and from a change in global environment, which may reduce the country’s worldwide market share (NASSCOM-McKinsey, 2009; Lewin, Massini, & Peeters, 2009). According to the NASSCOM-McKinsey report (2009), India, which was holding more than the seventy percent of the world service offshoring market, is expected to have its stake reduced to less than forty percent by the end of 2020. This would be a result of both a slowdown in the Indian innovation rate and of the emergence of several competitors from developing countries in Asia, Latin America and Eastern Europe (Lewin, Massini, & Peeters, 2009). Among them: Philippines, Russia, Malaysia, Brazil, Hungary and Czech Republic.

In addition to that, China, which is considered the “factory of the world”, is still remaining behind India, due to its shortage of English-speaking workers and IT competences. Nevertheless, the selection of the offshore site depends also upon other features of the host nations, such as political stability, quality of infrastructures and government incentives. This is the reason why competition is believed to be far from static.

1.3 Service Offshoring Motives

Firms have contracted with counterparties abroad for services for several years (Kotabe et al., 1998). Nonetheless, literature has generally concentrated on the export of services, rather than on the offshore of services (Graf & Mudambi, 2005). Kotabe and Murray (2004) raised the attention on topics like: “how to source” and “where to source” in order to complement previous researches. However, the concepts on FDIs turned out to be useful for the examination of sourcing strategies. For instance, Swamidass and Kotabe (1993) implemented a study on the sourcing strategies adopted by European and Japanese enterprises and took their hypotheses from the works on FDIs. The two authors referred to a study by Buckley and Pearce (1979) and suggested that, to a certain degree, international sourcing phenomenon has the same motivations, which drive foreign direct investments (Graf & Mudambi, 2005).

Literature has traditionally associated offshoring of business services to three main factors: disintegration, location-specific and externalization (i.e. DLE Paradigm) advantages (Kedja & Mukherjee, 2009). In the next three sections, are discussed DLE factors as motivations for offshoring.

1.3.1 Disintegration

In order to be able to reconfigure tasks and to gain from service offshoring, corporations reshape their value chain more aptly (Linares-Navarro, Pedersen, & Pla-Barber, 2014). Typically, they proceed with the fineslicing of the value chain activities into minor and more coherent subsets, which can be isolated from each other in space and time (Linares-Navarro, Pedersen, & Pla-Barber, 2014). Thus, companies select the activities that have to be relocated and the more suitable governance mode. According to Kedia and Mukherjee (2009) disintegration advantages occur, when the firm can concentrate on core functions and offshore noncore basic services. On the contrary, in a more recent study, Mukherjee (2013) provides an organization design practice with the processes for an effective administration of the resources in the different OS steps. In relation to this, Mudambi and Venzin (2010) confirm that OS phenomenon encompasses increasingly knowledge-intensive processes, but also that it is crucial for companies to keep tight control over high-value knowledge-intensive functions.

Certainly, the disintegration of the value chain grants the offshoring firm several benefits. Clearly, dividing the business functions into minor modules limits the amount of proprietary knowledge shared outside the firm, thus reducing misappropriation dangers (Gooris & Peeters, 2016).

Subsequently, the disintermediation of the value chain allows the company to locate each single task to the most appropriate position and to profit from external agglomeration economies (e.g. choosing a specialized cluster) (Lewin, Manning, & Massini, 2008).

Finally, corporations can reduce the complexity of managing foreign initiatives while gaining higher organizational flexibility (Kotabe, Parente & Murray, 2007).

Obviously, only some of the services have become good candidates for global disaggregation, after the latest technological improvements (Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011). In fact, it is important to remark that, although being advantageous for the aforementioned reasons, the disintermediation always necessitates of a consequent reintermediation, which may threaten benefits with huge coordination costs (Griffith, Harmancioglu, & Droge, 2009; Larsen, Manning, & Pedersen, 2013). OS research has

pinpointed the features that characterize potentially offshorable activities. It has been agreed that an activity is more likely to be disaggregated and performed remotely, when its information intensity is high¹.

¹ Information intensity defined as the proportion of time spent dealing with information relative to the total time devoted to the activity itself] (Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011).

1.3.2 Location

Location advantages can be associated to the major motives of internationalization (Albertoni, Elia, Massini, & Piscitello, 2017). In 1993, Dunning published what became the most cited classification on the motives that drive internationalization. The author identified four types of FDI, basing upon his famous OLI paradigm: (i) desire to compete on prices by reducing costs (resource-seeking) and (ii) by increasing efficiency (efficiency-seeking), (iii) desire to penetrate into a new market (market-seeking) and (iv) desire to create competitive advantage through innovative skills (talent- or asset-seeking).

1.3.2.1 Resource-Seeking

Dunning (1998) includes in the category of resource-seeking (also known as cost-saving (Ramasamy et al., 2012)) factors like: unskilled labor and scarce inputs, which may be not available at home (natural resources and raw materials) or may accessible domestically only at higher costs.

Cost saving has been the first factor leading companies to relocate their services, since the beginning of the OS phenomenon (Bunyaratavej, Doh, Hahn, Lewin, & Massini, 2011). The savings came in first place from the difference in wages between developed and emerging countries and they also represent the cause that led the pioneer companies to offshore services to emerging countries.

The annual surveys, issued by IB analysts between 2004 and 2006, proved that labor and other cost savings were considered as the key strategic motivations to start OS (Lewin & Couto, 2007). For example, Farrell (2005) observed that US and German corporations spared respectively \$ 0.58 and €0.52 for every dollar spent on the working positions transferred to India.

Today, cost saving is always a fundamental driver for services offshoring, mainly for the simple, back-office, and ordinary tasks (Youngdahl & Ramaswamy, 2008). Nevertheless, IB researchers suggest that cost constitutes only a small portion of the pool of variables that a management must take in consideration (Gefen & Carmel, 2008). As a matter of fact, market

adjustments are weakening the imbalances of labor costs between developed and emerging countries. (Lewin, Massini, & Peeters, 2009; Manning, Massini, & Lewin, 2008). Indeed, labor costs are augmenting in emerging nations and declining in advanced ones, where the rate of unemployment demonstrates saturation in the labor market (Arlbjørn & Mikkelsen, 2014; Van Den Bossche, Gupta, Gutierrez, & Gupta, 2014).

An example of shrinking in the wage gap comes from the IBM experience: initially, the company paid in India a labor cost eighty percent lower than in the US, today, instead, Indian wages are only thirty to forty percent lower than in the United States. In addition to that, in low wage areas in US it is now possible to hire skilled labor force for even less than in Brazil or in the Eastern Europe (Albertoni, Elia, Massini, & Piscitello, 2017).

1.3.2.2 Efficiency-Seeking

The early research on OS, which is coherent with common wisdom and with the discoveries of Nachum and Zaheer (2005), reveals that efficiency (together with costs) are the primary drivers behind offshoring implementations (Dossany & Kenney, 2007; Farrell, 2005; Grote & Taube, 2007; Levy, 2005).

Dunning (1993) argues that firms carry out foreign direct investments for efficiency-seeking with two preeminent purposes. The first is to profit from the difference in endowment and costs of traditional factor endowments in different countries, the second is to exploit the potential earnings coming from scale and scope economies and from differences in consumer tastes and supply capabilities.

For example, firms engaging in captive offshoring, achieve further cost reductions from the consolidation of activities into fewer locations and the resulting scale economies (Doh, 2005; Farrell, 2005). Ellram, Tate, & Billington (2008) explained this with the Transaction Costs Economics Theory, suggesting that enterprises reduce both costs and risks, by offshoring high volumes of work, in order to capitalize on lower marginal transaction costs.

In addition to that, Miozzo and Grimshaw (2010) claim that offshoring firms have a significant strategic reaction, when, as the number of offshoring ventures grows, they start developing an organizational learning path to raise the levels of productivity and efficiency.

Indeed, as corporations offshore recurrently, they increase the scale and scope of their activities and, they can expand their knowledge and design competences on what kinds of details to include in a contract with service providers.

At the same time, potential service providers (in case of offshoring outsourcing) that interact with the same client for several projects, may be able to improve both cost efficiency and project execution (Ethiraj et al., 2004).

1.3.2.3 Market-Seeking

Market-seeking happens when firms invest abroad to earn in foreign markets. The motives can be: the necessity to follow suppliers or customers, the need to adapt goods to domestic requirements and tastes, the reduction of costs caused from serving a distant market and the urge to be physically present on the market in order to dissuade potential competitors (Dunning, 1993).

In their review of the Dunning (1993) work on internationalization motives, Rentocchini and Vitucci (2008) assert that the choice of the market can be driven by two metrics: either the size of the target market or its growth rate, which in some cases matter more than the absolute value. Other important factors are the accessibility to both absolute and comparative advantages.

Strategic asset seeking

Strategic asset seeking leads companies to access a new technological base, instead of exploiting their existing resources (Dunning, 1993). For a crescent number of firms, cost and efficiency-seeking are no longer the main drivers behind their internationalization ventures, particularly when more value-added activities are being offshored (Meyer K. E.; 2009).

1.3.3 Externalization

Literature has identified externalization advantages with the make-or-buy decisions that take place outside national and firms borders (that is offshoring outsourcing) (Ellram, 2013; Griffith, Harmancioglu, & Droge, 2009). Allegedly, externalization is debated together with the Transaction Cost Economics framework, which considers costs related to asset-specificity, market volatility and uncertainty (Coase, 19337; Williamson, 1971, 1991). Indeed, on one side, companies bear lower costs, thanks to the economies of scale, the economies of scope and to the capabilities of their providers. On the other side, instead, the establishment of a relationship with providers requires that the company handles additional costs, such as search costs for potential suppliers, bargaining and negotiation costs, and contract-related costs (Ellram; Tate & Billington, 2008).

According to TCE, the process of externalization originates from a positive balance between the advantages and the disadvantages that the company would come across.

Additionally, transaction costs may significantly affect, together with financial and revenue objectives (Ghodswar & Vaidyanathan, 2008), the selection of the service delivery model (captive or outsourcing), to adopt during the implementation of an offshoring initiative (Tate & Billington, 2008).

1.4 Service Delivery Models

Figure 1 shows how IB literature has distinguished initiatives on the basis of the way, in which business activities are coordinated across country and company boundaries. The top quadrants represent activities that are undertaken domestically. These initiatives are implemented in-house, as for the classical type of firm, or outsourced to a local provider. The bottom quadrants, instead, contain the two main service delivery models employed by service offshoring and will, thus, be the object of this analysis.

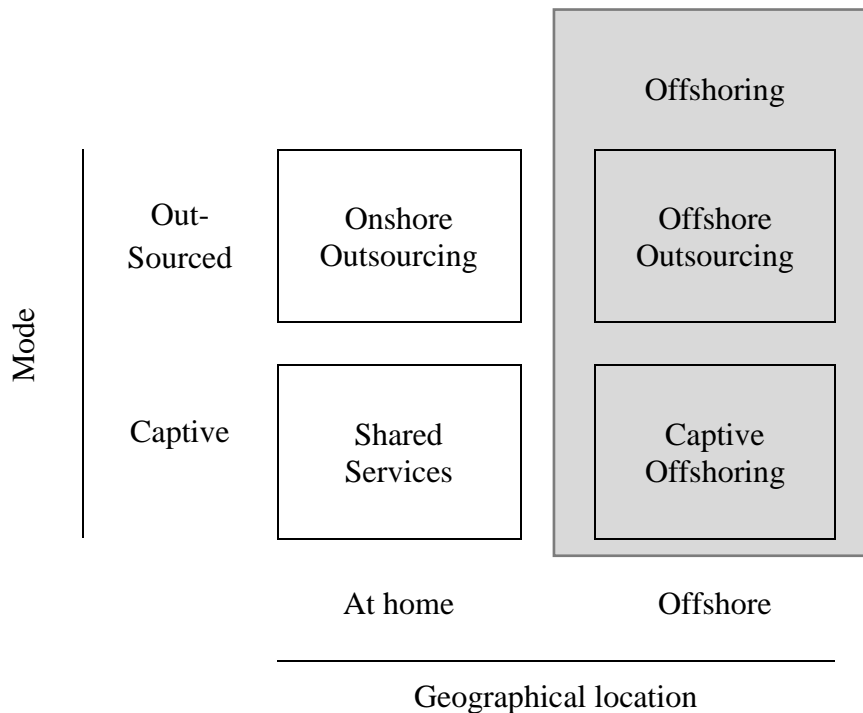


Figure 1: Offshoring explained

1.4.1 Captive Offshoring and Offshore Outsourcing

Captive offshoring relates to the intra-company transfer of activities to fully-owned subsidiaries abroad (Linares and Pedersen, 2012). This practice is also referred to as: internal offshoring (OECD 2005), offshore in-house sourcing (OECD 2007) and offshore insourcing (Kotabe et al., 2007).

Captive offshoring clearly overlaps with foreign direct investment, in the sense that captive offshoring involves foreign direct investments (Linares-Navarro, Pedersen, & Pla-Barber, 2014)

Offshore outsourcing, instead, takes place when the company opts for either an international or a third-party supplier in the destination country. This practice is often renamed as: non-captive offshoring (WTO 2005) and external offshoring (OECD 2005).

Offshore outsourcing binds pure outsourcing to fully-owned companies offshore and implies that firms have to face the benefits and the threats of both of them (Lewin & Peeters, 2006). Academics have observed that companies have a propensity to offshore-outsource business services, if transaction costs are low (Albertoni, Elia, Massini, & Piscitello, 2017; Ellram, Tate & Billington, 2008).

As a matter of fact, conventional theoretical wisdom posits that the choice of the service delivery model is deeply bounded to the type of function offshored. Researchers believe that in offshoring ventures some resources have a fundamental function, as for any other connection that involves location, control and value creation. One example for that is knowledge, which is considered, in international literature, a major determinant of foreign entry decisions (Mudambi, Venzin, 2010; Shin et al., 2009; Mudambi, 2008; Pyndt, Pedersen, 2006). Especially, the firms that offshore-outsource R&D functions are expected to face biggest challenges, due to the necessity to both transfer the necessary knowledge in a secure way and to maintain enough topic-related familiarity and absorptive capacity within the firm.

Knowledge is an intangible resource for the company and is often considered as more tacit, more embedded and less separable from the firm . Therefore, it must be protected by the

company, as it will be capable of generating higher returns, *ceteribus paribus*, than a company, which does not control it directly (Mudambi & Venzin, 2010).

On this regard, Linares and Pedersen (2012) released an empirical research on the correlation between the nature of the asset and the choice of the organization mode abroad. The authors observed that captive offshoring is more likely to happen with high-knowledge intensive functions, as it jeopardizes less the knowledge base of the offshoring firm and protects from the imitation risk. Offshore outsourcing, instead, is more proper for low-knowledge activities, such as contact centers.

Yet, some other researchers posit that the decision on the service delivery mode is influenced by the OS experience of companies (Oberg, Pedersen, 2010).

In fact, in another empirical study, Lewin and Peeters (2006), observed, quite unexpectedly, that more than fifty percent of relatively critical activities, such as engineering services and research activities, were outsourced to third-party providers. This suggests that companies with offshoring experience, had improved managerial skills for the management of activities abroad. Moreover, it shows an increasing confidence in the competences of third-party providers in developing countries in both providing quality work and preserving core knowledge (Lewin & Peeters, 2006).

1.5 Contributions to economic theories

During the first wave of services offshoring, companies managed to cut their costs mostly by offshoring outsourcing business processes such as payroll, claims processing and customer contact. Additionally, improved IT and globalization of work markets facilitated the growth of services offshoring (Graf & Mudambi, 2005).

Despite the success, mass media, politicians and experts raised doubts and criticized the location decisions made by offshoring companies.

Dell, for example, received several customer complaints after they had started to reroute calls from US purchasers to a contact center situated in Bangalore. And, in the end, the company was obliged to backshore the contact activities because of poor quality service (i.e. cultural differences, language difficulties and time delays were cited) (Frauenheim, 2003).

Given this environment, practitioners considered necessary a review and an enrichment of the existing academic literature. These new studies drew on the theory and the past research, regarding location attractiveness, with the aim of improving the understanding of the location decisions related to business process offshoring.

1.5.1 Additional location motives

Graf and Mudambi (2005) co-authored an empirical work in which they try to improve the understanding of OS in the high-tech business arena of today. In their study, the authors analyzed three location motives, i.e. country risk, quality of infrastructures and government policy, under the lens of service offshoring and drew the conclusion that this set of location motives needs to be complemented with a fourth one: human capital.

1.5.1.1 Country Risk

Country risk encompasses economic and political risk. Specifically, the economic one includes metrics like inflation rate, real exchange rate fluctuation and the possibility to repatriate profits. Whereas, political risk interests country's political stability, the intensity of conflict between states, and the probability of changes in labor and environmental laws, which might affect business and trade.

Graf and Mudambi (2005) argue that economic and political risk are negatively correlated to the amount of services offshored.

Moreover, in case of a critical country risk, companies attempt to limit their exposure by restraining the volume of resources employed in that specific nation (Brouthers, 1995; Kobrin, 1983; Vernon, 1979).

1.5.1.2 Quality of Infrastructures

The implementation of IT-enabled services offshore requires a balanced combination of human factor and information technologies (Pisani & Ricart, 2008).

Explicitly, IT infrastructure encompasses all the devices, networks, protocols and procedures that are employed in the telecoms or information technology fields to foster connection among different users (IGI GLOBAL, Disseminator of knowledge, 2018).

In particular, according to theory-based assessments, service offshoring activities are processes enabled by ICT infrastructures, thus their success depends on the accessibility, the reliability and the cost of the IT supports (Doh, Lewin, Massini, Hahn, 2011).

Graf and Mudambi (2005) proved, on an empirical basis, that the quality of infrastructures influences the selection of the offshoring locations. In fact, thanks to their work, it is possible to observe two phenomena: (i) the quality and the accessibility of IT infrastructure in host countries are positively related to the quantity of services offshored, (ii) the cost of IT infrastructure in the host nation is negatively related to the quantity of services offshored.

1.5.1.3 Government Policy

The perspective of governments on foreign investments has significantly changed over the years (Young et al., 1994) and policy variables resulted to be effective in altering foreign investment decisions (Grubert & Mutti, 1991).

In fact, political authorities control the extent and the form of foreign involvement in service industries, by setting obstacles and discriminatory blocks (i.e. taxes and fiscal instruments),

or, on the contrary, by offering investment incentives (i.e. subsidies). Tax rate, specifically, is the major responsible of shaping a country's attractiveness. Favorable rates may be employed by host governments to compete with other countries to retain specific investments (Mudambi, 1995, 1998). In the empirical work released by Graf and Mudambi (2005), it is stated that: (i) the tax level in the destination country is negatively related to the amount of services offshored and (ii) that the investment attraction schemes of host locations are positively correlated to the quantity of business services offshored.

1.5.1.4 Human Capital

In first place, a key requirement for the host location is that there must be a labor source large enough to allow extensive operating hours, without breaking regulation laws. For example, one of the reasons why US companies offshore outsource routine activities (i.e. payrolls, contact centers) is the impossibility to domestically hire and retain workers in a demanding 24/7/365 environment (Richardson & Marshall; 1999). Moreover, abundance is allegedly useful also for more qualified personnel. In fact, Bunyaratavej et al. (2007) observed that firms seek locations with huge presence of qualified personnel *ceteris paribus*, also because a larger pool of well-prepared workforce may decelerate the wage inflation for those rather costlier workers (Doh, Lewin, Massin, Hahn, Bunyaratavej, 2011).

A second characteristic of human capital, positively correlated with the amount of relocated services, is the level of experience of the resources available in the host location (Graf & Mudambi, 2005). Over the years, indeed, certain nations have become recognized targets for certain types of services.

As a matter of fact, the spatial concentration of industry and the geographic clustering of firms imply that some specific combinations of sources may have the ability to preserve their location advantage (Birkinshaw, 2000). Certainly, the local presence of well-prepared workforce and the chances to exploit unintentional and intentional knowledge spillovers of other leading firms, mutually reinforce themselves in a virtuous cycle, which leads to the development of a cluster (Graf & Mudambi, 2005).

In addition to abundance and experience, quality of human capital is the third motive that drives corporations to select a certain host location (Graf & Mudambi, 2005). Namely,

quality is defined as a multidimensional pattern that comprises technical expertise and interpersonal aspects (i.e. competence in language and understandability). According to Doh et al (2009) the presence and the quality of human capital has become determinant in the selection of the location. Moreover, Dossany and Kenney (2004) have observed that, when firms select the target of a service offshoring initiative, the presence of an abundant pool of qualified personnel works as solicitation for inward offshoring and may also smooth the wage inflation related to these relatively costlier workers (Bunyaratavej et al 2007).

Walsh et al. (2012) investigated customer perceptions of service quality, when it is performed abroad. The authors suggest that companies should give priority to a customer-orientation, in order to avoid potential downturns with clients. India is a perfect example; in fact, around half of the training in Indian centers is about accent neutralization, listening comprehension and improvement of communication skills (Tata Telecom, July 25, 2003).

1.5.2 The emerging race for global talents

Lewin et al. (2009) present an empirical assessment of the determinants of companies' decisions to offshore innovation. Their results corroborate the importance of quality human capital as a factor driving offshoring. Yet, Lewin et al. (2009) fill in the service offshoring picture by mentioning the shortage of qualified personnel in home countries, as a potential service offshoring motive.

Among the different considerations that have been made on the OS phenomenon, it is interesting to highlight how empirical evidence proves that the relocation of white-collar jobs did not lead to a reduction in the number of employees at home. Instead, the global pool of jobs grew, as a proof of the fact that the offshoring of innovation and product development constitutes a unique body with business growth plans. Managers, indeed, are more willing to cover crucial talent gaps, than to replace the existing job positions through leverage on opportunities of wage arbitrage. In fact, it is fundamental to consider the increasing lack of qualified scientists and engineers, that developed countries are experiencing.

In the US, for example, the number of graduates with master's and Ph.D. degrees in engineering has dropped, since the beginning of the new millennium, whereas the request

has considerably increased, during the last two decades. In the past, US government tried to solve the problem, by importing more workers through the allowance of a major number of H1B work visas, which in the 2003 had reached a 193.000 quota. Nonetheless, in 2004, US congress did not renew the quota, but, instead, halved work permits, which went back to the amount of 1998 (Lewin, Massini, & Peeters, 2009).

European nations, as well, are experiencing such a lack. Indeed, according to the briefing note released by Cedefop (2016), European countries are experiencing a skill shortage, which is of actual concern, especially when associated to a high unemployment rate. In particular, Europe is currently missing technology, engineering, and ICT professionals, whose demand is progressively increasing, because almost every economic sector is starting to require these figures (Cedefop, 2016). Moreover, unattractive working environments and falling remuneration are worsening the situation.

The economic theory states that, in such situation, wages would adjust and, thus, market conditions improve and reduce the lack (Lewin, Massini, & Peeters, 2009). Nevertheless, in the last decades the science and engineering job market has become global. This means, that a potential market adjustment would require an excessive amount of time. As a matter of fact, the possibility to benefit from a global pool of workers, serves both as a counterweight to the pressure on wages in US and EU and as a delay to the global market adjustment (Lewin, Massini, & Peeters, 2009).

Internationalization literature suggests that firms adopt a market-oriented logic (downstream logic), where competitive advantage is grown, in first place, at home. Then, the achieved advantage can subsequently be exploited either at home or with a global network of subsidiaries, which adapt the home-based advantage to the foreign markets. Nonetheless, today, offshoring is believed to have an upstream sense, which focuses on how companies can exploit foreign resources, including cheap labor, human talent and new knowledge (Boardman et al., 2008).

According to this logic, Lewin et al. (2011) assert that offshoring scenarios are transforming from home-base-augmenting to home-base-replacing means for larger multinationals, whereas small- and medium-sized businesses, appear to be adopting innovation offshoring strategies to boost limited domestic innovation capabilities.

It emerges thus that this latest wave of offshoring of business services differs from the past waves of internationalization on the basis of three main arguments. First, at this point even companies of small and medium sizes are involved. Second, offshoring now involves the relocation of white-collar activities to less developed locations. Third, companies offshore tasks not with the aim of serving local markets, but with the purpose of assisting domestic operations (Massini & Miozzo, 2010).

CHAPTER 2

EXPLOITATION VERSUS EXPLORATION

Organizational learning is the experiential production and reproduction of organizational rules, leading to behavioural firmness or behavioural changes (Kieser et al. 2001; Levitt and March, 1988). As a matter of fact, human beings, acting on behalf of organizations, are likely to undertake processes of experiential learning, which, in turn, yield behavioural outcomes useful to produce organizational rules (Holmqvist, 2004).

On a general basis, organizational learning has been described as a mean for knowledge development, which can promote behavioural change and can lead to the improvement of company performances (DiBella, Navis, and Gould 1996; Fol and Lyles, 1985; Sinkula, 1994; Slater and Narver, 1995).

Any organization is a unique combination of behaviours, which emerges from various and usually conflicting experiences of a group of humans. Therefore, daily conversation, discourse, and comparable activities, correlated to the experiences of potential and current organizational members, generate the so-called organizational rules (Zhou, 1993). Organizational rules, which can be either formal or informal, confine members' behaviour and limit their discretion with organizational activities. According to Hedberg (1981), these rules mirror experiential learning, which is neither blind nor random.

Organizational learning theories offer rich insights of the processes and capabilities that generate and change organizational knowledge (Schulz, 2001).

It is widely alleged that organizational learning process is a multilevel phenomenon (Crossan, Lane, and White, 1999; Huber, 1991; Huysman, 2000), which is boosted by numerous capabilities that generate new knowledge or modify the existing pool of competences (Esterby-Smith and Araujo, 1999; Schulz, 2001).

In particular, behavioural literature identifies two noteworthy activities that are responsible for the generation of experiential knowledge: *exploration* and *exploitation* (Ozsomer and Genturk, March, 1999; Marengo, 1993).

The conceptual distinction between exploration and exploitation has been employed as an analytical construct, explicitly or implicitly, in a wide range of management research areas, covering strategic management (Winter & Szulanski, 2001), organization theory (Van den Bosch, Volberda, & de Boer, 1999), and managerial economics (Ghemawat & Ricart, 1993). In strategy research, the internal ecology model of strategy making discriminates between two types of strategy processes, namely variation-reducing induced processes and variation-increasing autonomous processes.

In organizational research, practitioners have distinguished between structures specifically designed for efficiency, such as mechanistic ones, and structures designed with the purpose of innovating, such as organic ones. Likewise, organizational literature draws a line between single-loop and double-loop learning, and between local search and long-jump (Levinthal & March, 1993).

Finally, managerial economics have highlighted a distinction between static and dynamic efficiency. In particular, static efficiency implies that the firm continuously chases improvement along affixed production function, whereas dynamic efficiency demands a discontinuous shift from a production function to a more profitable one (Ghemawat & Ricart, 1993).

These analyses have shown that exploration and exploitation demand considerably diverse patterns, processes, strategies, skills and principles to be achieved and might influence in different ways firm's outcomes and adaptation processes (He & Wong, 2004).

Exploration is responsible of the variety production in experiences, which can be achieved through "search, variation, risk taking, experimentation, play, flexibility, discovery, innovation" and exploitation refers to things such as "efficiency, (Piao, 2007) . Generally, it is related to organic structures, lightly joined systems, path breaking, improvisation, and emerging markets and technologies.

On the other side, exploitation improves the reliability of experience out of "refinement, routinization, choice, efficiency, production, selection, implementation (and) execution" (Holmqvist, 2004). Exploitation regards control, bureaucracy and stable markets and

technologies (Ancona, Goodman, Lawrence, & Tushman, 2001; Brown & Elsenhardt, 1998; Lewin, Long, & Carrol, 1999).

Firms performing exploration generate large performance variability by experiencing success as well as failure, thus, they have more erratic and chronologically distant expected returns. Whereas, companies implementing exploitation are expected to have more stable outcomes, which are more certain and chronologically closer (He & Wong, 2004).

The gains of exploitation have been proved through the learning-curve effects. Indeed, the refinement of pre-existing know-how and the learning from experience lessen transaction costs and thus speed up decision-making, implementation, and control (Cyert and March 1963).

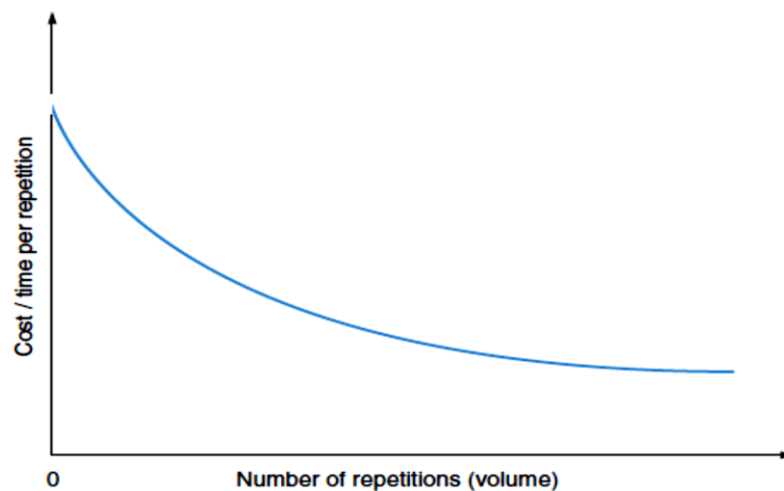


Figure 2: Learning curve (Policonomics, 2018)

The “learning-curve effect states that time per repetition decreases as the number of repetitions increases” (March, 1991), nevertheless, learning-curves have some limitations. In particular, any change in personnel, design or procedure, is expected to alter the curve, causing it to spike up for a limited amount of time, even if it is expected to drop in the long-run. Moreover, resource availability and changes in processes may affect the curve as well (Abernathy & Wayne, 1974).

Additionally, well-established routines might undermine organization's capability to absorb new information, which is not consistent with earlier learning (Nelson & Winter, 1982). In fact, the key assumption of Hannan and Freeman (1977) is that internationalization paths are contingent on the proximity to tacit knowledge and commensurate skills. Therefore, according to the path-dependent view on internationalization, companies optimize their outcomes, by relying on past experiences.

Companies, that engage in international operations leverage skills that are unique and usually hard to imitate. Accordingly, Hannan and Freeman (1977) posit that the aforementioned skills constitute, at the same time, a source of inertia and of distinctive competence within a company. In particular, inertia is attributed to: the sunk costs deriving from past investments and rooted in social structures, the cognitive styles matured by managers and to behavioral dispositions and heuristic decisional models (Hutzschenreuter, Pedersen, & Volberda, 2007). The skills, which are responsible of firm's inertia, are, on the other side, capable of driving the firm towards the accomplishment of efficiency and reliability targets (Miller & Chen, 1994; Hutzschenreuter, Pedersen, & Volberda, 2007).

In opposition to that, there is a large body of literature, which sets in place disagreement to this theory. For example, Wielemaker, Volberda, Elfring, & Baden-Fuller (2003) posit that internationalization journeys are versatile and that firms have the need and the capability to explore new strategies, by beating the barriers and limitations, recurrent in IB literature, such as "liability of foreignness" and "psychic distance" (Hutzschenreuter, Pedersen, & Volberda, 2007).

Specifically, liability of foreignness (LOF) is a recognized concept in international business literature, which posits that companies face social and economic costs when they work in foreign markets. LOF can derive from the environment in which the firm operates or from the features of the firm itself. Environment-based LOF has its source in home and host country environments, while country-based LOF stems from firm-specific attributes, such as ownership structure, firm-specific resources, learning and network-based connections such as affiliation to a business group (Gaur, Kumar, & Sarathy, 2011).

"Psychic distance" is essentially the perception of the differences between home and foreign country (O' Grady & Lane, 1996). This concept is based on factors like specific industry in which the firm operates, firm's authoritative and administrative qualities. Johanson and

Vahlne (1977) argue that the lack of essential knowledge resulting from psychic distance highly affects the decisions made on international operations.

Focusing on a single learning capability at time may lead the firm to experience lock-in effects (March, 1991). Apparently, the self-reinforcing predisposition toward exploitation, is responsible for a shrinking in the novelty of organizational routines and for brake to firms' ability to exploratory-learn (Levinthal & March, 1993). Adaptation to ongoing market requirements may sustain structural inertia and reduce companies' capability to adjust to future environmental changes and to catch potential new opportunities (Hannan & Freeman, 1984). Additionally, an excessive focus on exploitation may produce an effect recognized as "learning myopia" and make the firm fall into competency traps. As a consequence of that, companies may compromise the overall company effectiveness, by transforming core competences into core rigidities and by being themselves stuck in a research for efficiency of an obsolete function (Kyriakopoulos & Moorman, 2004).

On the other side, testing new alternatives may slow down the improvement and the refinement of existing competencies (March, 1991). In addition to that, a ruinous explorative effort may shatter successful practices in a company's existing domains, without providing additional benefits to compensate for the loss in the existing operations (Mitchell & Singh, 1993). Accordingly, the inability of many firms to be innovative can be traced in their continuous efforts to explore new products and unfamiliar markets, without dedicating enough resources to the exploitation of their competences in a more familiar and niche market (Levinthal & March, 1993).

Previous research posits that no company can build a long-term sustainable advantage, since factors which represent today's advantage, may turn into future weaknesses for the company, with significant rapidity (D'Aveni, 1994). Therefore, in order to survive, businesses have to counter-balance exploitation with exploration, by disrupting both their own and competitors' advantages and by continuously striving to achieve improvements in advance, compared to other players in the industry (He & Wong, 2004; D'Aveni, 1994).

It appears that exploitation and exploration are completely different logics which are likely to create tensions, since they compete on company's scarce resources, creating a significant trade-off for companies. Nevertheless, practitioners have recognized the existence of potential synergies among them, which require that firms manage the balance between them (He & Wong, 2004).

On this regard, March (1991) suggests that it is the balance between the two learning capabilities that permits firm's survival and long-term prosperity.

Basically, the problem that companies need to solve is the upkeep of an exploitation level, that is sufficient to allow the company to maintain its current viability and, meanwhile, and the reach an exploration level sufficient for ensuring future feasibility (Levinthal & March, 1993).

Likewise, Burgelman (2002) recommends that a combination of variation-reducing induced strategic process and variation-increasing autonomous strategic process in strategy definition may allow firms to overcome environmental selection pressures. This interpretation posits that companies might have to run both processes simultaneously, although it implies that they cannot completely maximize the benefits coming from current domains (Burgelman, 2002).

Literature refers to the equilibrium between these two learning capabilities with the concept of organizational ambidexterity (Tushman & O'Really, 1996).

Specifically, Tushman and O'Really (1996) claim that a firm, which is capable of performing exploration and exploitation simultaneously, has much more chances to achieve superior outcomes, compared with firms, that emphasize one learning capability, depriving the other one.

Eisenhardt & Martin (2000) contribute to the literature on ambidexterity with a work on dynamic capabilities. To be effective, dynamic capabilities require a proper blending of the two different logics, namely exploration and exploitation, so that managers can succeed in altering existing resource base (e.g. by acquiring and shedding resources, integrating them together and recombining them) and to generating new value-creating strategies (Eisenhardt & Martin, 2000; Grant, 1996; Pisano, 1994).

In addition to that, further research posits that the exploitation of current capabilities is essential to explore new ones, and that, on the other hand, the exploration of new capabilities permits the firm to enhance its current knowledge base. It appears that exploration and exploitation form a dynamic path of absorptive capacity (Katila & Ahuja, 2002).

Nevertheless, Tushman and O'Reilly (1996) claim that, practically, exploration and exploitation follow completely different logics, which are difficult to reconcile and which only few companies can handle in an effective way. Following this reasoning, it emerges

that, unless companies are able to manage the dichotomy properly, the interaction between the two learning capabilities may turn out to be even ruinous.

Among the few practical contributions to ambidexterity, there is the empirical study performed on Toyota's production development by Knott (2002). Specifically, the researcher finds that the Toyota's product development function managed to handle the two learning capabilities, and concludes that they are expected to be complementary, due to the fact that it would not be optimal to combine them, if they were substitutes.

He and Wong (2004) contribute to the practical research, by assessing ambidextrous practices in the field of technologic innovation. In particular the authors focus on how firms commercialize new technological knowledge and ideas into new products and processes. Allegedly, technological innovation represents only a subset of organizational learning activities and, hence, it allows to make empirical studies easier and more manageable.

According to these authors, ambidexterity takes place in two situations: in the first case, if a firm scores high on both exploitative and explorative innovation strategies; in the second case, if a firm scores low on both innovation strategies. In fact, also in this second case, it can be said that management is dedicating equal effort to both the strategies (He & Wong, 2004). The paper provides empirical proof that, in both its interpretations, ambidexterity affects positively the outcomes of a firm.

Consequent managerial implications determine that, while existing innovation management practices have been rooted on established typologies with corresponding resource allocation and performance benchmarks (e.g. percentage allocation of R&D expenditure into basic versus applied research), they may also need to introduce new measures to prioritize resource allocation and benchmark performance along the exploitative versus explorative dimensions (He & Wong, 2004).

CHAPTER 3

CONCEPTUAL MODEL AND HYPOTHESES FORMULATION

3.1 Conceptual model

Özsomer and Gençtürk (2003) integrate the organizational-learning perspective with the resource-based view of the firm (Barney, 1991). With their work, they provide an improved understanding of the augmenting role of subsidiaries as mechanisms for knowledge creation. Resource-based theory advocates that greater outcomes stem from resources and capabilities of the firm (Barney, 1991). Day (1994) et al., recognize the existence of a discrepancy between resources and capabilities. Under the label of resources scholars include all assets, organizational processes, firm attributes, stock of knowledge, human capital and other tangible and intangible factors controlled by a firm. Resources are heterogeneous across firms and imperfectly mobile (Barney, 1991). On the other hand, capabilities cannot be valued with a monetary value and are so rooted in the organizational customs that cannot be traded or replicated easily. Allegedly, the latter ones are responsible of binding resources together and allow to employ them in a favorable way.

The focus is specifically on subsidiaries, as it is assumed that learning takes place locally and that learning in subsidiaries has a higher importance now, in comparison to the first experiences of foreign direct investments, due to: globalization of technologies and markets, major customer expectations, higher competitive pressures and shorter cycle times.

The authors argue that, in order to allow long-term survival and accomplishments of a company, it is necessary to arrange, cultivate and handle a beneficial balance of exploration and exploitation.

The competition between the two learning capabilities generates a friction, whose recognition and management are the latest challenges of organizational learning.

Particularly, although it might be appealing to involve only innovative exploration in organizational learning, it is fundamental to remark that exploitation represents a capability which may deliver the instruments that allow to benefit from previous learning (Özsomer & Gençtürk , 2003; Crossnan, Lane, & White, 1999). For example, Motorola has consolidated the practice of accentuating exploration in subsidiaries in order to create new product lines, and to subsequently concentrate on the exploitation of the new product base, in order to benefit through efficiency gains.

Moreover, the contribution of these two learning capabilities to firm's performances is function of the amount of turbulence in the subsidiary environment. Precisely, turbulence is defined as the rate of change linked with new product technologies and the composition of new customer base, customer preferences and competitor strategies. Cases of turbulence can be the extraordinary challenges requiring firms to create new knowledge, in order to deal with markets that have been deregulated, markets that have been recently freed, or even markets where crises are taking place.

Yet, organization and strategy research have pointed out that, also in these critical situations, organizations need to concurrently make the most of existing capabilities (Schulz, 2001; Easterby-Smith, 1999).

Özsomer & Gençtürk (2003) present an innovative framework, which incorporates exploration and exploitation capabilities with the potential impacts of each learning capability on subsidiaries' performance. Specifically, the authors argue that subsidiaries reach different levels of performance on the basis of the way in which they manage the dichotomy between exploration and exploitation as market-learning capabilities. Performance is a joint function of return from an operation and of an organization's current competence in that particular activity (March, 1991). In this particular case, the authors of the model have decided to asses performance on the basis of whether subsidiary's outcomes constitute a long-lasting or a short-term achievement.

In the paper, firm's performance is measured according to three dimensions, explicitly, effectiveness, efficiency and adaptability, which are in accordance with Walker and Ruekert (1987) research on subsidiaries.

The expected relationships are represented in the Table 1.

Subsidiary performance				
		<i>Effectiveness</i>	<i>Efficiency</i>	<i>Adaptability</i>
Subsidiary Learning Capability				
<i>Exploration</i>	+		-	+
<i>Exploitation</i>	-		+	-

Table 1: Expected relationships between exploitation and exploration and the three performance dimensions (Özsomer & Gençtürk , 2003)

Subsidiaries are expected to differ in these performance dimensions on the basis of their management of the tension between exploitation and exploration as learning capabilities.

The pursuit of new knowledge, such as radically new products, new markets or new marketing programs, has less predictable results, longer time horizons and more dispersed products than does the exploitation of existing knowledge. Thus, exploration is likely to affect positively long-run performance of the subsidiaries in terms of effectiveness and adaptability. Since returns from exploration are regularly less certain, less clear and more distant in time (March, 1991), when compared to exploitation, it takes a higher amount of time to experience the benefits of exploration (Özsomer & Gençtürk , 2003).

In opposition with that, positive local feedbacks at subsidiary level can lead to strong path-dependence. Companies are likely to enjoy huge returns to experience in the short-run. Furthermore, learning by doing and imitation in exploitation may lead to an improved overall efficiency, hence, subsidiaries may pursue a single objective, in order to enhance their brilliance in front of top management.

This framework identifies in exploration and exploitation strategies the determinants of the three performance dimensions. Strategic management has basically tried to comprehend the

decisions that influence company performance, such as which governance mode to select, whether to make or buy, to acquire or invest, to join a network or not, to choose an alliance or a joint venture, to centralize or decentralize, etc. (Caniato, Elia, Piscitello, & Ronchi, 2014). Nevertheless, firms must explicitly or implicitly predict their potential outcomes (Özsomer & Gençtürk , 2003), and thus their internationalization strategies are based on expectations of how their decisions can influence future performance. In accordance with that, the underlying presumption is that managers can make choices to create sustainable competitive advantage, by this means achieving superior performance outcomes for their companies. In this way, an endogeneity problem emerges, due to the fact that the variables employed as explicable terms of the firm's outcomes, represent simultaneously the drivers that lead the company to implement the offshoring venture, in first place.

Therefore, in our framework we reverse the causal relationship proposed by Özsomer & Gençtürk (2003). The critical challenge for any business is to create an environment capable of fostering the proper type of market-learning capability in function of the dimension that they are trying to enhance. Instead of analyzing how the learning capabilities influence the performance dimensions of the service offshoring initiatives, the purpose here is to assess how the strategic objectives of management, in terms of effectiveness, adaptability and efficiency, influence the handling of the two learning capabilities, exploration and exploitation.

3.2 Hypotheses Formulation

The starting point of this analysis is the decision-making processes, since the roots of many of the problems related to offshoring can be found in inadequate considerations in the initial phases of an offshoring implementation (Aron & Singh, 2005).

The figure below displays conceptually the early stages of an offshoring initiative. First, managers become aware of the opportunities that the relocation of a specific business process might offer, and consequently they select most proper destination. If the expected scenario does not appear to benefit the company, they can reiterate this process, until they find a promising solution.

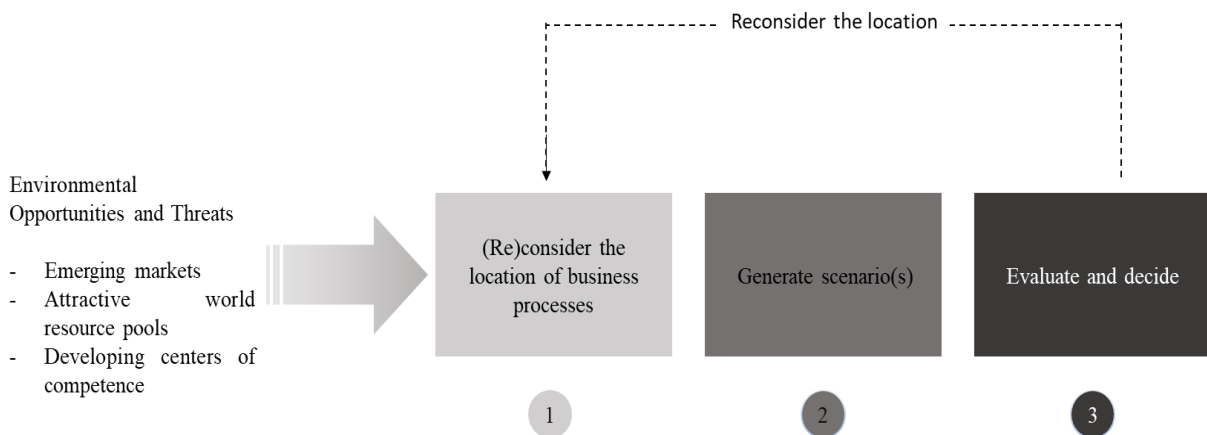


Figure 3: A typical Offshoring decision-making process (van Rest, 2006)

It appears, thus, that the selection of the offshored business function and of the offshoring destination are mutually dependent; for this reason, this analysis assesses service offshoring initiatives on the basis of two dimensions: *host location* and *relocated function*. In particular, what, is being investigated here, is whether companies perform exploration or exploitation in the two offshoring dimensions. Exploration in host location, is addressed also with the concept of *high location novelty*, which is associated with the search and experimentation of new and culturally-diverse destinations, which imply higher risk and uncertainty. Exploration in the relocated function, is addressed also with the notion of *high function novelty*, which is related to the idea of strategic reorientation and of the experimentation of the relocation of more complex functions.

On the other side, exploitation in the location dimension is renamed *low location novelty*, it covers the initiatives with which companies exploit accumulated knowledge on a country or on a region, and, hence, relocate either in the very same country or within the same region. The concept of exploitation in the function dimension is labeled as *low function novelty*, it regards the offshoring ventures in which companies transfer less complex business processes and/or functions that they have already offshored in the past.

The consequent step for the adaptation of the resource-based model of Özsomer & Gençtürk (2003) to service offshoring practices consists in reshaping the framework following the service offshoring boundaries. Hence it is necessary to find a correspondent metric for the considered performance dimensions.

3.2.1 Effectiveness

According to the model, effectiveness performances can be improved through the employment of exploration capabilities. In the case of FDIs of manufacturing activities, effectiveness involves the success of the subsidiary's products and programs in relation to those of its competitors and it is generally measured through sales growth or changes in market share, which have remained significant objectives also for companies offshoring services (Lewin, Massini, & Peeters, 2009). An additional measure of service offshoring effectiveness is proposed by Niven (2004) who suggests using the agility of firms. The agility can be assessed in terms of fast response to changing customer tastes and preferences, while at the same time meeting shareholder expectations. To take advantage of market opportunities, it is often necessary to reach engineers and researchers capable of realizing new products and technologies and of adapting the existing ones to local demand. In particular, firms that have significant growth objectives may decide to offshore some of their research and development activities to locations where talent is largely supplied.

On this regard, there is significant strand of literature on offshoring innovation research, which has investigated the nature of innovation activities and has, basically, identified two types of initiatives: home-base-knowledge-exploiting (HBKE) and home-base-knowledge-augmenting (HBKA) activities (Pisani & Ricart, 2018).

Specifically, multinationals establish their business processes offshore to either exploit firm-specific knowledge possessed at home or to increase it through the search and acquisition of new knowledge in the host environment (Ambos & Ambos, 2011; Cantwell & Mudambi, 2005; Dunning, 1993; Kuemmerle, 1999; Le Bas & Sierra, 2002; Lewin, Massini, & Peeters, 2009; Rilla & Squicciarini, 2011).

Companies decide to undertake HBKE initiatives in order to support knowledge-transfer from the home country to the host country and to enrich it through the contribution of talented labor abroad. Moreover, literature suggests that asymmetric market learning, in comparison with other market players, can contribute to the evolution of competition and that may help firms to grow competitive advantage (Dickson, 1992). For example, in 2013 Audi established one of its R&D centers in China, with the primary objective of investigating local market and of identifying specific customer needs in the region. This allowed the company to enhance its agility, by featuring its cars with the requested attributes (Volkswagen, 2013).

Under this lens, neither previous market experience in the host country nor cultural proximity between host and home locations, are expected to play a fundamental role in the offshoring location selection. Aligned with Stahl and Tung (2015), a growing body of research has shown that cultural differences provide an attention stimulus to meticulously collect and sort information that has a positive impact on performance in the context of global sourcing. Thus, it is more likely that companies decide to explore new locations in order to study new customer segments and to increase their customer base abroad.

It is reasonable to assume that business services offshoring ventures aimed at enhancing the company effectiveness, are characterized by a high location novelty degree, since management is propense to exploring culturally different and dispersed offshoring destinations. Hence, this analysis posits as location-implication of the first hypothesis the following:

H1a: companies implementing service offshoring initiatives with the purpose of enhancing their effectiveness are propense to high location novelty

The second type of offshoring innovation, namely HBKA, covers instead the repositioning of knowledge-intensive activities designed to search new resources that allow the firm to upgrade the pool of capabilities accumulated in the home country (Ambos & Ambos, 2011; Cantwell & Mudambi, 2005; Chung & Alcacer, 2002; Florida, 1997; Le Bas & Sierra, 2002).

In particular, the emergence of talent seeking driver for service offshoring initiatives has produced the latest and most innovative evolution of offshoring, in which companies relocate more and more white-collar activities, such as R&D, product design and engineering services.

For example, in 1998 Intel established its first R&D center in China intending to focus on advanced research for its universal products (Reddy, 2011).

In particular, it emerges that globalization of economic activities has altered the rationale for foreign investment. According to Knight & Cavusgil (2004), in the relocation process of high-knowledge intense services, there is a growing number of agile firms, which are characterized by a positive predisposition to innovativeness. Therefore, companies appear to be confident enough to relocate key value-generating activities, even without possessing previous experiences in their transfer (Pisani & Ricart, 2008).

Hence, management that is driven by the willingness to enhance firm's effectiveness in delivering new and innovative products, is expected to undertake service offshoring ventures characterized by high functional novelty, due to the relocation of high-knowledge intensive business functions and to the neglect of firm's previous experience in the particular function.

Therefore, this analysis posits as functional-implication of the first hypothesis the following:

H1b: companies implementing service offshoring initiatives with the purpose of enhancing their effectiveness are propense to high functional novelty

3.2.2 Efficiency

The second performance dimension of the model, efficiency, is considered as the outcome of a subsidiary's programs in relation to the resources employed in it. Subsidiary's efficiency is commonly measured through profitability, either as a percentage of sales or as return on investment (Özsomer & Gençtürk , 2003). On this topic, numerous researchers state that efficiency-based motives still play an important role only in a portion of business services offshoring ventures, which must be distinguished from the branch of initiatives, that are designed to access to global talent pools. Lewin et al. (2007) posit that wage arbitrage and productivity enhancement play a fundamental role in the migration of fairly commoditized activities, such as IT, administrative and other back-office functions. Hahn et al. (2009) contribute to this body of literature, by finding evidence that firm-level and environmental-level learning produce a surge in company's tolerance of riskier target locations of service offshoring. According to the interpretation provided by Bahli and Rivard (2003) risk can be defined as "the uncertainty about negative outcomes" and can be associated with several factors like: transaction costs, switching costs, contract negotiations, litigation, reliability and service quality. Thus, for less complex functions, previous experience may corroborate firms' tolerance on the risk aspects associated with service offshoring (Hahn, Doh, & Bunyaratavej, 2009).

Hence, as far as regards the geographical dimension of offshoring, successful experiences can produce an uncertainty reduction in relation to a certain location, which may lead companies to pursue self-reproducing approaches to their offshore location decisions, for example by continuing to relocate in the same host countries or, at least, within the same cultural region (Hahn, Doh, & Bunyaratavej, 2009). Additionally, cultural similarities between a host and a home country provide many benefits to a firm. Indeed, a culturally closer location may allow companies to reduce transaction costs deriving from training and acquiring information.

Hence, managers aiming at delivering efficiency results to shareholders are expected to exploit location- or regional-specific knowledge and thus to implement service offshoring initiatives characterized by a low degree of location novelty. Therefore, the location-related implication for hypothesis 2 is the following:

H2a: companies implementing service offshoring initiatives with the purpose of enhancing their efficiency are propense to low location novelty

As argued before, cost and efficiency gains represent only a potential secondary benefit for innovation processes, as, in these cases, the access to knowledge is the key factor for the survival and growth of the company. Furthermore, it is important to point out that cost arbitrages for knowledge-intensive processes are really hard to maintain (Pisani & Ricart, 2008). Therefore, it is expected that, in the majority of the cases, managers try to augment efficiency when relocating low-knowledge functions or when previous experience, in the migration of the specific function, is effective in increasing productivity. Therefore, the implication of hypothesis 2 is the following:

H2b: companies implementing service offshoring initiatives with the purpose of enhancing their efficiency are propense to low functional novelty

3.2.3 Adaptability

Adaptability is the third performance dimension considered by the model. It represents the success of the subsidiary in reacting in time to the environmental changes and opportunities. In the paper by Özsoy and Gençtürk (2003) adaptability is tracked through the quota of successful new product developments in comparison with those of competitors, or through the percentage of sales registered for products released within the previous five years. As Ulrich et al. (1993) claim, the ability to learn is a fundamental trigger for firm's adaptation skills. The search for a correspondent dimension in the service offshoring field leaves more freedom with respect to the other two dimensions.

Service providing companies, which operate in sectors like: media, software and high-tech, insurance and banks, are among those that have been more affected by the continuous advancements and technology disruptions, which have taken place in the last decades.

Thus, there has been an increasing necessity for companies operating in these industries, to face always new challenges in order to remain competitive in the market (Fersht, 2012). As an example, it has been observed that IT progresses have promoted the phenomenon of globalization, by providing new opportunities to integrate less developed countries with the global economy. Yet, globalization also has increased competition among companies and has created new systems of connection, new methods of service assessment and new opportunities to capture competitive advantage (Rzepka & Hlawko, 2016). In general, adaptability could be interpreted as firms' ability to react to market changes and competition through the relocation of business services.

While effectiveness and efficiency performance dimensions were driven essentially by internal strategic considerations, accountability refers to external contingencies, i.e. the fact that firms invest overseas also to face the competitive pressures or as preemption to advance the firm's competitive position, in relation to the major market players (Knickerbocker, 1973).

In particular, this practice has become diffused in environments subject to rapid change and fast rules modifications, such as information-intensive industries, and has been referred to as "oligopolistic reaction".

A pioneer in the topic of oligopolistic reaction is Knickerbocker (1973), who explains that firms (followers) are likely to match the international moves of their rivals (leaders), by investing in the same country. For example, when, in the 1990s, US-based companies, such as General Electric and IBM, first began offshoring IT and business processes to India, they stimulated a “herd effect” in minor players in the industry, which allowed India to become a major destination for business services offshoring (Abramson & Rosenkopf, 1993).

Evidence is provided also from manufacturing firms; as Heinz & Delios (2002) claim, the quota of previous entries by firms in the same industry has a positive effect on the probability that a firm locates its plants in the very same country.

Rapid technological changes present a high degree of risk and uncertainty and, under some circumstances, the international moves of competitors highlight market attractiveness and convince managers of the legitimacy of the host location. In fact, greater general international/host nation experience may allow companies to deal effectively with the costs and uncertainties of operating in riskier markets, and accepting less familiar, and more competitive environments (Hahn, Doh, & Bunyaratavej, 2009). Therefore, companies are expected to follow other players in the industry, regardless of their potential lack of location experience. Therefore, the location-related implication for hypothesis 3 is the following:

H3a: companies implementing service offshoring initiatives with the purpose of enhancing their adaptability are propense to high location novelty

The same reasoning may be applied also to the functional dimension of service offshoring. As argued by Nachum and Zaheer (2005), imitative and mimetic patterns are more likely to emerge among knowledge-intensive industries.

Additionally, researchers observe that companies in the early phase of their offshoring journey have the propensity to neglect risk and to follow the broader competitive environment, notwithstanding with their own previous experiences. The awareness of other players’ success in creating competitive advantage abroad, may represent a strong incentive for companies. Therefore, may not rely on the companies’ own path dependencies and ignore their scarce experience in the relocation of a certain function.

Therefore, the function-related implication for hypothesis 3 is the following:

H3b: companies implementing service offshoring initiatives with the purpose of enhancing their adaptability are propense to high functional novelty

Table 2 summarizes the hypotheses of this study.

Summary of the relationships presented in the hypotheses

	<i>Location novelty</i>	<i>Functional novelty</i>
Effectiveness	+	+
Efficiency	-	-
Adaptability	+	+

Table 2: Relationships presented in the hypotheses

CHAPTER 4

EMPIRICAL ANALYSIS

4.1 Sample Description

4.1.1 ORN Database Description

Service Offshoring phenomenon has been analyzed by the Offshoring Research Network (ORN) project, which is an international research network, started by the Center for International Business Education and Research (CIBER) of Duke University (U.S.) in 2004. During the first two years, the project was concentrated on the offshoring ventures of U.S.-based firms. In 2006, the survey was widened to include six European Universities. Today, ORN relies upon a network of thirteen associate universities and partner business schools, situated in: Australia, Belgium, Brazil, China, Denmark, Germany, France, Spain, Japan, Korea, the Netherlands, the United Kingdom, and Italy (whose leading partner is the Department of Management, Economics and Industrial Engineering of Politecnico di Milano). Every member supports the database through the collection and sharing of data regarding the offshoring ventures outward its own country. Pisani & Ricart (2008) state that ORN stands out for two major reasons. The first one is that it is administered online and thus allows a high degree of comparability among the examinations collected in different nations. The second reason is that it is a fine-grained analysis based on single OS (Offshoring of Services) ventures, rather than on the whole company's OS experience.

The survey was conducted across a noteworthy range of industries, which allows for observations of trends and of any heterogeneity of offshoring. In terms of participants' industry, 23% of respondents belongs to the Finance and Insurance sector, 12% to Software,

9% to High Tech and Telecom, 8% to Professional and technical services, 12% to Manufacturing and the remaining 27% is classified as Other.

ORN study targets small, medium and large companies, be they currently offshoring, considering to, or not planning to start OS.

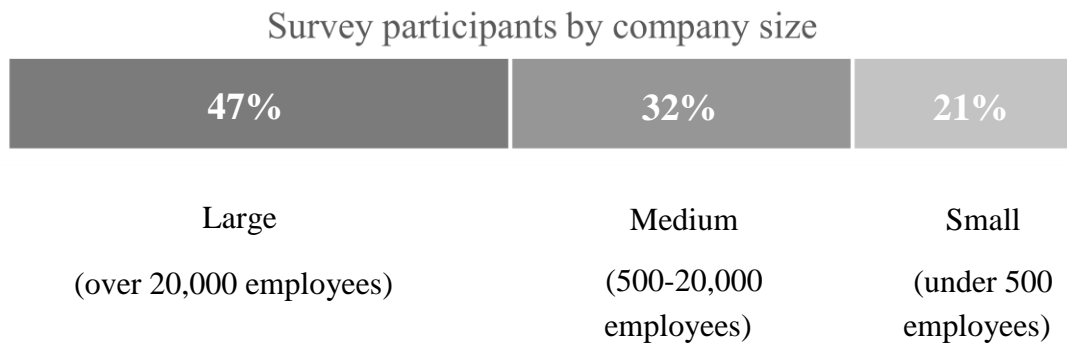


Figure 4: Survey participants by company size (The Conference Board, 2009)

The survey records global sourcing strategies, drivers, geographic aspects, risks, entry mode, outcome and future plans for all industries and business functions. The latest release of the ORN database dates to 2011 and encompasses 5619 observations.

The survey covers about 45 years of implementations, which are not distributed uniformly. In particular, as shown in the graph below, there is a peak corresponding to 2005.

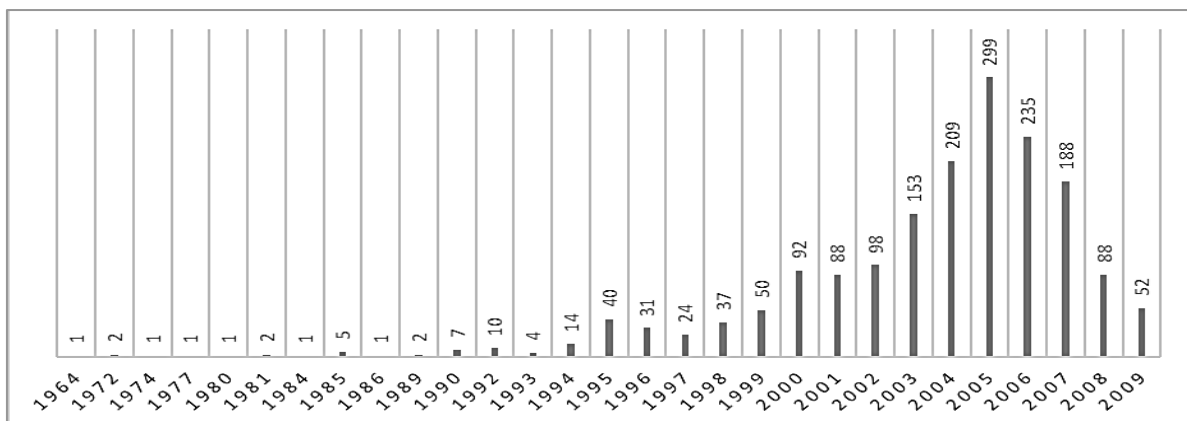


Figure 5: Survey participants by year of implementation (The Conference Board, 2009)

The database is heterogenous, indeed it encompasses a significant amount of different home countries, which happen to be ORN partners like US, Japan, China, UK and others. According to World Investment Report, in 2013 they were listed among the top 20 investor economies.

In particular, 44% of participating companies are from North America, 35% from Europe, 15% from Australia and 6% are from other parts of the world (e.g. Asia and Latin America).

Survey participants by company headquarters

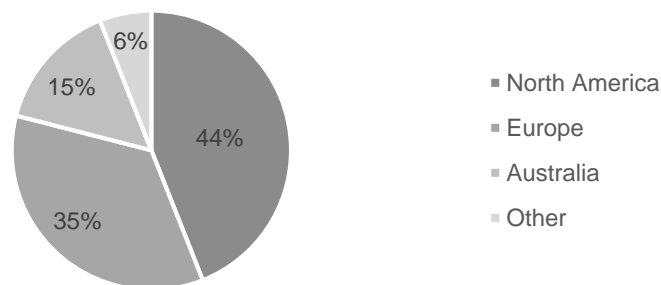


Figure 6: Survey participants by company headquarters (The Conference Board, 2009)

Regarding destinations, the global sourcing movements are mostly directed towards English-speaking countries and emerging countries like China and India, yet there are also other regions, such as Latin America, which have become more fascinating lately.

Distribution of service providers by HQ region

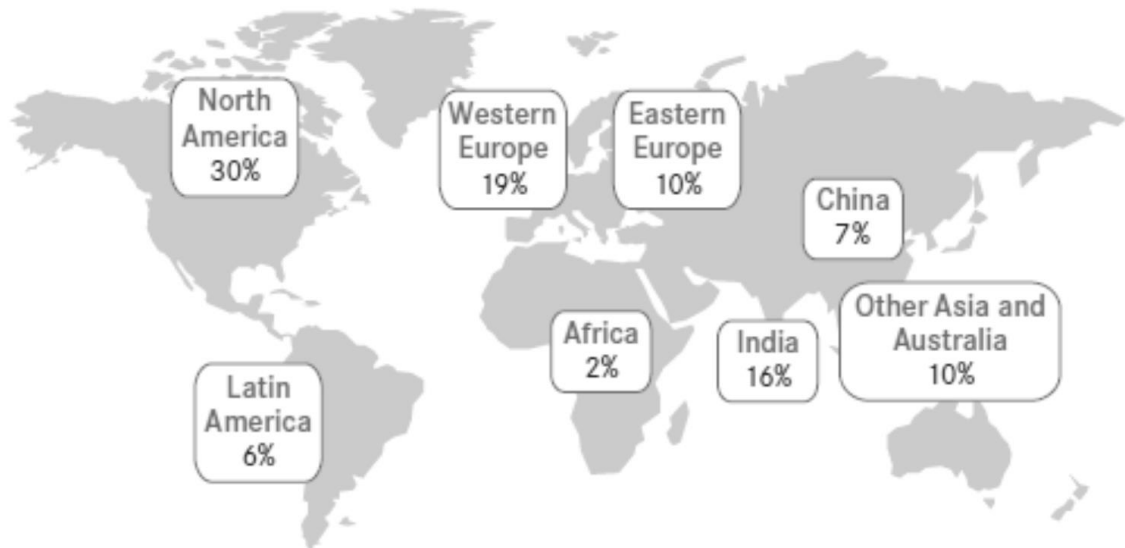


Figure 7: Service providers by HQ region (The Conference Board, 2009)

The database is comprehensive and allows scholars to observe companies' performances as they offshore all types of business processes or functions. Users of the ORN survey can track the evolution of offshoring practices within nine main areas:

1. Overall offshoring status (currently offshoring, considering offshoring, not considering offshoring)
2. Adoption of corporate and functional strategies guiding offshoring decisions
3. Functions offshored
4. Strategic drivers of offshoring
5. Perceived risks
6. Choice of offshore location and rationale for this choice
7. Type of service delivery model used (captive, third party, hybrid)
8. Performance metrics
9. Future offshoring plans (18-36 months out)

Functions offshored include contact centers, finance and accounting processes, HR, legal services, other administrative back-office services, and all innovation activities, such as R&D, product development, engineering services, and software development.

The ORN database focuses on specific offshore projects, rather than on a company's general experience with service offshoring. This means that same company's offshoring implementations are identified through launch year and are treated as separate observations. The survey framework allows for an analysis of offshoring dynamics across various administrative and technical functions located in an extended range of countries or regions in the world, as well as across industries, sizes of the company, and types of delivery mode (Captive, third party, or hybrid).

In particular, regarding delivery mode, data suggest that US companies are more likely to issue offshoring-outsourcing initiatives, whereas European ones are more likely to adopt captive offshoring ventures. This is probably due to the fact that European countries experience more rigidity, in terms of employment legislation, compared to US, where companies typically enjoy a higher elasticity.

4.2 Variables

4.2.1 Dependent variables

The dependent variables used to test the hypothesis are two, namely *location novelty* and *functional novelty*, and they are built on the basis of the answers to the ORN questionnaire.

It is important to remark, that to avoid potential increase in complexity and to have a complete measure of experience, it has been decided to exclude from the analysis all observations that constitute the absolute first offshoring experience of a company. Otherwise, it would have been difficult to assess the experiential component of the dependent variable. Thus, this work accounts only for initiatives that represent the second, or subsequent, offshoring implementation of the company.

4.2.1.1 Location Novelty

To build *location novelty*, the topic of location choices was assessed adopting a perspective that is not commonly used in the literature. In particular, the concept of location novelty affects the selection of the target country in which the firm aspires to develop its operations.

Barkema and Shvyrykov (2007) launched the idea of novelty as a measure of how much the location of an international foreign direct investment is new, compared with the company's precedent investment experiences, and as a level of how deep cultural differences are between the company's home country and the offshoring destination.

Indeed, investing in foreign countries permits to take in significant country knowledge regarding local culture, organizations and competitive setting (Barkema & Shvyrykov, 2007). Therefore, experience simplifies company's subsequent investments in the same country, by decreasing the level of uncertainty and risk associated with the future internationalization plans (Delios & Beamish, 2001). Additionally, by implementing a service offshoring

initiative in a country, a firm can build numerous connections with service providers, customers and potential partners (Johanson & Vahlne, 2009). The knowledge absorbed through this network could be exploited by the company to capture further market opportunities and, thus, the firm may decide to perform further ventures in the same country. Therefore, previous experience in a foreign market immunizes the firm from liability of foreignness and reduces associated psychic distance (Johanson & Vahlne, 2009).

If, instead, a company selects, as offshoring destination, a country in which it does not have previous experiences, the location novelty increases, and it is necessary to make a distinction among the different destinations selected.

To quantify the degree of knowledge related to these implementations, it is useful to rely on the concept of cultural distance, a topic that is extensively discussed in the International business literature. Previous studies have employed the concept of “national culture” to express the amount of distance between the origin and the destination country. By national culture, is employed to account for all the differences between the two countries as of rules, habits, business practices and organizational culture. Moreover, there are differences, such as language, religion, educational levels, industrial progress and political structure, which contribute to defining the overall perceived distance of a country (Dow, 2012; Kogut & Singh, 1988).

Researchers have concentrated on the development of a pattern effective in quantifying these cultural differences among countries. Back to the 1950s, Beckerman (1956) was a pioneer in the field of cultural distance, subsequently Johanson and Vahlne (1977) were among the major contributors with their concept of *psychic distance* and, about ten years later, Kogut and Singh (1988) shaped their own national culture distance scale, by combining the four cultural dimensions of Hofstede (1980) in a single one.

Nevertheless, provided that service offshoring is a recent phenomenon, it seems appropriate to rely on a more recent approach, specifically the one elaborated by Ronen and Shenkar (2017), according to which, culture is an articulated product that encompasses economic, geographic, religious and historical aspects, which is transmitted from a generation to the next one (Ronen & Shenkar, 2013).

Ronen and Shenkar (2017) developed a tree-like world map (figure below), which groups world countries on the basis of certain cultural characteristics. Specifically, the cultural factors taken in consideration are: religion, language and geography, but not political or institutional aspects. These aspects describe the ecological and sociopolitical features of a nation and, hence, are crucial in shaping its cultural character (Ronen & Shenkar, 2017).

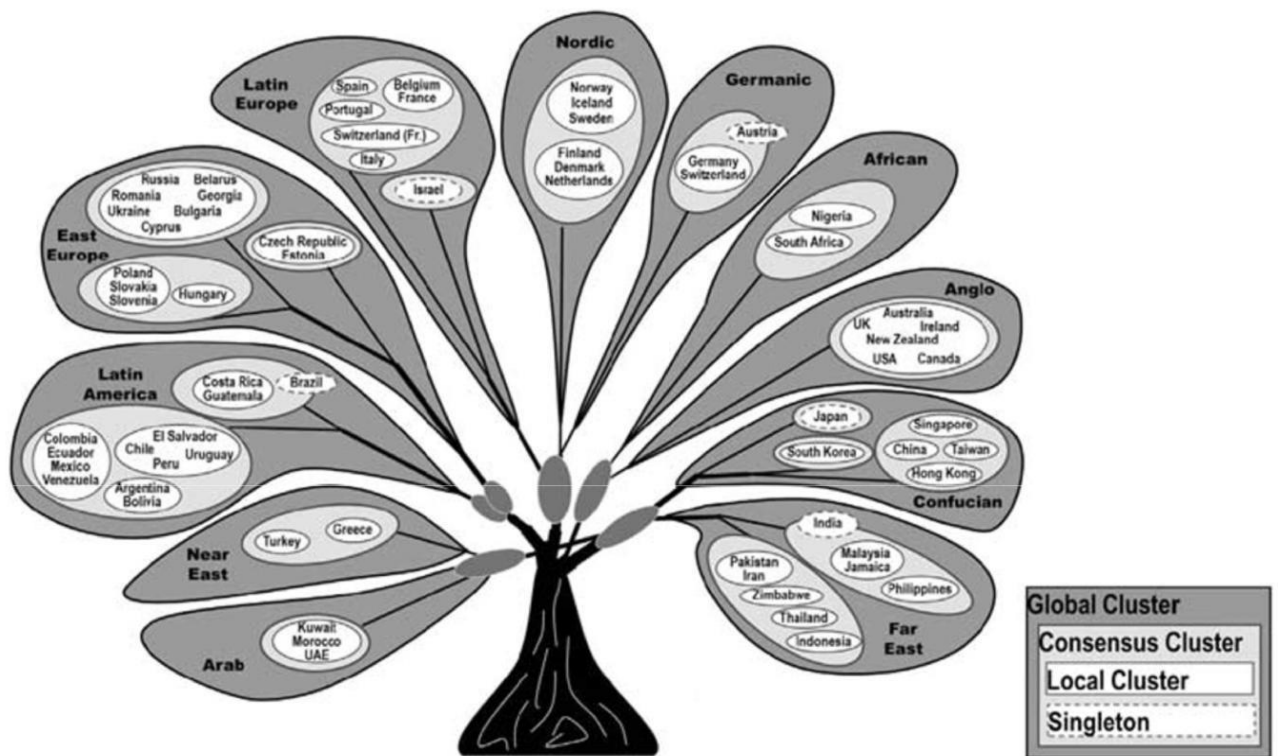


Figure 8: Tree-like map of Cultural Clusters (Ronen & Shenkar, 2017)

In the framework four types of clustering are present, from the most comprehensive to the most exclusive: global, consensus, local and singleton clusters. In this analysis it has been decided to use the global classification, in order not to make the classification of location novelty too complex. Countries within the same cluster are culturally compatible in terms of norms, regulations and cognitive commonalities, therefore they are likely to benefit from uncertainty and opportunism reduction in transactions, when compared to cross-cluster initiatives (Ronen & Shenkar, 2017).

Accordingly, the scale of location novelty that is employed in this analysis takes into consideration two parameters: (i) whether the firm has previous experience in the same location, and, (ii) whether home and destination country share the same cultural block.

The lowest level of novelty (location novelty=1) is attributed to the case in which a company is performing a service offshoring venture in a country belonging to its very same cultural block and in which it has had previous offshoring experiences.

To select the second lowest level of novelty, it is necessary to dig again in the previous literature.

Erramili (1991) posits that, uncertainty in international markets can be reduced, by increasing the effective operations conducted within its country. Additionally, Chakrabarti and Mitchell (2011) state that although firms usually avoid distant foreign destinations, if they have previous experience in remote countries, they are more likely to select them even for consequent implementations. On this basis, the second lowest level of novelty (location novelty=2), includes all those service offshoring implementations in countries in which the company has had previous experiences, but which do not belong to its cultural block.

Following this reasoning, the third level of location novelty (location novelty=3) covers all the service offshoring ventures implemented in a country where the company has no previous experience, but which shares with home the cultural block.

In the end, the highest level of novelty considered (location novelty=4) is attributed to all the cases in which the company neither has experience in the destination country, nor belongs to its same cultural block.

The reasoning is conceptualized in the figure below.

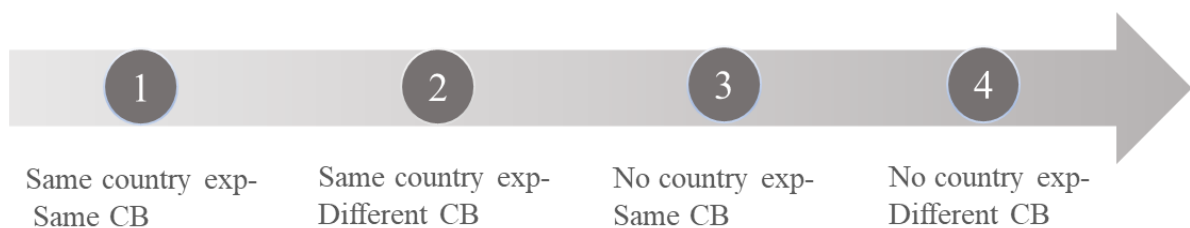


Figure 9: Location Novelty explained

4.2.1.2 Functional Novelty

A similar interpretation has been followed to build the second dependent variable, namely *functional* novelty. The concept of functional novelty affects the specific function that has been relocated overseas.

On this regard, past experience with the same function is believed to mitigate the level of novelty faced by the company, as it can reduce firm's unfamiliarity with the relocation of that specific function. Nevertheless, as companies are starting to offshore increasingly higher-value-added knowledge intensive processes (Lewin, Massini, & Peeters, 2009), it appears crucial to discriminate, same-experience offshoring initiatives, also on the basis of the nature of the function offshored.

Previous research is helpful in this distinction, identifying a category of superior functions, named high-value added business services. Activities belonging to this category are generally non-repetitive and imply higher transaction costs than low-value added functions, due to higher knowledge leakages and misappropriation risks.

In order to build this dependent variable in a homogeneous way with location novelty, it has been decided to classify functions in two macro-categories: *high-value* added and *low-value* added, following the considerations made by Youngdahl et al. (2010).

The table below represents the classification of activities.

Classification of Offshored Functions	
<i>High-Value Added</i> Functions	<i>Low-Value Added</i> Functions
Product Design Research and Development Engineering Services	Call Center and Customer Contact Finance/Accounting Marketing and Sales IT Infrastructure Human Resources Supply Chain and Facilities

The lowest level of novelty (functional novelty=1) is attributed to initiatives in which the relocated function is low-value added and the company has already offshored it in the past.

The second lowest level of novelty (functional novelty=2) covers the implementations in which the relocated function is high-value added and has already been offshored in the past.

The remaining two levels encompass initiatives in which the company does not have previous experience in offshoring the very same function. Again, they are discriminated on the bases of their complexity into low-value-added function implementations (functional novelty=3) and high-value-added function implementations (functional novelty=4).



Figure 10: Functional Novelty explained

4.2.2 Explanatory variables

In order to assess the relationship between the different levels of novelty and the different performance dimensions, it is necessary to operationalize effectiveness, efficiency and adaptability, with the drivers present in the ORN Database. Specifically, for the purpose of this study, it has been decided to attribute to each of the dimensions a single driver, among those provided by the Offshoring Research Network.

The survey assesses the influence (on a scale from 1 to 5) of each offshoring driver on the single offshoring implementation on the basis of companies' answers to the following question:

“What is the importance of each of the following drivers in considering offshoring this function?” (Likert scale from 1-strongly disagree to 5-strongly agree)

4.2.2.1 *Effectiveness in terms of Speed to Market Driver*

It appears that the speed to market driver is the most suitable measure to evaluate the dimension of effectiveness in offshoring ventures.

Indeed, it encompasses both the aim to increase presence in the market and the search for a competitive advantage, by reducing the time needed to deliver innovative products to the customers. Speed to market can be accelerated by upgrading firm's explorative capabilities to access qualified talents, such as engineers, researchers and software development. Nonetheless, in many cases, it is not only about the realization of new products, but also about the adaptation of existing ones to local tastes and necessities. Hence, the proxy employed for the variable *Effectiveness* is the evaluation on the Likert Scale (from 1 to 5) provided by respondents for the driver “Speed to Market” in the ORN survey.

4.2.2.2 *Efficiency and Efficiency Driver*

Efficiency driver accounts for managerial purpose to realize cost reductions and to enhance firm's productivity. Hence, the proxy employed for the variable *Efficiency* is the evaluation on the Likert Scale (1 to 5) provided by respondents for the driver "Efficiency" in the ORN survey.

4.2.2.3 Adaptability in terms of Accepted Industry Practice Driver

This study has interpreted companies' need for adaptability as catalyst for the imitative and "follow the herd" behaviours that take place within an industry. Therefore, it appears reasonable to relate the adaptability dimension to the accepted industry practice driver provided by the ORN survey.

Specifically, accepted industry practice driver represents exactly the managerial intentionality to arrange offshoring initiatives with the purpose of adapting to the practices that emerge within the industry. Hence, the proxy employed for the variable *Adaptability* is the evaluation on the Likert Scale (1 to 5) provided by respondents for the driver "Accepted Industry Practice" in the ORN survey.

Table 3 summarizes the relationships in the hypotheses, operationalized on the bases of the operationalization of the three performance dimensions.

Summary of the relationships presented in the hypotheses, operationalized with the selected drivers				
	<i>Proxy</i>	<i>Measure</i>	<i>Location novelty</i>	<i>Functional novelty</i>
Effectiveness	<i>Speed to Market driver</i>	Likert scale from 1 to 5	+	+
Efficiency	<i>Efficiency driver</i>	Likert scale from 1 to 5	-	-
Adaptability	<i>Accepted Industry Practice driver</i>	Likert scale from 1 to 5	+	+

Table 3: Operationalization of the hypotheses

4.2.3 Control variables

The analysis is featured with some control variables, which can be helpful in explaining companies' propensity to novelty. Control variables have been classified in four categories, based upon their nature.

4.3.2.1 Company-level control variables

Company-level control variables are intended to explain the dependent variable on the basis of features which characterize the offshoring firm.

A first control variable is *Company Size*, which is measured with the number of the employees in the offshoring company. Size is proposed here as a proxy of company's resources; therefore, it is expected that larger firms can count on broader financial resources, which can be helpful to carry out novel and riskier offshoring initiatives.

Specifically, a set of three dummy variables classifies the initiatives on the basis of firm's size and "Small size" is taken as benchmark.

Dummy	Computation
Small Company Size	Assumes value 1 if offshorer's company size is small, 0 otherwise
Medium Company Size	Assumes value 1 if offshorer's company size is medium, 0 otherwise
Large Company Size	Assumes value 1 if offshorer's company size is large, 0 otherwise

Table 4: Company Size operationalization

Given that this analysis has its conceptual grounds on the role of experience, a third company-level control variable is the *Company Offshoring Experience*. Experience is

operationalized through the number of past offshoring implementations of the company. The table below shows the related variable.

Discrete Variable	Computation
Company Experience	Assumes value 1 to 49, based on the number of past service offshoring initiatives implemented by the same company

Table 5: Company Experience operationalization

4.3.2.2 Initiative-level control variables:

The first control variable in this case is related to modularity. Indeed, it is widely accepted that the disaggregation or slicing of a function in smaller modules, may be an incentive to relocation, as it may mitigate the risks and costs faced in the relocation. Hence, a dummy variable is built, in order to take into consideration whether the company has offshored the whole function or a project. The variable *Fineslicing* assumes value 1 if the implementation was made through fineslicing and 0 if, instead, the entire process was offshored.

The second initiative-level control variable has to do with the selected entry mode. The survey keeps track of different entry modes, such as captive, outsourcing, joint venture ecc, however, for some of them data provided is not enough to perform an analysis. Hence, this study focuses on entry mode with a dummy variable named *Outsourcing*, which has value 1 if the adopted service delivery mode was offshore outsourcing and 0 if the adopted service delivery mode was captive offshoring.

The table below shows the initiative-level control variables.

Dummy	Computation
Fineslicing	Assumes value 1 if a single module of the business process is offshored, 0 if the entire process was offshored
Outsourcing	Assumes value 1 if selected entry mode is offshoring outsourcing, 0 if the selected entry mode is captive offshoring

Table 6: Initiative-level control variables operationalized

4.3.2.3 Country-level control variables

Following Elia et al. (2018), this study keeps under control aspects related to the host market and to its institutional context, by employing a Factor Analysis based on items provided by the World Competitiveness Yearbook (WCY) and the Worldwide Governance Indicators (WGI).

The first variable employed is *Host Country Political stability*, controlling for this aspect is relevant, since it might influence firm's location choices as well as the level of location novelty. For instance, companies might be propense to relocate in a new country, if it is safe and politically stable. This variable is the result of the combination of the following items:

- Political stability and absence of violence/terrorism
- Government effectiveness
- Regulatory quality
- Rule of law
- Control of corruption

Table 21 in Appendix provides further details.

A second variable is *Host market attractiveness*, which represents the potential market growth of the host countries. Indeed, the market potential may influence the location choice of companies offshoring in order to acquire more knowledge on host country's customer.

This variable is the result of the combination of the following items:

- Gross domestic product
- Gross fixed capital formation
- Direct investment inflows
- Government consumption expenditure
- Household consumption expenditure

Table 21 in Appendix provides further details.

The third country-level control variable is *high-value added resources* and represents a measure of the pool of qualified works available in the host location, which is important due to the nature of the activities offshored. This variable is the result of the combination of the following items:

- Information technology skills
- Qualified engineers
- Skilled labor

The table 21 in appendix provides further details.

The fourth country-level control variable is *low labor cost*. This variable is the result of the combination of the following items:

- Remuneration call center agent
- Remuneration manufacturing worker
- Remuneration department head
- Remuneration personal assistant

The table in appendix provides further details.

A fifth country-level control variable is *Host Country Region*, which takes into consideration the region to which firm's home country belongs. It appears useful to discriminate, due to the fact that initiatives are not homogeneously distributed among the different host regions.

Specifically, the table below shows the set of ten dummy variables that was built to keep track of the different targeted areas.

Dummy	Computation
Africa	Assumes value 1 if host region is Africa, 0 otherwise
Asia	Assumes value 1 if host region is Asia, 0 otherwise
Australia	Assumes value 1 if host region is Australia, 0 otherwise
China	Assumes value 1 if host region is China, 0 otherwise
Eastern Europe	Assumes value 1 if host region is Eastern Europe, 0 otherwise
India	Assumes value 1 if host region is India, 0 otherwise
Latin	Assumes value 1 if host region is Latin America, 0 otherwise
Middle East	Assumes value 1 if host region is Middle East, 0 otherwise
US	Assumes value 1 if host region is United States, 0 otherwise
Western Europe	Assumes value 1 if host region is Western Europe, 0 otherwise

Table 7: Host Country Region variables operationalized

4.3.2.4 Industry-level control-variables

Companies that answered to the survey belong to a wide and diversified range of industries.

On this regard, previous research has demonstrated that, controlling for company's industry, is appropriate, since it might affect the internationalization strategies as well as the location choices. Specifically, it emerges that, compared to manufacturing companies, firms operating in dynamic high-tech environments tend to have a global point of view, while planning their internationalization strategies (Dowling, Liesch, Flint, & As-Saber, 2000) (Haahti, Hall, & Donckels, 1998).

Therefore, initiatives have been classified on the basis of the type of industry, in which, the companies that have implemented them, operate. Industries clustering is based on the 2008 Eurostat-OECD classification. The table below shows the set of four dummies, which is employed to group observations on the basis of the technology intensity of the related industries. "OECD Medium High Tech" is taken as benchmark.

Dummy	Computation
High Tech Industry	Assumes value 1 if offshorer's industry is high technology, 0 otherwise
Medium High Tech Industry	Assumes value 1 if offshorer's industry is medium-high technology, 0 otherwise
Medium Low Tech Industry	Assumes value 1 if offshorer's industry is medium-low technology, 0 otherwise
Low Tech Industry	Assumes value 1 if offshorer's industry is low technology, 0 otherwise

The table 20 in appendix provides further details on the industries that belong to each category.

4.3 Econometric model

Since the dependent variables are of a rank ordered type, the most suitable way to assess the hypotheses is to implement an ordered probit model .

Moreover, provided that the nature of offshoring implementations does not allow to ignore the correlations between location and functional choices, it appears that the best way to account for interdependencies is through a Bivariate ordered probit.

The Bivariate ordered probit is a generalization of the logistic regression Probit Model that allows to consider simultaneously two dependent variables (Cappellari & Jenkins, 2003).

Hence, under all the control variables considered, the objective of the empirical analysis is to assess which is the position of each of the offshoring implementations on the bidimensional matrix below.

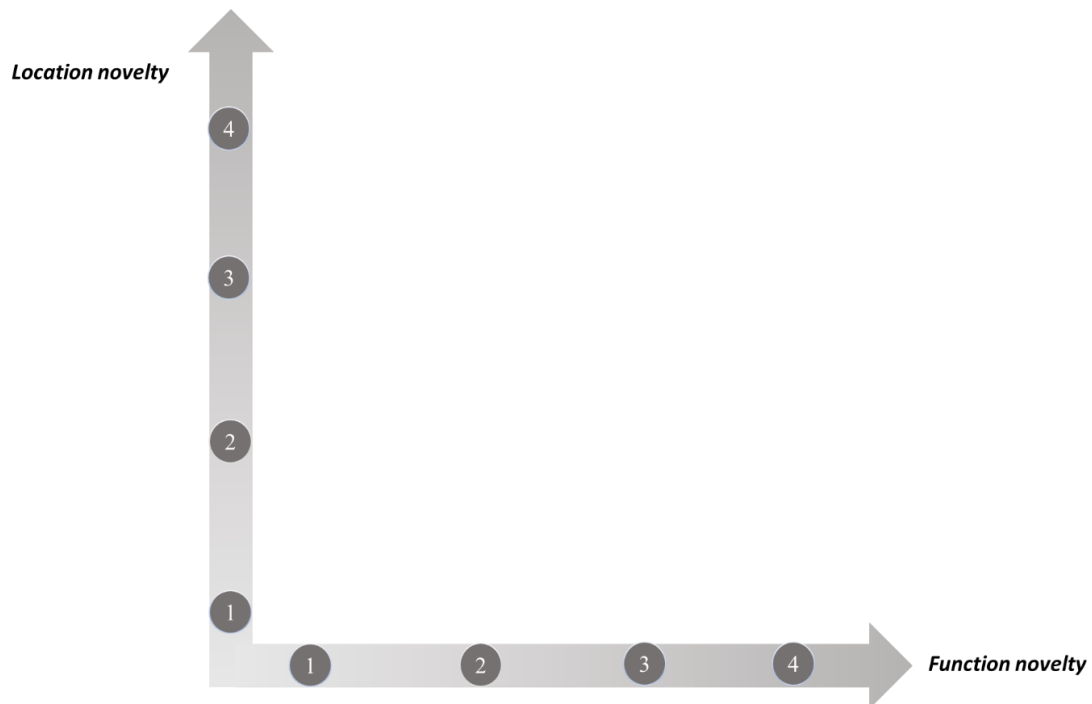


Figure 11: Representation of the econometric model

The equation of the model is the following:

$$y_i = x_i \beta + \varepsilon_i$$

where y_i represents the vector of dependent variables for each i implementation:

$$y_i = \begin{pmatrix} \text{location novelty } i \\ \text{functional novelty } i \end{pmatrix}$$

where for each of the terms in the vector:

$$y_i = \begin{cases} y_i = 1 \\ y_i = 2 \\ y_i = 3 \\ y_i = 4 \end{cases}$$

x_i is the vector of the explanatory and control variables for observation i , β is the coefficient of each independent variable and ε_i represents the normally distributed error.

The equation of the model is:

$$y_i = \beta_0 + \beta_1 \text{Effectiveness}_i + \beta_2 \text{Efficiency}_i + \beta_3 \text{Adaptability}_i + \beta_4 \text{Controls}_i + \varepsilon_i$$

Where the variable Controls_i includes company-level, country-level, industry-level and initiative-level control variables.

4.4 Descriptive statistics

The unit of this analysis is the single observation and this study relies on a sample of 277 observations.

The following tables and graphs are intended to describe the sample on which the analysis is performed.

Company Size	Freq.	Percent
Small (<500)	35	12,64%
Medium (>500; <20,000)	113	40,79%
Large (>20,000)	149	53,79%
Total	277	100,00%

Table 8: Company Size distribution within the sample

Host Regions	Freq.	Percent
Africa	1	0,36%
Asia	49	17,69%
Australia	4	1,44%
China	29	10,47%
East Europe	27	9,75%
India	101	36,46%
Latin	27	9,75%
Middle East	3	1,08%
US	16	5,78%
West	20	7,22%
Total	277	100,00%

Table 9: Host Regions distribution within the sample

Below is represented the distribution among the different degrees of location and functional novelty.

<i>Location Novelty</i>	Freq.	Percent
1	73	26,35%
2	69	24,91%
3	80	28,88%
4	55	19,86%
Total	277	100,00%

Table 10: Distribution of Location Novelty

The weighted average location novelty is 2.4224. So, it lies between implementations in same countries but different cultural blocks and implementations in new countries but in the same cultural block.

<i>Functional Novelty</i>	Freq.	Percent
1	75	27,08%
2	71	25,63%
3	87	31,41%
4	44	15,88%
Total	277	100,00%

Table 11: Distribution of Functional Novelty

The weighted average functional novelty is 2.3610. Hence, it lies between relocations of same high-value added functions and new low-value added functions.

Specifically, from a correlation between the two dependent variables, it emerges a slightly negative correspondence (coeff. = -0.3550), which may be an indicator of the fact that companies try not to face too much uncertainty with the same service offshoring implementation and to balance exploitation and exploration.

Additionally, an analysis on the three explanatory variables was made.

The graphs below show the occurrence of the different intensities of each explanatory driver, based on the Likert Scale (1-not important at all; 5-very important) and assessed on the subsample utilized in this examination.

In particular it emerges that the three drivers played a significant role in more than half of the implementations, with average intensities of: 3.3/5 for speed to market, 3.26/5 for efficiency and 3.10/5 for accepted industry practice.



Figure 12: Relevance of Accepted Industry practice driver

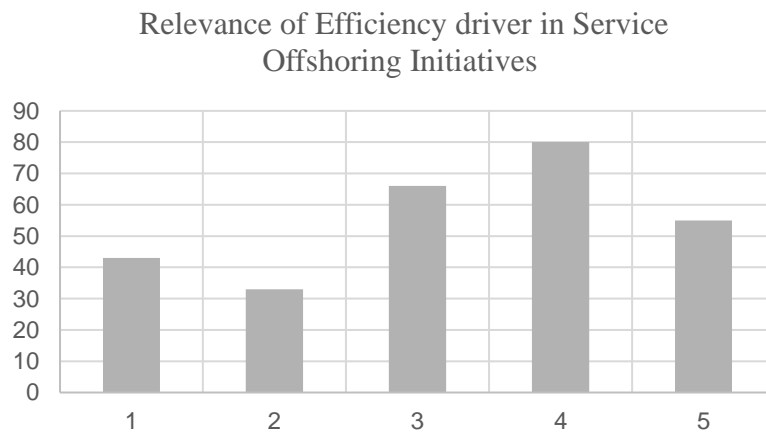


Figure 13: Relevance of Efficiency driver

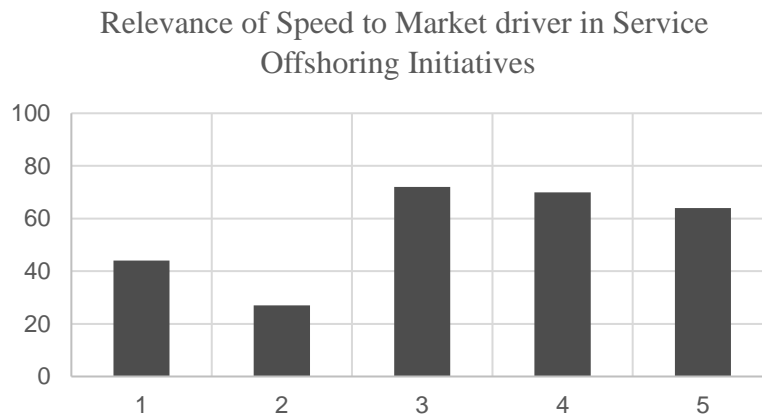


Figure 14: Relevance of Speed to Market driver

Moreover, it seemed helpful to assess the drivers' intensity for the different degrees of functional and location novelty. For instance, these analyses, although not detailed, provide an insight of the potential relationships that will emerge with the econometric model. Computations were performed through pivotal tables and charts on Excel.

It appears that there is linear correlation between the speed to market driver and the degree of location novelty adopted by the company. Specifically, as the intensity of the speed to market increases, firms are more propense to face higher location novelty. This result is in accordance with the hypothesis H1a formulated in the previous section.

In the second case, data provided in the table do not prove a linear pattern of the intensity of the driver, in relation to different location novelty degrees. Nevertheless, it appears that the peak of intensity of the efficiency driver is located in a high location novelty area. In this case, the result does not corroborate hypothesis H2a.

As far as regard accepted industry practice driver, the results show that highest intensities can be found in correspondence of high location novelty, thus it seems that hypothesis H3a is coherent with this finding.

Pivotal analyses with *Location novelty*

Location Novelty	Average Speed to Market driver
1	2,964358974
2	2,97460177
3	3,392405063
4	3,270833333

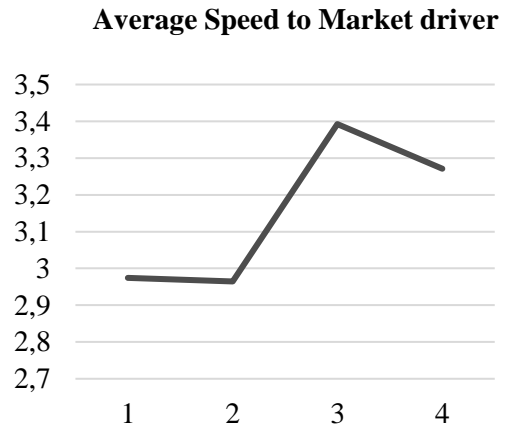


Table 12: : Average Speed to Market driver in relationship with Location Novelty levels

Location Novelty	Average Efficiency driver
1	3,408805031
2	3,307017544
3	3,469879518
4	3,253472222



Table 13: : Average Efficiency driver in relationship with Location Novelty levels

Location Novelty	Average Accepted Industry Practice driver
1	2,955696203
2	2,789473684
3	3,148148148
4	2,979166667

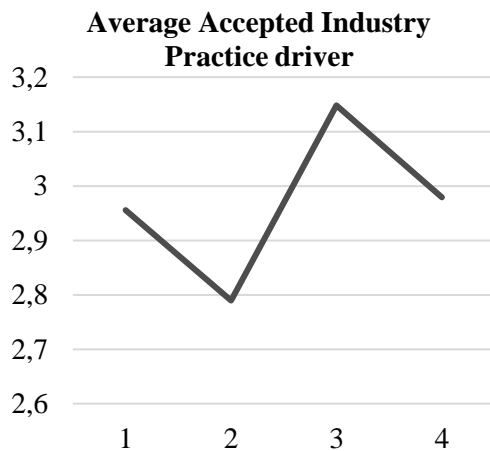


Table 14: : Average Accepted Industry Practice driver in relationship with Location Novelty degrees

Regarding the second the relationship between functional novelty and speed to market driver, the findings there is not a deep concentration of high intensity neither in the low nor in the high levels of functional novelty. Hence, this result is not useful to assess the likelihood of hypothesis H1b.

In the second case, instead, it emerges that the peak of efficiency driver intensity is located between functional novelty levels 1 and 2. This result is coherent with the hypothesis H2b that efficiency enhancing purposes are likely to convince management to rely on exploitation, rather than exploration.

From the third analysis, it appears that accepted industry practice driver reaches its highest peaks in correspondence of low functional novelties. Therefore, it looks as if this finding corroborates the opposite of hypothesis H3b, and, thus, managers intending to adapt to competitors' behaviors seem more propense to relocate functions, that they have already offshored in the past.

Pivotal analyses with *Functional* novelty

Functional Novelty	Average Speed to Market driver
1	3,252918828
2	3,833333333
3	2,751020408
4	3,372549020

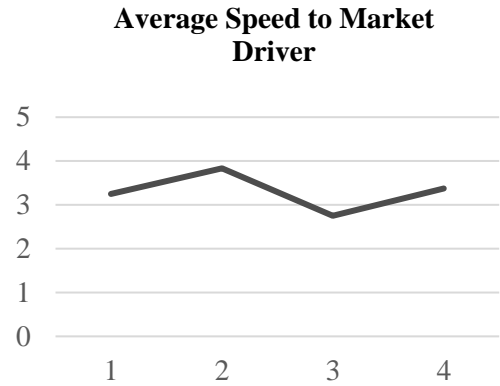


Table 15: Average Speed to Market driver in relationship with Functional Novelty levels

Functional Novelty	Average Efficiency driver
1	3,325581395
2	3,381443299
3	3,337301587
4	3,274509804

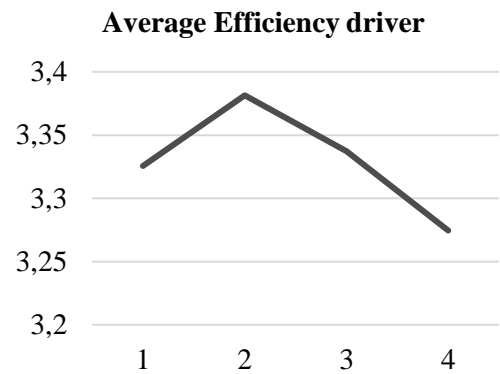


Table 16: Average Efficiency driver in relationship with Functional Novelty levels

Functional Novelty	Average Accepted Industry Practice driver
1	3,135658915
2	2,802083333
3	2,911646586
4	2,764705882

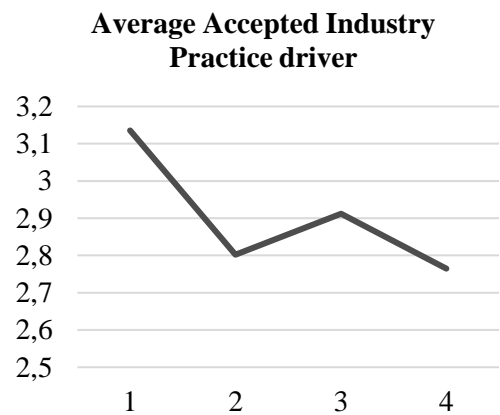


Table 17: Average Accepted Industry Practice driver in relationship with Functional Novelty

CHAPTER 5

FINDINGS AND DISCUSSION

Table 18 in the next page provides the correlation matrix of the explanatory and control variables employed in the regression. From the correlation matrix, it seems that the variables are not affected by multicollinearity problems.

	Effect.	Effc.	Adapt.	Political Stability	Market Attractiveness	High Value Added Resources	Low Labor Cost	Company Experience	Franchising	Outsourcing	Large Company Size	Medium Company Size	High Tech Industry	Low Tech Industry	Medium Low Tech Industry	Africa	Asia	China	Eastern Europe	India	Latin America	Middle East	US	Western Europe
Effect.	1	0.12741	0.125298	0.081329051	0.083488	-0.071724927	0.007201357	0.030040111	0.068033715	0.095437097	-0.1925667	0.04837363	-0.012614921	-0.118855534	-0.0077814355	-0.028488896	-0.0616	0.075	0.018887014	-0.03988	-0.044590811	0.014639202	0.07129	0.064194063
Effc.	0.127419	1	0.105475	0.07871628	-0.049374	-0.013398795	0.117591492	0.28888394	-0.0017574	-0.099021246	0.11163562	-0.0253346	-0.166350644	-0.080627086	0.144307006	0.003671021	0.07363	-0.0455	-0.088029298	-0.11947	0.107138033	0.058058503	0.03104	0.113889565
Adapt.	0.1252983	0.10548	1	-0.016079721	0.004292	0.145497758	-0.130524009	0.042672939	-0.00711509	0.047723638	0.18617781	-0.0653613	0.133953185	-0.0663149611	-0.153084459	-0.178069266	0.09025	-0.0116	-0.099801623	0.085501	-0.02767135	0.011879145	0.01658	-0.07771697
Political Stability	0.0813291	0.078716	-0.01608	1	0.0881	-0.423600978	0.330888761	0.257490732	-0.09424606	-0.25770719	-0.1189947	0.01636836	-0.16220337	-0.029499228	0.119592671	0.070030756	-0.031	0.0158	0.2300106941	-0.5073	-0.002797749	0.030511168	0.37091	0.47290768
Market Attractiveness	0.0834883	-0.049374	0.004292	0.10880989	1	-0.265262911	-0.024457959	-0.0663884	-0.02521466	-0.071833931	-0.0644344	-0.0114412	0.04177558	0.0030153381	-0.031398615	-0.073325226	-0.2518	0.5778	-0.174780236	-0.09112	-0.092191818	-0.027734502	0.39895	-0.032920789
High Value Added	-0.071725	-0.0134	0.145498	-0.423600978	-0.265263	1	-0.510073077	-0.04922044	0.07550404	0.150388621	0.22564852	0.0085094	0.121834109	-0.00315219	-0.137028299	-0.20240871	0.02452	-0.5222	-0.329679584	0.809301	-0.286066929	-0.029405346	-0.03503	-0.178256003
Low Labor Cost	0.0072014	0.117591	-0.13052	0.330888761	-0.024458	-0.510073077	1	0.165936814	-0.02369939	-0.04186094	-0.1318111	-0.0048278	-0.139538608	-0.035767626	0.151534039	0.092359081	0.11609	-0.0590	-0.006859618	-0.6199	0.532754665	0.045625254	0.08006	0.554289365
Company Experience	0.0300401	0.28888394	0.042672939	0.257490732	-0.066388	0.049220444	0.165936814	1	0.061179233	-0.130481633	0.1864259	0.03280111	-0.185130999	-0.142871399	0.306927286	-0.072335016	0.0624	-0.0288	-0.058854579	-0.16481	0.013512141	0.014966525	0.09398	0.273242428
Franchising	0.0680337	-0.0018	-0.00712	-0.094246062	-0.025215	0.07550404	-0.023699387	0.061179233	1	0.212998841	-0.1247794	-0.13125524	-0.120599868	0.01733706	0.170521989	-0.111061554	-0.062	-0.0215	0.005040382	0.117295	-0.016560017	-0.01440064	-0.05277	-0.016018035
Outsourcing	0.0954371	-0.099	0.047724	-0.25770719	-0.071834	0.150388621	-0.04186094	-0.130481633	0.212998841	1	0.072445474	-0.1365354	0.073941208	0.017676907	-0.060974295	0.00093349	-0.043	-0.1433	-0.043735845	0.175475	0.064020206	-0.070222212	-0.01391	-0.172257832
Large Company Size	-0.192367	0.11664	0.186178	-0.118994713	-0.064434	0.225648523	-0.131811099	0.186425898	-0.12477943	0.072445474	1	-0.6912541	-0.041129629	0.144667491	-0.076895845	-0.069814527	0.07203	-0.1353	-0.170670817	0.152528	0.117627785	-0.054771562	-0.0117	-0.149984333
Medium Company Size	0.0483736	-0.0253	-0.06536	0.016368359	-0.011441	0.008509395	-0.004827776	0.032801113	0.131255238	-0.136535413	-0.6912541	1	-0.003748864	-0.145112484	0.183165286	-0.089183698	0.0181	0.002	0.10988392	0.015452	-0.156257329	0.079235065	-0.03013	0.11590712
High Tech Industry	-0.012615	-0.1664	0.133953	-0.16220337	0.041776	0.121834109	-0.139538608	-0.185131	-0.120599887	0.073941208	-0.0411296	-0.0037489	1	-0.284304572	-0.733097977	0.01730351	-0.053	-0.069	-0.095435987	0.187634	-0.083745494	-0.082165511	0.0463	-0.25123115
Low Tech Industry	-0.118836	-0.0806	-0.06315	-0.029499228	0.003054	-0.00315219	-0.055787626	-0.1428714	0.01733706	0.017676907	0.14466749	-0.145125	-0.284304572	1	-0.11606081	-0.024451031	-0.0559	0.0353	-0.004862189	0.028409	0.010806454	-0.013008064	0.01407	-0.020253824
Medium Low Tech Industry	-0.007814	0.14431	-0.15308	0.119592671	-0.031599	-0.137028299	0.151534039	0.306927286	0.170521989	-0.060974295	-0.0768958	0.18316529	-0.733097977	-0.11606081	1	-0.063048837	0.12636	0.1062	0.083712425	-0.22303	-0.05653347	0.112079849	-0.04853	0.172197009
Africa	-0.028049	0.00567	-0.17807	0.070030756	-0.07325	-0.20240871	0.092359081	-0.0733302	-0.1106155	0.00093349	-0.0698145	-0.0891837	0.01730351	-0.024451031	-0.063048837	1	-0.0451	-0.035	-0.05704299	-0.1052	-0.041388345	-0.00706476	-0.0209	-0.030967054
Asia	-0.061621	0.07363	0.090254	-0.031032145	-0.251806	0.024515706	0.116085796	0.0623903	-0.06200792	-0.014322201	0.07203395	-0.0181389	-0.052987706	-0.05911823	0.12035674	-0.045131773	1	-0.1188	-0.125863847	-0.35785	-0.140628397	-0.024010315	-0.07101	-0.105287123
China	0.0749565	-0.0455	-0.01156	0.015780395	0.577841	-0.522212108	-0.050864987	-0.02879111	-0.02153185	-0.143329154	-0.1335027	0.00203444	-0.068978075	0.035257215	0.106227509	-0.034961941	-0.1188	1	-0.09750214	-0.27721	-0.1068397	-0.018599917	-0.05501	-0.081562101
Eastern Europe	0.039887	-0.088	-0.0998	0.200106941	-0.17478	-0.329679584	-0.006859618	-0.05883458	0.005040382	-0.043735845	-0.1706708	0.10988392	-0.095435987	-0.004862189	0.083712425	-0.03704299	-0.1259	-0.0975	1	-0.29771	-0.115424146	-0.019707045	-0.08528	-0.086416943
India	-0.039887	-0.195	0.085501	-0.50730452	-0.091117	0.809300637	-0.619902977	-0.16481299	0.117295093	0.175474559	0.15252836	0.01545207	0.187633997	0.028409259	-0.223033409	-0.105317455	-0.3578	-0.2772	-0.293710156	1	-0.32816404	-0.056029381	-0.16571	-0.245693248
Latin America	-0.044508	0.10714	-0.02767	-0.002797749	-0.092192	-0.286066929	0.352754665	0.015312141	0.01636002	0.064020206	-0.1176278	-0.1562573	0.083745494	0.010806454	-0.05653347	-0.041388345	-0.1406	-0.1089	-0.115424146	-0.32816	1	-0.022018794	-0.06512	-0.096554146
Middle East	0.0146392	0.05806	0.011879	0.030511168	-0.027735	-0.029405346	0.045625254	0.014966525	-0.0144006	-0.070222212	-0.0547716	0.07923396	-0.082165511	-0.013008064	0.112079849	-0.007066476	-0.024	-0.0186	-0.019707045	-0.05603	-0.022018794	1	-0.01112	-0.016485258
US	0.0712944	0.03104	0.016585	0.370980849	0.39847	-0.035033399	0.08003655	0.093983991	0.05276546	-0.01399838	-0.0116996	-0.0301276	0.046299957	0.01406693	-0.048533474	-0.02098875	-0.071	-0.085	-0.058292948	-0.16571	-0.065119872	-0.011183	1	-0.048754619
Western Europe	0.0641941	0.11389	-0.07777	0.47290768	-0.052921	-0.178256003	0.55289365	0.273242428	-0.1601803	-0.172257832	-0.1499843	0.11599071	-0.25123115	-0.030253824	0.172197009	-0.030987054	-0.1053	-0.0816	-0.086416943	-0.24569	-0.096554146	-0.016485258	-0.04875	1

Table 18: Correlation Matrix

5.1 Results

The table below reports the results of the econometric analysis.

Explanatory and control variables	<i>Location novelty</i>		<i>Function novelty</i>	
	Coefficient	<i>p-value</i>	Coefficient	<i>p-value</i>
Effectiveness	0.125**	(0.043)	0.0971*	(0.090)
Efficiency	-0.0616	(0.334)	-0.0731	(0.215)
Adaptability	0.126*	(0.099)	-0.120*	(0.087)
Political Stability	0.382***	(0.001)	-0.0540	(0.618)
Market Attractiveness	0.274**	(0.032)	0.123	(0.378)
High Value Added Resources	-0.0858	(0.585)	0.0186	(0.903)
Labor Cost	-0.201	(0.216)	-0.165	(0.291)
Company Experience	0.00226	(0.771)	-0.0256***	(0.000)
Fineslicing	-0.139	(0.392)	-0.181	(0.239)
Outsourcing	0.534***	(0.001)	-0.351**	(0.021)
Large Company Size	-0.297	(0.323)	-0.401	(0.131)
Medium Company Size	0.0637	(0.823)	-0.210	(0.404)
High Tech Industry	-0.364	(0.309)	-0.686**	(0.031)
Low Tech Industry	1.058*	(0.053)	-1.297***	(0.006)
Medium Low Tech Industry	-0.780**	(0.037)	-0.669**	(0.043)
Africa	0.577	(0.562)	-1.223	(0.285)
Asia	1.313	(0.115)	0.812	(0.398)
China	0.344	(0.700)	0.167	(0.870)
East	1.289	(0.124)	0.168	(0.861)
India	-0.0864	(0.923)	0.984	(0.330)
Latin	1.406*	(0.083)	0.238	(0.801)
Middle East	1.407	(0.207)	-0.477	(0.705)
US	-1.219	(0.186)	-0.0724	(0.948)
West	0.796	(0.311)	0.778	(0.400)
Observations	277		277	277
Chi-Square	107.7		107.7	107.7
P-Value	0,000		0,000	0

Robust p-value in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 19: Results of the bivariate ordered probit regression

5.1.1 Hypothesis 1 (H1a and H1b)

Starting from the location novelty dimension (*H1a*), as shown in the table below, the results of the bivariate ordered probit regression highlight the positive and statistically significant ($0.01 < p < 0.05$) relationship between the dependent variable *location novelty* and the explanatory one *Effectiveness* (coefficient 0.1252). This result corroborates the hypothesis that effectiveness purposes might lead the offshoring firm to explore new destination countries.

For what concerns the function novelty dimension (*H1b*), the results of the bivariate regression show a significant positive relationship between the dependent variable *functional novelty* ($0.05 < p < 0.1$) and the explanatory variable *Effectiveness* (coefficient 0.0971). Hence, firms seem to be more prone to functional novelty when driven by effectiveness purposes.

5.1.2 Hypothesis 2 (H2a and H2b)

As far as regards *location novelty* (*H2a*), the results of the regression demonstrate a negative non-significant ($p > 0.1$) relationship between the dependent variable *location novelty* and the exploratory one *Efficiency* (coefficient -0.0616). Hence, it is not possible to validate the relationship between efficiency purposes and exploitation of location knowledge.

The situation is analogue for *functional novelty* (*H2b*). Indeed, also in this case the relationship between the dependent variable and the exploratory variable *Efficiency* is non-significant ($p > 0.1$) and negative (coefficient -0.0731). Due to this result, this model cannot prove the hypothesis that efficiency drivers lead companies to low function novelty in their service offshoring implementations.

5.1.3 Hypothesis 3 (H3a and H3b)

As regards the *location novelty* dimension (*H3a*), the results of the bivariate regression show a significant positive relationship between the dependent variable and the exploratory variable *Adaptability* ($0.05 < p < 0.1$; coefficient 0.1265). Therefore, the hypothesis that adaptability drives companies to explore new location is proved.

On the *functional* side (*H3b*), the regression outcome highlights a significant negative relationship between the dependent variable *functional novelty* and the exploratory variable *adaptability* ($0.05 < p < 0.1$; coefficient -0.1201). Evidence does not confirm hypothesis 3b, but its opposite. Indeed, it seems that firms offshoring services for adaptability purposes are more prone to rely on their function-related experience in offshoring.

5.2 Control variables

5.2.1 Country-level control variables

The results show that host country political stability and host market potential are in a positive relationship with the dependent variable *location novelty*. Instead, results on the availability of high value added resources in the host location and the low cost of local labor are not in a significant relationship with the dependent variable.

Instead, as far as regards *functional novelty* none of the results is statistically significant ($p > 0.1$).

5.2.2 Company-level control variables

Company Size is never statistically significant ($p > 0.1$).

Regarding *Company Experience*, it shows a very significant ($p < 0.000$) and negative relationship with *functional novelty*. This latter finding is comprehensible considering that,

as the number of offshoring ventures issued by a company increases, the possibility of exploring always new functions tends to decrease.

5.2.3 Industry-level control variables

Starting from *location novelty*, “high-knowledge intensive” industry level control variables do not seem to be in a significant relationship with the dependent variable. Whereas, “low-knowledge intensive” variable shows a significant positive relationship with the dependent variable *location novelty*, meaning that companies operating in low-knowledge intensity industries are more prone to *location novelty*.

As far as regards *functional novelty*, results are significant ($0.01 < p < 0.05$) for all the dummies and it emerges that companies operating in Low-Tech industries are those that are more reluctant to explore the location of new or high-value added functions.

5.2.4 Initiative-level control variables

Starting from *entry mode*, the results show a very significant ($p < 0.01$) and positive relationship between the dependent variable *location novelty* and entry mode control variables. In particular, it seems that companies are more prone to explore new target locations when performing offshoring outsourcing, rather than captive offshoring.

Concerning *functional novelty*, the results are significant ($0.01 < p < 0.05$) but show a negative relationship between *offshoring outsourcing* and the dependent variable *functional novelty*, meaning that firms selecting captive entry mode are more likely to offshore new functions.

Regarding *modularity*, although it was assumed that fineslicing would facilitate the selection of new destinations and new functions to offshore, the model does not provide significant relationships ($p > 0.1$).

5.3 Additional Evidence

I performed an additional analysis on the relationship between the explanatory variables and exploration by building a one-dimensional dependent variable named Novelty.

This dependent variable is meant as a proxy of the overall exploration adopted for each offshoring initiative. *Novelty* was built through the arithmetic sum of the novelty levels registered in the location and functional dimensions:

$$Novelty_i = Location\ novelty_i + Function\ novelty_i$$

Since, in this case, there was a single dependent variable, it was possible to perform an ordered probit model. The following table represents the results of this regression.

Explanatory and control variables	Novelty	
	Coefficient	p-value
Effectiveness	0.153***	(0.003)
Efficiency	-0.0949*	(0.056)
Adaptability	0.0160	(0.812)
Political Stability	0.254***	(0.008)
Market Attractiveness	0.291**	(0.016)
High Value Added Resources	-0.0775	(0.493)
Labor Cost	-0.234**	(0.041)
Company Experience	-0.0140**	(0.023)
Fineslicing	-0.233	(0.106)
Outsourcing	0.161	(0.212)
Large Company Size	-0.418***	(0.007)
Small Company Size	0.0874	(0.702)
High Tech Industry	-0.748**	(0.025)
Low Tech Industry	-0.148	(0.725)
Medium Low Tech Industry	-1.061***	(0.003)
Africa	-1.374***	(0.010)
Asia	0.501	(0.202)
Australia	-1.000***	(0.004)
China	-0.697	(0.174)
East	0.0468	(0.914)
India	-0.459	(0.306)
Latin	0.0871	(0.829)
Middle East	-0.272	(0.760)
US	-1.940***	(0.003)
Observations	277	
Chi-Square	106.2	
P-Value	0	

Robust pval in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 20: Additional Evidence

Results confirm the positive and significant correlation between Effectiveness and Novelty ($p < 0.01$). as regards Efficiency, which was significantly correlated neither with location novelty nor with functional novelty, it turns out and negative and significant correlation with the overall Novelty ($p < 0.01$). Finally, as regards the Adaptability, the sign is positive, but not significant.

5.4 Discussion of the findings

Given the results provided in the previous section, it turns out that there is a positive relationship between the dependent variables, *location novelty* and *functional novelty*, and the explanatory variable, *effectiveness*.

These findings confirm both declinations of the first hypothesis of this analysis; in fact, firms driven by effectiveness objectives are more likely to implement an exploration strategy based on location novelty and on functional novelty.

This result is coherent with the model by Özsoy & Gençtürk (2003) from which this analysis takes inspiration, proving that companies offshoring services to grow their market share and to enhance their overall effectiveness in comparison with competitors, are more likely to employ their exploration capabilities. Indeed, it is predictable that firms, that are trying to increase their presence in the market, may decide to relocate to new destinations in order to improve their knowledge of local customers and to adapt their services to their needs. Additionally, a firm trying to facilitate and to speed up its presence on the market, are more likely to offshore new and higher-knowledge functions, in order to access pools of experts and to benefit from potential knowledge spillovers.

Moreover, the results of additional analysis provide extra support to hypothesis 1. Indeed, it turns out that there is a positive relationship between *Effectiveness* and the overall Novelty.

According to the results shown in the previous section, the model does not provide evidence to corroborate any of the implications of hypothesis 2. Indeed, although coefficients' signs of the relationships between the two dependent variables and efficiency explanatory variable are negative, the p-value does not allow affirming that, for this sample, companies pursuing efficiency objectives are more likely to have low levels of location and functional novelty.

Significantly, hypothesis 2 finds validation when the dependent variable is *Novelty*. In fact, the statistically significant and negative coefficient of the relationship between *Novelty* and *Efficiency* proves that companies rely on full exploitation (in terms of both location and functional) when they are driven by goals such as enhancing productivity and reducing costs.

Finally, the bivariate regression highlights a positive relationship between location novelty and *Effectiveness*, which confirms implication 3a of hypothesis 3. Therefore, it is possible to affirm that *firms offshoring services for adaptability purposes are more likely to explore new and culturally different destinations*. On the other hand, the negative relationship between the dependent variable functional novelty and the explanatory variable *accepted industry practice*, does not validate hypothesis 3b, but rather its opposite. Therefore, in this second case it is possible to say that *firms offshoring services for adaptability purposes are less likely to offshore functions that are more complex, and, in whose relocation, they have matured little experience*.

The first result is coherent with the model by Özsoy & Gençtürk (2003); it appears, thus, that firms are propense to location novelty, in order to keep the pace with industry progress.

This finding is supported by literature. According to Igami (2013) offshoring can be recognized as the main driver of long-run economic survival and well-being for firms, although he claims that the literature on competition incentives to relocate is still scarce. Accordingly, cross-border sourcing implemented by some firms is likely to set in motion the strategic dynamics in market structure in which: first, firms become increasingly more likely to offshore their operations and, second, the quota of non-offshoring firms declines over time, since some of them start themselves the practice and some others are forced out of the market (Igami, 2013). A further incentive for companies is represented by the evidence that offshoring firms produce at least double of the output compared to non-offshoring companies. In a world where innovation cycles become shorter and developing technologies is always more challenging, firms are likely to explore new destinations in order to access world-class talent pool and to build a competitive advantage that might differentiate them from competitors (Baler, Rammer, & Schubert, 2013).

Researchers have assessed the so-called bandwagon cycles and have stated that an increase in the number of organizations that adopt a practice influences the remaining organizations that will subsequently adopt the same practices. Nevertheless, empirical evidence has been found only on the location dimension, proving that herd behaviours of firms are the result of a higher tolerance of country risk.

Instead, no empirical evidence has proved that firm's tolerance increases also on a functional dimension.

As anticipated above, implication 3b of hypothesis 3 cannot be validated due to a negative relationship that emerged between accepted industry practice and functional novelty.

In accordance with the starting paper by Özsoyler & Gençtürk (2003), it was expected that firms trying to survive in the market, would have been more likely to relocate functions that they had not previously relocated or higher-knowledge ones. Yet evidence, highlights the contrary.

It appears that firm's capacity to responding quickly to changes in the industry and delivering services efficiently, decreases when the level of R&D offshoring quota is major than 15% of the total R&D department (Igami, 2013). It seems that companies trying to survive to industry changes may not recur to a high functional novelty, as it would harm the organizational synergies in place within the firm and might be unrewarding in terms of coordination costs. In addition to that, according to Rilla et al. (2011), the selection of the specific function appears to be more idiosyncratic and less industry-related, hence this may justify the fact that the selection of the function is not subject to the herd instinct discussed before.

Interestingly, when performing the regression analysis with the dependent variable *Novelty*, the relationship with *Adaptability* presents a statistically significant and positive coefficient. This not significant result is due to the combination of positive correlation with location novelty and negative correlation with functional novelty, confirming that adaptability pushes firms to balance exploration and exploitation.

CONCLUSIONS AND FUTURE DEVELOPMENTS

This essay is a study that aims at combining the service offshoring literature with an insight on the management of the acknowledged tension between exploitation and exploration, which, so far, have been treated mainly as two separate elements.

Particularly, previous research on offshoring of business services has focused on the investigation of the drivers of service offshoring and on the effects of each service delivery model on firm's performances. However, it is alleged that managers might, implicitly or explicitly, predict the performance outcomes when implementing initiatives, and hence the motivations that lead a company to relocate its activities represent often also the performance dimensions that the company is aiming to enhance.

On the other side, research on exploration and exploitation has focused mainly on the description of these two learning capabilities and on the effects that the prevailing of one of them, might have on companies' internationalization paths.

This analysis aims at filling a gap in literature, by combining these two streams in a single pattern, which investigates which is the learning capability that allows the company to realize the desired outcome, when implementing a service offshoring initiative. In this thesis, there is a reversion of causality in comparison with past studies, since, in this case, the focus is not on the effects of a certain strategy on the performances of the company, but instead on how the tension towards a specific outcome affects the selection of a strategy.

Additionally, this study is innovative, since it interprets exploration and exploitation in service offshoring initiatives with the concept of novelty, which is not so diffused in international business literature. Moreover, exploration and exploitation are assessed under

two dimensions, namely location and functional novelty, which highlight a bi-dimensional nature of the service offshoring strategies, that cannot be ignored.

This paper offers managerial implications. First, it raises attention on the fact that service offshoring should not be considered with a bottom-up approach or as a set of random initiatives, as it often happens with companies that have little or no experience in international relocations. Instead, managers must carefully consider that there are two learning capabilities, namely exploration and exploitation, which they can leverage on, when implementing their initiatives.

Second, it highlights that there is an interdependence between host location and relocated function of a service offshoring initiative, and, that managers must consider the effects that these two have on each other, in implementing their internationalization projects.

Third, it provides managers with a significant insight on the potential outcomes, that each of the strategies may produce, distinguishing between short-term and long-term performance dimensions.

This analysis is not exempt from limitations. Future research should try to develop different or more accurate measures of the performance dimensions (i.e. by attributing a different offshoring driver or a set of drivers to each performance dimension). Additionally, this study was stimulated by a paper, whose aim was to assess the dynamics between company learning capabilities, namely exploitation and exploration, and three performance dimensions: effectiveness, efficiency and adaptability. Yet, future research may assess the outcomes of a service relocation according performance dimensions, which are different from those considered here.

Moreover, this study captures only the static pattern of the tension between the two learning capabilities and it completely ignores that exploitation and exploration are evolving patterns that may change over time. Hence, in order to have a better understanding of the whole phenomenon, future research may extend this framework with a variable, that allows to have a temporal perspective on the phenomenon.

APPENDIX

Eurostat-OECD Classification	Industries Included
High Tech Industry	Aerospace, pharmaceuticals, life science, accounting and computing machinery etc.
Medium High Tech Industry	Chemicals, defence, automotive, electrical machinery, railroad and transport equipment etc.
Medium Low Tech Industry	Manufacturing, construction
Low Tech Industry	Wood, paper products, food products, beverages, tobacco, textiles, leather etc.

Table 210: Industry classification (2008 Eurostat-OECD)

First order construct	Items	Source	Description	Scale	Loadin	Alpha
Market attractiveness	Gross domestic product	WCY	Gross domestic product	US\$ billions	0.9864	0.7939
	Gross fixed capital formation	WCY	Inward foreign direct investments	US\$ billions	0.9519	
	Direct investment inflows	WCY	Direct investment inflows	US\$ billions	0.8724	
	Government consumption expenditure	WCY	Government consumption expenditure	US\$ billions	0.9726	
	Household consumption expenditure	WCY	Household consumption expenditure	US\$ billions	0.9698	
Political stability	Political stability and absence of violence/terrorism	WGI	Perception of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism	- 2.5/2.5	0.8783	0.9696
	Government effectiveness	WGI	Perception of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies	- 2.5/2.5	0.8556	
	Regulatory quality	WGI	Perception of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development	- 2.5/2.5	0.9011	
	Rule of law	WGI	Perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence	- 2.5/2.5	0.8859	
Location costs	Control of corruption	WGI	Perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests	- 2.5/2.5	0.8544	
	Remuneration call center agent	WCY	Gross annual income including supplements such as bonuses - call center agents	US\$	0.7480	0.7849
	Remuneration manufacturing worker	WCY	Total hourly compensation for manufacturing workers (wages + supplementary benefits)	US\$	0.7606	
High value-added resources	Remuneration department head	WCY	Gross annual income including supplements such as bonuses - department head	US\$	0.7254	
	Remuneration personal assistant	WCY	Gross annual income including supplements such as bonuses - personal assistant	US\$	0.7622	
	Information technology skills	WCY	The extent to which the country can rely on information technology skills	0/10	0.8036	0.9237
	Qualified engineers	WCY	The extent to which qualified engineers are available in labor market	0/10	0.9310	
	Skilled labor	WCY	The extent to which skilled labor is readily available in labor market	0/10	0.9000	

Table 21: Factor Analysis for the Country-Level control variables (Elia, Massini, & Narula, 2018)

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