

MARJA ROZA

# The Relationship between Offshoring Strategies and Firm Performance

Impact of Innovation, Absorptive Capacity and Firm Size



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# **The Relationship between Offshoring Strategies and Firm Performance**

**Impact of innovation, absorptive capacity and firm size**

De relatie tussen offshoring strategieën en het bedrijfsresultaat  
Het effect van innovatie, absorptieve capaciteit en ondernemingsomvang

Thesis

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by Maaïke Wilhelmina Roza-Van Vuren  
place of birth Everdingen



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To Eva and Dave



# **PREFACE**

A few years after earning a Master's in Strategic Management at RSM Erasmus University, I decided to go back to university to learn more about business strategy. After 1.5 years of teaching, I joined the ERIM PhD program to investigate offshoring strategies as part of the Department of Strategic Management and Business Environment.

First of all, I would like to thank my promoters, Prof. Henk W. Volberda and Prof. Frans A.J. van den Bosch, for giving me the opportunity to collaborate in this research. The project was a tremendous three-year, full-time learning experience. We participated in the Offshoring Research Network (ORN) and developed partnerships with Statistics Netherlands (CBS) and Deloitte to respond to the research questions about offshoring. Given the substantial demands of survey research, Carolien Vergouwe and Tessa de Blom provided assistance for various parts of the research activities. Thanks for participating.

I would also like to thank Arie Lewin (ORN initiator), Stephan Manning, Carine Peeters and other members of ORN for their practical support and inspiration. I would also like to thank Gusta van Gessel and Gerhard Meinen and their team from CBS for the fruitful collaboration as regards the Eurostat International Sourcing Survey. In addition, I appreciate the efforts of Joke Scholtens (Deloitte) in bringing us into contact with Technology Fast 50 firms to participate in the study on firm growth. Thanks go to the CEOs and managers of these firms.

Thanks also go to my family and friends. My father's business served as a useful business case of international strategy. More than once, my mother and mother-in-law helped me to combine research and family life. Arie, Eva and Dave, you inspired me to value life and encouraged me to do my research.

Marja Roza  
December 2010  
Rotterdam





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# 1 INTRODUCTION

## 1.1. Introduction

Increased global connectedness (e.g. Audretsch, 1995; Farrell, 2005) offers unique possibilities to companies to exploit location advantages across the world. Numerous products and services are available on international intermediate markets. This makes it possible for firms to purchase around the globe, outsource outside their home country and/or relocate business activities internationally. Although firms have been relocating activities for many decades, current offshoring strategies are different (Lewin & Peeters, 2006b) as they allow to offshore a single part of the value chain resulting in more complex and interconnected multinational enterprise systems (Cantwell, 2009).

More specifically, offshoring is defined as ‘the process of sourcing any business task, process, or function supporting domestic and global operations from abroad’ (Manning, Massini, & Lewin, 2008: 35). This research specifically emphasizes *the relocation* of business activities to foreign locations. Relocation of activities can be realized through offshore outsourcing, i.e. relocating business tasks to third parties, or captive offshoring, i.e. relocation while maintaining control (UNCTAD, 2004). In order to grow and survive in dynamic international markets, offshoring may be a strategy to exploit ownership advantages at lower costs (Dunning, 2009a) or a strategy to survive increased global competition (Coucke & Sleuwaegen, 2008). Also firms are faced with institutional constraints in their home countries. Not only lack of skilled labor (Lewin & Peeters, 2006b), but also institutional rigidities and inflexibilities on the labor market in home countries are mentioned as reasons to escape the home country (Witt & Lewin, 2007). Moreover, offshoring has been cited as a pro-active strategy to grow (Lewin & Peeters, 2006b), create new markets and services (Farrell, 2005) and gain access to new markets and technologies (Stratman, 2008). Recent findings of the Offshoring Research Network (ORN), for example, reveal that offshoring knowledge intensive activities of European and US firms is increasing (Couto, Mani, Lewin, & Peeters, 2006). Offshoring of higher added value activities, like R&D, HRM and administrative processes, poses important challenges to companies, for example, with regard to coordination, control and innovative performance (Levy, 2005). The studies of this research address offshore activities with different levels of knowledge intensity.

## 1.2. Research Aim

In Journal of Management Studies, offshoring has been discussed as raising an important research agenda for management scholars (Doh, 2005; Farrell, 2005; Levy, 2005). Further, numerous perspectives on service and knowledge offshoring (Youngdahl, Ramaswamy, & Verma, 2008) were presented in a Special Issue of Journal of Operations Management on offshoring. Moreover, empirical findings of the Offshoring Research Network (initiated by Duke Center of International Business Education, CIBER) investigating offshoring projects resulted in publications on offshoring knowledge intensive activities (Lewin, Massini, & Peeters, 2009; Lewin & Peeters, 2006a; Lewin & Peeters, 2006b). Although a broad range of topics has been addressed by these studies, this PhD research aims to contribute to strategic management literature in several ways (Table 1.1).

First, it contributes to offshoring literature by providing a *multi-dimensional view* of offshoring strategies. Research mostly shows a uni-dimensional view, addressing organizational and strategic attributes of offshoring strategies in isolation. Attributes are discussed separately, for example, governance mode either corporate-owned or offshore outsourcing (Ellram, Tate, & Billington, 2008). These authors posit that it would be interesting to compare the ‘specific adaptive behaviors used in offshoring versus outsourced offshoring’ (Ellram, et al., 2008:160). Second, research mentions the sole focus on cost savings and suggests ‘view[ing] offshoring not as an economic threat but as an important opportunity for (...) nation’s businesses, consumers, and shareholders’ (Farrell, 2005:682), resulting in ‘dramatically increased revenue as global companies reap the benefits of expanding markets’ (Farrell, 2005:683). Third, another group of researchers focuses on offshoring as a labor resource (Lewin, et al., 2009; Manning, et al., 2008), however, Couto et al. (2006:3) show ‘lower costs (...) specifically lower labor costs’, ‘sourcing talent’ and ‘incorporating offshoring of innovation, engineering and product development functions’ all three deserve attention. Therefore, this research answers the call for ‘a more in-depth look at this phenomenon’ (Ellram, et al., 2008:161) by addressing both outsource offshoring, i.e. placing activities under the control of third-party firms, and captive offshoring, enabling firms to keep (full) control themselves (Oshri, Kotlarsky, & Willcocks, 2008:289). In addition to offshoring governance mode, research addresses location and function as organizational attributes. Different offshore locations possess different characteristics and therefore support offshoring strategies in various ways. Nearshore and farshore locations offer, for example, differences with regard to wage

levels and availability of resources. Usually, low-value functions were offshored, however, lately high-value functions are offshored increasingly (Couto, et al., 2006; Lewin, et al., 2009). This research addresses cost, resource and entrepreneurial drivers as strategic attributes, which represent the managerial intent underlying offshoring strategies, like cost and resources (Lewin, et al., 2009). These drivers are discussed in the next paragraph.

Second, the research presents a *framework of offshoring drivers*, which is both supported theoretically and empirically. Different strategic attributes are discussed in the literature, especially cost advantages have been extensively mentioned (Doh, 2005; Farrell, 2005). However, availability of resources, like personnel or technologies at offshore locations, is also mentioned as a motive for offshoring (Couto, et al., 2006; Lewin & Peeters, 2006b). Moreover, offshoring has been put forward as value creating innovative strategy and growth strategy (Kenney, Massini, & Murtha, 2009; Lewin, et al., 2009; Lewin & Peeters, 2006a). So far, theoretical and empirical studies investigating these different types of drivers together are lacking. Similarly, the relationship between the attributes and firm performance remained unaddressed.

Third, research has produced mixed findings with regard to *performance effects* of offshoring. Negative performance effects (Fifarek, Veloso, & Davidson, 2008; Kotabe, 1990) and lack of performance (Bhalla, Sodhi, & Son, 2008; Gilley & Rasheed, 2000) have been reported. Bhalla et al. (2008:333) posit: ‘Our results (...) warrant taking a closer look at offshoring benefits by studying when should companies offshore and what the factors behind successful offshoring are. This emphasizes the importance of investigation offshoring performance effects. This research studies both competitive position and firm growth as firm performance measures, while previous studies addressed profitability and sales measures (Bhalla, et al., 2008), subjective performance data (Gilley & Rasheed, 2000) and innovative activity (Fifarek, et al., 2008).

Fourth, research does not address the impact of firms’ *innovation and absorptive capacity* in the context of offshoring strategies and firm performance, although the importance of capabilities has been mentioned (Novak & Stern, 2008; Youngdahl & Ramaswamy, 2008), 2008). Research has revealed, for example, ‘the adaptive risk behaviors demonstrated by the firms studied has shown that that there is much learning and change that occurs in the process of outsourcing services’ (Ellram, et al., 2008:160). Firm-specific capabilities have been shown to be an important explanation for make-or-buy decisions (Leiblein & Miller, 2003) and

international strategies in general (e.g. Subramaniam & Venktraman, 2001; Zahra & Hayton, 2008). This research addresses both innovation and absorptive capacity in investigating the importance of capabilities for offshoring strategies and performance. Learning processes underlie both innovation and absorptive capacity to contribute to firms' dynamic capabilities (e.g. Jansen, Tempelaar, van den Bosch, & Volberda, 2009; Lichtenthaler & 2009; Volberda, Foss, & Lyles, 2010).

Fifth, research identifies the 'outsourcing behavior of firms in either the youngest or most mature industries' as an important area for future research just like 'firm size may be an issue (...) smaller firms might outsource different activities than large ones, given that their skill base and core competencies are very different (Gilley & Rasheed, 2000:386). This research pays – explicit – attention to *firm size* characteristics and characteristics related to it in all four studies. The first explicitly addresses small, medium-sized and large firms, while the second focuses on well-established firms, the third on growing firms which turn out to be mostly medium-sized firms and the last one combines firms of different size groups. These characteristics impact the offshoring strategies of firms. For example, small and medium-sized firms may lack resources to pursue cost strategies in the same way as large firms (e.g. Qian & Li, 2003), which is also applicable to growing firms. Their resource constraints may also limit them to use the captive governance mode as it demands more resources compared to the offshore outsourcing mode. This is similar to what Narula (2004:160) claims by stating 'SMEs tend to prefer to use outsourcing rather than alliances, perhaps because of the higher risks, and costs of managing such a partnership'.

Sixth, research on international business has as yet not addressed the impact of time on choosing a location for offshoring. Although the relocation of business activities may be easier than setting up entirely new activities and operations, skills and capabilities are needed to make the strategy work. Firms need to build their offshoring experience as offshoring practices characterize themselves as 'sequential learning by doing processes (Lewin & Peeters, 2006b:236). This compels further exploration of the impact of a *process* dimension on offshoring strategies.

Lastly, the above-mentioned contributions are based on extending the *variety of theories* used in explaining the impact of offshoring strategy on performance. So far, transaction cost economics and the resource-based view have been used to explain offshoring strategies. However, they mainly focus on explaining governance mode choice, i.e. outsource

offshoring versus captive offshoring (e.g. Ellram, et al., 2008). Our studies extend the number of theories by taking into account entrepreneurship theory, learning theory and the knowledge-based view of the firm to explain offshoring drivers and performance effects of offshoring strategies as well. Moreover, a lot of research addressing offshoring at the firm level has been conceptual or case study based (Manning, et al., 2008). All four studies of this research use survey data to support the theoretical frameworks.

**Table 1.1 – Research Contributions of Study I-IV**

<b>Research Contribution</b>	<b>Existing Literature</b>
<p><b>1. Development of a Multi-Dimensional View of Offshoring</b></p> <p>a. organizational attributes: function, location, governance mode</p> <p>b. strategic attributes: cost, resource and entrepreneurial drivers</p>	<p>1. Uni-Dimensional View of Offshoring</p> <p>a. organizational attributes in isolation: governance mode (Ellram, et al., 2008)</p> <p>b. strategic attributes in isolation: cost savings (Farrell, 2005) or labor resources (Lewin, et al., 2009; Manning, et al., 2008).</p>
<p><b>2. Development of a Framework of Offshoring Drivers</b>, i.e. Cost, Resource and Entrepreneurial Drivers</p> <p>- supported both theoretically and empirically</p>	<p>2. Offshoring Drivers are mentioned, e.g. personnel/technologies (Couto, et al., 2006) or growth strategy (Lewin &amp; Peeters, 2006a), however, not categorized and explained simultaneously.</p>
<p><b>3. Investigation of Performance Effects of Offshoring</b></p> <p>a. competitive position</p> <p>b. firm growth</p>	<p>3. Mixed findings, e.g. negative effects on innovative activity (Fifarek, et al., 2008; Kotabe, 1990) and lack of effect on sales and profitability performance measures (Bhalla, et al., 2008) and subjective performance Measures (Gilley &amp; Rasheed, 2000).</p>

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**4. Investigation of Impact of Firm****Capabilities:**

- a. innovation
- b. absorptive capacity

**5. Investigation of Impact of Firm Size**

- a. small, medium-sized and large firms
- b. well-established firms
- c. growing firms

**6. Investigation of Impact of Offshoring****Experience**

- a. address the offshoring location choices to assess importance of experience over time

**7. Use of Multiple Theories**

- a. drivers: Transaction Cost Economics (and production efficiency theory), Resource-Based View, Entrepreneurial Theory
- b. offshoring strategy and performance: Learning Theory, Knowledge-Based View and Internationalization Theory

4. Innovation and absorptive capacity have not been researched in the context of offshoring, however, capabilities have shown to be important for international strategies (e.g. Zahra & Hayton, 2008).

5. Firm size has not been researched in the context of offshoring. Its impact is only mentioned by, for example, Gilley and Rasheed (2000).

6. Research did not make attempts to investigate whether offshoring location choice is influenced by experience over time and other offshoring strategy characteristics, offshoring location is, for instance, deemed unimportant in offshoring services (e.g. Blinder, 2006).

7. Variety of theories and their application is limited, for example, Transaction Cost Economics is used to explain governance mode (Ellram, et al., 2008)

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In conclusion, there are still important gaps in the literature on offshoring. We aim to contribute to research by studying the offshoring strategy, its impact on performance and the influence of innovation, absorptive capacity and firm size on this relationship. The aim of this research is

*to investigate: (1) the attributes of an offshoring strategy, both organizational attributes and strategic attributes, (2) whether an offshoring strategy influences firm performance, (3) whether innovation, absorptive capacity and firm size impact this relationship, and (4) how the offshoring process over time relates to location choices.*

### **1.3 Methodology**

To meet the aim of this research a model is developed to investigate the relationship between offshoring strategy and performance and the moderating influence of firm capabilities (see Figure 1.1). Within this model four different studies were conducted to meet the demands of context-specificity. Every study answers a separate set of research questions addressing the research aim. Study I provides an in-depth analysis of the attributes of an offshoring strategy itself (see Figure 1.1, indicated by the singular line). Similar to research we divide between organizational and strategic attributes (Youngdahl & Ramaswamy, 2008). A cross-sectional survey at the implementation level from the Offshoring Research Network (ORN) is employed to describe the offshoring strategy attributes. ORN was initiated by Duke University Center for International Business Education and Research (CIBER) Fuqua School of Business in 2004 and from 2006 also European universities<sup>1</sup> took part in the research. Surveys are issued every year. The Netherlands participated for the first time in 2006 issuing a survey among 800 firms, resulting in 103 participating firms (13%) and 120 offshore implementations (Volberda, Bosch, Jansen, Szczygielska, & Roza, 2007). The above mentioned organizational attributes (function, governance mode and location) and strategic attributes (cost, resources and entrepreneurial drivers) are addressed in the research and compared for firms adhering to different firm size groups, i.e. small, medium-sized and large firms. The data allowed performing one-way anova tests to discern different offshoring strategies between these firm groups.

Study II addresses the relationship between the offshoring strategy and firm performance and the moderating influence of innovation on their relationship, specifically for larger established firms (see Figure 1.1, indicated by the dashed line). For this study, a research

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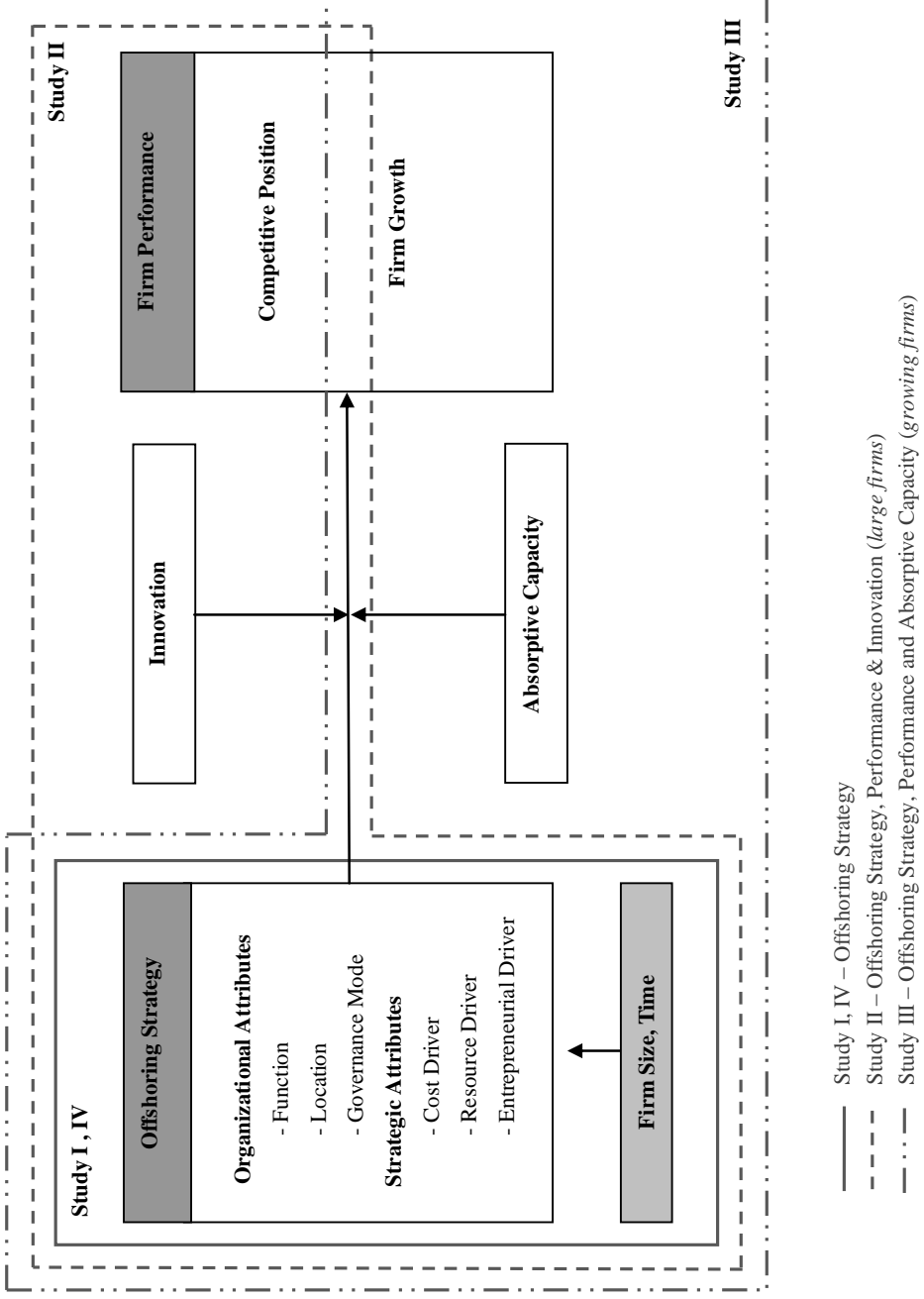
<sup>1</sup> Copenhagen Business School (Denmark), Wissenschaftliche Hochschule für Unternehmensführung (Germany), IESE (Spain), Manchester Business School (UK), Solvay Business School (Belgium) and Rotterdam School of Management, Erasmus University (Netherlands).



collaboration was set up with a Dutch government agency Statistics Netherlands (CBS), who participated in the International Sourcing Survey 2007 of Eurostat, the Statistical Office of the European communities located in Luxembourg. This survey was held in 13 EU countries addressing well-established firms with 100 or more employees. CBS invited us to share our experiences with offshoring research to further improve their survey. The final version of the International Sourcing Survey was decided upon by Eurostat. Our study draws upon the Dutch survey data of the International Sourcing Survey (INTSO). This survey invited 1503 firms of which 1002 responded (67%). Main findings of this survey are already published in Dutch practitioners' journals (Roza, Van den Bosch, & Volberda, 2008a; Roza, Van den Bosch, & Volberda, 2008b). We used the Community Innovation Survey (CIS) of Eurostat reporting on innovation activities of firms held on a two-yearly basis, to research the relationship between offshoring and innovation. The data allowed again to analyze both organization and strategic attributes of offshoring strategies, however, did not allow analyzing offshore location. Importantly, the richness of the database enabled to address the firm as unit of analysis. Firms were namely asked to give answers on their full offshoring strategy. The impact of this firm-level data on firm performance is investigated by applying binary regression analysis.

Study III also focuses on the relationship between the offshoring strategy, firm performance and absorptive capacity. However, this study is based on offshoring implementation level data to answer a specific set of research questions (see Figure 1.1, indicated by the dotted dashed line). Moreover, Study III researches growing firms whereas Study 2 focuses on larger well-established firms. For this study a research collaboration was set up with a business partner, the consulting firm Deloitte. To investigate how the research, as performed by ORN and Eurostat, could be adapted to research offshoring strategies of growing firms, several case studies were done studying offshoring drivers, offshored functions and offshoring governance modes. The structured interviews facilitated adaptations in the original set up of the survey, while also variables were added to the survey, such as past international experience, internationalization and entrepreneurial orientation. A database with Dutch growing firms was developed, which were retrieved from three sources, the Reach database, the yearly Gazelles list of the Dutch Financial Times (Het Financieele Dagblad) and Deloitte. In sum 607 firms were sent an invitation for the survey resulting in 155 responding firms. This study, like Study I, has the offshore implementation as unit of analysis. Organizational

Figure 1.1 - Research Framework: Positioning Study I-IV



attributes of offshoring strategies are researched for their impact on firm growth applying hierarchical regression analysis.

Study IV again applies the cross-sectional survey data at the implementation level from the Offshoring Research Network (ORN), similar to Study I (see Figure 1.1, indicated by the singular line). This study also applies data collected in 2007, however, is limited to two countries, US and the Netherlands. The Netherlands participated for the first time in 2006 and repeated the survey at larger scale in 2007. More specifically, this study investigates 540 offshoring implementations of 363 U.S. and Dutch firms. The fourth study again has the offshore implementation as unit of analysis and aims to explain nearshoring likelihood. Moreover, we focus on firms of all sizes to explain this likelihood by macro-level, firm-level and task-level variables of the offshoring strategy. Binary regression analysis is applied to investigate nearshoring likelihood.

In Table 1.2 the four studies are compared with regard to data source, year, unit of analysis, variables, firm size, countries and statistical method. Above we mainly introduced the studies by discussing the methodology, in the subsequent paragraphs the characteristics of the studies will be explained more detailed.

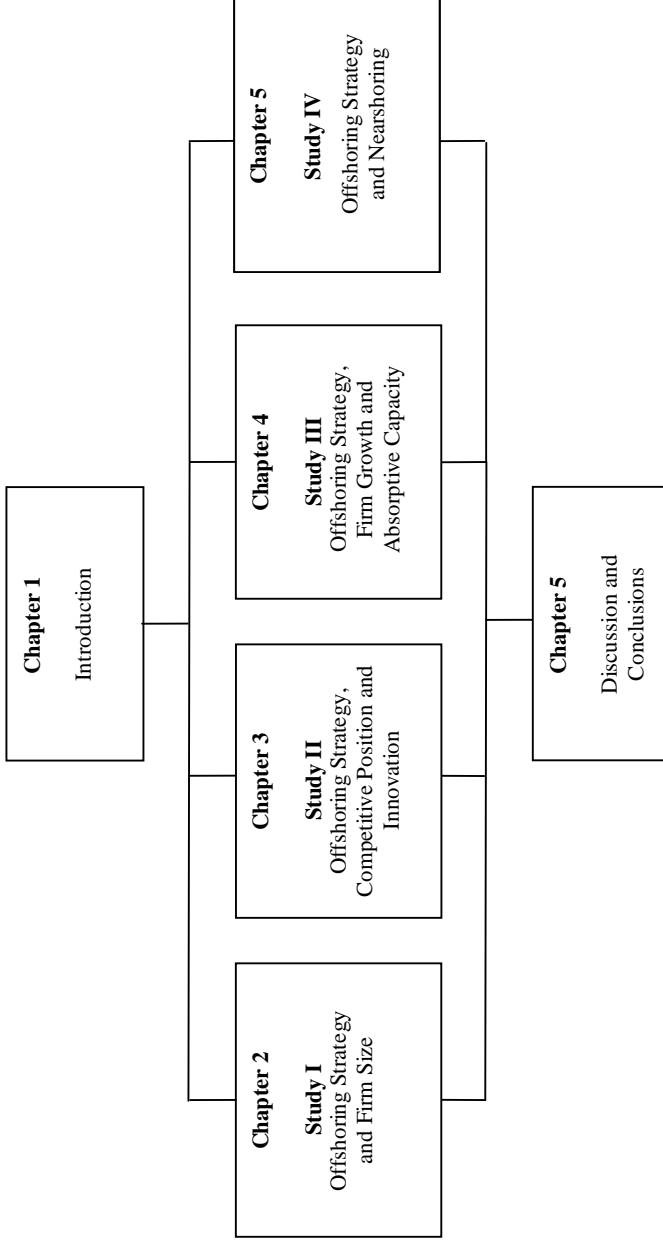
#### **1.4 Outline of the Dissertation**

The next paragraphs introduce the four studies in more detail. The chapters two to five each focus on one of the studies. As the studies are set up as individual papers, the individual chapters comprise theory, methodology and empirical data relevant for the specific study. In the fifth chapter the main findings are presented, the research questions addressed, and managerial implications discussed. The outline of the dissertation is presented in Figure 1.2.

**Table 1.2 - Overview of Study I-IV**

	<b>Study I</b>	<b>Study II</b>	<b>Study III</b>	<b>Study IV</b>
Data source	Offshoring Research Network	Dutch Statistical Office / Eurostat	Deloitte, FD (Dutch Financial Times), Reach Database	Offshoring Research Network
Year	2006	2007	2008	2004-2007
Unit of analysis	Offshore Implementation	Firm	Offshore Implementation	Offshore Implementation
Dependent variable	Descriptive Study	Competitive Position	Firm Growth	Nearshoring Likelihood
Independent variables	Offshoring Strategy: Organizational and strategic attributes	Offshoring Strategy: organizational and strategic attributes	Offshoring Strategy: organizational and strategic attributes	Offshoring Strategy: time-level, firm-level and task-level attributes
Moderating variable	-	Innovation	Absorptive Capacity	-
Firm Size	Small, medium-sized and large firms	> 100 employees, Well-established firms	Medium-sized and large firms, average growth rate of more than 10% per year during a timeframe of 5 years	Medium-sized and large firms
Countries	US, Germany, UK, Spain, The Netherlands	The Netherlands	The Netherlands	The Netherlands and US
Statistical method	One Way Anova	Binary Regression Analysis	Structured Interviews and Hierarchical Regression Analysis	Binary Regression Analysis

**Figure 1.2 - Dissertation Outline**



## **1.5 Study I - Offshoring Strategy: Motives, Functions, Locations and Governance Modes of Small, Medium-Sized and Large Firms**

### *Introduction*

The first study (see Figure 1.1) focuses on untangling the attributes of the offshoring strategy. An offshoring strategy has both organizational and strategic attributes (Youngdahl & Ramaswamy, 2008) as indicated in Table 1.1 and Figure 1.1. Youngdahl et al. (2008) mention organizational and strategic issues, global service and knowledge of supply chain issues, and tactical issues to introduce the diversity of related topics in the domain of offshoring. The authors refer to organizational and strategic issues like types of services and functions, governance mode, location choice and performance effects. We divide between organizational (function type, governance mode, location) and strategic attributes (offshoring drivers).

The ORN was one of the first to publish on offshoring extensively, investigating functions offshored, location choice, perceived risks, and future plans (Couto, et al., 2006). This study focuses on both theoretically and empirically derived attributes of an offshoring strategy. The offshoring strategy will be further investigated for its influences on firm performance in Study II and III. Table 1.3 summarizes the characteristics of Study I.

**Table 1.3 – Overview of Study I**

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Research gap	Offshoring strategies discuss offshoring strategy attributes uni-dimensionally (e.g. Ellram, et al., 2008) Offshoring studies reporting on large firms (e.g. Gilley & Rasheed, 2000; Lewin & Peeters, 2006b)
Research question	How are offshoring strategies influenced by firm size?
Year	2006
Dependent variables	Organization attributes (function, governance, location) Strategic attributes (cost, resource, entrepreneurial drivers) (Youngdahl & Ramaswamy, 2008)
Theory	Transaction Cost Economics and Behavioral Theory
Method	One-way Anova
Data	Offshoring Research Network (ORN)
Countries	The Netherlands, USA, Spain, UK, Germany

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### *Research questions*

Organizational attributes are important for several reasons. While in research often prescribes to only offshore standard activities, nowadays knowledge intensive activities (Couto, et al., 2006; Erber & Sayed-Ahmed, 2005) and services (Ellram, et al., 2008) are also offshored. Therefore, this study pays specific attention to offshoring competence exploiting and competence exploring activities (Cantwell & Mudambi, 2005). Second, location choice is still an important determinant of international strategies (Dunning, 2009a). Moreover, offshoring typically takes place to lower cost locations (Manning, et al., 2008), for which location choice cannot be neglected. The third organizational attribute is the governance mode used to relocate activities. In general, governance mode choice is seen as an important decision as it cannot easily be reversed (Leiblein, Reuer, & Dalsace, 2002). Although research has paid a lot of attention to international outsourcing of activities (e.g. Ellram, et al., 2008), captive offshoring is a main part of this research as well. This allows us to give a balanced overview of governance modes most often employed by firms to relocate business activities (Lewin & Peeters, 2006b).

Strategic attributes comprise the different offshoring intents firms have for offshoring strategies (Lewin, et al., 2009). So far, research mentions labor cost arbitrage and search for resources as most important reasons for offshoring (Farrell, 2005; Lewin & Peeters, 2006b). However, offshoring as growth strategy is also mentioned (Kenney, et al., 2009). In research, scholars motivated offshoring by the transaction cost theory and the resource-based view (e.g. Ellram, et al., 2008; Stratman, 2008). However, we argue offshoring might be seen as an entrepreneurial venture as well, a means to expand and internationalize at low cost.

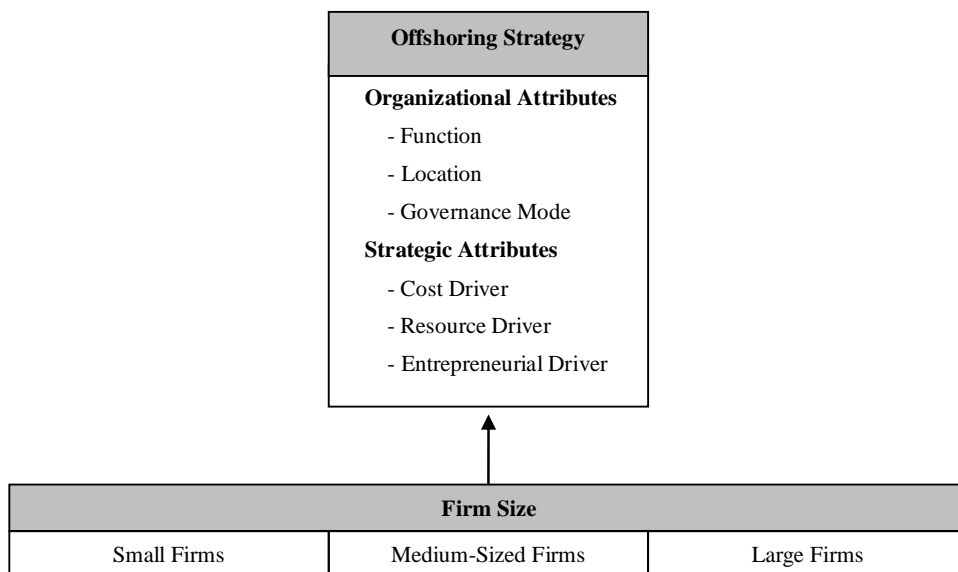
Research sparsely addresses the different strategies of companies of different firm size (Gregorio, Musteen, & Thomas, 2009). As small and medium-sized firms (SMEs) are often associated with differentiation or innovator strategies. They are thought to lack material advantages, like financial and human resources (Lu & Beamish, 2001; Qian & Li, 2003). Therefore, offshoring strategies may be different across *firms of different size*. The economic impact of SMEs is large; 23 million SMEs in Europe, 99% of all firms, provide 75 million jobs equaling two thirds of employment (European Commission, 2006).

Consistent with research this study measures the offshoring strategy at the implementation level, implying that an individual offshoring project is the unit of analysis and one firm may have more than one offshoring project. This allows investigating all governance,

function and location combinations that are applied by firms. Taking into account our research aim, Study I specifically addresses the following research questions (see Figure 1.3):

1. *How can an offshoring strategy be defined and measured on an offshoring implementation level?*
2. *To what extent are offshoring strategies influenced by firm size?*

**Figure 1.3 – Research Framework of Study I**



*Methodology*

These research questions are addressed using cross-sectional survey data of the Offshoring Research Network (ORN) collected in 2006 in the United States, United Kingdom, Germany, Spain and the Netherlands. Seven core areas are investigated by this survey: functions offshored, choice of offshore location and rationale for this choice, governance mode (outsourcing, captive or hybrid offshoring), strategic drivers, perceived risks, performance and



future plans. Data is collected at the implementation level, indicating that unique function-location-governance mode combinations are researched.

### *Contributions*

This study contributes to existing research in several ways (see Table 1.4). First, different strategic attributes of offshoring strategies have been recognized, but are not dealt with simultaneously. This study aims to provide an integrated overview of both cost and resource drivers and also investigates the importance of entrepreneurial drivers. All three are examples

**Table 1.4 – Contributions of Study I**

<b>Research Contribution</b>	<b>Existing Literature</b>
1. Development of a Multi-Dimensional View of Offshoring a. organizational attributes: function, location, governance mode b. strategic attributes: cost, resource and entrepreneurial drivers	1. Uni-dimensional View of Offshoring a. organizational attributes in isolation: governance mode (Ellram et al., 2008) b. strategic attributes in isolation: cost savings (Farrell, 2005) or labor resources (Lewin et al., 2009; Manning et al., 2008)
2. Development of a Framework of Offshoring Drivers, i.e. Cost, Resource and Entrepreneurial Drivers - supported both theoretically and Empirically	2. Offshoring Drivers are mentioned, e.g. personnel/technologies (Couto et al., 2006) or growth strategy (Lewin & Peeters, 2006a), however, not categorized and explained.
3. Investigation of Impact of Firm Size a. small, medium-sized and large firms	3. Firm size has not been researched in the context of offshoring. Its impact is only mentioned by e.g. Gilley and Rasheed (2000).
4. Use of Multiple Theories a. drivers: Transaction Cost Economics (and production efficiency theory), Resource-Based View, Entrepreneurial Theory	4. Variety of theories and their application is limited, e.g. Transaction Cost Economics is used to explain governance mode (Ellram et al., 2008)

of strategic attributes. These categories are theoretically supported by transaction cost economics (Coase, 1937; Williamson, 1975), the resource-based view (Barney, 1991; Penrose, 1959) and Entrepreneurship Theory. Offshoring might not only enable doing existing activities cheaper and in better way, but also stimulates exploring new markets, growing and obtaining differentiation advantages. Offshoring strategies might develop from a tactical to a strategic level (Lewin & Peeters, 2006b; Vivek, Banwet, & Shankar, 2008). Second, the study specifically addresses organizational attributes, like function, location and governance mode to offshore, enabling further investigation of the offshoring strategy in a multi-dimensional way. Third, researching the offshoring strategy in a detailed way allows assessing different offshoring strategies across firm size. The research allows to see whether behavioral advantages of small and medium-sized firms enable them to overcome their material disadvantages with regard to resources (Rothwell & Dodgson, 1994) by offshoring.

## **1.6 Study II - How Offshoring Strategy Attributes and Innovation Influence Firms' Competitive Position: A Learning Perspective**

### *Research questions*

The second study (see Figure 1.1) addresses the offshoring strategy and its impact on firm performance from a learning perspective. Learning theory specifically pays attention to the importance of prior knowledge as this underlies learning processes in a firm (Cohen & Levinthal, 1990). Firms may learn from offshoring strategies to further improve their performance. The study focuses on well-established firms with 100 or more employees. Similar to other studies a firm-level approach is taken (Gilley & Rasheed, 2000). Table 1.5 summarizes the characteristics of Study II.

**Table 1.5 – Overview of Study II**

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Research gap	Offshoring strategies discuss offshoring strategy attributes unidimensionally (e.g. Ellram, 2008). Offshoring research neglects the importance of prior knowledge (Cohen and Levinthal, 1990) to successfully implement offshoring strategies.
Research question	How does innovation moderate the relationship between an offshoring strategy and competitive position?
Year	2007
Independent variable	Competitive Position
Dependent variables	Organization attributes (function, governance, location) Strategic attributes (cost, resource, entrepreneurial drivers) Innovation
Theory	Learning Theory
Method	Binary Regression Analysis
Data	International Sourcing Survey and Community Innovation Survey Eurostat/Dutch Statistical Office
Country	The Netherlands

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This study investigates the offshoring strategy in a multi-dimensional way by addressing both organization and strategic attributes of offshoring strategies (Gilley & Rasheed, 2000; Youngdahl & Ramaswamy, 2008). Firms may offshore different function types, both core and non-core (Gilley & Rasheed, 2000; Holcomb & Hitt, 2007) and apply different governance modes, i.e. an outsource or a captive mode (UNCTAD, 2004). Both of these organizational attributes; function and governance mode will be investigated at firm-level. Using learning theory, the study posits core/non-core diversity (i.e. core and non-core offshoring) and governance diversity (i.e. outsource and captive offshoring) to positively influence competitive position. Learning theory shows learning to be most efficient in domains close to existing knowledge, while at the same time diversity is thought to build learning (Cohen & Levinthal, 1990). This reveals a positive tension between depth and breadth of knowledge. Too diverse knowledge, i.e. too breadth knowledge will not be efficient. However, certain distant to existing knowledge is necessary to feed learning processes; change in

organizational knowledge is necessary to increase firms' routines (Cyert & March, 1963). As mentioned before, offshoring is often seen as cost strategy (Doh, 2005; Farrell, 2005). However, research also has shown that offshoring to be important to gain access to resources (Lewin, et al., 2009; Lewin & Peeters, 2006b), e.g. personnel and technology. Therefore, Study 2 addresses both cost and resource drivers as strategic attributes of the offshoring strategy.

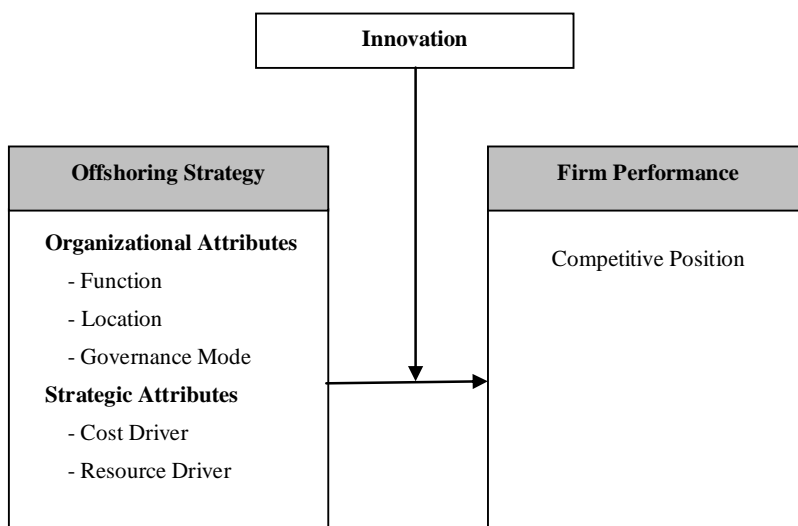
How do firms profit from their offshoring strategies to improve their competitive position? Competitive position points to relative market position, put differently; it is about whether a firm is able to improve its position compared to its competitors. So far, research investigating performance effects of offshoring is sparse. Research at firm-level study shows offshoring strategies not to have an impact on firm performance (Gilley & Rasheed, 2000) and does not show a clear link between offshoring extent and firm performance (Bhalla, et al., 2008). A study at the home country level has shown that negative performance effects (Fifarek, et al., 2008). A macro-level study reports negative effects (Kotabe, 1990). Further evidence from business press on outsourcing has shown that firms fail to measure outsourcing impact (e.g. Oshri & Kotlarsky, 2009). Differences in labor costs and available resources around the globe demand firms to reorganize to profit from these possibilities.

Moreover, research mentions the importance of capabilities to realize benefits from IB-strategies in general (Hitt, Hoskisson, & Kim, 1997; Zahra & Hayton, 2008). With regard to offshoring strategies (e.g. Holcomb & Hitt, 2007; Novak & Stern, 2008), however, empirical evidence is lacking. Often offshoring is thought to be detrimental for innovation capabilities (Fifarek, et al., 2008; Kotabe, 1990). Contrary, *innovation capabilities* might also improve gaining advantages from offshoring strategies. As our research focuses on large well-established firms, we investigate whether the relationship between offshoring strategies and competitive position is contingent upon process innovation capabilities. Capabilities may facilitate learning-by-doing resulting in cost reductions due to prior experience (Helfat, 2007). One of these capabilities is process innovation. Purposeful investment in process innovation facilitates cost reduction by application of specialized personnel and resources (Sinclair, Klepper, & Cohen, 2000). Moreover, process innovation implies rigorous structures and systems in place to improve business practices (Nasbeth & Ray, 1974), implying accumulated experience of which offshoring strategies may profit. Without innovation, offshoring strategies would be executed ignorant of prior related knowledge underlying innovation (Cohen & Levinthal, 1990).

Taking into account our research aim, Study II specifically addresses the following research questions (see Figure 1.4):

1. *How can an offshoring strategy be defined and measured on a firm-level?*
2. *How does an offshoring strategy influence competitive position?*
3. *To what extent does innovation moderate the relationship between an offshoring strategy and competitive position?*

**Figure 1.4 – Research Framework of Study II**



### *Methodology*

To answer these research questions, cross-sectional data of the Dutch Statistical Office is applied. Both the International Sourcing Survey of 2007 investigating offshoring by firms in the period 2001-2006 and the Community Innovation Survey of 2002, 2004 and 2006 are used.

The former study addressed the offshoring strategy, i.e. function type, governance mode and location, in addition to motives, constraints and labor force effects; while the latter is a recurrent research on innovation across sectors and regions. The analysis is done at the firm-level for which several implementation level variables are transformed.

**Table 1.6 – Contributions of Study II**

<b>Research Contribution</b>	<b>Existing Literature</b>
1. Development of a Multi-Dimensional View of Offshoring <ul style="list-style-type: none"> <li>a. organizational attributes: function, location, governance mode</li> <li>b. strategic attributes: cost, resource and entrepreneurial drivers</li> </ul>	1. Uni-dimensional View of Offshoring <ul style="list-style-type: none"> <li>a. organizational attributes in isolation: governance mode (Ellram et al., 2008)</li> <li>b. strategic attributes in isolation: cost savings (Farrell, 2005) or labor resources (Lewin et al., 2009; Manning et al., 2008)</li> </ul>
2. Investigation of Performance Effects of Offshoring <ul style="list-style-type: none"> <li>a. competitive position</li> </ul>	2. Mixed findings, e.g. negative effects on innovative activity (Fifarek et al., 2008; Kotabe, 1990) and lack of effect on sales and profitability performance measures (Bhalla et al., 2008) and subjective performance measures (Gilley & Rasheed, 2000)
3. Investigation of Impact of Firm Capabilities: <ul style="list-style-type: none"> <li>a. innovation</li> </ul>	3. Innovation has not been researched in the context of offshoring, however, capabilities have shown to be important for international strategies (e.g. Zahra & Hayton, 2008)
4. Use of Multiple Theories <ul style="list-style-type: none"> <li>a. offshoring strategy and performance: Learning Theory</li> </ul>	4. Variety of theories and their application is limited, e.g. Transaction Cost Economics is used to explain governance mode (Ellram et al., 2008)

### *Contributions*

This study aims to contribute to existing research in several ways (see Table 1.6). First, different offshoring strategy attributes, both organizational and strategic (Gilley & Rasheed, 2000), are addressed simultaneously for their impact on firm performance (second contribution). Third, the effects of innovation capabilities on realizing benefits from offshoring strategies are investigated. The results will show whether firms realizing process innovation are able to show different performance effects than firms lacking these capabilities. Fourth, the research applies learning theory to find whether the effects of offshoring strategies move beyond costs and gaining access to resources (Kenney, et al., 2009; Lewin, et al., 2009). As such an offshoring strategy might develop from a cost, to a resource and to a learning strategy.

## **1.7 Study III - Offshoring and Firm Growth: Direct Effects of Core and Outsource Offshoring and Indirect Effect of Absorptive Capacity**

### *Research questions*

The third study (see Figure 1.1) contributes to strategic management literature by unfolding whether an offshoring strategy influences firm growth. The study focuses on firms with above average growth rates. Table 1.7 summarizes the characteristics of Study III.

Offshoring may be chosen as growth strategy (Lewin & Peeters, 2006a). Offshoring strategies free up capacity at the home base and facilitate firm growth, and therefore can enable crucial firm growth in the international arena. At certain stages of their life-cycle, firms seek for additional resources (Churchill & Lewis, 1983:39). These can be found by employing offshoring strategies. Research has advocated to only offshore non-core activities (Gilley & Rasheed, 2000; Kotabe, 1990). However, to obtain advantages of scale and leverage capabilities, firms might consider offshore core activities as well. With regard to governance, growing firms are suggested to have preference for outsource offshoring. While large, established firms have the possibility to set up captive centers, growing firms might lack resources (Narula, 2004). Growing firms, usually smaller firms, are only capable of reaching a limited amount of scale advantages themselves, therefore turning to international intermediate markets, where suppliers generate scale advantages for them. Findings suggest networking

strategies, i.e. trust-based relationships, are fundamentally important in the internationalization process of SMEs (Rodrigues, 2008).

Consistent with research, the impact of absorptive capacity on realizing benefits from international strategies is investigated. Different IB-strategies show better performance effects due to the moderating influence of absorptive capacity (Subramaniam & Venktraman, 2001; Zahra & Hayton, 2008). Absorptive capacity is defined as the ability to recognize new, external information, assimilate and apply it to commercial ends (Cohen & Levinthal, 1990:128). Learning processes underlie absorptive capacity to contribute to firms’ capabilities (e.g. Lichtenthaler & 2009). Offshoring core activities and outsource offshoring can both profit from prior related knowledge of the firm represented by absorptive capacity. Absorptive capacity

**Table 1.7 – Overview of Study III**

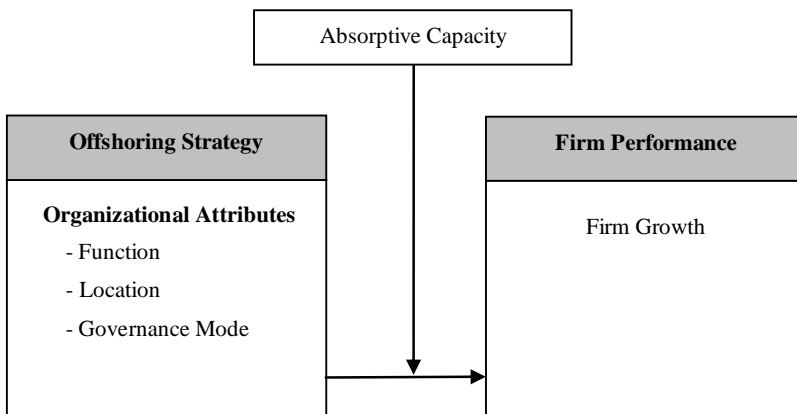
Research gap	Offshoring strategies discuss offshoring strategy attributes unidimensionally (e.g. Ellram, 2008) Offshoring neglect the importance of prior knowledge (Cohen and Levinthal, 1990) to successfully implement offshoring strategies. Offshoring studies reporting on large firms (e.g. Lewin & Peeters, 2006; Gilley and Rasheed, 2000)
Research question	How does absorptive capacity moderate the relationship between an offshoring strategy and firm growth?
Year	2008
Dependent variable	Firm Growth
Independent variables	Organization attributes (function, governance, location) Absorptive capacity
Theory	Knowledge-Based View of the Firm
Method	Interviews & Hierarchical Regression Analysis
Data	RSM Erasmus University Offshoring Survey (database Reach, FD, Deloitte Fast 50)
Country	The Netherlands



further improves performance effects of offshoring strategies by enabling using information and knowledge from the external environment to move beyond offshoring as cost strategy (Lewin & Peeters, 2006b). Taking into account our research aim, Study III specifically addresses the following research questions (see Figure 1.5):

1. *How does an offshoring strategy influence firm growth?*
2. *To what extent does absorptive capacity moderate the relationship between an offshoring strategy and firm growth?*

**Figure 1.5 – Research Framework of Study III**



*Methodology*

Both interviews and survey research are used to investigate the research questions of Study III. The survey is executed among firms that have shown a +10% growth number with regard to sales the last 5 years. Interviews were done to see how existing surveys of ORN and Eurostat could be adjusted for specific ‘growing-firm-characteristics’. We investigated for example

whether growing firms have different offshoring drivers and aim for different performance effects. The interviews focus on SMEs and large companies both in industry and services to develop understanding of the offshoring phenomenon and relevant variables to be researched in the survey. The semi-structured interviews enable case comparison.

### *Contributions*

First of all the objective of this study is to investigate how growing firms might profit from offshoring strategies in further boosting their firm growth. So far, offshoring strategies are often seen as cost strategy, indicating certain advantages for firms able to realize advantages of scale (Ellram, et al., 2008). However, some research mentioned ‘offshore arrangements (to) support companies’ growth strategies (Lewin & Peeters, 2006a:22). Second, by looking into the effect of absorptive capacity the study explicitly incorporates the importance of capabilities in executing offshoring strategies (e.g. Zahra & Hayton, 2008). Third, the study introduces a new theoretical lens to investigate the impact of offshoring strategies on firm performance, i.e. the knowledge-based view. Prior literature stays limited to explaining different drivers for offshoring, like costs and resources, and applying transaction cost economics to governance choices. Addressing both offshoring strategies and performance opens the way to several theoretical lenses to be applied to this phenomenon. With regard to growing firms, usually relatively small and young, the importance of knowledge is inevitable.

**Table 1.8 – Contributions of Study III**

<b>Research Contribution</b>	<b>Existing Literature</b>
1. Investigation of Performance Effects of Offshoring a. firm growth	1. Mixed findings, e.g. negative effects on innovative activity (Fifarek et al., 2008; Kotabe, 1990) and lack of effect on sales and profitability performance measures (Bhalla et al., 2008) and subjective performance measures (Gilley & Rasheed, 2000)
2. Investigation of Impact of Firm Capabilities: a. absorptive capacity	2. Absorptive capacity has not been researched in the context of offshoring, however, capabilities have shown to be important for international strategies (e.g. Zahra & Hayton, 2008)
3. Use of multiple theories a. offshoring strategy and performance: Knowledge-Based View	3. Variety of theories and their application is limited, e.g. Transaction Cost Economics is used to explain governance mode (Ellram et al., 2008)

**1.8 Study IV – How Distance Matters: The Dynamics of Offshoring Location Choices**

*Research questions*

The fourth study addresses the offshoring strategy and location. Table 1.9 introduces the main characteristics of the study. First of all, the role of distance has been neglected in offshoring research so far. In service offshoring, distance should not matter (e.g. Blinder, 2006) and technological developments make exchange of information unlimited according to many scholars. Second, although offshoring might not be as difficult as setting up new operations as existing activities are relocated internationally; capabilities are needed to make the strategy work. In order to realize the profit gains (Farrell, 2005) firms may need to invest in ‘making it work’ and build experience before they realize these increased efficiencies. Although transfer-

**Table 1.9 – Overview of Study IV**

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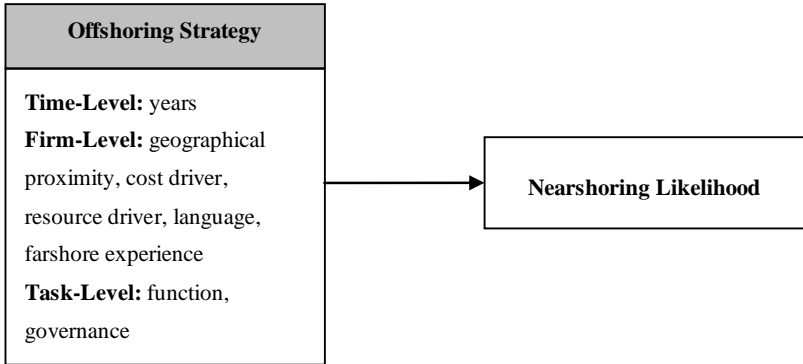
Research gap	Offshoring strategies discuss offshoring strategy attributes uni-dimensionally (e.g. Ellram, 2008) Offshoring neglect the importance of prior knowledge (Cohen and Levinthal, 1990) to successfully implement offshoring strategies. Offshoring studies reporting on large firms (e.g. Lewin & Peeters, 2006; Gilley and Rasheed, 2000)
Research question	How do multi-level offshoring strategy attributes influence the likelihood of nearshoring?
Year	2004-2007
Dependent variable	Nearshoring Likelihood
Variables	Time-level: years Firm-level: cost, talent, geography, language, experience Task-level: commodity, function, governance model
Theory	International expansion theory, i.e. stage model theory (IB)
Method	Hierarchical Regression Analysis
Data	Offshoring Research Network (ORN)
Country	The Netherlands and United States

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based learning, i.e. developing routines by transfer, time-based learning, i.e. gaining general understanding (Martin & Salomon, 2003) is important for developing offshoring strategies. Third, it is therefore important to allow time to bring in the effect of maturing offshoring strategies. Not only a farshore implementation will bring in effects on distance choice, also time tapping into a society wide understanding and involvement in relocation strategies is important. To summarize, Study IV specifically addresses the following research questions (see Figure 1.6):

- 1 How does a multi-level offshoring strategy influence nearshoring likelihood?*
- 2. How do time and experience influence this relationship?*

**Figure 1.6 – Research Framework of Study IV**



*Methodology*

These research questions are addressed using cross-sectional survey data of the Offshoring Research Network (ORN) collected in 2004-2007 in the United States and the Netherlands. Seven core areas are investigated by this survey: functions offshored, choice of offshore location and rationale for this choice, governance mode (outsourcing, captive or hybrid offshoring), strategic drivers, perceived risks, performance and future plans, as already mentioned in a previous paragraph. Data is collected at the implementation level, and allow investigating the impact of the offshoring strategy on nearshoring likelihood over time.

**Table 1.10 – Contributions Study IV**

<b>Research Contribution</b>	<b>Existing Literature</b>
1. Development of a Multi-Dimensional View of Offshoring a. organizational attributes: geographical proximity, language and experience b. strategic attributes: cost and resources	1. Uni-dimensional View of Offshoring a. organizational attributes in isolation: governance mode (Ellram et al., 2008) b. strategic attributes in isolation: cost savings (Farrell, 2005) or labor resources (Lewin et al., 2009; Manning et al., 2008)

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<p>2. Investigation of Impact of Offshoring Experience</p>	<p>2. Research did not make attempts to investigate whether offshoring strategies are incremental or born global strategies, offshoring is e.g. stated not to be important in offshoring services (Blinder, 2006).</p>
<p>3. Use of Multiple Theories a. offshoring process: Internationalization Business Theories</p>	<p>3. Variety of theories and their application is limited, e.g. Transaction Cost Economics is used to explain governance mode (Ellram et al., 2008)</p>

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*Contributions*

This last study aims to contribute to existing research by again addressing firms’ offshoring strategy. Beyond the organization attributes function and governance, here the aim to focus on organizational characteristics related to geographical distance/proximity. Moreover, the importance of experience is taken into account.

First, this research contributes by addressing various dimension of an offshoring strategy. Drivers, cost a, and other characteristics like geographical proximity, language and experience are thoroughly investigated. The focus is on the geographical dimension of the offshoring strategy. As the drivers are usually geographically indicated, the same goes for geographical proximity and language. Experience has shown that the familiarity of firms with these processes.

The second and third contribution are closely related. The importance of nearshoring versus farshoring is put in perspective of development of time. Research shows considerable investments need to be made to overcome the start-up costs, sometimes called ‘hidden-costs’ of offshoring (Stringfellow, Teagarden, & Nie, 2008). Especially, farshoring takes time of firms to get used to the unfamiliar processes and context at remote locations, simply because learning is reached more easily close to the existing experience of firms.



## **2 STUDY I - OFFSHORING STRATEGY: MOTIVES, FUNCTIONS, LOCATIONS AND GOVERNANCE MODES OF SMALL, MEDIUM-SIZED AND LARGE FIRMS <sup>2,3</sup>**

### **2.1 Introduction**

Cost motives are often considered to be the most important driver for offshoring (Aksin & Masini, 2008; Bunyaratavej, Hahn, & Doh, 2007; Lewin & Peeters, 2006b; Stratman, 2008). However, other motives, like for example acquiring human capital (Lewin & Peeters, 2006b) or firm growth (Lewin & Peeters, 2006a) are also mentioned in literature. Other parts of an offshoring strategy are function, location and governance mode choices (Couto, et al., 2006; Lewin & Peeters, 2006b; Youngdahl & Ramaswamy, 2008). Firms offshore different types of functions ranging from relatively simple activities to highly knowledge insensitive activities more recently (Lewin & Peeters, 2006b). Furthermore, location choices play an essential role in international business strategies (Dunning, 2009a). Activities might be nearshored or farshored dependent on a fit between firm demands and location characteristics. To execute an offshoring strategy firms apply a captive or outsource governance modes (Manning, et al., 2008; UNCTAD, 2004). However, the question of offshoring strategies function in companies of different size is under researched. This paper contributes to this question by applying transaction cost economics (TCE), the resource-based view (RBV) and entrepreneurship theory to explain three driver categories. Cost, resource and entrepreneurial drivers are investigated for their relationship with firm size. Moreover, we hypothesize on the relationship between function, location and governance mode choices and firm size. Using multi-country data of the Offshoring Research Network (ORN), we present empirical evidence on the three offshoring driver categories and function, location and governance mode choices of small, medium-sized and large firms. The results show offshoring might be used as cost, resource or entrepreneurial strategy. Cost drivers are most important for large and small firms, whereas resource drivers are especially important for medium-sized and large firms. Entrepreneurial drivers are most

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<sup>2</sup> We would like to thank Arie Lewin, Silvia Massini, Carine Peeters, Jan van Dalen, Jussi Hätönen and Raymond van Wijk for suggestions on earlier versions of the manuscript.

<sup>3</sup> This chapter will be submitted to a primary journal.



important for medium-sized firms, just like these firms have a relatively stronger preference for nearshoring. Small firms mostly offshore competence exploring activities, whereas large firms relocate competence exploiting activities.

## **2.2 Theoretical Overview**

The relocation of business activity has been employed by companies for many years. Offshoring focuses on the relocation of business functions from home base to foreign locations. This strategy is labeled as new managerial practice and finds its origin in the late seventies (Lewin & Peeters, 2006b). Whereas previous theories focus on for example explaining international production (Dunning & Buckley, 1977) or geographical distribution of sales (Dunning, 1980); nowadays ‘welfare-enhancing international division of labor’ (cf. Dunning, 2009a:10) receives more attention. Offshoring is a new managerial practice for several reasons. First, the relocation of activities (Manning, et al., 2008) is the focal characteristic of an offshoring strategy. Relocation can be labeled as a form of replication. Replication addresses ‘transferring or redeploying competences from one concrete economic setting to another (Teece, Pisano, & Shuen, 1997:525). Transfer of people or investments to convert tacit into codified knowledge to exchange knowledge underlie performance gains. Different governance modes exist to execute an offshoring strategy. These range from non-equity based to equity based collaboration to wholly owned subsidiaries corresponding diffused, balanced and dominant equity modes (Anderson & Gatignon, 1986). Therefore this offshoring study addresses the most often used offshoring governance modes simultaneously, i.e. captive and outsource offshoring (Manning, et al., 2008). Moreover, firms may use different governance modes for the same activity; this is referred to as taper integration (Harrigan, 1984) or concurrent sourcing (Parmigiani, 2007). Second, not only ‘simple’ manufacturing activities are relocated around the world, but also ‘complex integrated and interactive networks for the generation of new ownership advantages’ relying on ‘specialized activities conducted in certain locations’ (cf. Cantwell, 2009:36). Global sourcing has experienced three waves, as three different types of activities have been sourced subsequently, i.e. manufacturing, information technology and business processes (Kotabe, Mol, & Murray, 2009). Likewise, early offshoring projects involved manufacturing activities, while more recent projects relocate accounting, finance sales and other business processes abroad (Couto, et al., 2006; Lewin & Peeters,

2006b). So, intermediate products replace raw materials and final products. Third, offshoring is characterized by a broad set of drivers, ranging from cost savings to innovation and from efficiency gains to growth. As such the strategy meets the motives for setting up foreign operations mentioned in international business literature, i.e. market seeking, resource seeking, efficiency seeking and strategic asset seeking (Dunning, 1993). Although location advantages like cost advantages are still important, firms seek for talent and technology resources and expansion possibilities by offshoring as well. Therefore as offshoring means relocating activities to execute international strategies, it is 'a new variation of FDI, or international joint ventures, or partnerships' (Lewin, et al., 2009:919) to profit from worldwide markets.

Offshoring opens new opportunities for firms of different sizes. Research shows that also SMEs are important actors in internationalizing markets (e.g. Liesch & Knight, 1999; Oviatt & McDougall, 1994). Research shows their resource constraints to become less important as technological developments and global markets increasingly have taken away difficulties to access information (e.g. Liesch & Knight, 1999). Therefore, also SMEs might undertake offshoring and express their entrepreneurial profile on the international markets as well. Second, offshoring can be used as strategy to globalize and to overcome resource constraints as the strategy only sparsely draws upon firms' resources, because firms' business activities are relocated. This is especially true for outsource offshoring (Narula, 2004). This mode circumvents set-up costs of captive offshoring. More specifically, this study will discern between behavioral and material differences between SMEs and large firms (Rothwell, 1989; Rothwell & Dodgson, 1993). SMEs are characterized by for example entrepreneurial management and quick response to market changes. Large firms run the risk of bureaucracy and inflexibilities toward change. However, large firms possess material advantages generating economies of scale and scope, while small and medium-sized firms are disadvantaged in this respect. Further examples of behavioral and material advantages and disadvantages are presented in Table 2.1.

The paper now further elaborates on the offshoring drivers and the function, location and governance mode choice involved in offshoring and their respective relationship with firm size.

**Table 2.1 - Examples of Advantages and Disadvantages of SMEs and Large Companies**

<b>SMEs</b>	<b>SMEs</b>
<p><i>Behavioral Advantages</i></p> <p>Little bureaucracy, entrepreneurial management, rapid decision-making; risk-taking; organic style. Fast reaction to changing market requirements; can dominate narrow market niches.</p>	<p><i>Material disadvantages</i></p> <p>Market start-up can be prohibitively costly.</p> <p>Full-time R&amp;D can be too costly. Can suffer diseconomies of scope.</p>
<b>Large Companies</b>	<b>Large Companies</b>
<p><i>Behavioral Disadvantages</i></p> <p>Often controlled by risk-averse accountants; managers become bureaucrats and lack dynamism. Can ignore emerging market niches with growth potential; see new technology as threat to existing products and not as an opportunity.</p>	<p><i>Material Advantages</i></p> <p>Comprehensive distribution and servicing facilities, high market power with existing products. Can support the establishment of a large R&amp;D laboratory: economies of scale and scope in R&amp;D.</p>

(based on Rothwell (1989) and Rothwell & Dodgson (1993))

**2.3 Offshoring Drivers**

In this study three different groups of offshoring drivers are discussed. First, scholars apply *transaction cost economics* to explain cost drivers of offshoring (Farrell, 2005), in addition to 'simple' location specific advantages as low labor costs (production efficiency). Low labor costs alone are not enough in explaining the offshoring cost driver, as offshoring increases transaction costs, which might (partly) offset savings (Stratman, 2008). Transaction costs are increased by uncertainty involved in the relocation activities (Coase, 1937; Williamson, 1975). Firms exploit their firm specific ownership advantages, for example economies of scope and technological and organizational expertise, by geographically relocating activities (Doh, 2005; Dunning, 1980). These ownership advantages are transferred to decrease cost levels by profiting from lower wages (i.e. location advantage) (Dunning, 1980). In the past, these cost advantages were used to stay competitive in comparison to local suppliers at foreign locations. However, nowadays, offshoring is undertaken to compete against imports originating from low wage countries' (Coucke & Sleuwaegen, 2008:1262) in the domestic markets (Kotabe, 1990). Transaction cost economics has shown that to distribute activities over market and firm in a way to minimize internal and external transaction costs (Poppo & Zenger, 1998; Williamson, 1975). Digitization has decreased transaction costs dramatically both for hierarchy and market transactions (Coase, 1937; Ellram, et al., 2008) and therewith unlocked gaining access to lower

labor costs at offshore locations. It is important to notice transaction costs usually increase by internationalization processes due to uncertainty involved. Offshoring is a business strategy to perform business activity at offshore locations at lower cost through market and/or arms-length transactions, thereby reducing summed transaction costs (Coase, 1937) and production costs. In particular, TCE explains offshoring strategies by lower overseas labor costs, as well as the government and management costs related to these overseas activities (Coase, 1937; Williamson, 1975). TCE has been applied to explain offshoring (Stratman, 2008), offshore outsourcing (Ellram, et al., 2008) and sourcing (Vivek, et al., 2008). Companies may be able to reduce the total costs of labor (production efficiency) and transaction below the level in the home country either through outsource offshoring or captive offshoring, although there might be 'invisible' costs like communication related costs (Stringfellow, et al., 2008) or set-up costs (Ellram, et al., 2008) when offshoring services.

Firms may seek for efficiency gains at offshore locations. Therefore, offshoring might decrease transactions costs. Large numbers of suppliers at overseas intermediate markets decrease transactions costs (Holcomb & Hitt, 2007). This effect is strengthened by a more common understanding of the value proposition of offshoring (Stratman, 2008). This decreases technological uncertainty for standard services. Moreover, available IT and communication systems have importantly decreased transaction costs (Ellram, et al., 2008). Key attributes of transaction cost theory are bounded rationality, opportunism and uncertainty. Based on these attributes offshoring governance decisions might be taken. Firms may choose for captive offshoring due to for example intellectual constraints, self-interest and external and internal uncertainty, (Stratman, 2008). However, market transactions, i.e. offshoring outsourcing, may be an attractive option when no specific investments are required, large number of transactions outweighs high fixed set up costs and further standardization and availability of products and services on intermediate markets. Having discussed and explained offshoring cost drivers and the relationship between offshoring and transactions costs, we now turn to the relationship of an offshoring cost driver with firm size. Although larger companies may benefit of their scale advantages (e.g. Cavusgil & Kirpalani, 1993) to overcome e.g. set up costs, SMEs might also have possibilities to reduce their cost levels with offshoring. Offshoring is an attractive strategy for these firms as it only sparsely draws on their resources while relocating business activity involves fewer resources than starting new business activities. Moreover, resource constraint firms only have a small internal scale which limits the efficiency of internal production and

results in relatively high internal governance costs (Poppo & Zenger, 1998). Summed governance and production costs (production efficiency) might be decreased by the relocation of activities to offshore locations. Also, suppliers on the intermediate markets might generate scale advantages for SMEs by serving different clients, which large firms might obtain themselves easily. Therefore, offshoring is a strategy offering scale advantages to SMEs, as setup costs are relatively low and their suppliers also create scale advantages for them. This makes it possible to produce their specialist products at competitive levels. However, this will not fully compensate their limited material advantages compared to large firms, e.g. financial and technological resources (Fagiolo & Luzzi, 2006; Lu & Beamish, 2001; Rothwell, 1989; Rothwell & Dodgson, 1993). For this reason we expect that larger firms are likely more able to gain cost advantages from offshoring. Thus we hypothesize,

*H1 Offshoring driven by cost motives will become more likely when firm size increases.*

The *resource-based view* (Barney, 1991; Penrose, 1959; Vivek, et al., 2008) explains the second group of driver, namely resource drivers. From this view offshoring is caused by the availability of for example qualified personnel or capabilities for business process redesign at offshore locations (Lewin & Peeters, 2006b). Resource drivers focus on knowledge-seeking and efficiency-seeking, which are the two most important causes for international activity in information-intensive industries (Nachum & Zaheer, 2005). In this view, the emphasis is on the resources a firm needs to maintain and improve its competitive position. To do so, the firm might also search at distanced locations (e.g. Lewin & Peeters, 2006b; Westhead, Wright, & Ucbasaran, 2001).

Whereas economies of scope, learning or scale, are typically important in executing ownership advantages (Dunning, 1980), these advantages are less important for resource driven offshoring. This makes it possible for SMEs to profit from offshoring as they might use it to acquire and leverage their disadvantaged resource base (Mosakowski, 2002). Smaller firms face constrained resources (George, Wiklund, & Zahra, 2005; Hoffmann & Schlosser, 2001; Lu & Beamish, 2001), for example financial resources (Fagiolo & Luzzi, 2006). These companies, therefore, might search for complementary resources with offshoring strategies, similar to acquiring and leveraging resources with alliances (e.g. Baum, Li, & Usher, 2000).

SMEs of all sizes need to use their external environments to find necessary resources (Dickson, Weaver, & Hoy, 2006). The resources firms seek, enable firms to go beyond performing activities in a cheaper way. Gaining access to personnel and technologies for example, give firms the opportunity to become more efficient, i.e. doing existing things more efficient. More mature companies might be more focused on managing their existing resource base, they also need to manage their growth (Jarillo, 1989) and seek for resources by offshoring. Smaller firms might search for resources relatively closely to their core activities, whereas mature firms focus on resources more distant to their core activities as they have more possibilities to build their existing resources within their own firm. Therefore we expect smaller and large firms to apply offshoring for search of resources, although it might be different resources.

*H2 Offshoring driven by resources motives is equally important for SMEs and large firms.*

*Entrepreneurial drivers* can also motivate offshoring strategies, as a third category of offshoring drivers. Research pointed out offshoring as a strategy to realize growth (Lewin & Peeters, 2006a) and for less information-intensive industries new market entry is specifically important (Nachum & Zaheer, 2005). Entrepreneurship Theory (Baumol, 1993; Fiet, 2001; Phan, 2004) provides an argument for moving beyond resources to address new resource combinations (Foss & Ishikawa, 2007) and emphasize the importance of strategic choice (Baden-Fuller & Stopford, 1994; Mosakowski, 2002). Entrepreneurship is about ‘carrying out new combinations’ (Schumpeter, 1934); it implies the ability to identify new opportunities and to develop the resource base needed to pursue the opportunities (Arthurs & Busenitz, 2006). Entrepreneurship also reflects the willingness of firms to grow, explore and stretch the boundaries of the firm (Davidsson, 1989). International entrepreneurship has been an emerging field of research (McDougall & Oviatt, 2000; Oviatt & McDougall, 2005b) and is applicable in the context of offshoring strategies as well. The relocation of business functions makes it possible for firms to get closer to potential customers and other opportunities. Geographic expansion is a strategy for small firms to grow (Barringer & Greening, 1998), which might be realized through an offshoring strategy. Smaller firms may find it more advantageous to differentiate than to pursue a cost leadership strategy (Porter, 1985; Qian & Li, 2003). The relocation of activities only draws limitedly on firm resources, which is typically important for

smaller firms due to their resource constraints. Other entry strategies, like FDI and alliances aiming to set up new activities, are less attractive for small firms than large firms. Therefore, smaller firms might use offshoring as entrepreneurial strategy more often than large firms.

*H3 Offshoring driven by entrepreneurial motives will become less likely when firm size increases.*

We conclude this section with summarizing the three driver categories; the theoretical perspectives and core references, the expected effects, and how the three categories of drivers are associated with the drivers used in the ORN survey (see Table 2.2).

#### **2.4 Offshoring Function**

More companies start to offshore higher added value activities (Lewin & Peeters, 2006b). Therefore, offshoring activities might be divided into competence exploiting and competence creating activities (Cantwell & Mudambi, 2005). Whereas the latter focuses on technologically advanced activities like performing basic research, the former focuses on deploying existing technologies, like assembly activities. Competence exploiting and competence creating activities closely relate to the distinction between exploitation and exploration (March, 1991). Exploitation activities are closely linked to cost advantages, whereas exploration activities are more focused on value creation by innovation. More specifically, exploitation involves refinement, choice, production, efficiency and selection and exploration involves search, variation, risk taking and flexibility (March, 1991).

**Table 2.2 - Main Theoretical Perspectives, Core References and Illustrative Examples of Offshoring**

Offshoring Driver	Theoretical Perspective	Core References	Effect	Examples, drivers ORN
Cost Driver	Transaction Cost	Coase, 1937;	Use low costs (summed	Labor costs
	Economics (production efficiency theory)	Williamson, 1975	production and transaction costs) at offshore locations to decrease <i>cost levels</i> at domestic location.	Other cost savings
Resource Driver	Resource-Based View	Penrose, 1959; Barney, 1991;	Use resources at offshore location to improve <i>efficiency</i> of current operations at domestic location.	Gaining access to qualified personnel Business process redesign Improved service levels
	Entrepreneurship Theory	Schumpeter, 1934; Davidsson, 1989	Use entrepreneurship to address new resource combinations to realize <i>new business opportunities</i> .	Part of a larger global strategy Increasing speed to market Differentiation strategy Access to new markets



Compared to large companies, the behavioral advantages of SMEs, i.e. entrepreneurial dynamism, internal flexibility and responsiveness to changing circumstances (Rothwell, 1989; Rothwell & Dodgson, 1993) might enable to offshore activities associated with competence creating, i.e. product development activities. Furthermore, in comparison to large companies, lack of financial and technical resources, i.e. lack of high-level technical skills and diseconomies of scope (Rothwell, 1989; Rothwell & Dodgson, 1993) might stimulate smaller companies to investigate the possibilities that offshoring might offer to further develop their specialist profile. SMEs might overcome their resource constraints by network relationships, as mentioned in the overview of Coviello and McAuley (Coviello & McAuley, 1999). Internationalizing these network relations, i.e. offshoring, might be a strategy to do so. Therefore it is hypothesized that larger companies will less often offshore product development activities.

*H4 Offshoring competence creating activities will become less likely when firm size increases.*

## **2.5 Offshoring Location**

Location choice is an important element of internationalization strategies (Dunning, 2009a) and is closely related to the drivers of offshoring; for example if a firm is motivated by cost, then choosing a low-cost location is important. Location choice of smaller companies is assumed as well to be influenced by limited material advantages, for example financial and technological resources (Fagiolo & Luzzi, 2006; Lu & Beamish, 2001; Rothwell, 1989; Rothwell & Dodgson, 1993). Smaller companies, therefore, search for complementary resources, which are more likely to be found in nearshore economies as these are innovation driven. Second, smaller companies are subject to several constraints with regard to information gathering (Liesch & Knight, 1999) and might try to limit their constraints by choosing nearshore locations. Although smaller firms possess entrepreneurial capabilities to develop competitive advantages from complex international resource combinations (Karra, Phillips, & Tracey, 2008) and international participation might be more easily possible around the world due to technological developments (e.g. Knight & Cavusgil, 2004), larger firms possess still

greater information capacity and resources than large firms. Large firms have for example large scale research and development facilities, whereas smaller firms are specialists (e.g. Qian, 2002). These differences point at similar differences in information capacity. Therefore we hypothesize that large firms are more likely to offshore to farshore locations.

*H5 Offshoring to farshore locations will become more likely when firm size increases.*

**2.6 Offshoring Governance Mode**

In order to undertake international activities, companies can choose several governance modes as entry strategy. Different researchers have focused on certain types of foreign market entry. Agarwal and Ramaswami (1992) focus for example on exporting, licensing, joint ventures and sole ventures. Acquisition, joint ventures and greenfield investment are used by Kogut and Singh (1988). Research distinguishes three governance modes (Anderson & Gatignon, 1986). First, the so-called dominant equity mode, which allows full ownership and control. Second, the balanced mode, which shows shared ownership, like with joint-ventures. Lastly, the diffused governance mode which lacks ownership and has only limited possibilities for control. In this paper we divide between captive offshoring and outsource offshoring (UNCTAD, 2004), distinguishing between full and shared ownership on the one hand and no ownership models at the other hand (Table 2.3).

**Table 2.3 – Offshoring Governance Modes**

<b>Offshoring Governance Modes</b>	<b>Categorization (Anderson &amp; Gatignon, 1986)</b>
Captive offshoring	Full ownership model
	Shared ownership model
Outsource offshoring	No ownership model

Especially the limited financial resources of SMEs (Fagiolo & Luzzi, 2006; Lu & Beamish, 2001; Rothwell, 1989; Rothwell & Dodgson, 1993) are expected to have a significant influence on governance mode choice. As ownership, i.e. captive offshoring, requires more capital than no ownership modes, it is less likely that the dominant mode will be chosen by

smaller companies in comparison to large companies. Furthermore, the entrepreneurial dynamism, internal flexibility and responsiveness to changing circumstances (Rothwell, 1989; Rothwell & Dodgson, 1993) which are more prominent in smaller companies than in larger ones are likely to influence a preferences for governance modes that are collaboration focused.

*H6 Captive offshoring will become more likely when firm size increases.*

## **2.7 Data and Method**

The survey data was gathered through an international research collaboration, the Offshoring Research Network (ORN). This network is led by Duke University US. Universities from Germany (Wissenschaftliche Hochschule für Unternehmensführung), Spain (IESE), United Kingdom (Manchester Business School), Denmark (Copenhagen Business School) and the Netherlands (Rotterdam School of Management, Erasmus University) are taking part in this joint research project. The first survey was launched in November 2004. The objective of ORN is to yearly investigate the adoption of offshoring administrative and technical functions (Lewin & Peeters, 2006b). ORN has been building the first firm-level database on offshoring. Companies were invited by an email invitation to participate in the survey. The survey addresses questions including when each firm started offshoring, with what particular business function, where it was offshored, using what governance mode and why. The survey also addressed issues like perceived risks, benefits and future plans. For every offshored function, offshoring strategy items were asked separately. Companies could report on more than one offshoring function. To investigate offshoring strategy and the impact of firm size, the data from the 2006 annual ORN survey will be used. We investigated 353 unique functions offshored by firms from United States, United Kingdom, the Netherlands, Germany and Spain.

**Offshoring Drivers.** The importance of nine different offshoring drivers used in the ORN survey (see Table 2.2, right column) was investigated using a 5-point Likert scale. An exploratory factor analysis (a statistical method used to derive main categories from different drivers of offshoring) was done to find support for the three theoretically defined categories. The analysis supports the three categories of offshoring drivers, i.e. costs, resources and entrepreneurial (all items loaded on their appropriate factors greater than 0.66, and no cross-loading was greater than 0.26, eigenvalues for each factor were greater than 1).

**Offshoring Function.** The different functions which are offshored, were categorized similarly to the division of Cantwell et al. (2005) between competence exploiting and competence creating activities. Functions were divided between (1) Finance/Accounting, Human Resources, Marketing & Sales, IT, Call Center, Procurement, Logistic Services and (2) Engineering, R&D and Product Design. The former are assumed to be primarily associated with competence exploiting and the latter with competence creating activities.

**Offshoring Location.** The offshoring location has shown that the country to which a certain activity is offshored. Nearshoring is for European countries offshoring to Western and Eastern European countries and for US to Canada, Mexico, and Central America. Other locations for the respective countries are labeled as farshoring.

**Offshoring Governance Mode.** With regard to governance mode the different models were either set as outsource or captive offshoring (Manning, et al., 2008; UNCTAD, 2004). Firms are offshore outsourcing when they outsourced to a domestic partner, an international party and/or a local party, when they applied more than one of these or in case they only answered outsourcing. Captive offshoring firms form joint ventures or keep full control over overseas activities (see Table 2.3).

**Firm Size.** Based on the European Union's categorization (Wiklund & Shepherd, 2003) we divided firms in three size classes (1-49, 50-249 and +250 employees). Similar categorizations have been made in research (Bohata & Mladek, 1997; Sadler-Smith, 2004). We repeated the analysis using US categorization of firm size (small firms -500 and large firms +500 employees) (Arend, 2006; Dickson, et al., 2006), resulting in a two-category analysis, addressing small and large firms.

## 2.8 Analysis and Results

To investigate whether differences regarding driver categories, function, location and governance mode are present between small, medium-sized and large companies, ANOVA is used (the F-value of the ANOVA shows whether significant differences exist between the three groups of companies with regard to the driver categories).

Table 2.4 shows means and standard deviations of the three firm size groups. Also, significant differences between size groups and drivers for offshoring are shown. The significance of the F-values has shown that the cost driver, resource driver, entrepreneurial

driver, function and location to be different. Only governance mode does not show a significant difference. Moreover, we did post hoc analyses to investigate how the significant differences between the three groups are composed (Table 2.5). The first hypothesis states that cost drivers are likely to be more important when firm size increases. The findings show that Hypothesis 1 can be accepted for medium-sized firms as small firms indicate cost drivers to be equally important as to large firms. With regard to the resource driver, this driver is equally important for medium-sized and large firms, however, small firms assign relatively the least importance to offshoring as resource strategy. Therefore, hypothesis 2 can only be accepted for medium-sized and large firms. Moreover, medium-sized firms show to be most entrepreneurial driven. Results on small and large firms show these firms to be relatively least entrepreneurial. Again the research identifies small firms as different group. Hypothesis 3 can be accepted for medium-sized and large firms.

Turning to the other elements of the offshoring strategy, i.e. function, location and governance mode, shows the following results. Large firms indeed offshore the least competence exploring activities, whereas small firms offshore relatively the most competence exploring activities. Although, medium-sized firms are not significantly different from either of the groups, the assigned importance of this group is between small and large firms, which confirms Hypothesis 4. The fifth hypothesis states that farshoring is more likely when firm size increases. The findings point out that this is true for both medium-sized and large firms. Small firms were expected to undertake relatively more nearshoring; however they report to undertake more farshore implementations. Therefore, Hypothesis 5 is not confirmed. Governance mode, addressed by the sixth and last hypothesis, shows not to be affected by firm size, for which Hypothesis 6 is not confirmed.

We repeated the analysis using the US categorization of firm size (below or above 500 employees). This analysis shows that large firms are relatively most cost and resource driven, and they also offshore exploitative functions and choose for farshoring. The opposite is true for smaller companies (< 500 employees). The entrepreneurial driver and again the governance mode do not show any significant differences.

**Table 2.4 - Importance of Offshoring Drivers for Small, Medium-Sized and Large Firms (ANOVA) (N=353)**

	Small Firms (1-49 employees)	Medium-Sized firms (50-249 employees)	Large Firms (>250 employees)	F-value*
Cost Driver	4.22 (0.99)	3.71 (1.46)	4.21 (0.74)	5.270 **
Resource Driver	3.20 (1.00)	3.70 (0.94)	3.71 (0.83)	6.535 **
Entrepreneurial Driver	2.57 (1.27)	3.65 (1.20)	2.90 (1.02)	10.132 ***
Function	0.34 (0.48)	0.21 (0.41)	0.16 (0.37)	3.887 *
Location	0.90 (0.30)	0.65 (0.49)	0.90 (0.30)	9.838***
Governance Mode	0.41 (0.50)	0.35 (0.49)	0.42 (0.50)	0.317

*Note: Cells provide means and standard deviations for the importance of a certain driver;*

*N=353; \*p <0.05; \*\*p<0.01, \*\*\*p<0.001*

**Table 2.5 – Strategic and Organizational Attributes of Small, Medium-Sized and Large Firms (ANOVA Subsets)**

<b>Strategic Attributes</b>	<b>Subset A</b>	<b>Subset B</b>
Cost Driver	Medium-Sized Firms	Small and Large Firms
Resource Driver	Small Firms	Medium-Sized and Large Firms
Entrepreneurial Driver	Small and Large Firms	Medium-Sized Firms

<b>Organizational Attributes</b>	<b>Subset A</b>	<b>Subset B</b>
Function	Large and Medium-Sized Firms	Medium-Sized and Small Firms
Location	Medium-Sized Firms	Small and Large Firms
Governance Mode	All firms	

## 2.9 Discussion

Firm size is recognized to be an important (control) variable, but did not receive yet much attention as an antecedent of firm behavior in strategic management or organization theory literature, like cost, human capital, growth (Farrell, 2005; Lewin & Peeters, 2006a; Lewin & Peeters, 2006b). Here we proposed three conceptual categories, namely cost, resources and entrepreneurial drivers. These categories were predicted by transaction cost economics (and production efficiency theory), the resource-based view of the firm and entrepreneurship theory respectively. They were supported in the analysis with ORN data as three distinct groups of drivers. This shows that offshoring which allows to realizing cost, resource and entrepreneurial strategies. Firms can not only decrease their cost levels at their domestic locations, they can also improve their efficiency, gaining access to qualified personnel and potential customers at offshore locations for geographical expansion. Our findings show that offshoring strategies might be used as cost strategy, resource strategy and value creating strategies that focus on innovation and growth (Lewin & Peeters, 2006a). Moreover, they show again that managerial intentionality (Hutzschenreuter, Pedersen, & Volberda, 2007) is important for offshoring strategies (Lewin, et al., 2009).

Second, the paper contributes to existing research by showing differences in importance companies of different sizes assign to the three driver categories and the offshoring strategy elements function, location and governance mode. Contrary to our expectations, small firms seem to be capable of overcoming their lack of material advantages, i.e. financial and technological advantages (Rothwell, 1989; Rothwell & Dodgson, 1993). These firms assign the same importance to using offshoring as cost strategy, farshoring and offshoring competence exploring functions. This might indicate that small firms may have the so-called born global capabilities to develop complex international resource combinations across the world (Karra, et al., 2008) to profit from lower costs at farshore locations and sending competence exploring activities abroad. Moreover, once more stage models of internationalization (Johanson & Vahlne, 1977) are questioned as these firms farshore as much as large firms. Research already indicated stage models to be less relevant in nowadays business (e.g. Autio, Sapienza, & Almeida, 2000; Oviatt & McDougall, 1994).

Medium-sized firms, however, favor employing offshoring as entrepreneurial strategy more than small and large firms. Nonetheless, they undertake offshoring also as cost and resource strategy. Further, these firms choose relatively more often for nearshoring. Medium-



sized firms might still follow a more traditional internationalization path (Johanson & Vahlne, 1977) preferring nearshore locations and exploiting their specialist entrepreneurial profile and finding resources in this way, while profiting from some cost advantages as well. Interestingly, the offshoring strategy element governance mode does not show to be effected by firm size. In this case both small and medium-sized firms show not to be constrained by their firm size to choose an equal proportion of offshore implementations to be executed with a captive governance mode. Governance mode might be more influenced by for example size of the operation, industry and host country (Brouthers & Hennart, 2007).

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**Table 2.6 - Main Findings**

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- Offshoring can be undertaken as a cost, resource or entrepreneurial strategy.
  - Small companies use offshoring as cost strategy, are relatively often farshoring and relocating competence exploring functions.
  - Medium-sized firms use offshoring as cost, resource and entrepreneurial strategy and are relatively often nearshoring.
  - Large firms use offshoring as cost and resource strategy, are relatively often farshoring and relocating competence exploring functions.
  - Firm size does not affect the offshoring governance mode, either captive or outsourcing offshoring.
- 

We will indicate several limitations and suggest directions for future research. First, firms of different sizes seem to use the offshoring strategy in a different way. Future research needs to further explore and explain these differences and specifically address the characteristics of small and medium-sized firms. Applying international entrepreneurship literature (Oviatt, 2005; Oviatt & McDougall, 1994) might show whether offshoring might function as a born global strategy, would be a fruitful way of additional research. Second, future research has to investigate the impact of offshoring drivers on offshoring performance, for example improved competitive position and firm growth. Research (e.g. Gilley & Rasheed, 2000) has produced mixed findings. Third, future research needs to investigate firm capabilities, like absorptive capacity which is mentioned to be an important capability to execute international strategies

(Zahra & Hayton, 2008), enabling gaining profits from offshoring strategies. Finally, in future research offshoring drivers and behavior could be investigated in a co-evolutionary context including the emergence of new organizational forms. Offshoring strategies and more specific offshoring drivers, are embedded in a co-evolutionary setting in which the firm and the environment interact (Lewin & Volberda, 1999; Volberda & Lewin, 2003). By offshoring, business functions of companies become globally dispersed and due to co-evolutionary processes this might result over time in new organizational forms (Lewin & Volberda, 1999) and capabilities (Volberda, 1998). For example, embedded in firm strategies, strategic alliances co-evolve with other firm strategies, the environment and managerial intentionality.

In conclusion, these findings help firms to consider offshoring as a strategy that moves beyond gaining cost advantages. Table 2.6 summarizes the main findings of this chapter. The findings show that companies of different sizes might profit in different ways from their offshoring strategies.



### **3 STUDY II - HOW OFFSHORING STRATEGY ATTRIBUTES AND INNOVATION INFLUENCE FIRMS' COMPETITIVE POSITION: A LEARNING PERSPECTIVE <sup>4</sup>**

#### **Summary**

Research in offshoring is growing steadily; however, the number of studies investigating the impact of this administrative innovation on firm performance is limited. We investigate how offshoring strategies and innovation contribute to firms' competitive position from a learning perspective. The offshoring strategy both exists of organizational attributes, i.e. core/non-core diversity and governance diversity; and strategic attributes, i.e. cost and resource focus. The moderating influence of innovation is researched for its impact on the relationship between the offshoring strategy and firms' competitive position. Interestingly, the results show that the strategic attribute cost focus positively influences competitive position, whereas the attribute resource focus and the organizational attributes do not influence competitive position directly. Regarding innovation, a positive moderation effect of process innovation is presented for the organizational attribute governance diversity and a negative effect for the attribute core/non-core diversity. These results entail that innovative firms profit from offshoring non-core functions. Applying both outsourcing and captive governance models also shows positive impact. The research has shown that process innovators are better able to profit from offshoring strategies.

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<sup>4</sup> This chapter will be submitted to a primary journal.

### 3.1 Introduction

Offshoring, i.e. the relocation of business activities to foreign locations, makes it possible for companies to gain competitive advantages. This is not only true for relocating the manufacturing of standardized products, but also for knowledge intensive activities (Couto, et al., 2006; Erber & Sayed-Ahmed, 2005), services (Ellram, et al., 2008; Metters & Verma, 2008; Stratman, 2008; Stringfellow, et al., 2008; Youngdahl & Ramaswamy, 2008) and core activities (Couto, et al., 2006; Volberda, et al., 2007). However, cultural and geographical distance (Gilley & Rasheed, 2000; Kogut & Singh, 1998; Zaheer, 1995), underestimation of costs (Ellram, et al., 2008) and invisible costs (Stringfellow, et al., 2008) might be detrimental to the realization of benefits from an offshoring strategy.

Several authors have called for more research, proposing positive performance effects, however, empirical evidence is lacking. So far, they have, for example, been unable to find evidence for a positive relationship between outsourcing and performance (Gilley & Rasheed, 2000) or a relationship between the extent of offshoring and firm performance (Bhalla, et al., 2008). Others investigated the influence of shared service organizations on performance (Aksin & Masini, 2008). Although there is evidence that offshoring increases chances of survival (Coucke & Sleuwaegen, 2008), its effect on firm performance must still be explored further.

In the past, the literature referred to transaction cost economics and the resource-based view to explain outsource offshoring versus captive offshoring (e.g. Ellram, et al., 2008; Holcomb & Hitt, 2007). Also research applies learning theory to explain internationalization of sales due to outsourcing by small and medium-sized enterprises. Unfortunately, research conducted so far has failed to address the effects of outsource and captive offshoring on performance simultaneously. Both modes enable gaining profit from offshore location advantages, i.e. decreased summed production and transaction costs. This research applies learning theory to investigate whether an offshoring strategy moves beyond gaining cost and resource advantages.

Innovation is thought to positively influence firm performance (e.g. Nicholson, Rees, & Brooks-Rooney, 1990; Thornhill, 2006). Moreover, innovation is a critical process for firm performance in international markets (e.g. Kotabe, 1990; Steensma, Marino, Weaver, & Dickson, 2000). Product and process innovation, both types of technological innovation, are important to realize competitive advantages in international and global markets (Franko, 1989;

Porter, 1990). Research addresses the influence of offshoring on technological innovativeness (e.g. Ficarek, et al., 2008). The results show that offshoring results in less innovation in the rare earth industry. Other research focuses on offshore outsourcing, for example, by stating that offshore outsourcing damages the ability of firms to innovate (Chesbrough & Teece, 2002), is the cause of lost internal capabilities for research and development (Teece, et al., 1997) and limits connectivity with breakthroughs (Kotabe, 1990). However, effects from offshoring strategies on firm performance might depend on the innovation of firms. This chapter seeks to explore how innovation influences realizing performance effects from offshoring strategies.

The objective of this chapter is to investigate the impact of an offshoring strategy on firm performance from a learning perspective and to assess the moderating influence of the innovative performance of firms. First, we advance by incorporating several attributes of offshoring strategies into a multi-dimensional analysis to further untangle the relationship between offshoring strategies and performance. Both organizational attributes, i.e. core/non-core diversity (e.g. Couto, et al., 2006; Gilley & Rasheed, 2000) and governance diversity (e.g. Brouthers & Hennart, 2007), and strategic attributes focused on either costs or resources (e.g. Lewin & Peeters, 2006b) are addressed. Second, the research addresses the performance effects from offshoring strategies from a learning perspective (Cohen & Levinthal, 1990) to complement the cost and resource perspective. Third, innovative performance is introduced as a facilitator in realizing positive performance effects (Nicholson, et al., 1990; Thornhill, 2006) from offshoring strategies. Firms possessing innovative capabilities may also be able to increase the performance effects of offshoring strategies.

### **3.2 Theoretical Overview**

Recently gaining more attention of companies (Farrell, 2005; Lewin & Peeters, 2006b), offshoring is defined as ‘the process of sourcing and coordinating tasks and business functions across national borders’ (cf. Manning, et al., 2008:39). Once started with offshoring IT by US firms, the strategy is no longer limited to IT activities and has expanded to other Western countries as well (Lewin & Peeters, 2006b). ‘Endless’ availability of low-cost labor capacity abroad and advances in information and communication technology (e.g. Farrell, 2005) have caused rapid development of the strategy.

Offshoring is thought to enhance firm performance, either through labor cost advantages (Bunyaratavej, et al., 2007; Erber & Sayed-Ahmed, 2005; Farrell, 2005) or increased access to resources (Couto, et al., 2006). However, research also points to unanticipated consequences (Ellram, et al., 2008) and hidden costs (Erber & Sayed-Ahmed, 2005; Stringfellow, et al., 2008). Moreover, offshoring creates revenue generation, while many potential gains go unrealized (Farrell, 2005). The literature on outsourcing empirically supports that offshore outsourcing positively contributes to the market value of firms, which value comprises an unbiased estimate of both tangible and intangible assets (Jiang, Belohlav, & Young, 2007). However, research does not report conclusive findings regarding the performance effects of both outsource and captive offshoring. This study applies learning theory (Autio, et al., 2000; Cohen & Levinthal, 1990; Zahra & Hayton, 2008) to better understand the contribution of offshoring strategies to firm performance.

The literature on outsourcing identifies several important strategic elements of offshoring, namely the function which is offshored, the governance mode chosen to control the offshored activity and strategy behind the offshoring strategy (Couto, et al., 2006; Youngdahl, et al., 2008). Different *functions* might be offshored. Whereas only repetitive specialist tasks like manufacturing were outsourced previously, now more visible and sensitive functions like R&D and customer support are outsourced as well (Holcomb & Hitt, 2007). Nowadays, functions that are also more core to a firm, often labeled as core activities, are offshored as well (Couto, et al., 2006; McIvor, 2009; Volberda, et al., 2007). International business literature investigates different *governance modes*, for example, exporting, licensing, joint ventures and sole ventures (Agarwal & Ramaswami, 1992). With regard to offshoring, the resulting ownership and control structure is most important, for example, full, balanced or diffused modes (Anderson & Gatignon, 1986). Accordingly, we distinguish between so-called captive offshoring and outsource offshoring (Manning, et al., 2008; UNCTAD, 2004) corresponding with the most commonly applied governance modes (Lewin & Peeters, 2006a). Captive offshoring implies the relocation of activities under direct control of the offshoring firm by either setting up a new subsidiary or acquiring one. With outsource offshoring, the activities are relocated to a third-party service provider. Further, the impact of strategic attributes, i.e. *cost focus* and *resource focus*, on competitive performance is investigated. These strategic attributes represent cost and resource drivers of offshoring (e.g. Couto, et al., 2006). Both being examples of managerial intentionality (Hutzschenreuter, et al., 2007), these positively

enhance the competitive position of firms. It has been suggested that strategic intent leads management to relocate as it makes it possible to link all operational aspects of the relocation to ensure consistent behavior and management responsibility (Carter, 1996).

Prior research suggests offshoring to be detrimental to innovation (Fifarek, et al., 2008; Kotabe, 1990). However, others mention firms that both source and integrate knowledge are likely to be successful innovators (Almeida, 2003). In this research, we argue that innovation capabilities that already exist within firms contribute to realizing performance effects of offshoring strategies. Innovation capabilities are important when executing offshoring strategies for several reasons. First, researchers show innovation to be a precursor to international diversification (Kotabe & Murray, 1990). For example, SMEs that developed and commercialized breakthrough innovations were more likely to seek and enter new geographic markets (Branzei & Vertinsky, 2006). Additionally, research shows that with international R&D acquisitions, the acquirer gains are positively related to the pre-acquisition strength of the new product pipeline and exclusive product portfolio (Higgins & Rodriguez, 2006). Second, innovation also plays a key role in firm survival (Schumpeter, 1942:84). Innovation matters for the survival of all types of companies, new and established companies (Cefis & Marsili, 2005:1167). Evidence suggests that the expected survival time of innovative firms is higher than that of non-innovative firms. Process innovators in particular have a high premium in survival time (Cefis & Marsili, 2005:1168). Third, innovativeness reflects the tendency of firms to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes (cf. Lumpkin & Dess, 1996:142). Product development strategies are said to contribute to higher levels of innovation and growth (Ardishvili & Cardozo, 1994; McDougall, Shane, & Oviatt, 1994; Shane, 1996). Moreover, innovativeness shows the entrepreneurial level of a firm, in addition to risk-taking and pro-activeness levels of firms (Lumpkin & Dess, 1996). Although smaller firms are often researched for the effects of their entrepreneurial behavior (Filatotchev, Liu, Buck, & Wright, 2009), the focus here is on well-established firms in order to contribute to the literature on innovation.

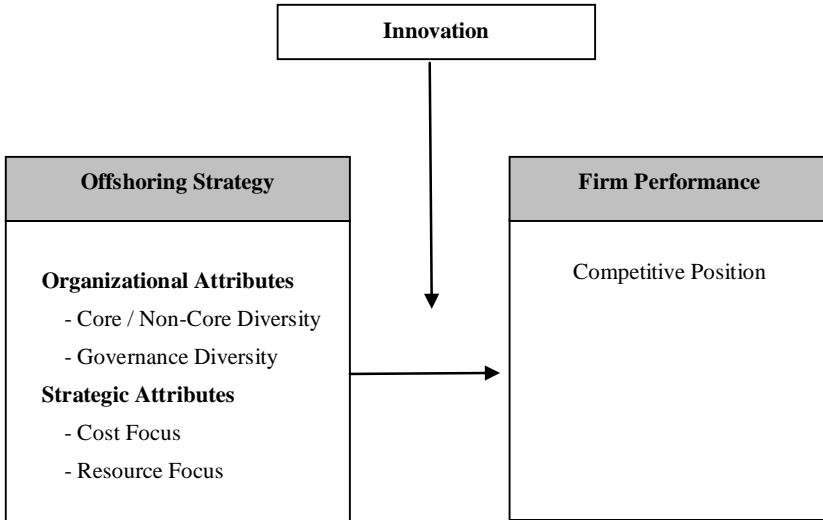
This study moves beyond cost and resource perspectives to explain performance effects of offshoring strategies by applying learning theory. “An organization learns if any of its units acquires knowledge that it recognizes as potentially useful to the organization” (cf. Huber, 1991:89). Organizational learning stems from information sharing between individuals



(Huber, 1991) and is defined as assimilating new knowledge into the organizational knowledge base (Autio, et al., 2000). Moreover, learning theory is built on the premise of the detection and correction of error (Argyris & Schon, 1978) and “improving actions” (Fiol & Lyles, 1985:803). More specifically, Argyris and Schon (1978) discern between single loop learning, implying corrective actions within accepted routines, and double loop learning, questioning underlying organizational policies and objectives and consequently creating new routines. When a firm internationalizes, it has to handle new knowledge (Ghoshal, 1987), and learning and capability building increase as firms expand into a variety of markets (Argyris, 1996). General constructs related to organizational learning, like knowledge acquisition and information distribution (Huber, 1991), also have their importance in the context of offshoring. Learning theory shows learning to be most efficient in domains close to existing knowledge, while diversity builds learning (Cohen & Levinthal, 1990). This typically applies to offshoring, as this phenomenon is defined as the relocation of existing activities to foreign locations implying learning close to the existing knowledge base in a new context. Previous research does confirm that diversity, necessary for international learning, might be built in the international arena (Barkema & Vermeulen, 1998; Zahra, Ireland, & Hitt, 2000). For this reason, this study applies learning theory (e.g. Autio, et al., 2000; Cohen & Levinthal, 1990) to the organizational attributes of the offshoring strategy, i.e. core/non-core diversity and governance diversity, to see whether this contributes to firm performance.

Figure 3.1 presents the research model. We will now further elaborate on the organizational attributes (i.e. core/non-core diversity and governance diversity), strategic attributes (i.e. cost and resource focus) of offshoring strategies, and the moderating impact of innovation capabilities on the relationship between offshoring strategy and performance to develop hypotheses.

**Figure 3.1 - Research Framework**



**3.3 Offshoring Strategy: Core/Non-Core Diversity**

The first organizational attribute of offshoring strategies addresses the type of function which is offshored. We distinguish between core and non-core functions (Quinn & Hilmer, 1994), which is similar to the categorization between core and peripheral activities by Gilley and Rasheed (2000). Offshoring non-core activities makes it possible for companies to focus on their core activities (e.g. Dess, Rasheed, McLaughlin, & Priem, 1995; Kotabe & Murray, 1990; Quinn & Hilmer, 1994). It also allows firms to improve their quality while obtaining financial benefits from offshoring non-core activities (Gilley & Rasheed, 2000). It has been suggested that offshoring core activities results in ‘hollowing-out’ effects (Kotabe, 1990) and loss of protection against competitors (Quinn & Hilmer, 1994). However, core activities might be offshored all or in part to gain access to complementary and strategic capabilities (Holcomb & Hitt, 2007). These strategic capabilities are important for the further development of the core

activities and competitive position of firms. Technological modularity (Tiwana, 2008) and concurrent sourcing (Parmigiani, 2007), i.e. only partly offshoring an activity, might overcome disadvantages of core offshoring.

Core activities are highly important to the long-run success of firms (Gilley & Rasheed, 2000) and form the basis and direction for growth (Peteraf, 1993). Non-core activities are strategically less relevant to firms. Offshoring involves experience-based learning (Levin, 2000; Martin & Salomon, 2003), i.e. firms replicate their routines by relocating existing activities to offshore locations. Learning occurs by adjusting to business practices and norms (Eriksson, Johanson, Majkgard, & Sharma, 1997), hiring employees that worked for competitors and using local suppliers (Almeida, 1996), and developing interconnected firm systems (Cantwell, 2009). These activities involve related, but different capabilities for offshoring core activities and non-core activities. This is caused by the different learning priorities (Bettis & Wong, 2003) 2003) and strategic relevance (Gilley & Rasheed, 2000; Quinn & Hilmer, 1994) that both types of activities entail. The diverse circumstances under which both activities are offshored, involve a variety of events and ideas (Jacobides & Winter, 2006). This diversity facilitates experiential knowledge accumulation (Barkema & Vermeulen, 1998; Penrose, 1959). However, similarities between offshoring core and non-core activities ensure learning to be efficient (Autio, et al., 2000; Cohen & Levinthal, 1990) and allow staying within the cognitive limits of information sharing (Barkema & Vermeulen, 1998; Hitt, Hoskisson, & Ireland, 1994).

Prior research has shown that learning to improve organizational performance and positively contribute to competitive position (Levinthal & March, 1993). Learning is important to improve organizational performance and strengthen competitive advantage (Luo & Peng, 1999; March, 1991). International expansion into related activities in particular results in performance effects (Barkema, Bell, & Pennings, 1996). Moreover, it has been suggested that repetition of the same task improves performance (Levinthal & March, 1993). Core/non-core diversity moves beyond the benefits of repetition of tasks as it involves double loop learning. Offshoring non-core activities might entail only single loop learning as these non-core activities are simple, non-specialized activities. However, combined with offshoring core activities, double loop learning also plays a role in the offshoring process (Argyris & Schon, 1978). Non-standard, specialized activities, i.e. dynamic capabilities require a higher level of learning, while specialized routines demand a lower level of learning (Volberda, 1998).

Accordingly, we posit that offshoring both core and non-core activities generate learning effects which positively influence the competitive position of firms.

*H1 A higher level of diversity of core/non-core functions in offshoring positively influences firm performance.*

### **3.4 Offshoring Strategy: Governance Diversity**

The second organizational attribute, diversity in governance mode, considers the governance mode used to run the operations at the offshore location. Offshoring strategies might be implemented by an outsource offshoring or captive offshoring governance mode (Manning, Massini, & Lewin, 2008; UNCTAD, 2004). While the former entails relocating activities to foreign service providers, the latter implies vertical integration at foreign locations. Other studies have reported a relationship between governance modes and firm performance (e.g. Brouthers & Hennart, 2007; Leiblein, et al., 2002). Additionally, the choice of governance mode is deemed as being of strategic importance, especially since it is a choice that cannot be easily reversed (Agarwal & Ramaswami, 1992). Moreover, research shows that it is unlikely that one type of governance mode (e.g. internal, external, hybrid) is able to successfully deal with all forms of innovation (Connor & Prahalad, 1996). Studies have labeled the application of different governance modes in a single structure as taper integration (Harrigan, 1984), concurrent sourcing (Parmigiani, 2007), and plural governance (Heide, 2003). Although the performance effects of vertical integration and outsourcing have been described conceptually, robust empirical evidence is lacking (Leiblein, et al., 2002). Only a few authors report on the performance effects of captive offshoring (Coucke & Sleuwaegen, 2008).

Striking a balance between outsourcing (i.e. outsource offshoring) and vertical integration (i.e. captive offshoring) has proven to be important for innovative performance gains (Rothaermel, Hitt, & Jobe, 2006). Previous research also shows that diversity in joint venture modes influences the longevity of joint ventures (Barkema, et al., 1996). Moreover, learning from governance modes might occur due to the application of different control mechanisms (Tiwana, 2008), the development of procedures to codify knowledge for external users (Kogut & Zander, 1992) and the development of interconnected firm systems (Cantwell, 2009). Offshoring under both captive and outsource governance mode leads to the

accumulation of foreign experience, which facilitates learning (Barkema, et al., 1996). However, both captive and outsource offshoring involve different, albeit related sets of capabilities. The different governance modes require different levels of adaptation to foreign partners (Barkema, et al., 1996). Moreover, control issues might be more complicated for captive governance modes (Gilley & Rasheed, 2000). Outsource and captive offshoring generate different experiences, while diversity in governance modes also prevents groupthink (Janis & Mann, 1977) and uniformity pressures (Whyte, 1989). When a firm only applies captive offshoring, it might be limited in its ability to learn, as it is outperforming in controlling its ‘captives’. However, the concomitant application of outsource and captive offshoring opens up the firm to profit from its external environment to a greater extent.

Research has shown that learning improves organizational performance and positively contributes to competitive position (Levinthal & March, 1993). Accordingly, offshoring both through outsource offshoring and captive offshoring increases depth of knowledge, because it involves relocating existing activities using a new organizational configuration. However, offshoring also increases exposure to the breadth of knowledge available in the international arena (Zahra & George, 2002), accessed through, for example, foreign suppliers involved in these offshoring processes. These suppliers might be involved as either direct supplier (outsource offshoring) or supplier of captives (subsidiaries controlled by the offshoring firm). Accordingly, using different governance modes simultaneously stimulates innovative performance (Keil, Maula, Schildt, & Zahra, 2008). For example, outsource offshoring to a certain country may enhance implementation of captive offshoring projects and so experience with one task may influence and improve performance of subsequent tasks (Ellis, 1965). Therefore, we assume that firms using both outsource and captive governance modes contribute most to firm performance.

*H2 A higher level of governance diversity in offshoring positively influences firm performance.*

### **3.5 Offshoring Strategy: Offshoring Drivers**

The second part of the offshoring strategy encompasses its strategic attributes. As mentioned, companies may have different drivers for offshoring. The literature on offshoring identifies

*cost driver* as the most dominant driver, for example, labor cost arbitrage and other cost savings (Couto, et al., 2006; Farrell, 2005; Manning, et al., 2008). The OLI paradigm discusses ownership, location and internalization variables to explain foreign direct investment (Dunning, 1980). The paradigm states that firms go abroad for location advantages, like production cost-related advantages. Examples are the price of skilled and professional labor and materials (Dunning, 1998). Firms can profit from the offshore cost advantages of both outsource and captive offshoring strategies. In addition to location advantages, transaction cost theory further explains cost advantages abroad. Transaction costs have been reduced due to digitization (Aron & Singh, 2005; Kenney, et al., 2009). Technological advancements have decreased information asymmetries (Williamson, 1975), and the Internet has led to a decrease in both internal and external searching costs (Smith, Venkatraman, & Dholakia, 1999). For example, the electronic marketplace informs offshoring firms about the existence, prices and products of suppliers (Yannis Bakos, 1997). This reduces external searching costs. Captive offshoring is also eased by reduced information asymmetries. The transaction costs associated with managing a captive offshore location are decreased using interconnected information technology systems between offshore and home locations. Moreover, transaction cost advantages occur due to reduced small numbers bargaining. The increased number of specialized suppliers on the intermediated markets (Holcomb & Hitt, 2007) reduces the existence of opportunistic behavior. Suppliers on the intermediate markets generate reduction of transaction costs by sharing their scale economies generated across their customers (Walker & Weber, 1984). Although firms may need time to fully profit from location advantages and decreased transaction costs due to, for example, hidden costs (Stringfellow, et al., 2008), we posit that firms will be able to realize cost advantages over time.

Second, the resource-based view (Barney, 1991) predicts *resource drivers* to underpin offshoring strategies. While cost drivers aim at reducing the expense associated with existing activities, resource drivers aim at improving the efficiency of operations through specialized capabilities (Gilley & Rasheed, 2000; Holcomb & Hitt, 2007). A firm might search for resources worldwide and discover that they are available at distanced locations (e.g. Lewin & Peeters, 2006b; Westhead, et al., 2001) through an offshoring strategy. More specifically, the resource-based view predicts complementarity of capabilities, strategic relatedness, relational capability building and cooperative experience (Holcomb & Hitt, 2007) as drivers of offshoring strategies to improve the competitiveness of the resource base of firms. Research

into offshoring identifies instances when offshoring is undertaken to increase innovation (Lewin, et al., 2009; Lewin & Peeters, 2006b). Moreover, small and medium-sized enterprises tap into resources and capabilities of foreign partners with an offshoring strategy (Gregorio, et al., 2009).

Both cost and resource drivers are assumed to positively influence competitive position. The drivers are examples of managerial intentionality (Hutzschenreuter, et al., 2007), which may also applied to offshoring strategies (Lewin, et al., 2009). Hutzschenreuter et al. (2007:1062) conclude in their paper that 'knowledge stocks shared between various locations and cost considerations have received most attention'. Managerial intentionality influences the innovation paths and competitive position of firms. Managerial intent, which is also referred to as strategic intent, describes a desired future state, goals defined in competitive terms (Campbell & Yeung, 1991) and might describe a misfit between current resources and ambitions (Hamel & Prahalad, 2005; Hamel & Prahalad, 1989) urging appropriate response. Strategic intent can lead management of the relocation, for example, offshoring, as it facilitates linking all operational aspects of the relocation to ensure consistent behavior and management responsibility (Carter, 1996). Also, medium-sized enterprises profit from strategic intent to obtain enhanced environmental action (Worthington & Patton, 2005). Further, alliance research proposes stronger exploitation intent, for example, the importance of cost drivers to achieve positive performance outcomes (Koza & Lewin, 1998). An exploitation intent will namely initiate output controls (Ouchi, 1979) improving performance.

As such, cost drivers, motivated by transaction cost economics (combined with production efficiency theory), emphasizes efficiency and cost-minimizing rationales for cooperative strategies like offshoring (Child & Faulkner, 1998). The level of transaction-specific investment is crucial to decide whether an economic exchange should be managed internally or externally. Additionally, resource drivers, motivated by the resource-based view, explain offshoring as well. From this perspective, core competences are to be dealt with from within the organization to improve its competitive position (McIvor, 2009:47). A growing body of literature identifies the complementarity of TCE and RBV, i.e. with outsourcing. McIvor (2009:45) states in his paper that 'neither transaction cost economics, nor the resource-based view alone can fully explain the complexities of outsourcing' and therefore favors 'integrating TCE and RBV'. Vivek et al. (2008:180) add by stating that offshoring processes 'cannot be explained solely by one of these theories'.

Although the prescriptions of both theories might be conflicting, both a focus on cost efficiencies concerning market versus hierarchical governance structures (Williamson, 1975) and a focus on gaining access to and developing resources that contribute to competitive advantage (Barney, 1991) might be realized at the same time. Therefore, we hypothesize that cost and resource drivers as strategic attributes of an offshoring strategy will positively influence the competitive position of firms.

*H3 Offshoring with both a cost driver and a resource driver positively influences the competitive position of firms.*

### **3.6 Interaction between Offshoring Strategy and Innovation**

Development is defined as carrying out new combinations characterized by existing knowledge applied with discontinuity and withdrawal of means from old combinations (Schumpeter, 1934:67-68), i.e. incremental learning. Previous research has identified different types of innovation, for example, incremental versus radical innovation (Dosi, 1982), innovation focused at needs of existing versus emergent markets (Christensen & Bower, 1996) or innovation aimed at exploration requiring new knowledge and exploitation of existing knowledge and skills (Benner & Tushman, 2003; Jansen, Van den Bosch, & Volberda, 2006). While each characterization has its own merits, this research focuses on process innovation as opposed to product innovation (Tushman & Nadler, 1986). Process innovations are new elements in the operations of firms to produce a product or render a service, while product innovations are new products or services to meet an external user or market need (Knight, 1967). This research investigates well-established firms and therefore focuses on process innovation originates, usually undertaken in later stages of a firm's life cycle (Abernathy & Utterback, 1978) and post-dominant design stages (He & Wong, 2004). Moreover, process innovations are 'mainly introduced in the operating core of an organization' (Damanpour, 1991:580). Therefore, activities involved in process innovation match those involved in offshoring. Innovation positively influences firm performance (e.g. He & Wong, 2004; Nicholson, et al., 1990; Thornhill, 2006) and is important to realizing competitive advantages in international and global markets (Franko, 1989; Porter, 1990). An innovative culture facilitates the acquisition of knowledge leading to capability development and performance



effects (Knight & Cavusgil, 2004). The organizational attributes of offshoring strategies are prone to learning and knowledge exchange. Therefore, both function and governance diversity and their respective relationship with performance may be contingent on innovation. The positive effect of process innovation on realizing benefits from offshoring strategies is rooted in recognizing resources in the process innovation domain that are valuable for the offshoring domain (Hargadon, 2002). Knowledge can transfer across contexts by ‘analogical transfer’ (Reeves & Weisberg, 1994). By this process, knowledge involved in prior process innovation can be unlocked to serve offshoring strategies. Application of process technology requires big changes in structure and administrative practices (Nasbeth & Ray, 1974) and individual task behaviors (Zmud, 1982). Process innovation makes simultaneous use of external and internal integration mechanisms to be successful (Ettlie & Reza, 1992). Additionally, process innovation allows ‘doing what they do, but better’ (Davies, 1979), and the adoption of new process technology is said to have a substantial impact on productivity (Ettlie & Reza, 1992). Offshoring is an example of administrative innovation, implying new control systems and new structures (Damanpour, Szabat, & Evan, 1989). Therefore, process innovation knowledge is closely related to learning from function and governance diversity. Cohen & Levinthal (1990:131) state that ‘learning performance is the greatest when the object of learning is related to what is already known’. Consequently, we assume offshoring strategies can profit from existing process innovation capabilities available within the firm. Therefore, we assume that process innovators are more fully equipped to seize the benefits from both core/non-core diversity and governance diversity from offshoring strategies. Process innovation increases learning effects as it allows to learn new lessons from the firm’s existing knowledge base.

*H5 In offshoring, process innovation positively moderates the relationship between core/non-core diversity and competitive position.*

*H6 In offshoring, process innovation positively moderates the relationship between governance diversity and competitive position.*

## **3.7 Methods**

### **3.7.1 Setting and Data Collection**

The empirical data for this study was retrieved from the Dutch Statistical Office and combines offshoring and innovation data. Eurostat, the European Statistical Office, investigated offshoring in 13 European countries in 2007. Their International Sourcing (INTSO) survey addressed firms in industry, building, trade, catering and business services larger than 100 employees. These categories were further divided into high-tech industry, medium- and low-tech industry, knowledge intensive business services and other firms. Firms were asked for their offshoring activities in the period 2001-2006 and their plans for 2007-2009. The Dutch Statistical Office executed the INTSO survey for the Netherlands. They took a survey sample of 1503 out of 4633 companies Dutch companies available in the mentioned categories and firm size categories. Firms could choose to either fill in the survey on chapter or electronically. 1002 firms responded (67%) of which 156 companies are offshoring (16%). Non-response analyses were not done due to the high response rate and ‘the coverage of the responses (...) was in proportion to the aim set in advance’ (i.e. size classes and activity groups) (Denmark Statistics, Finland Statistics, Netherlands Statistics, Norway Statistics, & Sweden Statistics, 2008).

Second part of the data comes from the European Community Innovation Survey (CIS) 2002, 2004 and 2006 of Eurostat. CIS survey is used by all EU member states applying the same methodology. Firms were invited to fill in the survey on paper. Non-response analyses were not done as the Dutch response rate has always been above 70 percent. Only in case this rate is below 70 percent, Eurostat requires additional non-response analysis.

This research focuses only on the firms that reported to be offshoring in INTSO (N=156). Based on their business identification numbers, these firms were coupled with innovation data from CIS 2002, 2004 and 2006. We were able to combine offshoring and innovation data of 154 companies. Due to missing values in the CIS data, the number of usable respondents decreased to 75. So, binary regression analysis was done for data on 75 firms. This analysis is a method that allows analyzing binary dependent variables.

### 3.7.2 Construct Validation

The Dutch Statistical Office consulted Erasmus Strategic Renewal Center of the Rotterdam School of Management, Erasmus University when preparing their contribution to the Eurostat development of the INTSO survey. As a result of this involvement most variables could be taken directly taken from the survey, although measurement scales were sometimes simple categories lacking continuous scales. The innovation data is taken from the CIS database. Below the different constructs are further discussed.

***Competitive Position.*** Research measured firm performance on the firm-level (Gilley & Rasheed, 2000), however they failed to show a positive impact of outsourcing on firm performance. The authors indicate this might be solved by measuring individual functional areas where the savings occur (Gilley & Rasheed, 2000: 748). Therefore we measured firm performance by the question ‘Please evaluate the impact of the international sourcing activities 2001-2006 on your enterprise’ of INTSO was used. Firms could indicate whether offshoring had a negative impact (coded 1), no impact (coded 2) or a positive impact (coded 3) on their ‘competitiveness’. We triangulated competitive position with the production value available from Eurostat Prodcom (manufactured goods) statistics measuring ‘the amount actually produced by the unit, based on sales, including changes in stocks and the resale of goods and services’ (cf. European Commission, 1998:52). Impact of competitive position and log production value were significantly correlated, resulting in a correlation of 0.311 ( $p < 0.01$ ). Due to lack of data we were not able to compute a variable consisting of both the perceptual data of INTSO and objective data of Prodcom (Bingham, Eisenhardt, & Furr, 2007; Lane, Salk, & Lyles, 2001; McDonald, Westphal, & Graebner, 2008).

***Offshoring Strategy: Core/Non-Core Diversity.*** The variable *core/non-core diversity*, indicates whether a firm only offshores non-core activities (coded 1), only core-activities (coded 2) or both non-core and core-activities (coded 3). This is an adequate way to measure governance mode, as otherwise companies applying two governance modes cannot be dealt with at firm-level. A higher score of this variable shows that a firm has more diversity involved in its offshoring strategy ranging from firms only non-core activities to a firm applying the more diverse core offshoring and firms employing both types of functions. This diversity is caused by the level of tacitness involved in both types offshoring. Core activities entail more specialization and distinctiveness (Brusoni, Prencipe, & Pavitt, 2001) and therefore higher

levels of tacitness. Offshoring functions with different levels of tacitness entail higher levels of diversity, whereas captive offshoring itself involves more diverse processes than outsource offshoring.

**Offshoring Strategy: Governance Diversity.** In order to control an offshore operation, companies might choose between captive and outsource offshoring. From the INTSO survey the answer category ‘outside the firm’ was used to measure *outsource offshoring* (coded as 1). The answer categories ‘existing foreign affiliated firm’, ‘new acquired foreign affiliated firm’ and ‘new founded foreign affiliated firm’ were combined to represent *captive offshoring* (coded as 2). In case a firm used both governance modes they were put in a separate category (coded as 3). This way of measurement, does justice to companies that both use the captive and offshore mode. A higher score of this variable shows that a firm has a higher diversity of tasks involved in its offshoring process. Some firms apply the least diverse mode, outsource offshoring, whereas captive offshoring involves more diversity of experiences and both outsource and captive offshoring most diversity. Outsource offshoring applies codified knowledge to be exchanged with suppliers, implying less tacit knowledge involved.

**Offshoring Strategy: Offshoring Drivers.** Drivers of the offshoring strategy are measured by the question ‘Please indicate the importance of the following motivation factors for your decision to carry out international sourcing activities’ This question has three answer categories ‘not important’ (coded 1), ‘some importance’ (coded 2), ‘very important’ (coded 3). ‘Reduction of labor costs’ was used as cost driver and ‘Lack of available labor’ as resource driver.

**Process Innovation.** *Process innovation* was coded as dummy variable with categories no process innovation (coded as 0) and process innovation (coded as 1). Process innovation was defined by INTSO as new or importantly improved processes.

**Control Variables.** Firm size, measured by the number of employees, was taken as control variable. Larger firms might be able to obtain more scale advantages through offshoring resulting in a greater impact of their offshoring strategy on firm performance. Gilley and Rasheed (2000:786) state ‘size may be an issue. It is conceivable that larger firms outsource more activities’ which ‘may have performance implications’. To correct for skewness in firm size, the logarithm of the number of employees was taken.

### 3.8 Analysis and Results

In Table 3.1 the descriptive statistics and correlations of the variables are presented. Correlations between independent variables were no greater than 0.24, indicating no significant problems with multi-collinearity exist (e.g. Nicolaou & Birley, 2003:1715). Table 3.2 presents the binary regression results for competitive position. For the interaction terms variables were standardized (Model 3). Model 1-3 present results on *offshoring strategy*, *innovation* and *competitive performance*. Model 1 contains the control and moderator variable. Whereas Model 2 introduces the offshoring strategy attributes and Model 3 moderator effects of process innovation.

Models 2 and 3 do not confirm a positive influence of *core/non-core diversity* and *governance diversity* on *firm performance*. Therefore hypothesis 1 and 2 are not confirmed. With regard to hypothesis 3 we found a cost driver to positively influence firm performance ( $p < 0.05$  in models 2 and 3). Hypothesis 3 however could only partly be confirmed as a positive performance effect of a cost driver is confirmed, however, a positive impact of a resource driver on performance could not be found. With regard to the moderating role of *innovation*, process innovation was assumed to positively interact with the offshoring strategy elements to positively influence resulting *competitive position*. First of all, process innovation was found to negatively moderate between the *core/non-core diversity* and *competitive position*, although we expected positive moderation (H4). This implies that competitive position can only be improved by offshoring non-core activities, while offshoring both core and non-core activities decrease competitive performance effects. A significant positive moderation effect is found between *governance diversity* and *competitive position* (H5). In general, models 1-3 show both the *offshoring strategy* and *innovation* to be important contributors in explaining *competitive position*. Adding both sets of variables results in significant increase of the explanatory value of the models (for both Models 2 and 3  $\Delta\chi^2 < 0.05$ ).<sup>5</sup>

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<sup>5</sup> For product innovation, similar models were tested without any significant results.

**Table 3.1 - Means, Standard Deviations, and Correlations (N=75)**

	Mean	St. Dev.	(1)	(2)	(3)	(4)	(5)	(6)
1. Firm Performance	0.57	0.50						
2. Number of Employees (log)	2.41	0.34	0.12					
3. Process Innovation	0.67	0.47	0.02	0.18				
4. Core/Non-Core Diversity	2.01	0.76	0.16	-0.05	0.05			
5. Governance Diversity	1.97	0.59	-0.04	0.20	0.11	0.18		
6. Cost Driver	2.50	0.70	0.38**	-0.01	0.12	0.24*	-0.03	
7. Resource Driver	1.65	0.76	0.14	-0.07	0.09	0.12	-0.14	0.09

\*p<0.05

\*\*p<0.01

Two-tailed tests.

**Table 3.2 - Results of Regression Analysis: Effects of Offshoring Strategy on Competitive Position Moderated by Innovation (Part 1)**

Variables	Competitive Position		
	1	2	3
Number of Employees (log)	0.75 (0.73)	1.21 (0.82)	1.45 (0.90)
Innovation	-0.01 (0.51)	-0.31 (0.57)	-0.03 (0.66)
<i>Offshoring Strategy: Organizational Attributes</i>			
Core/Non-Core Diversity (H1)		0.24 (0.36)	0.49 (0.41)
Governance Diversity (H2)		-0.26 (0.49)	-0.76 (0.63)
<i>Offshoring Strategy: Strategic Attributes</i>			
Cost Driver (H3)		1.29*** (0.46)	1.33** (0.49)
Resource Driver (H3)		0.36 (0.35)	0.49 (-0.78)
<i>Interaction Effects</i>			
Core/Non-Core Diversity * Process Innovation (H4)			-0.78** (0.39)
Governance Diversity * Process Innovation (H5)			0.76* (0.44)

**Table 3.2 - Results of Regression Analysis: Effects of Offshoring Strategy on Competitive Position Moderated by Innovation (Part II)**

	Competitive Position		
	1	2	3
Constant	-1.50 (1.73)	-6.33** (2.79)	-6.98 (3.08)
N	75	75	75
-2LL	101.219	87.162	79.760
$\chi^2$	1.134	15.191**	22.593**
$\Delta\chi^2$		14.057**	7.402**
Cox and Snell $R^2$	0.02	0.18	0.26
Nagelkerke R2	0.02	0.25	0.35
Hitt ratio (%)	59	73	76

*Note:* standard errors are in parentheses

\*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.001.



### 3.9 Discussion

How can an offshoring strategy and innovation contribute to the competitive position of firms? This study seeks to answer whether offshoring strategies move beyond 'simple' access to competitive costs and resources. More specifically, we investigated whether organizational attributes of offshoring strategies, i.e. core/non-core diversity and governance diversity, via learning effects result in performance effects. Moreover, we address whether the relationship between offshoring strategy and competitive position is contingent upon the innovation of firms.

An offshoring strategy makes it possible for firms to improve their competitive position (Couto, et al., 2006) by profiting from lower offshore labor costs (e.g. Farrell, 2005) and offshoring to gain access to resources (Lewin & Peeters, 2006b). As the 'generation of new ownership advantages rely on the interrelatedness between specialized activities conducted in certain locations' (Cantwell, 2009:36), it is important to investigate how an offshoring strategy and innovation might result in the improved performance of firms. First, this research investigated whether the offshoring experience of firms, expressed in terms of organizational attributes of their offshoring strategy, i.e. core/non-core diversity and governance diversity, contributes to competitive performance. We argue that offshoring both core and non-core activities results in most experiential knowledge. Although the literature only modestly advocates offshoring core-activities (Gilley & Rasheed, 2000; Jiang, et al., 2007; Quinn & Hilmer, 1994), we posit that core and non-core offshoring together have the largest learning effects. With regard to governance diversity, most learning effects and therefore performance effects were expected when firms applied both captive and outsource governance modes when offshoring. However, research has shown that higher levels of core/non-core diversity do not significantly contribute to competitive position (H1, Table 3.3), nor does governance diversity impact the competitive position of firms (H2, Table 3.3). These findings indicate that offshoring is either not or not as yet a strategy to build capabilities to improve firm performance through learning mechanisms. The results indicate that in addition to experiential learning, i.e. international replication of existing routines, attention may be paid to time-based learning (Martin & Salomon, 2003). Time influences need to be addressed more specifically. It might be that firms still need to build their experience base to overcome initial set-up costs (Ellram, et al., 2008) and hidden costs (Stringfellow, et al., 2008) of the strategy. Additionally, knowledge tacitness might prevent firms gaining advantages from relocating business activities (Kogut & Zander, 1992; Stringfellow, et al., 2008), while information sharing constraints

might limit organizational learning as well (Barkema & Vermeulen, 1998; Cohen & Levinthal, 1990). With regard to core and non-core activities, firms might require different types of learning, one aiming for exploration and one for exploitation (Raisch & Birkinshaw, 2008). Balancing exploration and exploitation contributes most to firm performance, however, both types of learning are contradictory as well (e.g. Gupta, Smith, & Shalley, 2006; March, 1991; O'Reilly & Tushman, 2008). Future research may want to further untangle the influence of different learning effects accompanying offshoring strategies on competitive position.

Second, this research investigated the importance of a cost and resource focus as proxy for cost advantages and availability of resources at offshore locations. Addressing the managerial intent of firms (Lewin, et al., 2009) facilitates an assessment of cost and resource motives in addition to the learning effects of diversity in functions and governance modes. By showing that a sole focus on cost positively contributes to the competitive position of firms (H3, Table 3.3), the research points out that labor cost arbitrage (Farrell, 2005) and other cost advantages are still very important offshoring drivers. However, the research also confirms that the offshoring activities of established firms (i.e. 100 employees or more) do not move beyond cost drivers, as a resource focus does not improve competitive position. Put differently, lack of available labor at domestic locations (Lewin & Peeters, 2006b; Witt & Lewin, 2007) might drive offshoring, but it does not improve competitive position, indicating that competitive advantage is not improved by gaining access to offshore labor. Future research may be able to further investigate cost and resources drivers by adding time components, which was not possible here due to data constraints.

Third, the study addressed the importance of process innovation in the firm by investigating whether the relationship between offshoring strategies and firm performance is contingent on innovative capabilities (Damanpour, 1991). Innovation might enable firms to effectively profit from new experience gained through core and non-core offshoring and applying captive and outsource governance modes. In demonstrating that innovative performance negatively moderates the relationship between core/non-core diversity and competitive position (H4, Table 3.3), our research points out that innovation does not enhance learning merits from offshoring both core and non-core activities. However, learning from diversity in governance modes does contribute to the competitive position of firms (H5, Table 3.3). It is possible that process innovation capabilities diverge too much from learning resulting from offshoring both core and non-core activities and consequently only 'connect' to

capabilities involved in executing governance modes. Moreover, offshoring core activities might reduce domestic learning and therefore be detrimental to competitive position. Put differently, learning from core offshoring might cause reduced domestic learning as resources are shifted offshore (Sapienza, Clercq, & Sandberg, 2000). With regard to governance diversity, the findings report the contingent effect of innovation on the relationship between governance diversity and competitive position. This confirms that process innovation is linked to learning from governance diversity in offshoring. More specifically, process innovation capabilities generate capabilities that enable firms to learn from offshoring using both captive and outsource governance modes. Here we link process innovation to the capabilities of firms, which is also to be further investigated in future research.

**Table 3.3 – Overview Hypotheses**

<b>Hypothesis</b>	<b>Result</b>
1: Diversity of core/non-core diversity → competitive position (+)	Not confirmed
2: Diversity of governance mode → competitive position (+)	Not confirmed
3: Cost driver and resource driver → competitive position (+)	Partly confirmed
4: Moderating impact of process innovation on H1 (+)	Confirmed, but negative
5: Moderating impact of process innovation on H2 (+)	Confirmed

This study contributes to the literature by discussing the importance of an offshoring strategy to realize cost advantages, access to resources and learning advantages. By showing the importance of a cost focus and moderating impact of innovation on the relationship between offshoring strategy and competitive position, the findings have several implications for international business literature. First, the chapter contributes to the literature by trying to unpack the black box offshoring strategy in a multi-dimensional way to address both organizational (function and governance mode) and strategic (cost driver and resource driver) attributes of offshoring. With regard to governance mode, the study addresses both captive and outsourcing offshoring governance modes, whereas research mostly focuses on outsourcing (e.g. Gilley & Rasheed, 2000). Second, the research shows offshoring is not or not yet capable of generating learning effects from offshoring strategies that positively influence competitive position, at least not from core/non-core and governance diversity. For managers, this implies

that difficult learning trajectories are involved in offshoring strategies and at least some structure, coordination and focus may be necessary to realize profits from the strategy. At the same time, a cost focus is dominant in explaining competitive position. Future research may want to address performance effects of different types of learning involved in offshoring and the relative impact of cost, resource and learning perspective of offshoring on firm performance. Third, process innovation capabilities do influence the effectiveness of an offshoring strategy to influence competitive performance. Although diversity in core/non-core activity does not profit from innovation, the study contributes to offshoring literature by showing that low levels of function diversity when offshoring do profit from process innovation in improving competitive position. Managers may profit from offshoring the most when they have an integrated way of coping with new learning opportunities. Learning effects of diversity in core/non-core activity offshoring has yet to be further investigated. Diversity of governance modes does improve competitive position through innovation. The study measured innovative capabilities by process innovation, which is usually undertaken in later stages of the firm life cycle (Abernathy & Utterback, 1978), corresponding to the development stage of the established firms investigated in this study. Future research may want to address how other types of innovation and offshoring skills interact and how subsequent learning might be further improved.



#### **4 STUDY III - OFFSHORING AND FIRM GROWTH: EFFECTS OF CORE AND OUTSOURCE OFFSHORING AND MODERATING EFFECT OF ABSORPTIVE CAPACITY <sup>6</sup>**

##### **Summary**

Despite research in offshoring is growing, the impact of offshoring strategy on firm outcomes is still under researched. From a knowledge perspective, this chapter investigates how attributes of offshoring strategies contribute to firm growth and how their relationship is dependent on firms' absorptive capacity. Gaining access to offshore knowledge is assumed to accelerate firm growth of consistent growing firms. The organizational attributes of the offshoring strategy, i.e. core function and outsource offshoring, are investigated. Interestingly, the findings regarding the organizational attributes show that offshoring core functions and employing an outsource governance mode positively influence firm growth. The effect of outsource offshoring on firm growth is derived from its positive interaction with firms' absorptive capacity. Growing firms see their firm growth accelerated by offshoring strategies and absorptive capacity. Gaining access to offshore knowledge allows replicating operations at offshore locations which positively impacts additional firm growth.

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<sup>6</sup> This chapter will be submitted to a primary journal.

#### 4.1 Introduction

Offshoring, i.e. the relocation of business activities to foreign locations, is receiving more attention in recent literature. The most commonly identified motives for offshoring are costs and resources (Couto, et al., 2006; Lewin & Peeters, 2006b). Gaining access to labor at lower costs and/or access to skilled labor and technology are the main drivers pursuing this complicated strategy. Companies may improve their competitive position with offshoring (Farrell, 2005) or increase chances of survival (Coucke & Sleuwaegen, 2008). In addition to the relocation for cost and resource reasons, companies might employ offshoring as a growth strategy (Lewin & Peeters, 2006a) with entrepreneurial motives at play. How can an offshoring strategy contribute to firm growth?

Research on firm growth has indicated balancing exploitation and exploration to be important to gain sustainable growth (Levinthal & March, 1993; Raisch & Birkinshaw, 2008). At the same time research has shown that the importance of life-cycles stages along which firm growth progresses (e.g. Churchill & Lewis, 1983; Kazanjian & Drazin, 1989; Quinn & Cameron, 1983). The different life-cycle models usually identify several growth stages, for example inception, survival, growth, expansion and maturity (Scott & Bruce, 1987). Although the empirical evidence is limited, life-cycle stages have proven to be a valuable concept in explaining the strategic issues faced companies (Quinn & Cameron, 1983). In certain stages firms may need to ‘get resources for growth’ (cf. Churchill & Lewis, 1983:39) to further facilitate expansion strategies. The relocation of business activities might contribute to access foreign resources as firms are not confined to certain locations to find resources (Penrose, 1959). This makes it possible to further *exploit* the firm’s ownership advantages (Dunning, 2009a) and *explore* new growth opportunities at the home base.

Applying the knowledge-based view of the firm (e.g. Grant, 1996b), this study shows how core offshoring and outsource offshoring contribute to firm growth. Knowledge may, for instance, be transferred ‘from client staff to on-site provider staff and then to offshore provider staff’ (Oshri, et al., 2008:294). Core offshoring entails the relocation of core activities to foreign locations. This process facilitates important knowledge exchange and integration across locations to further develop the knowledge base of the firm and increase firm growth. Outsource offshoring entails the relocation of activities to third-party providers at offshore locations, allowing firms to gain access to the knowledge of other firms. Both core and

outsourcing involve the continued development of the knowledge of people and organizations (Kogut & Zander, 1992).

Research on the performance effects of international strategies has shown the moderating impact of absorptive capacity on a firm's profitability and revenue growth (e.g. Subramaniam & Venktraman, 2001; Zahra & Hayton, 2008). Absorptive capacity, i.e. the ability to recognize the value of new, external information, assimilate it, and apply it to commercial ends (Cohen & Levinthal, 1990), has a critical role in inter-organizational learning and performance (Lane, et al., 2001). Therefore, absorptive capacity is important for executing outsourcing strategies as well (cf. Lewin & Peeters, 2006b:236). Moreover, dynamic capabilities in general, provide organizations with the potential for growth (Helfat, 2007:100). So far, there has not been any research on the impact of absorptive capacity on achieving performance results from outsourcing. This study addresses the moderating impact of absorptive capacity on the relationship between outsourcing strategies and firm growth.

This study addresses the impact of outsourcing strategies on firm growth in order to assess the potential application of outsourcing as a growth strategy. In addition, the outsourcing strategy is unbundled according to various dimensions, including two organizational attributes: core function and outsourcing. Moreover, explicit attention is paid to the moderating influence of a firm's capacity to absorb knowledge about the relocation of related activities abroad in order to realize growth as part of an outsourcing strategy.

## **4.2 Theoretical Overview**

Not only has the commercialization of products and services undergone rapid internationalization in the face of the ICT revolution, so have the activities to produce them. In addition to global purchasing, business activities are also outsourced using outsourcing or captive governance modes (Manning, et al., 2008; UNCTAD, 2004). Just as companies might pursue growth strategies like market penetration, market development, product development or diversification (e.g. Aaker, 1995; Ansoff, 1984), we argue they could also implement an outsourcing strategy to achieve growth. Outsourcing, i.e. the relocation of business activities (Manning, et al., 2008), creates the possibility to increase capacity at the offshore location whereas keeping the employment level at the home base at the same level (Lewin & Peeters, 2006b). Accordingly, outsourcing makes it possible to create economies of scope by decreasing



costs and making a greater variety of products (Dodgson, Gann, & Salter, 2008). Moreover, offshoring might function as an administrative innovation driving firm growth by reallocation of resources (Schumpeter, 1934). Administrative innovations entail new control systems and new structures (Damanpour, et al., 1989). Internationalization of production and service processes implies companies to become part of condensed networks in which relational capabilities are important to gain competitive advantage (Dyer & Kale, 2007). These capabilities enable access to and acquisition of available resources (Hite & Hesterley, 2001) necessary for firm growth.

In this study we apply the knowledge-based view to explain the effect of core offshoring on firm growth. This perspective is rooted in resource-based view of the firm, however extends this view by assigning knowledge as resource itself. Central to the knowledge-based view is the argument that knowledge resides in persons and is also expressed in social communities like organizations or networks (Kogut & Zander, 1992). Stated differently, firms integrate specialist knowledge resident in individuals into goods and services (Grant, 1996b). Transfer of knowledge from abroad to local entrepreneurs is enabled by the opportunities local entrepreneurs have to interact with foreign buyers and suppliers (Filatotchev, et al., 2009). Likewise, offshoring allows transferring knowledge from foreign locations to the home base. The relocation of business activities means that, different people are performing the same activities at separate locations, which facilitates for knowledge exchange. Sharing and communicating of new knowledge provides a basis for transferring individual knowledge to organizational knowledge (Inkpen & Pien, 2006).

The contribution of offshoring strategies to firm growth has been investigated using a multi-dimensional view. Both organizational and strategic attributes are addressed (Youngdahl & Ramaswamy, 2008). The first organizational attribute addresses the type of *function* to be offshored, which has shown to be important in research (e.g. Couto, et al., 2006). A distinction can be made between high and low added value activities (e.g. Lewin & Peeters, 2006b), the knowledge intensity of activities (e.g. Couto, et al., 2006; Erber & Sayed-Ahmed, 2005) and between core and non-core activities (Gilley & Rasheed, 2000). This research applies the core/non-core categorization as it facilitates focusing on the activities from which firm growth is realized, namely core activities. The second organizational attribute addresses *governance modes* to execute offshoring. Different internationalization entry strategies are used, e.g. exporting, licensing, joint ventures and sole ventures (Agarwal & Ramaswami, 1992). In terms

of offshoring, captive and outsource offshoring are the most frequently used forms (Lewin & Peeters, 2006b). This study specifically investigates the impact of outsource offshoring on firm growth, as this governance mode allows resource-constrained firms experiencing growth to profit from knowledge of supplier firms at offshore locations. In addition to organizational attributes, strategic attributes, i.e. *cost driver* and *entrepreneurial driver*, are also introduced. Literature on managerial intentionality (Hutzschenreuter, et al., 2007; Lewin, et al., 2009) highlights the importance of managerial intent for enhancing firms' competitive position. A cost driver makes it possible to tap into lower labor costs at offshore locations, whereas a differentiation driver uses the relocation to international locations to differentiate and to expand into new markets. The categories represent the cost and differentiation strategy, two generic strategies of Porter (1990).

Knowledge connections, for example personnel transfer (Inkpen & Dinur, 1998), are important to achieving a firm's intended offshoring results. In addition, adequate knowledge management (Gupta & Govindarajan, 1991), i.e. coordinating knowledge flows between the home base and offshore locations, may positively influence the performance effects of offshoring strategies. Implementing an offshoring strategy requires certain capabilities. This research uses absorptive capacity to investigate whether the benefits of an offshoring strategy on firm growth are contingent upon knowledge capabilities. Absorptive capacity is defined as the ability to recognize the value of new, external information, assimilate it and apply it to commercial ends (Cohen & Levinthal, 1990:128). Research has shown that absorptive capacity to positively moderate between managerial ties and innovativeness (Gao, Xu, & Yang, 2008), network position and business unit performance and innovativeness (Tsai, 2001) and technological sourcing and firm performance (Rothaermel & Alexandre, 2009). Absorptive capacity is likely to moderate the impact of offshoring strategies on firm growth.

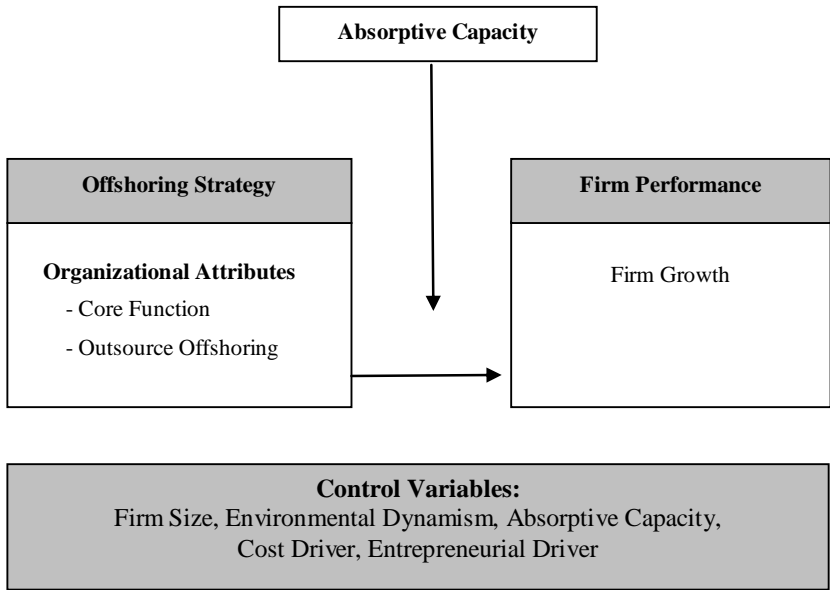
Figure 4.1 presents the study's research framework. The chapter will now continue with a discussion of the organizational attributes (i.e. core offshoring and outsource offshoring) and strategic attributes (i.e. cost and entrepreneurial driver) of offshoring strategies and their relationship to firm growth with a view to developing the hypotheses. In addition, the dependence of the relationship on absorptive capacity is also addressed.

### **4.3 Offshoring Strategy: Core Function**

Although companies can offshore core and non-core activities, research only reports on the offshore outsourcing of both types of activities. Arguments have been made against outsourcing a firm's core activities (e.g. Gilley & Rasheed, 2000; Harrigan, 1984; Quinn, 1992) as relocating these activities could potentially harm a firm's capacity to, for instance, learn and innovate (Kotabe, 1992; Teece, 1987). Others state – from a resource-based perspective – that companies might outsource their core activities to complement their resource and capability base (e.g. Holcomb & Hitt, 2007). For companies in the early growth phase (Abernathy & Utterback, 1978), network strategies are advocated with a view to gaining access to resources important for a firm's survival and growth (Abernathy & Utterback, 1978; Churchill & Lewis, 1983; Gulati, 1998). Although more mature companies might be more focused on managing their existing resource base, they also need to manage growth (Jarillo, 1989).

Although a firm's core activities are not necessarily the same as its core competences, they do involve them. Core activities are those in which firms have achieved a certain level of specialization, i.e. distinctiveness (Brusoni, et al., 2001). Specialization in specific knowledge areas is necessary for the efficient acquisition of existing knowledge and the storage of knowledge (Grant, 1996b). Moreover, specialization enhances capability development and it is likely that specialization will, for some time, be superior to integration, depending on trajectories of capability development (Cacciatori & Jacobides, 2005:1874). Increasing specialization of useful knowledge makes it difficult to only rely on in-house learning (Brusoni, et al., 2001). Firms need to broaden their knowledge base and narrow down their manufacturing bases simultaneously to further develop their capabilities. Core activities are usually executed with high levels of control to safeguard against the risk of imitation (Kogut & Zander, 1992). Specialization entails a high degree of tacitness of the knowledge involved. Tacit knowledge is closely associated with production tasks (Grant, 1996a) and is even more important when core activities are involved. The ability to replicate this knowledge by means of, for instance, offshoring, implies that the foundations for learning and improvement are available within the firm (Teece, et al., 1997). These foundations enable the transformation of tacit knowledge into codified knowledge.

**Figure 4.1 - Research Framework**



In further developing their knowledge base, firms might relocate their core activities to offshore locations to increase knowledge exchange at the individual, intra-organisational and inter-organisational level. Building on social relationships within the firm implies growth (Kogut & Zander, 1992). As new forms of collaboration are not easily acquired, cumulative knowledge within the firm offers opportunities for growth. In addition, assets are embedded in the replication of existing social relationships. Moreover, internationalization might be undertaken in pursuit of growth opportunities (Sapienza, Autio, George, & Zahra, 2006). Although relocation of existing activities is an internationalization strategy with only marginal resource commitments (Penrose, 1959), it enhances the firm to be open to growth opportunities at both the home base and the offshore location. Not only knowledge and capabilities are leveraged in

this way, but also capacity becomes available at the home base and offshore markets are explored.

*H1 Core function offshoring positively influences firm growth.*

#### **4.4 Offshoring Strategy: Outsource Offshoring**

In general, two strategies exist to govern offshore activities, i.e. captive and outsource governance mode (Manning, et al., 2008; UNCTAD, 2004). Whereas the latter entails the relocation of activities to domestic, international or local parties at an offshore location, the former involves the retention of control via the establishment of a subsidiary or the acquisition of business operations by acquisition. While firms experiencing growth need to expand capacity (Hanks, Watson, Jansen, & Chandler, 1993), they also require new capital (Grenier, 1972; Scott & Bruce, 1987). Both access to and the availability of resources, for example financial and managerial resources (Penrose, 1959), is important for these firms. Stated differently, both the accumulation of resources and gaining efficient access to them results in growth (Man, Lau, & Chan, 2002). Accordingly, offshore outsourcing might be favored over captive offshoring as the latter is constrained by high set-up costs and by the amount of time needed to put the activity into practice. How might outsource offshoring contribute to firm growth?

The knowledge-based view argues firms maintain activities in-house that involve capabilities that are to lead to 'recombinations of economic value' (Kogut & Zander, 1992). By outsource offshoring, firms relocate these activities of which they lack knowledge and capabilities (Gilley & Rasheed, 2000). With outsource offshoring they gain access to the knowledge base of third-party suppliers (Ernst & Kim, 2002). Resulting financial benefits by firms might be used to invest in R&D, hire the best engineers and facilitate training to further improve firms' core activities (Dess, et al., 1995). These intermediate suppliers generate advantages of scale by their specialization in certain activities. Outsource offshoring may also be an option to gain access to knowledge to further improve or extend the knowledge base of firm. Technological modularity (Tiwana, 2008) and executing activities both at the home base and at offshore locations, prevent loss of knowledge and capabilities by outsource offshoring. Governance modes available to coordinate execution of activities and knowledge exchange

across locations, markets and hierarchies are taper integration (Harrigan, 1984), concurrent sourcing (Parmigiani, 2007) and plural governance (Heide, 2003). Each of these modes allow for executing tasks at the home base and offshore location simultaneously. Management responsibility is to coordinate for necessary knowledge integration (Grant, 1996b).

To further manage their resource base, firms might decide to apply outsource offshoring. This governance mode integrates the relocation to external locations and third parties. Firms' core activities profit in two ways. Not only is the firm unburdened from peripheral activities that distract focus and resources for core activities but also, knowledge can be accessed to strengthen the knowledge base. Not all knowledge at distanced locations can simply be accessed by captive offshoring. This emphasis on the core activities, involving core competencies, will lead to increased growth possibilities (Peteraf, 1993). Moreover, the knowledge-based view argues that typically cumulative knowledge of the firm provides options to expand (Kogut & Zander, 1992). Put differently, ongoing firms have a greater capability to expand. Outsource offshoring implies the relocation of activities to a third, already existing organization of a third-party. Captive offshoring usually implies setting up a new organization. Research shows past experience to be important, for example past business experience (Reid, 1981) and past experience of an entrepreneur (Westhead, et al., 2001). Combined with the notion that transfer of tacit knowledge requires experience (Spender, 1996), building on and collaborating with offshore suppliers opens more easily new possibilities for growth than captive offshoring. Although new knowledge is developed by individuals, organizations play a critical role in articulating and amplifying that knowledge (Nonaka, 1994). Therefore, we hypothesize outsource offshoring to positively impact growth of firms.

*H2 Outsource offshoring positively influences firm growth.*

#### **4.5 Interaction between Offshoring Strategy and Absorptive Capacity**

Previous research has applied absorptive capacity in the context of international governance modes. Lane et al. (2001) demonstrated the dependence of international joint venture performance on absorptive capacity. Their study concludes that understanding, assimilating and applying knowledge to fully or partially influence learning from the parent firm and joint venture performance. In addition, absorptive capacity moderates the relationship between, for

example, international acquisitions and alliances on firm performance (Zahra & Hayton, 2008). Importantly, the authors state that the moderating effect of absorptive capacity is strongest for activities related to primary business activities. Just as absorptive capacity is crucial for the performance effects of international joint ventures and other international governance modes, the interaction between offshoring strategy and absorptive capacity is critical to sharing knowledge and consequently to innovating and growing through offshoring. Firms with a high level of absorptive capacity are better able to integrate knowledge, capabilities and skills from foreign locations into domestic operations (Lane, et al., 2001). Moreover, it has been suggested that it influences the extent to which firms can achieve profit and revenue growth from international operations (Zahra & Hayton, 2008). Absorptive capacity makes it possible for firms to build capabilities conducive to growth (Zahra, Filatotchev, & Wright, 2009). Moreover, absorptive capacity might overcome geographical and cultural distance to prevent realizing positive results from international activities (Kogut & Singh, 1988; Zaheer, 1995).

Although absorptive capacity is increased by increasing R&D intensity, it is not only a by-product of R&D investment (Cohen & Levinthal, 1990), but also a consequence of manufacturing operations (Abernathy & Utterback, 1978; Rosenberg, 1982). In terms of manufacturing operations, firms are better able to recognize and exploit new information. Both offshoring services and manufacturing activities foster the ability of firms to recognize, assimilate and exploit new information. Offshoring implies relocating existing business activities to offshore locations, maximizing the impact of absorptive capacity (Zahra & Hayton, 2008).

The organizational attributes of offshoring strategies are prone to inter- and intra-corporate learning and knowledge exchange. Both the influence of core and outsource offshoring on firm growth depend on absorptive capacity. Information recognized, assimilated and exploited due to offshoring core functions will positively influence firm growth. Knowledge can be transferred, for example, to improve or expand the product or service range a firm offers, resulting in growth. Moreover, research in offshoring suggests that absorptive capacity could facilitate the use of information and knowledge from the external environment to move beyond offshoring as a cost strategy (Lewin & Peeters, 2006b). Both core and outsource offshoring facilitate the assimilation of internal and external knowledge (Lewin, Long, & Carroll, 1999). Outsource offshoring involves third-party suppliers, requiring the recognition, assimilation and exploitation of skills. These information skills support the

positive effect of outsource offshoring on firm growth. The literature on learning suggests that offshoring strategies fail to take account of previously attained, related knowledge in the firm when not addressing absorptive capacity (Cohen & Levinthal, 1990). Consequently, we hypothesize that absorptive capacity positively moderates the relationship between core offshoring and firm growth and the relationship between outsource offshoring and firm growth.

*H3 Absorptive capacity positively moderates the relationship between core offshoring and firm growth.*

*H4 Absorptive capacity positively moderates the relationship between outsource offshoring and firm growth.*

## **4.6 Methods**

### **4.6.1 Setting and Data Collection**

Firms were selected from Reach a database from Bureau van Dijk Electronic Publishing with company accounts, ratios, activities, ownership and management for 400,000 Dutch companies. Firms were selected if an average revenue growth rate per year of at least 10 percent during the period 2002-2006 was reported. The database was complemented with two ‘matching sets’ of firms from ‘growth lists’ from the business press, i.e. Dutch Financial Times and a consulting firm. This resulted in a database with 607 firms operating in manufacturing (34%), trade (14%), computer and IT services (25%), other services (23%) and other firms (4%). Firms were divided into these categories using the European Nomenclature générale des Activités économiques dans les Communautés Européennes (NACE). Primary data concerning offshoring strategies were obtained from responses to an electronic survey. Firms were invited by email addressed to the CEOs / general managers of the firm and reminded by email or telephone in case they did not fill the two weeks after they received the invitation. Confidentiality was assured in the introduction letter and a summary of the results was offered to ensure accurate data was reported. 155 questionnaires were returned resulting in a response rate of 26 percent. 69 respondents reported their firms are offshoring (44%). The response rate is high compared to the 17% response rate of Gilley and Rasheed (2000) in their outsourcing research. Respondents are CEO / general manager (78%) or other managers (22%); have



Bachelor/Master degree (87%) or other level of education (13%). Further, 71 percent was founded before 1980 and 29 percent after 1980.

To address potential single informant bias we applied psychological separation of predictor and criterion variables and response anonymity (Podsakoff, 2003). For example, we first ask for the effect of offshoring on firm performance items and later we ask for the organizational attributes (core/non-core offshoring and governance mode) and strategic attributes. This eliminates the saliency of any contextually provide retrieval cues and reduces bias by making prior responses less relevant (Podsakoff, 2003:888). Secondary data from Reach is used to perform a non-response analysis. Results of the T-tests (see Appendix B) indicate that there are no statistically significant differences between the two groups with regard to total firm value ( $t = -0.55$ ;  $p = 0.00$ ) and number of employees ( $t = 0.61$ ;  $p = 0.54$ ). They do show a statistically significant difference between respondents and non-respondents with regard to industry ( $t = -2.73$ ;  $p = 0.01$ ). This shows a large number of growing firms that are offshoring come from specific industries. Moreover, offshoring research done by the Dutch Statistical Office reports 14 percent of the firms they investigated employed an offshoring strategy (Roza, Bosch, & Volberda, 2008), whereas this research reports an offshoring rate of 44%.

#### **4.6.2 Construct Validation**

The questionnaire partly replicates the Offshoring Research Network (ORN) survey (see for details: Lewin & Peeters, 2006b). To assure applicability to companies employing growth strategies, we did exploratory semi-structured interviews at 6 firms from the generated dataset, executing growth strategies both in manufacturing and knowledge intensive industries. We interviewed 9 managers, 6 board executives and 3 managers responsible for offshoring operations. Companies were asked for offshoring drivers, functions, intensity, type of function offshored, location, governance mode, growth and finances. In Appendix A the main findings are presented. Additional information is available from the authors. The case studies indicated several adaptations of the ORN survey. The survey was partly replicated, partly adapted to fit the context of growing firms and extended with the absorptive capability scale.

***Firm Growth.*** This special group of firms with above average growth rates is researched for the impact of their offshoring strategy on firm growth. Research does not show a direct performance effect of outsourcing (Gilley & Rasheed, 2000). To overcome this problem, the

authors propose future research to look into functional areas in which outsourcing is undertaken (Gilley & Rasheed, 2000:784). This study aims to study growth resulting from offshoring strategies. Firms addressed in this study, answered to the question: “To what extent has offshoring achieved the following results, taking into account the full offshoring strategy of your organization?” (data on their offshoring strategy is reported on their most important offshoring implementation). To avoid social desirability bias of answers, in addition to growth, other items were included like cost reduction, gain access to personnel, gain access to new technologies, improvement of competitive position and innovation. The items are measured using a five-point Likert scale. Offshoring performance is not independently measured from firm performance, like acquisition performance (McDonald, et al., 2008) and international joint venture performance (Lane, et al., 2001). Therefore, we could not compute a variable consisting of both perceptual and objective data (e.g. Bingham, et al., 2007; Lane, et al., 2001; McDonald, et al., 2008). Consequently, to assure reliability of the growth data, we did additional analysis on another variable firms provided. Namely, the reported total firm growth (average growth during period 2002-2007) is correlated with objective firm growth data from REACH resulting in a correlation of 0.471 (p-value 0.01). As the objective data from the survey and an external database resulted in a significant correlation, we conclude our perceptual data would correlate with objective measures as well (if existent) (Lau & Ngo, 2001).

**Organizational Attributes: Core Function.** Companies were asked to answer the questions on their offshoring strategy for their most important offshoring implementation. The variable *core/non-core function* indicates whether the most important offshored function by a firm is a non-core function (coded 0) or a core function (coded 1). Consistent with Gilley and Rasheed (2000), core and non core functions were not predetermined, but firms were allowed to indicate whether their most important offshoring implementations involved core or non-core activities. This allows controlling for industry differences.

**Organizational Attributes: Outsource Offshoring.** In order to control an offshore operation, companies might use a captive or an outsource offshoring model (Couto, et al., 2006; Manning, et al., 2008; UNCTAD, 2004). For every offshoring project, firms indicated what governance mode they employ. The outsource mode is coded as 0 and the captive mode as 1. Firms may outsource to a Dutch, international or local offshore third-party. Captive offshoring might be executed by a wholly owned subsidiary or a joint venture.

**Absorptive Capacity.** Prior research uses R&D intensity to measure absorptive capacity (Cohen & Levinthal, 1990; Tsai, 2001). However, firm R&D spending does not necessarily fully address the knowledge built by offshoring strategies. Therefore, absorptive capacity consisting of the construct elements recognition, assimilation and commercialization of new information (Cohen & Levinthal, 1990), is adapted to measure absorptive capacity in an offshoring context ( $\alpha = 0.90$ ). Only a limited number of studies address the multi-dimensionality of absorptive capacity, (Jansen, Van den Bosch, & Volberda, 2005; Lane, et al., 2001; Lichtenthaler, 2009; Van den Bosch, Volberda, & Boer, 1999). We adapted absorptive capacity scales to fit the offshoring context. Every construct element, i.e. recognition, assimilation and commercialization (cf. Cohen & Levinthal, 1990) and is based on the three types of knowledge, namely know-what (recognize), know-how (knowledge processing) and know why (commercial objectives) addressed in earlier research to measure relative absorptive capacity (Lane & Lubatkin, 1998:466). We measured the ability of the firm, assessment of the firm, capabilities of employees and firm processes for each of the constructs measuring whether firms 'see' knowledge, process it internally in the firm and use it commercially. Similar to Szulanski (1996) emphasis was put on employee skills and competences and firm processes. Prior research made adaptations in measurement as well (e.g. Cadiz, Sawyer, & Griffith, 2009; Szulanski, 1996). For absorptive capacity items see Appendix C.

**Control Variables.** First, *firm size*, measured by the number of employees, is taken as control variable. To correct for skewness in firm size the natural logarithm of the number of employees of the home location was taken. Companies of different sizes may show different growth rates, research so far showed mixed evidence (Bothner, 2005). Second, *environmental dynamism* (Jansen, et al., 2006) is taken as control variable to assess differences in environmental turbulence ( $\alpha = 0.85$ ). Environmental dynamism is important because of its relationship with firm-level constructs and firm performance (Wang, 2003). Moreover, environmental dynamism might control for industry effects. This study addresses both *cost and entrepreneurial drivers* as third and fourth control variable for executing offshoring strategies. Drivers of an offshoring strategy are measured by the question 'Could you please indicate to what extend the following motives induced offshoring to this location?' using a 5-point Likert scale (similar to Capron & Pistre, 2002) (question adapted from Cording, Christmann, & King, 2008). For the cost driver we used the item 'costs' and for the entrepreneurial driver we averaged the items 'entrepreneurship: new markets and differentiation' and 'customer demand'.

#### 4.7 Analysis and Results

In Table 4.1 the descriptive statistics are presented, i.e. means, standard deviations and correlations. Table 4.2 shows the hierarchical regression analysis for firm growth. Independent variables were standardized before interaction terms were created to prevent multi-collinearity (Aiken & West, 1991). Variation inflation factors (VIF) were calculated. The maximum VIF within the models is 1.51 (tolerances not below 0.66). Hierarchical regression offers the possibility to see how much additional variance is explained by the independent variables after effects of control variables. So, first the control variables were entered in Model 1, followed by the offshoring strategy attributes in Model 2 and the interaction terms in Model 3. The F-statistic is used to determine significance of the changes in  $R^2$  (see Table 4.2).

Now we first discuss the effect the offshoring strategy attributes. The organizational attributes are hypothesized to positively influence firm growth. Hypothesis 1 states that *core offshoring* increases firm growth. Both model 2 and 3 ( $p < 0.05$ ) confirm this hypothesis, offshoring core activities positively influences firm growth. *Outsource offshoring* does not have an impact on firm growth; therefore hypothesis 2 is not confirmed. With regard to hypothesis 3 and 4 the Model 2 and 3 show a positive impact of both a *cost driver* ( $p < 0.05$ ) and an *entrepreneurial driver* ( $p < 0.05$ ). The interaction terms between the organizational attributes of the offshoring strategy and absorptive capacity show a non-significant effect of *core function*. Therefore hypothesis 3 is not confirmed. However, confirming hypothesis 4, absorptive capacity positively moderates the relationship between *outsource offshoring* and *firm growth*. Lastly, the results show that both the offshoring strategy attributes, i.e. organizational and strategic attributes, and the interaction add a significant explanation to the dependent variable firm growth (Model 2:  $p < 0.05$ ; Model 3:  $p < 0.10$ ). From the control variables, absorptive capacity, the cost driver and entrepreneurial driver have a significant positive effect on firm growth ( $p < 0.05$ ).

In the above analysis we used list wise deletion, which sometimes mentioned as a less accurate way to deal with missing data (e.g. Kim & Curry, 1977; Roth, 1992). Therefore we tested the same model using pair wise deletion and replacement with mean. The resulting models are similar to the list wise deletion model.

Therefore, offshore outsourcing was expected to positively influence firm growth. This research, however, does not confirm a direct influence of outsource offshoring on firm

growth (H2, Table 4.2). More research is needed to investigate the direct relationship between governance mode and firm growth.

#### **4.8 Discussion**

How can a firm apply offshoring as a strategy for firm growth? This study argues that organizational attributes, strategic attributes and absorptive capacity are critical in responding to this question.

A firm's offshoring strategy influences the possibility of realizing positive performance effects by the strategy. Possible performance effects include improved competitive position (Couto, et al., 2006), decreased costs (Farrell, 2005), or improved firm-level performance (Gilley & Rasheed, 2000). An offshoring strategy might also enhance firm growth by enabling volume expansion (Chandler, 1962). Business activities relocated to foreign locations might open up capacity at the home base to explore new opportunities (Levinthal & March, 1993) or to exploit ownership advantages (Dunning, 2009b) at a larger scale. Given the important performance effects offshoring can generate, it is critical to know how offshoring might result in firm growth. First, this research argues that organizational attributes, i.e. function offshored and chosen governance mode, influence the impact of offshoring on firm growth. Firm growth is typically driven by volume expansion of the core activities, whereas the growth rate of non-core activities only follows the development of the core activities. This research indeed shows a positive effect of core offshoring on firm growth (H1, Table 4.3), emphasizing the greater ease of achieving firm growth by offshoring critical business activities compared to support activities. Core offshoring successfully accesses knowledge at offshore locations to increase firm growth. Despite the reputation of offshoring core activities as being difficult, managers may want to consider how to build their businesses with this strategy. Additionally, governance mode is an important determinant for firm growth, addressing the boundaries of the firm. Although setting up a captive organization is usually

**Table 4.1 - Means, Standard Deviations, and Correlations (N=55)**

	Mean	St. Dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Firm Growth	4.04	1.11							
2. Core Function	0.84	0.37	0.27*						
3. Outsource Offshoring	0.64	0.48	0.03	0.01					
4. Cost Driver	3.56	1.43	0.13	-0.08	-0.04				
5. Entrepreneurial Driver	2.93	1.21	0.34**	0.10	0.31*	-0.33**			
6. Number of Employees (log)	1.79	0.72	0.06	-0.06	0.27*	0.21	-0.02		
7. Environmental Dynamism	3.52	0.80	-0.01	-0.01	-0.10	-0.25*	0.01	0.02	
8. Absorptive Capacity	4.88	1.03	0.30*	0.03	0.29**	-0.21	0.17	0.15	0.06

\*p<0.05

\*\*p<0.01

Two-tailed tests.

**Table 4.2 - Results of Regression Analysis: Effects of Offshoring Strategy on Firm Growth Moderated by Absorptive Capacity (Part I)**

	Firm Growth		
	1	2	3
<i>Control variables</i>			
Number of Employees (log)	- 0.06	0.00	- 0.01
Environmental Dynamism	0.06	0.05	0.10
Absorptive Capacity	0.31 **	0.35 **	0.28 **
Cost Driver	0.35 **	0.37 **	0.34 **
Entrepreneurial Driver	0.40 **	0.43 **	0.39 **
<i>Offshoring Strategy: Organizational Attributes</i>			
Core Function (H1)		0.24 **	0.29 **
Outsource Offshoring (H2)		0.19	0.17
<i>Interaction Effects</i>			
Core Function * Absorptive Capacity (H5)			- 0.03
Outsource Offshoring * Absorptive Capacity (H6)			0.21 **

**Table 4.2 - Results of Regression Analysis: Effects of Offshoring Strategy on Firm Growth Moderated by Absorptive Capacity (Part II)**

	Firm Growth		
	1	2	3
N	55	55	55
R <sup>2</sup>	0.27 **	0.35 **	0.43 **
R <sup>2</sup> adjusted	0.19	0.26	0.31
Significance F change		0.09 *	0.07 *

*Note: standardized regression coefficients are reported*

\*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.001.



associated with high set-up costs and time needed to operationalize the activities, it is often taken under considered for reasons of control when critical firm activities are offshored (Leiblein, et al., 2002; Tiwana, 2008). The absorptive capacity of firms influences the extent to which a firm can understand, assimilate and apply external knowledge (Cohen & Levinthal, 1990). Absorptive capacity might enable an offshoring firm to effectively deal with external knowledge at foreign locations (Lewin & Peeters, 2006b). The results confirm that absorptive capacity positively moderates the relationship between the outsource offshoring and firm growth (H4, Table 4.3.), however, do not confirm this for core activities (H3, Table 4.3). This shows that the influence of outsource offshoring on firm performance is dependent on the absorptive capacity of firms. Moreover, this shows that absorptive capacity is especially important in relations which involve external firm parties. Absorptive capacity is the ability to assimilate ‘new and external information’ (Cohen & Levinthal, 1990:128). Also, this result confirms that absorptive capacity is important for offshoring strategies, as well as for undertaking international alliances and acquisitions (Zahra & Hayton, 2008). In managerial terms, the results point as previously was the case to knowledge accumulation as being important in the international arena (Martin & Salomon, 2003), as this research shows, as well as for offshoring strategies. Future research may want to shed more light on the non-existent impact of absorptive capacity on the relationship between offshoring core activities and firm growth. Although we assume core activities entail tacit knowledge and routines, absorptive capacity does not seem to be important to realize firm growth. This might be because at the offshore location no significant new knowledge is acquired as offshoring is only the relocation of existing activities and not involving critical knowledge processes.

**Table 4.3 – Overview of Hypotheses**

<b>Hypothesis</b>	<b>Result</b>
1: Core activity → firm growth (+)	Confirmed
2: Outsource governance mode → firm growth (+)	Not confirmed
3: Moderating impact absorptive capacity on H1 (+)	Not confirmed
4: Moderating impact absorptive capacity on H2 (+)	Confirmed

The relationship between offshoring strategy and firm performance is underresearched (Gilley & Rasheed, 2000; Kotabe & Murray, 1990). In particular, the different attributes of an

offshoring strategy have been mentioned in previous research, but systematic evidence on their relationship with firm performance is lacking. Offshoring might be undertaken for core and non-core activities, applying internal or external governance modes. Moreover, companies may want to support their generic strategy with their offshoring strategy. By examining both organizational and strategic attributes of offshoring strategies and its implications for firm performance, i.e. firm growth, this research contributes to international business literature and emphasizes the multi-dimensional character of the offshoring strategy. Offshoring is not only a strategy to decrease cost levels or improve competitive position in general, however, it appears to support the growth strategies of firms. Moreover, the research provides evidence of the importance of learning capabilities in general and of absorptive capacity in executing offshoring strategies in particular.



## **5 STUDY IV – HOW DISTANCE MATTERS: THE DYNAMICS OF OFFSHORE LOCATION CHOICES <sup>7,8</sup>**

### **Summary**

Offshoring technical and administrative work has become an established business practice. Prior research suggests that firms choose offshore locations primarily for low labor cost and gaining access to talent, and that because of advanced ICT and reduced coordination costs geographical distance to the home country does not matter much. Therefore, we investigate whether incremental internationalization strategies, i.e. distance matters, are apparent in firms' offshoring strategies. More specifically, based on comprehensive data of early and more recent offshore implementations of U.S. and Dutch companies, we conduct a multi-level analysis of the likelihood of nearshore vs. farshore implementations addressing time, firm and task effects. Findings suggest early years to have a positive effect on nearshoring showing distance does matter. Moreover, farshore experience shows in later years to be impacting nearshoring likelihood.

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<sup>7</sup> This chapter is the latest version of a paper developed together with Prof.dr. Arie Y. Lewin and Stephan Manning (ORN).

<sup>8</sup> This chapter will be submitted to a primary journal.

## 5.1 Introduction

The relocation and sourcing of business functions and processes outside national borders – also called: offshoring – has become an established business practice (Doh, 2005; Kenney, et al., 2009; Manning, et al., 2008). Since the beginning of the 1990s, in certain U.S. companies have engaged in offshoring administrative and technical work, including IT, finance & accounting, and legal services, but also more advanced functions, including software and product development. In more recent years, an increasing number of European companies have also started to relocate various business functions abroad, in particular to emerging economies. Reducing labor costs and accessing growing pools of qualified personnel outside their home countries have been major offshoring drivers (e.g. Lewin, et al., 2009; Lewin & Couto, 2007) (e.g. Lewin & Couto, 2007).

One key aspect in offshoring decisions is the choice of the offshoring location. The rationale for selecting certain locations has attracted a number of studies in recent years (e.g. Bunyaratavej, et al., 2007; Doh, Bunyaratavej, & Hahn, 2009). Most of these studies stress the importance of labor cost advantages, level of education and expertise, as well as language capabilities as location selection factors. These studies also list a number of risks associated with locations, such as political stability, wage inflation, and protection of intellectual property (e.g. A.T.Kearney, 2004; Doh, et al., 2009; Lewin & Couto, 2007). Moreover, some recent studies suggest that over time specialized geographical IT and knowledge service clusters have emerged, for example in Russia, Eastern Europe, India and China, that attract function-specific investments (e.g. Bresnahan, Gambardella, & Saxenian, 2001; Dossani & Kenney, 2007; Manning, et al., 2008).

Interestingly, however, most studies on offshore location strategies neglect the importance of geographical distance, despite the ongoing discussion of location dynamics in international business (IB) theory (Dunning, 2009a). Many scholars believe that distance does not matter much in service offshoring (e.g. Blinder, 2006; Kotlarsky, I. Oshri, Hillegersberg, & Kumar, 2007) state for example that component-based software development can be developed ‘by several sites by accessing and utilizing expertise regardless of its geographical location’. The main argument is that advanced ICT has facilitated the modularization and reorganization of tasks and has made long-distance coordination and communication less costly (e.g. Kenney, et al., 2009; Metters & Verma, 2008).

We investigate the role of distance in offshoring location decisions by looking at the antecedents of nearshore vs. farshore location decisions based on comprehensive data of U.S. and Dutch companies, collected by the Offshoring Research Network (ORN). Thereby, we take a multi-level approach by looking at influences of time, firm-level and task-level attributes over time. Our findings may not only stimulate future research on offshoring strategies and location choices, but also shed light on the dynamics of internationalization in general.

## **5.2 Theoretical Overview**

The choice of location is a key dimension in making offshoring decisions (Bunyaratavej, et al., 2007; Doh, et al., 2009; Lewin & Couto, 2007). As mentioned before, offshoring is often confused with outsourcing, which denotes the transfer of tasks and processes to external providers mostly located in the home country. Offshoring, however, may include both captive models (setting up wholly owned subsidiaries) and offshore outsourcing (engaging external international and local providers to deliver certain services). Also, offshoring must not be confused with market-oriented foreign investment, for example setting up sales operations. Rather, offshoring is a sourcing strategy designed to set up local operations supporting domestic and global activities of the firm at non home-base locations (Manning, et al., 2008). With regard to offshoring technical and administrative tasks, for example IT, finance and accounting, software and product development, the most important factor being ‘sourced’ offshore is qualified personnel (Lewin, et al., 2009; Manning, et al., 2008), and – if available – external capabilities and subject-matter expertise (offshore outsourcing).

The most important offshoring drivers for U.S. and Western European companies are saving labor costs and accessing qualified personnel. Offshore location decisions to a great extent reflect these general drivers (Lewin & Couto, 2007). Accordingly, labor cost advantages, size of the talent pool available and gaining access to subject-matter expertise are important criteria in choosing offshore locations for certain services (Doh, et al., 2009). Along these lines, some scholars argue that the success of India and China as preferred offshore destinations can be mainly explained by the costs, quantity and quality of technically skilled labor available (e.g. Dossani & Kenney, 2007; Freeman, 2006). However, recent studies indicate that in certain European companies often select nearshore locations close to their home countries rather than India or China for making offshoring implementations (e.g. A.T.Kearney, 2004; Lewin &

Couto, 2007). Notably, a number of U.S. companies also consider Canada and Mexico in particular as alternatives to further remote locations.

As mentioned before the role of distance has been widely neglected in the more recent offshoring literature. Some scholars even argue that because of advances in IT, decreasing long-distance communication costs and the emergence of specialized geographical clusters providing talent and services for MNCs globally, distance should not matter much in service offshoring (Blinder, 2006). We investigate the role of distance in more detail, by examining determinants of nearshore vs. farshore location choices. This contributes to the development of a multi-dimensional view of offshoring comprising for example functions that are offshored and chosen governance modes to realize the offshore activities.

International business literature suggests distance to be an important factor in any foreign investment decision. One important reason, for example, why many companies set up manufacturing and sales operations close to their home countries are cost and coordination advantages (Rugman & Verbeke, 2004). *Geographical proximity* to headquarters or other central locations may reduce transportation and travel time and costs. But also in service offshoring proximity can be expected to be an important factor for those tasks that require intensive training of staff and coordination with head quarters or other locations, involving travel costs and other expenses. Related to this, time zone differences seem to affect coordination and communication between locations (O'Leary, 2007). On the other hand, strategies targeted at establishing 24h knowledge factories may favor implementations in more remote time zones (e.g. Gupta, Seshasai, Mukherji, & Ganguly, 2007).

Another equally important and historically related reason why many companies seem to prefer geographically close destinations for foreign investment is greater *familiarity* with economic, cultural and institutional conditions in countries within the region (e.g. Rugman & Verbeke, 2004). Most prominently, (1977) argue that investment in contexts characterized by 'psychic proximity' facilitate learning that is necessary to expand the global footprint. Incremental offshoring strategies argue psychic proximity relates to the accessibility of information about local market conditions. Availability of location information in the context of offshoring can reduce search costs, for example costs involved in finding talent or qualified service providers, which may facilitate and speed up the implementation of offshore projects. Reasons why geographical proximity often correlates with psychic proximity (or greater familiarity of context conditions) are for example the embeddedness of companies in local and regional networks, trade relationships between countries and prior foreign investments.

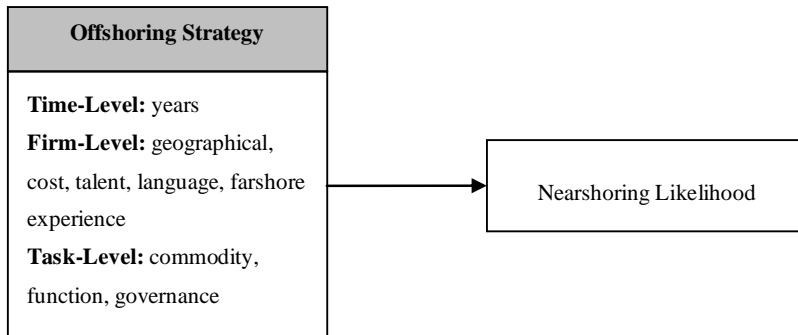
Similarly, IB scholars have argued, based on Hofstede's concept of cultural distance (Hofstede, 1980) that companies are more likely to invest in host countries that share norms and values with home countries (e.g. Kogut & Singh, 1988; for a critical view Shenkar, Y. Luo, & Yehekel, 2008). Again, geographical proximity is often correlated with cultural proximity. One important factor here is the use of the same or a similar *language* which facilitates intra- and inter-firm communication and coordination. In fact, similar norms and language have been listed as primary reasons in previous offshoring studies for the preference of many Western European companies to select locations in other European countries (e.g. A.T.Kearney, 2004). Related to this, Xu & Shenkar (2002) argue that similar regulative, normative and cognitive institutions (see in general Scott, 2001)– in short: institutional proximity – may affect location choice. Along these lines one could argue that the fact that many European countries belong to the European Union and therefore adhere to the same or a similar legal system reduces institutional distance in favor of nearshore investments.

Additionally to addressing location issues as mentioned, geographical proximity and other types of proximity, this study contributes by addressing accumulating offshoring experience over time. Research states offshoring to be a 'sequential learning-by-doing' process (Lewin & Peeters, 2006b:229). These authors show that firms in their early offshoring years most frequently choose for IT-related functions and later on for finance and accounting activities followed by research and engineering activities. However, this research does not address the learning processes over time across the globe. This research specifically contributes by addressing the impact of location choices over time.

To come to grips with preferences for nearshoring we apply a multi-level analytical framework. As proposed by Hitt, Beamish, Jackson & Mathieu (2007), Volberda and Lewin (2003) and others, multi-level approaches serve to simultaneously take into account influences on strategic decisions or managerial behavior coming from multiple systemic contexts – for example the firm itself, as well as macro-economic, and project implementation-level factors. Multi-level analyses are suitable where a phenomenon, such as a strategic firm-level location decision, cannot be easily explained just by factors at one level, for example firm-level preferences; national or industry context factors, but only by the combination and interaction between these levels (Hitt, et al., 2007). The hypotheses we develop help to better understand the dynamics of factors influencing location decisions in general and nearshore vs. farshore location choices in particular and address time-level, firm-level and task-level factors.



**Figure 5.1 – Research Framework**



### **5.3 Time-Level Effects**

Traditionally, there have been several theories that explain international activities (e.g. Agmon, 2006; Dunning, 2009b; Dunning, 1980; Liesch & Knight, 1999; McDougall, et al., 1994). Stage models have been presented to explain the development of international activities of firms over time. These theories assume that internationalization is incremental and that certain stages of maturity have to be reached in order to perform successfully in the international arena. One example is the Uppsala model that states that internationalization starts incrementally and matures later into extended forms of internationalization, like foreign direct investment (Johanson & Vahlne, 1977). Another is the product cycle theory, which considers that foreign direct investments will only be realized when a mature product is first exported and then internationalized on a larger scale (Vernon, 1966). More recent contributions suggest that the internationalization of international new ventures is not following the traditional, more sequenced way of internationalization, but internationalize from inception (McDougall, et al., 1994). The founders of international joint ventures are assumed to have ‘an unusual constellation of competencies’ that enable them to ‘combine a certain set of resources across national borders and form an international joint venture’ (McDougall, et al., 1994:479). In later papers this theory is further developed (Oviatt & McDougall, 2005a; Oviatt & McDougall, 1994; Zahra, 2005). Bloodgood, Sapienza and Almeida (1997) similarly reason that new

ventures seek international presence because of industry conditions and a unique set of resources which can be labeled as dynamic capabilities. These firms do not see themselves constrained by a lack of experience or and lack of an incremental development of international activities.

Offshoring can be expected to be undertaken as an incremental internationalization strategy (Johanson & Vahlne, 1977) or more complex integrated and interactive (Cantwell, 2009). Recent research on location choice patterns does not explicitly address the time of entry (Nachum, Zaheer, & Gross, 2008). The advancement of ICT is often named as one of the key factors facilitating and accelerating recent offshoring trends (Kenney, et al., 2009; Metters & Verma, 2008), as it reduces communication and coordination costs and therefore makes geographical distance less relevant (Blinder, 2006). So, it can be expected that, as ICT advances, coordination costs decrease over time. Also, in recent years offshoring has become a more established business practice, promoted by firm- and industry level experience, but also by a broader discourse, stimulated by business press, consulting and academia (e.g. Levy, 2005). India in particular has attracted more and more attention in the offshoring discourse in recent years (Dossani & Kenney, 2007). But also China has become a much-celebrated location for offshore investments (e.g. Huang & Khanna, 2003). Advancement of IT and the establishment of offshoring as an accepted business practice make, *ceteris paribus*, make nearshoring decisions less likely over time.

*H1 (Time-Level): Independent of company experience, the more recent an implementation is, the less likely a nearshore implementation will be chosen.*

#### **5.4 Firm-Level Effects**

Strategy research suggests that in a competitive space firms differ in terms of strategic choices (e.g. Child, 1972), because of different resource endowments, decision-making processes, absorptive capacity, strategic goals and managerial discretion etc. Also they respond to economic and institutional challenges, for example shortage of qualified personnel or EU enlargement, in different ways (Oliver, 1991). We therefore propose that the very factors companies perceive to be important when making location decisions for certain offshore projects matter. First, two main firm-level factors proven to be important in location research are addressed; these are geographical distance and language. Second, we turn to the two main

variables for undertaking an offshoring strategy, namely labor cost and gaining access to talent, to find whether these impact nearshoring. Finally, previous experience is addressed to see whether prior offshore experience matters in location choice over time.

With regard to nearshore implementations, clearly the importance of *geographical proximity* in a location decision can be predicted to play a key role. Importantly, the very fact that companies invest nearshore must be separated from the importance geographical proximity has in a certain decision. This is because nearshore investments can be potentially made for a variety of reasons, for example previous investments (for example manufacturing), availability of special expertise etc. With regard to proximity itself, it is important to know whether, in case of offshoring high value knowledge intensive activities, the need for geographical proximity (if existent) (still) influences nearshoring likelihood. It is important to know whether distance matters are not. Although recent theory seems to indicate that technological advancements do overcome these geographical proximity disadvantages existent with more remote locations (e.g. Blinder, 2006), we assume geographical distance does matter, also as a proxy for other differences between countries. The psychic distance has been defined as the sum of factors like differences in language, education, business practices, culture, and industrial development (Johanson & Vahlne, 1977:24). The second factor to be addressed in this research is *language*. Perceived language capabilities can be expected to be associated with factors positively contributing to nearshore rather than farshore investments (e.g. A.T.Kearney, 2004; Doh, et al., 2009). Fit with regard to language is not necessarily linked to geographical proximity nowadays, as was assumed in earlier research (Johanson & Vahlne, 1977). Research showed the English language as significant factor in location choice, it is the ‘central competence’ (Doh, et al., 2009:938).

Further we investigate the impact of the two main reasons on offshoring strategies, *labor cost* and *gaining access to talent* (e.g. Couto, et al., 2006). As labor costs in India and China (and other, second tier, Asian and Latin American locations) are significantly lower than in Europe (including Eastern Europe) and Canada (Coucke & Sleuwaegen, 2008; Farrell, 2005), we propose that the importance of low labor costs and availability of labor as firm-level location factors have a negative effect on the likelihood of nearshore implementations. In line with the Uppsala school of management (Johanson & Vahlne, 1977), but also with the resource-based view, we further propose that firm-level *farshoring experience* and – although not directly measured – advanced capabilities in coordinating offshore operations may influence location decisions. Similar to (Martin & Salomon, 2003:308) we assume firm’s knowledge to produce in foreign locations to increase. Consequently we hypothesize offshore

experience to negatively impact nearshoring, as competences increase, firms will be better equipped to exploit all opportunities around the globe, especially these that are located at distanced locations.

*H2a (Firm-Level): The more important geographical proximity is in a firm's offshore location decision, the more likely a nearshore implementation will be chosen.*

*H2b (Firm-Level): The more important language capability is in a firm's offshore location decision, the more likely a nearshore implementation will be chosen.*

*H2c (Firm-Level): The more important labor cost savings are in a firm's offshore location decision, the less likely a nearshore implementation will be chosen.*

*H2d (Firm-Level): The more important talent availability is in a firm's offshore location decision, the less likely a nearshore implementation will be chosen.*

*H2e (Firm-Level): The more experience a company has with farshore locations, the less likely a nearshore implementation will be chosen.*

## **5.5 Task-Level Effects**

Finally, offshoring research has shown that that location preferences very much depend on characteristics of the task being offshored (e.g. Doh, et al., 2009; Hutzschenreuter, et al., 2007). First, the degree of *commodity* of tasks has been stressed as an important indicator not only for their general 'offshorability', i.e. their 'separability' from other tasks (Blinder, 2006), but for the degree of coordination and local firm-specific investment needed to provide these tasks offshore. High degree of commoditization means that knowledge about a task is widely spread and diffused across companies and industries, and a potentially large number of providers and captive centers is able to perform this task. Also, knowledge about performing this task can be easily 'transferred' across locations and organizations. We therefore predict that the more commoditized tasks are the less important becomes geographical proximity; hence the less likely is a nearshore investment.

Second, we recognize that, according to a number of studies (e.g. Athreye, 2005; Dossani & Kenney, 2007; Patibandla & Petersen, 2002), India has become the most important provider of *IT, software and software development* services. China, in turn, is specializing primarily in providing engineering and product development services (A.T.Kearney, 2004; Lewin & Couto, 2007). The concentration of IT, software and product development services in

India and China is also facilitated by the high availability of qualified scientists and engineers in these countries as well as the high degree of digitalization of these services, in particular IT and software, which eases the transfer and remote coordination of these tasks (e.g. Leonardi & Bailey, 2008). We therefore predict that offshoring related to IT, software and product development are more likely to be made farshore than nearshore.

Third, offshoring might be implemented by an *outsource offshoring* or captive offshoring governance mode. Captive offshoring implies internationally relocating business activities while keeping them vertically integrated. Outsource offshoring entails relocating the activity to a foreign service provider. In a decision-making process, the choice of delivery model is often coupled with location choice. Transaction cost economics (TCE) is often used to explain governance modes of offshoring (Stratman, 2008), outsourcing (Ellram, et al., 2008) and sourcing (Vivek, et al., 2008). Search costs related to finding service providers increases with distance (see also Ghemawat, 2001; Verbeke & Kenworthy, 2008). Therefore, we hypothesize that tasks allowing for outsourcing will increase the likelihood of nearshore offshoring.

*H3a (Task-Level): The more commoditized a task is, the less likely a nearshore implementation will be chosen.*

*H3b (Task-Level): The more a task is related to IT, software and product development, the less likely a nearshore implementation will be chosen.*

*H3c (Task-Level): In case a task is offshored with the outsource offshoring governance model, the more likely a nearshore implementation will be chosen.*

## **5.6 Methods**

### **5.6.1 Setting and Data Collection**

We test the effect of the proposed multi-level factors on companies' decisions to locate business functions to nearshore rather than farshore locations based on 1,598 offshore implementations by 275 U.S. firms (1,187 implementations) and 88 Dutch firms (411 implementations). Due to missing values, the number of usable implementations decreases to 540 (34%). The data are drawn from the ORN database, which is based on an annual survey and which contains comprehensive data on offshoring strategies, drivers, risks, outcomes and concrete offshore implementations (both captive and outsourced) of currently 1,322 U.S. and

European companies of all sizes across industries and functions (Lewin & Couto, 2007). 48% of these companies are actually offshoring, 17% are considering offshoring and 35% are not considering yet. In this study we solely focus on companies that are currently offshoring. Industries in the ORN database as well as in our subsample include for example manufacturing, software, finance and insurance, and professional services. Functions offshored include IT, administrative services (for example HR, legal, finance & accounting), call centers, software and product development, marketing and sales, and procurement. Importantly, offshore implementations reported in the ORN database go back to the 1980s and early 1990s. However, 99% of implementations reported were made after 1990; the majority was launched in the last five years.

We selected the U.S. and the Dutch sample for this study. There are several reasons this: First, the U.S. and the Netherlands are geographically positioned in different parts of the world giving them different access to potential nearshore and farshore labor markets attracting offshore investments. In this respect, the Netherlands represents a typical Western European country whose companies engage in offshoring. The difference between U.S. and Dutch (or other Western European) companies in terms of their geographical position makes them interesting candidates for studying the role of distance in selecting offshore destinations. Second, however, U.S. and Dutch companies are similar in terms of the distribution of functions being offshored, years of offshoring experience, and delivery models selected. In fact, Dutch companies on average are among the more experienced offshoring firms in Europe. The similarity between U.S. and Dutch companies in these respects helps control for extraneous variation (Eisenhardt, 1989). However, the samples do differ in terms of the distribution of firms by size. The majority of Dutch companies are small and midsize, while the U.S. sample contains a large amount of larger companies. Not least for this reason, we control for size in all the regression models below. Third, the U.S. and the Dutch samples are the largest samples in the ORN database. The high number of offshore implementations facilitates a fine-grained regression analysis and an analysis by subsamples (see in detail below).

We use a binary logistic regression model to examine the effect of various multi-level factors on the likelihood of choosing nearshore vs. farshore locations (dependent variable). Similar approaches have been taken to study the likelihood of external delivery models vs. captive models (e.g. Hutzschenreuter, Lewin, & Dresel, 2008) or the likelihood of offshoring product development rather than other functions (e.g. Lewin, et al., 2009).

### 5.6.2 Construct Validation

***Nearshoring Likelihood.*** Nearshore location is defined as Canada, Mexico and Central America for U.S. companies, and Eastern and Western Europe for Dutch companies. We test the effect of multi-level factors on the likelihood of nearshoring in different subsamples. The sample includes all U.S. and Dutch implementations over time. We test the effect of time, firm-level and task-level attributes for different time splits. The first model divides implementations before and in 2003 and after 2003. Subsequent models do the same for 2001, 2002, 2004, 2005 and 2006. These time splits facilitate a comparison of multi-level effects on nearshoring vs. farshoring decisions over time. Variables are listed and explained in Table 5.1.

***Time-Level Effects.*** Hypothesis H1 is tested using the 2003 time split dummy in the basic sample model. YEARSPLIT is 1 for all implementations since 2003, 0 for implementations prior to and in 2003. In 2003 the number of implementations before-in vs. after is equally divided, i.e. the choice to start with 2003 is statistically driven. As mentioned above, we constructed similar time splits for the same analysis for 2001, 2002, 2004, 2005 and 2006.

***Firm-Level Effects.*** Hypotheses H3a through H3f are tested using firm-level variables. The location decision and experience variables are: (a) *geographical proximity*, (b) *labor cost*, (c) *access to talent*, (d) *language capability*, (e) *farshore experience*. The first four variables on the location decision are standard Likert-scale variables (1 to 5) based on the following ORN survey question: “For each implementation, please indicate your level of agreement with the following reasons for choosing this particular country as an offshore location.” (1 – strongly disagree; 5 – strongly agree). This shows to what extent companies choose a location because it promises to provide certain resources or opportunities *relative* to other locations. H3e on the effect of Firm-Level experience is tested using a simple dummy variable *farshore experience* – which is 1 if the respective company has made previous a farshore implementation.

**Table 5.1 - List of Independent Variables**

<b>Level</b>	<b>Hypothesis</b>	<b>Format</b>
<i>Time-Level Effects</i>		
Yearsplit 2003	H1: Implementation after 2003 (sample separation by time)	1 (since 2003); 0 (before and in 2003)
<i>Firm-Level Effects</i>		
Geographical Proximity	H2a: Location decision, importance of geographical proximity	5-Point Likert scale (1... very low, 5... very high)
Language	H2e: Prior farshore experience	5-Point Likert scale (1... very low, 5... very high)
Labor Cost	H2c: Location decision, importance of labor cost	5-Point Likert scale (1... very low, 5... very high)
Access to Talent	H2d: Location decision, importance of gaining access to talent	5-Point Likert scale (1... very low, 5... very high)
Farshore Experience	H2b: Location decision, importance of language	1 (yes); 0 (no)
<i>Task-Level Effects</i>		
Commodity	H3a: Level of commoditization of task	5-Point Likert scale (1... very low, 5... very high)
IT/Software/Product Development	H3b: IT, Software or Product development function	1; 0
Outsource Offshoring Governance Mode	H3c: Outsource offshore governance mode (rather than captive)	1; 0

**Task-Level Effects.** Hypotheses H5a-c (task-level factors) are tested in the following way: To test the effect of task commoditization on the relevance of geographical distance (H5a), we use the variable *commodity* which measures the degree of commoditization of a function, for example IT. This measure is generated from the ORN service provider survey (see also Couto, Mani, Sehgal, Lewin, Manning, & Russell, 2008). In this survey, respondents are asked the following question: “In your opinion, for each class of services that your company provides,



how commoditized had this service become? (1 – very low, 5 – very high)”. We took the average response for each function (N=280 responses) as a proxy for the degree of commoditization of tasks. To test H5b (effect of software, IT, product development function), we take *IT/software/product development* as a dummy to indicate if the respective function offshored belongs to the group of IT, software development or product development functions in the ORN survey. Other surveys, for example Doh et al. (2009), use similar measures to characterize the nature of tasks. *Outsource Offshoring*, dummy variable, is used to test whether outsourcing influences nearshoring. The variable is 1 if an implementation involves a local, domestic or international service provider and 0 if the company established a owned captive unit to perform the task.

**Control Variables.** Number of employees is used as an indicator for size of the company. It contains the log of the number of employees working for the respective company domestically. We realize that this size measure can be criticized in that it does not account for trends towards temporary employment. Also, it does not count employees working at outsourcers for the company. However, it is an indicator of the ‘resource base’ under ‘ownership’ control of the company. Also, it shows to what extent a company uses overhead implying the need for administrative efficiency in order to reduce costs (e.g. Lewin & Couto, 2007).

## 5.7 Analysis and Results

The binary logistic regression analysis was tested for multi-collinearity by assessing the correlations Table. No correlations above 0.6 were found, so problems with multi-collinearity are not to be expected. The findings show that the *time-level* variable does not influence the preference for nearshoring. Offshore implementations before and since 2003 do not show significant differences in preference for nearshoring. However, the time splits 2001 and 2002 do show this effect. Therefore, hypothesis 1 is confirmed, the more recent an implementation is, the less likely it is a nearshore implementation.

The next hypotheses discuss the importance of *firm-level* variables on the likelihood of nearshoring. The results show *geographical proximity* (H2a) positively effects nearshoring likelihood in all models. This shows geographical proximity is still important in location decision and moreover is importantly effect nearshoring likelihood also for high value adding activities. Hypothesis 2b and 2c are confirmed, *labor cost* and *access to talent* indeed drive firms to less nearshoring. Interestingly, nearshoring likelihood is not influence by *language*,

therefore H2d is not confirmed. *Farshore experience* shows an interesting pattern. Farshore experience namely shows significant positive effects on nearshoring likelihood when using time split 2003, 2004 and 2005. However, applying time split 2001 and 2002 does not show this effect. This shows a trend from farshoring to nearshoring in the later years that were investigated. Therefore hypothesis 3e is not confirmed.

The three hypotheses deal with the task specifics of offshoring projects. Hypothesis 3a and 3b state respectively that nearshoring is less likely when the activity to be offshored is a commodity or IT, software and product development related. The results do not show an impact of these task-level attributes. Lastly hypothesis 3c assumed a positive effect of outsourcing on nearshoring likelihood; however this effect was also not confirmed.

The results on the control variables show that number of employees is positively related to the likelihood of nearshoring in Model 3A en 4B. Country of origin, in this case Netherlands is negatively impacting the nearshoring choices, whereas consequently, US offshoring implementations are significantly more often executed farshore.

To test for the relative importance of the different levels of analysis, we also present  $\Delta\chi^2$  to test the significances of every (set of) variable(s) added to the model. Every level of analysis added significantly to the model, whereas the firm-level variables added the most.

**Table 5.2 – Means, Standard Deviations, and Correlations (N=540)**

	Mean	Std. Dev.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1 Nearshore likelihood	0.17	.373											
2 Yearsplit 2003	0.66	0.47	-0.14**										
3 Location decision - Geographical Proximity	2.91	1.35	0.30**	-0.14**									
4 Location decision – Language	3.45	1.16	0.02	0.05	0.31**								
5 Location decision - Labor Cost	4.10	1.06	-0.33**	0.08	-0.03	0.12**							
6 Location decision - Access to Talent	3.79	0.99	-0.21**	0.02	0.12**	0.27**	0.27**						
7 Farshore Experience	0.52	0.50	-0.01	0.22**	0.03	0.01	-0.03	-0.04					
8 Task - Commodity	3.11	0.45	0.02	0.03	0.15**	0.09*	0.07	0.05	0.04				
9 Task - IT/Software/Product Development	0.56	0.50	-0.11**	0.00	-0.03	-0.08	0.13**	0.26**	-0.17**	-0.05			
10 Task - Outsource Offshoring	0.58	0.49	-0.06	0.09*	-0.16**	-0.08	0.07	0.01	-0.05	0.19**	0.08		
11 Number of Employees	7.46	3.09	-0.10*	0.09*	0.11*	0.14**	0.16**	0.14**	0.19**	0.28**	-0.08	0.05	
12 Netherlands	0.21	0.41	0.36**	-0.12**	-0.15**	-0.19**	-0.35**	-0.15**	-0.05	-0.16**	-0.08	-0.10*	-0.39**

\*p<0.05

\*\*p<0.01

Two-tailed tests.

**Table 5.3 - Results of Regression Analysis: Effects of Time-, Firm- and Task-Level Effects on Nearshoring Likelihood**

	Model 1A	Model 2A	Model 3A	Model 4A	Model 4B	Model 4C	Model 4D	Model 4E	Model 4F
<i>Control Variables</i>									
Number of Employees	0.07	0.07	0.15**	0.12	0.12*	0.12	0.13	0.13	0.13
Netherlands	-2.08**	-2.04***	-3.22***	-3.33***	-3.21***	-3.25***	-3.35***	-3.36***	-3.41***
<i>Time-Level Effects(H1)</i>									
Yearsplit 2003				0.30					
Yearsplit 2001					0.71**				
Yearsplit 2002						0.65**			
Yearsplit 2004							0.23		
Yearsplit 2005								0.17	
Yearsplit 2006									0.40
<i>Firm-Level Effects</i>									
Location decision - Geographical Proximity (H2a)				1.27***	1.28***	1.27**	1.28***	1.29***	1.32***
Location decision - Language (H2b)				0.13	0.14	0.14	0.13	0.13	0.10
Location decision - Labor cost (H2c)				-0.50***	-0.51***	-0.50***	-0.58***	-0.51***	-0.50***
Location decision - Access to Talent (H2d)				-0.61**	-0.63***	-0.63***	-0.62**	-0.62**	-0.59**
Farshore Experience (H2e)				0.53*	0.42	0.47	0.53*	0.55*	0.63**
<i>Task-Level Effects</i>									
Task - Commodity (H3a)				0.20	0.18	0.21	0.20	0.19	0.19
Task - IT/Software/Product Development (H3b)				0.04	0.04	0.02	0.03	0.05	0.09
Task - Outsource Offshoring (H3c)				-0.46	-0.49	-0.50	-0.45	-0.44	-0.42
Constant				-1.70	-1.64	-1.69	-1.69	-1.68	-1.50
N				540	540	540	540	540	540
-2LL				295.09	294.94	291.96	295.47	295.72	295.033
$\chi^2$				194.73***	197.87***	197.86***	194.35***	194.09***	194.78***
Cox and Snell R <sup>2</sup>				0.30	0.31	0.31	0.30	0.30	0.30
Nagelkerke R <sup>2</sup>				0.51	0.52	0.51	0.51	0.50	0.51
Hitt ratio (%)				88.3	88.7	88.7	87.6	88.0	88.3

Note: standard errors are in parentheses, \*p < 0.10, \*\*p < 0.05, \*\*\*p < 0.001.

**Table 5.4 – Overview of Hypotheses**

<b>Variables / Hypothesis</b>	<b>Result</b>	<b>Specification</b>
<i>Time-Level Effects</i>		
Yearsplit 2003-2006 (H1)	Confirmed	Offshoring in more recent years decreases likelihood nearshoring. This implies that firms implemented relatively more farshoring projects in more recent year.
<i>Firm-Level Effects</i>		
Location decision - Geographical Proximity (H2a)	Confirmed	Importance of geographical proximity increases nearshoring likelihood.
Location decision - Language (H2b)	Not confirmed	Importance of language indifferent of nearshoring likelihood.
Location decision - Labor cost (H2c)	Confirmed	Importance of labor cost decreases nearshoring likelihood.
Location decision - Access to Talent (H2d)	Confirmed	Importance of gaining access to talent decreases nearshoring likelihood.
Farshore Experience (H2e)	Confirmed	Farshore experience increases likelihood of nearshoring in later years.
<i>Task-Level Effects</i>		
Task – Commodity (H3a)	Not confirmed	Offshoring commodity activities is indifferent of nearshoring likelihood.
Task - IT/Software/Product Development (H3b)	Not confirmed	Offshoring IT/Software/PD activities is indifferent of nearshoring likelihood.
Task - Outsourcing Offshoring (H3c)	Not confirmed	Outsource offshoring is indifferent of nearshoring likelihood.

## 5.8 Discussion

Empirical findings of this study suggest that factors at multiple levels impact nearshore vs. farshore implementations. First, the results indicate that nearshore vs. farshore preferences do change significantly over time. Prior to 2003 nearshoring likelihood was apparent, after 2003 this nearshoring likelihood disappeared. This finding is indifferent of firm experience with either offshoring nearshore or farshore which is discussed below. Offshoring knowledge intensive activities farshore therefore seems to have increased over the period 2001-2006, and this finding therefore agrees with traditional streams of research like the Uppsala Model (Johanson & Vahlne, 1977). ICT advancements, increased familiarity with farshore locations like India and China and firm's development of offshoring expertise over the years do advocate farshoring over the years, which shows that farshoring is undertaken without following a certain development path. Therefore in later years, offshoring might share characteristics of born global strategies (McDougall, et al., 1994), in the sense that location choice is indifferent of time (for example life-cycle stages).

Firm-level characteristics are important in explaining the likelihood to offshore. As expected the importance of geographical proximity enhances nearshoring, whereas language contrary to our expectations does not. The two main offshoring drivers, labor cost and access to talent decrease chances for choosing a nearshore location. Access to talent has shown before to be an important indicator to farshore (Lewin & Peeters, 2006b). Interestingly, farshoring experience does increase the nearshoring likelihood, possibly pointing at unsatisfied experiences gained at farshore locations.

Relocating commodity and IT/software/product development functions and choice for an outsourcing delivery model are not important in determining farshore or nearshore locations. These findings might suggest that advanced ICT has facilitated modularization and reorganization of tasks and made long-distance management less costly not only for standardized but also for less standardized, more knowledge-intensive tasks (Kenney, et al., 2009; Metters & Verma, 2008). Also it suggests that over time, companies have learned to tap into specialized talent pools all over the world, not just in China and India. Moreover, it is often indicated that certain governance modes might overcome problems at distanced locations; however, outsourcing is not shown to increase nearshoring.

Future studies are needed to further investigate the influence of time in executing offshoring strategies in general and offshoring location decisions more specifically. Future

research should be more time-sensitive, for example by applying concepts like ‘window of opportunity’ (e.g. Tyre & Orlikowski, 1994) that allow to understand how companies exploit labor cost advantages at certain locations at certain times. Additionally, future research should compare antecedents of offshore implementations of different years instead of a whole or split time frame to further untangle the time dynamics.

Further, future research should also extend country focus, as we focused solely on companies from the U.S. and Netherlands. The Netherlands show a preference for nearshoring, which might be explained by the proximity of nearshore locations, i.e. Eastern Europe. This confirms ORN findings that U.S. companies seem to have a much higher preference for India and other remote locations than most European companies. Although the investigated countries certainly are important contributors to the global offshoring dynamic, firms of different countries might show other strategic patterns.

In addition, our findings may stimulate various follow-up research questions exploring the dynamic nature of offshoring in general and offshoring location choices in particular. What antecedents do they share and which are different and how do they relate to gaining positive performance effects from offshoring? Possible follow-up research questions could also include to investigate to what extent companies observe competitive responses, and how they, in turn, respond to these observations. In other words, examining a moderating effect of absorptive capacity (Zahra & Hayton, 2008) on offshoring location choices could add to the explanatory power of the model. Other interesting research venues might include the role nation states play. To what extent for example are domestic and nearshore policy-makers aware of these dynamics and how do they respond? And how does migration of talent (e.g. OECD, 2008) affect location choice patterns? How is talent different, in this respect, from other ‘location factors’? We suggest, based on our exploratory study, that an extended co-evolutionary multi-level framework should be used to better understand these dynamic phenomena.

## 6 DISCUSSION & CONCLUSION

### 6.1 Introduction

The relocation of activities to international locations, i.e. offshoring, still poses important questions to academics and practitioners. Although increasingly practiced during the last 5-10 years, performance advantages have not always been the results of an offshoring strategy. Literature reports on positive and negative performance effects of offshoring (see respectively Coucke & Sleuwaegen, 2008; Kotabe, 1990). Moreover, firms face hidden costs (Stringfellow, Teagarden, & Nie, 2008) and high set-up costs (Ellram, Tate, & Billington, 2008) when adapting their organizations for the strategy. However, firms adopt the strategy for several reasons. First of all, managers see the strategy mainly as cost strategy (Farrell, 2005), but also get access to new resources (Holcomb & Hitt, 2007) and realize firm growth (Lewin & Peeters, 2006a) with the relocation of activities abroad. Therefore, it is important to further discuss the attributes of offshoring strategies and assess their impact on firm performance. Important questions are in what way the strategy can contribute to firm performance and how this can be executed and integrated into firm processes to profit from possibilities to create value across the globe. In Chapter 1 the research aim of this research was formulated as follows; the aim of the research is

*to investigate: (1) the attributes of an offshoring strategy, both organizational attributes and strategic attributes, (2) whether an offshoring strategy influences firm performance, (3) whether innovation, absorptive capacity and firm size impact this relationship, and (4) how the offshoring process over time relates to location choices.*

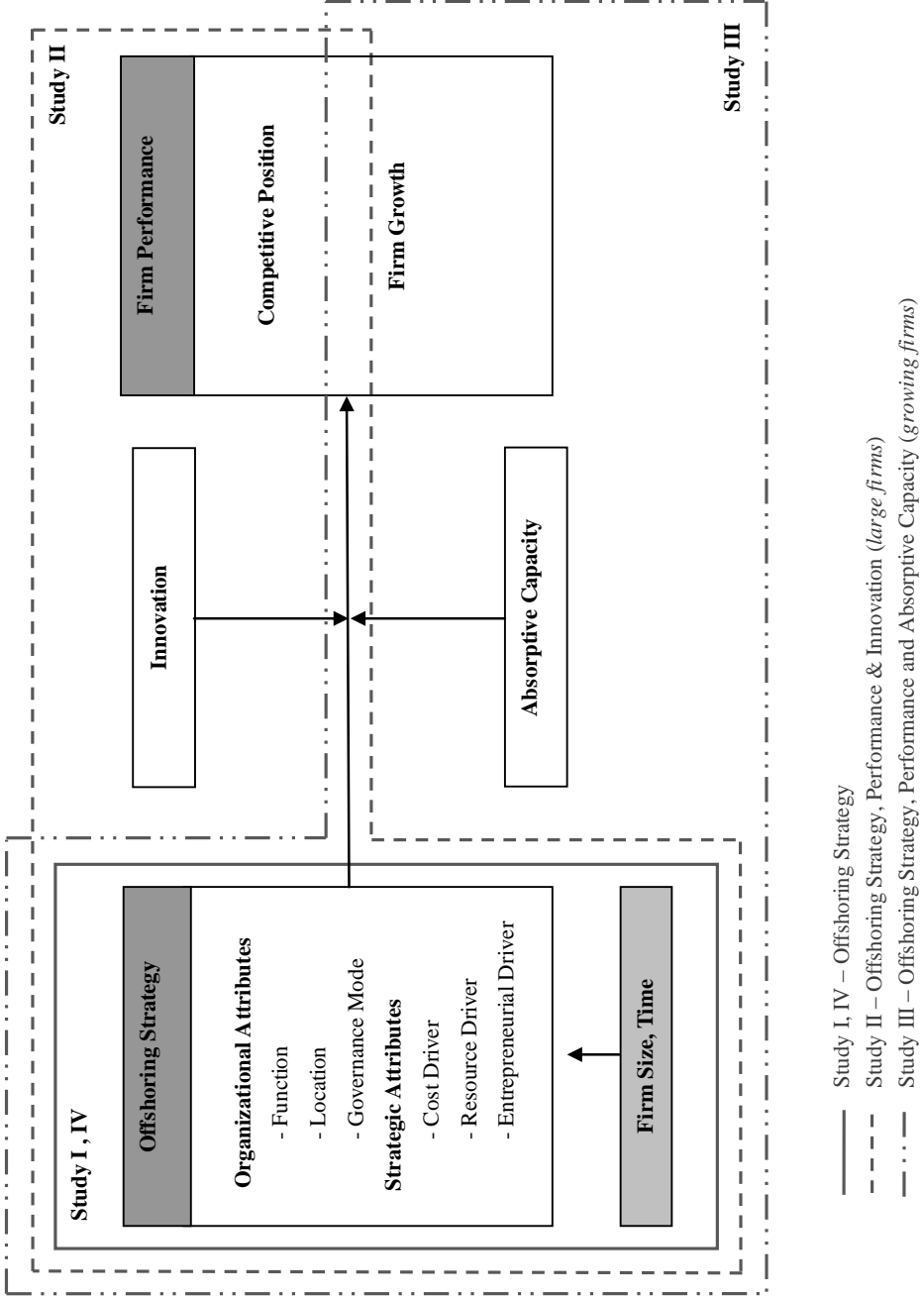
First, the studies focus on a multi-dimensional view of offshoring by untangling the attributes of an offshoring strategy, which were divided into organizational attributes (function, location and governance mode) and strategic attributes (cost, resource and entrepreneurial drivers). Prior studies only dealt with attributes of offshoring strategies in isolation, for example cost savings (Farrell, 2005). Second, the impact of the offshoring strategy on firm performance, i.e. competitive position and firm growth, is investigated as prior research reports mixed results (Bhalla et al., 2008). Third, the studies address the importance of innovation processes,



absorptive capacity and firm size to indicate how firm learning processes and knowledge capabilities may contribute to facilitate and strengthen performance effects. Lastly, the research aimed to specify the importance of location choice in relation to experience development over time. Location is where offshoring starts and therefore a crucial factor showing the possibilities of the strategy, however, location is also suggested to be far less or not important in offshoring services (Blinder, 2006).

In the next paragraph is discussed how the four studies contributed to existing research to meet the above stated research aim. As outline of these four studies we recall the research framework in Figure 6.1.

Figure 6.1 - Research Framework



## **6.2 Research contributions**

This paragraph will further discuss the research contributions of the four studies. These contributions are summarized in Table 6.1. Some of the contributions find their origin in more than one study. For example, the offshoring strategy, every study addresses its attributes, although in a slightly different manner.

### **6.2.1 Contributions of Study I**

First, this study investigated the attributes of an offshoring strategy, both organizational and strategic attributes (Table 6.1 contributions 1&2). Prior research investigated several attributes, like cost drivers (Doh, 2005; Farrell, 2005), resource drivers (Lewin & Peeters, 2006c), governance mode (Ellram, Tate, & Billington, 2008) and function type (Gilley & Rasheed, 2000). This research contributes to offshoring literature by discussing the offshoring strategy in a multi-dimensional way by addressing several attributes simultaneously. Both competence exploring and competence exploiting activities (Cantwell & Mudambi, 2005) are taken into account, in addition to farshore and nearshore location choices and outsource and captive governance modes (UNCTAD, 2004). Moreover, transaction cost economics (combined with production efficiency theory), the resource-based view and entrepreneurship theory are applied to explain three groups of offshoring drivers together. Not only cost drivers but also resource and entrepreneurial drivers are investigated (table 6.1 contributions 2 and 7). Entrepreneurial motives move beyond cost and resources to address new resource combinations (Foss & Ishikawa, 2007) by offshoring strategies. This may also indicate offshoring strategies to evolve from cost to innovation strategy (Lewin, Massini, & Peeters, 2009; Lewin & Peeters, 2006c; Vivek, Banwet, & Shankar, 2008) when firms gain more offshoring experience.

Second, research did not address the different application of offshoring strategies across firms of different size (Table 6.1 contribution 5). Although small and medium-sized firms are mentioned to be profiting from international markets (Karra, Phillips, & Tracey, 2008), they are also mentioned to lack resources (e.g. Qian & Li, 2003). The study indeed shows that firms of different sizes are using offshoring strategies in different ways, although the labor costs are still the most important reason to offshore. Small firms seem to act like born globals (Karra, Phillips, & Tracey, 2008; Oviatt & McDougall, 2005a) by choosing relatively often for farshoring and relocate competence exploring functions. Medium-sized firms decide

for nearshoring and apply offshoring as cost, resource and entrepreneurial strategy. Large firms use offshoring, as expected, as cost strategy to farshore competence exploiting functions. These findings show that firms of different size are indeed different (Penrose, 1959), and that small and medium-sized firms may be able to overcome their disadvantaged position with regard to their material resources compared to large firms. Their combined material and behavioral characteristics entail a different use of offshoring strategies. Additional research is needed to further specify the advantages and disadvantages firms of different size encounter by relocating at a global scale.

**Table 6.1 – Research Contributions of Study I-IV**

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**1. Development of a Multi-Dimensional View of Offshoring (the ‘Offshoring Strategy’)**

- identification of organizational attributes of offshoring, i.e. function, location and governance mode, which are addressed simultaneously in the studies
- identification of strategic attributes of offshoring, i.e. cost, resource and entrepreneurial drivers, which are addressed simultaneously in the studies

**2. Development of a Framework of Offshoring Drivers**

- cost, resource and entrepreneurial drivers are explained and both supported theoretically and empirically

**3. Investigation of Performance Effects of Offshoring**

- the effect of an offshoring strategy on firms’ competitive position and growth is confirmed

**4. Investigation of Impact of Firm Capabilities**

- the impact of process innovation and absorptive capacity on the relationship between an offshoring strategy and performance is confirmed

**5. Investigation of Impact of Firm Size on Offshoring**

- the studies show how small, medium-sized and large firms can all apply offshoring strategies, how large firms (+100 employees) are able to improve their competitive position and how growing firms (+10% per year, relatively smaller firms) can accelerate their growth with an offshoring strategy
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## **6. Investigation of Impact of Offshoring Experience**

- the results indicate farshoring to become more popular over time, while farshoring experience positively impacts nearshoring, indicating location (still) to be important regardless of the ongoing digitalization

## **7. Use of Multiple Theories**

- Transaction Cost Economics (and production efficiency theory), Resource-Based View, Entrepreneurial Theory are applied to explain the different rationales for executing offshoring strategies
  - learning and knowledge processes important to offshoring strategies are explained by Learning Theory and Knowledge-Based View respectively and show to be important to realize offshoring strategies
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### **6.2.2 Contributions of Study II**

The second study reports on the effects of offshoring strategies on firm performance. While the first study sheds light on the offshoring strategy elements and firm size in a descriptive way, this study aims to explain competitive position effects of offshoring strategies and addresses the importance of innovation. Prior research mentions the possibilities of an offshoring strategy to move beyond realizing profits from lower labor cost and gaining access to resources to realize growth, value creation and innovation (Farrell, 2005; Kenney, Massini, & Murtha, 2009; Lewin, Massini, & Peeters, 2009). Unfortunately, empirical evidence is lacking. Therefore, this study aims to contribute to literature by addressing the impact of organizational and strategic offshoring elements on firms' competitive performance (Table 6.1 contribution 1 and 3). The study is done at firm-level enabling to research firms' full offshoring strategy. In addition to cost and resource strategies, offshoring strategies are researched as learning strategy in the context of large well-established firms (Table 6.1 contribution 7). The results show that cost driven strategies indeed improve firms' competitive position, while a resource driven does not improve competitive position strategy and learning effects are not apparent. These findings show that firms are not (yet) able to profit from gaining access to resources and learning effects from offshoring strategies to improve their competitive position. The organizational attributes are measured by combining different function types and governance modes of offshoring projects into firm level variables, while importance of cost and resource strategy was measured

at firm level right away. Further research is necessary to investigate the learning effects of an offshoring strategy and its impact on firm performance.

Although we find that capabilities built by offshoring strategies, for example offshoring both core and non-core functions and applying both outsource and captive offshoring modes, did not impact firm performance, process innovation has a moderating effect on competitive position (Table 6.1 contribution 3). Innovation creates a positive effect of governance diversity on competitive position, which implies that experience with different governance modes profits from available innovation to positively influence firms' performance. However, function diversity does not positively impact firms' competitive performance. Put differently, learning effects resulting from offshoring both core and non-core activities are weakened by innovation to realize performance effects. Through innovation capabilities, lack of function diversity does result in negative effects on competitive position. It might be that offshoring both core and non-core activities require different capabilities. This may cause complexities and additional capabilities, for example relational capabilities (Vivek, Banwet, & Shankar, 2008), may be necessary to overcome these complexities. International business literature confirms the importance of capabilities to retrieve performance effects of international diversification (Hitt, Hoskisson, & Ireland, 1994; Hitt, Hoskisson, & Kim, 1997). Moreover, well-established firms, might be less flexible to incorporate learning effects from offshoring both core and non-core activities. Prior research for example shows that old and large firms are less able to profit from alliance partners than young and small firms (Stuart, 2000). Further research is necessary to investigate whether and how established firms may move beyond using offshoring as cost strategy. Additional application of learning theory will provide useful insights in development of learning effects by offshoring strategies influencing firm performance.

### **6.2.3 Contributions of Study III**

The third study answers the research questions with regard to firm growth. The first study shows firm size to be important in researching offshoring strategies. This study seeks to find whether offshoring can be used as growth strategy, opening up new opportunities for growing firms to further accelerate their growth (Table 6.1 contribution 4). Firms reported on their most important offshoring project to allow investigation of the impact of type of function offshored, governance mode chosen, and importance of cost and entrepreneurial drivers by applying them

as control variables. The study contributes to existing research by showing that offshoring indeed can be employed as growth strategy (Lewin & Peeters, 2006a), moreover, that core and outsource offshoring positively enhances firm growth. Although research discusses the possible ‘hollowing-out’ effect of offshoring (Kotabe & Murray, 1990) and does not advocate core offshoring, growing firms show to accelerate their growth with offshoring core activities. The knowledge-based view supports these findings (Table 6.1 contribution 7). Further research may want to investigate whether a trade off exists between short term performance and evolution of firm capabilities (Novak & Stern, 2008) for growing firms. Additionally, the knowledge-based view might be applied in future research to research offshoring to different geographical locations and therewith invoked cultural differences.

Offshoring strategies also influence firm growth through the strategic attributes of the offshoring strategy. Results on the governance mode shows offshore outsourcing to influence firm growth by absorptive capacity (Table 6.1 contribution 4), confirming the idea that growing firms might access knowledge via third parties circumventing their material disadvantages. Put differently, absorptive capacity is important to realize performance effects from outsource offshoring. As such absorptive capacity might function as way to align governance decisions and limit contractual hazards to impact performance (Leiblein, Reuer, & Dalsace, 2002).

#### **6.2.4 Contributions of Study IV**

The last study focuses on the location attribute of the offshoring strategy. In our strong internationalizing world with enormous technological advancements, this study investigates how distance matters and what the dynamics offshoring location choice are. First, this study contributes to existing research by applying both organizational and strategic attributes (Table 6.1 contributions 1 & 2). The findings from the research show two organizational attributes do matter in explaining nearshoring. As expected geographical proximity positively influences, however, interestingly, farshore experience results in increasing nearshoring likelihood. In future research the relationship and antecedents of nearshoring and farshoring should be further untangled.

Second, nearshoring likelihood is more apparent in ‘early’ offshoring years, as its likelihood decreases over the years (Table 6.1 contribution 6). This implies nearshoring to be followed by farshoring to seize the perceived advantage around the world and after farshoring nearshoring gets more important again. These results might be further investigated from the

traditional internationalization theory vs. born global discussion perspective. The question is what different types of experience (here: farshore versus nearshore experience) show about internationalization processes. The importance of experience and the time frame in which this is or becomes relevant may indicate certain characteristics of the ‘born-global phenomenon’, i.e. an international exchange system in which any firm, regardless of age, experience, and tangible resources (Knight & Cavusgil, 2004: 137), to be applicable.

### **6.2.5 Impact of the Offshoring Strategy**

In addition to these contribution per study as discussed above, the impact of the main attributes of the offshoring strategy across the studies can be summarized (Table 6.3). This research divided the attributes of offshoring strategies in organizational attributes (function, location, governance) and strategic attributes (cost driver, resource driver and entrepreneurial driver). In the different studies the singular relations are explained in detail, here we summarize the main effects.

The *function* offshored differs for firms of different size and offshoring core functions has positive impact on firm growth. Combining offshoring core and none-core functions negatively impacts competitive position through process innovation, while location choice is not influenced by type of function offshored. *Location* choice differs across firm size and the importance of geographical proximity is still not overruled by farshore location advantages. *Governance* mode is indifferent of firm size and does not impact location choice. However, applying both the captive and outsource governance mode results in an increased competitive position through process innovation. Also outsource offshoring positively impacts firm growth. Turning to the strategic attributes, a *cost driver* which is important for small, medium-sized and large firms, strengthens competitive position, increases firm growth and decreases nearshoring likelihood. The *resource driver* is especially important for medium-sized and large companies and the driver negatively impacts nearshoring choices. The *entrepreneurial* driver is especially important for medium-sized firms and also increases firm growth of fast growing firms (relatively more small and medium-sized firms).



**Table 6.2 – Impact of the Offshoring Strategy**

<b>Offshoring Strategy</b>	<b>Firm Size</b>	<b>Competitive Position</b>	<b>Firm Growth</b>	<b>Nearshoring</b>
Function	Small: exploration functions Large: exploitation functions	Core/non-core diversity shows negative impact through process innovation	Core offshoring shows positive impact	Indifferent of function
Location	Small and large firms: farshore locations Medium-sized: nearshore locations	N/A	N/A	Geographical proximity shows positive impact
Governance	Indifferent of size	Governance diversity shows positive impact through process innovation	Outsource offshoring shows positive impact	Indifferent of governance.
Cost driver	All firms.	Cost driver shows positive impact	Cost driver shows positive impact	Cost driver shows negative impact
Resource driver	Medium-sized and large firms.	Resource driver shows no impact	N/A	Resource driver shows negative impact
Entrepreneurial driver	Medium-sized firms.	N/A	Entrepreneurial driver shows positive impact	N/A

### **6.3 Managerial Implications**

The contributions and their impact have managerial implications for business practice (see Table 6.2). First, managers should be aware of the different ways of using offshoring strategies (Table 6.2, implication 1). Although cost reduction is an important strategy to be realized, the strategy might also be applied to gain access to resources, for example, qualified labor or technologies and as part of an international growth strategy or entrepreneurial strategy. Given the advantages of scale, large firms are in a better position to achieve the largest cost and

resource advantages in relative terms, but smaller firms seem to be able to leverage their capabilities and serve customers better using entrepreneurial strategies. Medium-sized firms tend to apply the strategy as a cost, resource and entrepreneurial strategy. Furthermore, Study I shows in terms of organizational attributes (Table 6.2, implication 2) that smaller firms offshore more competence exploring activities, which is consistent with their firm size characteristics. Farshore locations do not seem to be a problem for small and large firms, whereas medium-sized firms seem unable to fully profit from resources around the globe, given the general preference for nearshoring. As regards governance mode, firms are not limited by their firm size, as no differences between the application of either captive offshoring or outsource offshoring are found.

Second, offshoring strategies seem to impact firm performance. Study II suggests that offshoring is not or is not yet a strategy that moves beyond gaining cost advantages (Table 6.2, implication 3). This finding applies to well-established firms (i.e. 100 employees or more). The importance of cost drivers as proxy for gaining cost advantages results in important positive effects on the competitive position of firms. However, performance effects are not or not yet apparent as regards resources and learning effects. Study III has also shown that performance effects are generated by offshoring strategies (Table 6.2, implication 4). As regards growing firms, both organizational attributes, i.e. core offshoring and through absorptive capacity outsource offshoring, and strategic attributes, i.e. cost and entrepreneurial drivers, are important to achieve firm growth. This shows that the management of growing firms seems to be better able to profit from the full range of possibilities across the globe compared to the management of larger, established firms. While Study II investigated competitive position and study III firm growth effects, for which they are not fully comparable, these are important findings. Firms need to be aware of these differences and adjust their offshoring strategies to fit their overall firm strategy.

Third, Study II and Study III demonstrate the important role of innovation and absorptive capacity in achieving offshoring benefits. For well-established larger firms (Study II, Table 6.2, implication 3), the level of innovation positively influences the relationship between governance diversity and competitive position through innovation. This shows that offshoring using both an outsource and a captive offshoring mode, while innovating at the same time, positively influences firm performance. Accordingly, management should investigate the application of both models to maximize the results. As regards function type, the application of

both core and non-core offshoring does not increase competitive position. Interestingly enough, function diversity generates negative performance effects through innovation. In other words, innovation, measured in terms of process innovation, negatively influences the relationship between function diversity and competitive position, while positively influencing the one between governance diversity and competitive position. This might indicate that the combination of function diversity and innovation capabilities results in complexities that do not result in positive performance effects. The capability sets necessary are conflicting. Study III shows that offshoring firms further improve their growth by an outsource governance mode through absorptive capacity (Table 6.2, implication 4). If a firm is better able to recognize, assimilate and commercialize offshoring knowledge, this will facilitate gaining positive firm growth effects of the outsource governance mode. This points managers to the importance of aligning firm capabilities to gain performance effects of offshoring. Offshoring without addressing the role capabilities play, does not allow maximum exploitation of offshoring strategies.

Finally, Study IV points management to the development of experience by addressing location choice over time. Offshoring implies relocating a single part of the value chain and therefore overseas locations get connected to enterprise systems in complex ways, whereas earlier overseas operations were far more stand-alone subsidiaries. Interaction with and within the firm across the globe and building experience should have an important role in executing offshoring strategies over time to build experience. Moreover, the results show managers do not have to differentiate between functions and governance modes across nearshore and farshore locations.

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**Table 6.3 - Managerial Implications**

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1. Managers should realize offshoring is a multi-dimensional strategy. Offshoring can be undertaken to (1) reduce labor and other costs (cost strategy), (2) find personnel (resource strategy) and/or (3) build global strategies and access new markets (entrepreneurial strategy). For small firms, offshoring offers opportunities as a cost strategy, while large firms apply it as a cost and resource strategy. Medium-sized firms see possibilities in its application as a cost, resource and entrepreneurial strategy (see also implications 3&4). As a result, small, medium-sized and large firms may all profit from the strategy.
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2. Clear strategic goals, (organizational) choices with regard to function, location and governance mode and firm capabilities enable firms to execute and tailor an offshoring strategy to support firm strategy (see also implications 3-5).  
Across firm size, smaller firms offshore all or part of exploration functions (like engineering, R&D and product design). Medium-sized firms typically nearshore relatively more than small and large firms. Small firms do not see themselves constrained by their financial and material disadvantages. Furthermore, firm size does not show preferences for captive offshore (own overseas location) or outsource offshoring. Therefore, firms of different sizes can explore offshoring strategies.
  3. Managers of large firms (>100 employees) have been shown to impact their competitive position by offshoring both core and non-core activities (negative) and by applying both captive and outsource modes (positive) when process innovation capabilities are available in the firm. Accordingly, firms need to address offshoring as a performance strategy and focus on connecting and aligning innovation and learning to offshoring strategies to fully profit from the strategy. Managers of these firms have also been demonstrating to have the capacity to impact their competitive position with an offshoring cost strategy and not with an offshoring resource strategy. Accordingly, managers need to consider which case applies: (1) their firms do not need offshore resources to improve their competitive performance or (2) their firms are not or not yet able to profit from offshoring resource strategies pointing to the need to unlock this potential.
  4. The management of fast-growing firms may realize additional firm growth by offshoring core activities. Outsourcing (as opposed to captive offshoring) only positively impacts firm growth when the capacity to recognize, assimilate and apply new external information (absorptive capacity) is present. Therefore, managers should investigate how offshoring may contribute to firm growth and develop the knowledge capabilities necessary to unlock the value of offshoring strategies. Moreover, managers of growing firms should realize that applying offshoring as a cost and entrepreneurial strategy positively influences firm growth.
  5. Our study on location choice over time shows a trend from nearshoring to farshoring over time, showing nearshore experience to be important for farshore projects. Moreover, the results indicate farshore experience to accumulate nearshoring. Accordingly, managers should plan their internationalization strategy carefully over time and try to assess experience effects over time as well. If the offshoring strategy is cost or resource driven, managers should opt for farshoring, while the importance of geographical proximity may of course intervene at all times. Further, managers should be aware that the function and governance mode should not influence location choice.
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## 6.4 Future Research

Various venues for future research were identified and discussed in the previous chapters. The research contributions and their managerial implications were discussed in the previous paragraphs. In this section, we summarize these future research issues. First, our study focused on firms of different size, well-established firms and growing firms, highlighting the multi-dimensional character of an offshoring strategy. Only limited research is currently available that deviates from the mainstream in discussing the offshoring strategies of large firms. One important exception is a study discussing the impact of offshoring by SMEs on the internationalization of sales (Gregorio, Musteen, & Thomas, 2009). Future research should further investigate the meaning of offshoring strategies for smaller and growing firms by applying entrepreneurship theory (Baumol, 1993; Fiet, 2001; Phan, 2004) and research on born globals (Oviatt & McDougall, 1994).

Second, this research investigated both organizational and strategic attributes of offshoring strategies (Gilley & Rasheed, 2000; Youngdahl & Ramaswamy, 2008). We have not been able to include location as an organizational attribute in all studies due to data constraints. Future research might take market drivers into account as strategic attributes as well. As international competition is fierce (Coucke & Sleuwaegen, 2008), markets may force firms to relocate activities abroad to survive. Different types of drivers might be researched for co-evolution in determining the future performance of firms (Lewin & Volberda, 1999). Lastly, more sophisticated offshoring variables should be developed to address, for example, type of knowledge involved in offshoring different functions, offshoring experience and offshoring intensity. As such, the attributes of an offshoring strategy might be further extended and refined.

Third, the research invites further empirical support on how offshoring strategies impact firm performance at both firm and implementation level. Research has so far only sparsely reported on firm-level performance effects of offshoring strategies (e.g. Bhalla, Sodhi, & Son, 2008; Gilley & Rasheed, 2000). As offshoring strategies are thought to lead to large cost benefits and create value (Doh, 2005; Farrell, 2005), performance implications have to be investigated. This research contributes to strategic literature by explaining the performance effects of offshoring strategies by both learning theory and the knowledge-based view of the firm. Future research may want to extend their application to further untangle the impact of

offshoring strategies on firm performance using more sophisticated offshoring variables. As firms accumulate more offshoring experience, learning effects will obviously become more important.

Lastly, future research should also explain the offshoring decision itself and its performance effects. In this research, we focused on offshoring firms, but comparing and explaining performance of offshoring firms and firms not undertaking offshoring will be a fruitful area for future research. In other words, will it ever be possible to predict firm characteristics, such as competitive position, efficiency or profitability, by the presence or absence of offshoring strategies. Additionally, specific attention needs to be paid to the long-term effects of offshoring. It is important to address a trade off between short-term and long-term performance (e.g. Novak & Stern, 2008), while addressing the different objectives of offshoring strategies. In the context of the financial crisis, it is important to investigate whether this context makes offshoring recession proof or not and especially how this was realized.

## **6.5 Conclusion**

This research investigates the impact of attributes of offshoring strategies on firm performance, while addressing how innovation, absorptive capacity and firm size influence this relationship. The first aim of the study was to investigate the attributes of an offshoring strategy, both organizational and strategic attributes. All four studies investigated and assessed these attributes, although not every attribute identified was incorporated in all studies. The second aim was to show how an offshoring strategy influences firm performance. We showed in Study II and Study III that positive performance effects can be achieved. The third aim addresses the importance of innovation and absorptive capacity, which were shown to be important in further accelerating performance effects of the organizational attributes of offshoring strategies. Both innovation and absorptive capacity play an important role in achieving the performance effects firms aim for. The final study explicitly addressed the impact of experience on the development of offshoring location over time and confirmed the importance of location in international business theory.

The research aim is met by data collection by the Offshoring Research Network consortium initiated by Duke University, by collaborative research initiatives with Statistics Netherland and Eurostat and business partner Deloitte. This research not only reports important

findings, it also shows offshoring to be a fruitful area for future research. Areas for future research include not only the performance effects, but also the offshoring strategy itself. Moreover, (dynamic) capabilities like innovation and absorptive capacity need to be further explored. Offshoring research is still in its infancy and will profit from increasing attention of scientific researchers.

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**Appendix A – Case study firms**

<b>Firm</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
Industry	Navigation	Mobile entertainment Content Development	Telematics	E-commerce	Internet technology Development, Sales	E-commerce
Function offshored	Manufacturing, Customer Service		Manufacturing	Technology development, Sales	Development, Sales	Product development, content development
Core/non-core activity	Core, non-core	Core	Core	Core/Non-core	Core/Non-core	Core/Non-core
Location	China	Poland, Russia, China	Taiwan, China	India	China	Ukraine
Governance mode	Outsource offshoring	Outsource offshoring	Joint venture	Captive offshoring	Captive offshoring	Captive offshoring
Offshoring drivers	Cost, financing, flexibility	Cost, flexibility, skilled personnel	Cost, quality, flexibility	Cost, skilled personnel	Cost, skilled personnel, clients	Skilled personnel, cost
Growth	Offshoring crucial for growth strategy.	Offshoring might enable future growth due to lack of knowledge workers in NL.	Offshoring enabled growth (quantity and quality of labor, more production capacity).	Offshoring enabled growth (quantity and quality of labor).	Offshoring will enable future growth.	Offshoring will enable future growth as offshore capacity was focused on product development.





**Appendix B - T-tests for Equality of Means**

	<b>Non-Response</b>	<b>Response</b>	<b>Total</b>	<b>t</b>	<b>Sig. (2-tailed)</b>
Firm Value	378	119	497	-0.55	0.58
Number of Employees	318	107	425	0.61	0.54
Industry	455	152	607	-2.73	0.01



## Appendix C - Absorptive Capacity

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### **Absorptive capacity, adapted from Cohen & Levinthal (1990), adjusted for offshoring context.**

All items were measured on a seven-point scale (strongly disagree – strongly agree)

To what extent do you agree with the following statements?

#### *(Recognize)*

My firm is able to recognize new knowledge on the offshore location.

The value of new knowledge on the offshore location is rightly assessed by my firm.

My firm involves employees in the transfer of knowledge between the home and offshoring location.

My firm implements systems and procedures to facilitate knowledge sharing between the home and offshoring location.

#### *(Assimilate)*

My firm is able to adopt new knowledge from the offshore location.

The feasibility of adopting new knowledge from the offshore location is rightly assessed by my firm.

In my firm employees have the competence to absorb new knowledge from the offshore location.

My firm is able profit from the adjusted firm processes due to offshoring.

#### *(Commercialize)*

My firm is able to recognize the possibilities for commercialization of new knowledge on the offshore location.

The feasibility of commercializing new knowledge on the offshore location is rightly assessed by my firm.

In my firm employees are able to implement the new knowledge in new products/services.

My firm is able to profit from new products/services developed (partly) by the offshoring location.

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## NEDERLANDSE SAMENVATTING (DUTCH SUMMARY)

Technologische ontwikkelingen (Audretsch, 1995; Farrell, 2005) bieden bedrijven unieke mogelijkheden voor uitbreiding van hun internationale activiteiten. Hoewel bedrijven al decennia lang bedrijfsactiviteiten naar het buitenland verplaatsen, is offshoring een nieuwe internationale strategie (Lewin, Massini, & Peeters, 2009), waarbij een onderdeel van de waardeketen naar het buitenland wordt verplaatst. De activiteiten kunnen worden verplaatst naar een derde partij, het zogenaamde offshore outsourcen, of in eigen beheer worden gehouden, het captive offshoren (UNCTAD, 2004).

Bedrijven offshoren om te profiteren van lagere kosten (Doh, 2005; Dunning, 2009; Farrell, 2005) en om toegang te krijgen tot geschikt personeel en nieuwe technologieën (Lewin & Peeters, 2006c), maar ook om te groeien (Lewin & Peeters, 2006a), nieuwe markten te betreden en toegang te krijgen tot technologieën (Stratman, 2008). Ondanks dat er meer onderzoek naar offshoring wordt gedaan, is onderzoek op bedrijfsniveau voornamelijk conceptueel of gebaseerd op case studies (Manning, Massini, & Lewin, 2008). Dit onderzoek vindt plaats op bedrijfsniveau en levert ten eerste een bijdrage aan bestaand onderzoek doordat verschillende motieven (strategische kenmerken) voor offshoring, bijvoorbeeld kosten en resources, tegelijkertijd worden onderzocht. Ten tweede worden ook de organisatie kenmerken van de offshoring strategie bekeken. Dit betreft bijvoorbeeld de functie die wordt verplaatst, bijvoorbeeld kernactiviteiten en/of ondersteunende activiteiten van een bedrijf (Gilley & Rasheed, 2000). Daarnaast wordt ingegaan op de locatiekeuze en de toegepaste eigendomsstructuur. Ten derde wordt de invloed van de offshoring strategie op het bedrijfsresultaat onderzocht. In bestaande literatuur op bedrijfsniveau is er geen duidelijkheid over de effecten op resultaat (Bhalla, Sodhi, & Son, 2008; Gilley & Rasheed, 2000), terwijl er op macro- en meso-niveau negatieve effecten worden gemeten (Fifarek, Veloso, & Davidson, 2008; Kotabe, 1990). Ten vierde wordt de rol van ondernemingsvaardigheden onderzocht. Vaardigheden zijn belangrijk voor het behalen van voordelen met internationale strategieën (Subramaniam & Venktraman, 2001; Zahra & Hayton, 2008). Daarom wordt in dit onderzoek expliciet gekeken naar de rol van proces innovatie en *absorptive capacity* om vast te stellen of bedrijven met deze vaardigheden de resultaten van hun offshoring strategieën verhogen. Ten vijfde besteden we aandacht aan de vraag hoe een offshoring strategie kan worden gebruikt

door bedrijven met een verschillende bedrijfsgrootte en groeiende bedrijven. Eerder onderzoek heeft uitgewezen dat offshoring ook voor middelgrote en kleine bedrijven een betekenisvolle strategie kan zijn (Gregorio, Musteen, & Thomas, 2009). Dit ondanks het feit dat deze bedrijven misschien niet dezelfde kostenvoordelen kunnen behalen als grote bedrijven. Tot slot wordt in het onderzoek aandacht gegeven aan de effecten van opgebouwde ervaring met offshoring op locatiekeuze (*nearshoring* vs. *farshoring*). Concluderend is het doel van dit onderzoek:

*het onderzoeken van (1) de offshoring strategie, zowel organisatie als strategische kenmerken, (2) hoe een offshoring strategie invloed heeft op het bedrijfsresultaat en hoe (3) innovatie, absorptieve capaciteit en ondernemingsomvang deze relatie beïnvloeden en (4) hoe offshoring processen van invloed zijn op locatiekeuze.*

Het onderzoek bestaat uit vier delen. Studie I (hoofdstuk 2) richt zich op de offshoring strategie bestaande uit organisatie en strategische kenmerken (Youngdahl, Ramaswamy, & Verma, 2008). Er wordt data van het Offshoring Research Network (ORN) gebruikt om deze variabelen te onderzoeken. Het ORN is opgezet door Duke University Center for International Business Education and Research (CIBER) Fuqua School of Business in 2004. Vanaf 2006 nemen ook Europese universiteiten deel aan het jaarlijkse onderzoek. De resultaten laten zien dat de motieven voor offshoring, de strategische kenmerken van de offshoring strategie, kunnen worden onderscheiden in een drietal groepen. Transactiekosten theorie (in combinatie met productie efficiency theorie), de *resource-based view* en *entrepreneurship theory* verklaren respectievelijk kosten, resource (bijvoorbeeld technologie en personeel) en *entrepreneurial* motieven voor offshoring. Dit draagt bij aan een verdere integratie van deze drie theorieën (Foss & Ishikawa, 2007). Studie I besteedt expliciet aandacht aan de rol van ondernemingsomvang, aangezien eerder onderzoek aantoonde dat kleinere bedrijven minder goed in staat zijn kostenvoordelen te behalen zoals grote bedrijven dat kunnen (Qian & Li, 2003). Wellicht zijn zij in staat om hun nadeel op dit gebied te compenseren (Karra, Phillips, & Tracey, 2008). De resultaten laten zien dat kleine ondernemingen relatief vaak offshoren naar verafgelegen landen en kennis-intensieve waarde creërende activiteiten verplaatsen. Middelgrote ondernemingen gebruiken offshoring als kosten en resource strategie, maar ook als strategie om nieuwe markten te betreden en als onderdeel van een internationale strategie

(*entrepreneurial* strategie). Grote ondernemingen passen offshoring toe als strategie om kosten te verlagen en verplaatsen vooral eenvoudige bedrijfsactiviteiten.

Studie II (hoofdstuk 3) richt zich op de relatie tussen offshoring strategie en bedrijfsresultaat. Daarbij wordt expliciet aandacht gegeven aan de rol van ondernemingsvaardigheden op het gebied van innovatie. Voor deze studie naar offshoring en innovatie is een samenwerkingsverband aangegaan met het Centraal Bureau voor de Statistiek gevestigd in Den Haag/Heerlen en Eurostat. De onderzoeksvraag is onderzocht met data uit de International Sourcing Enquête (2007) en Innovatie Enquetes (2002, 2004, 2006). De studie richt zich op grotere, gevestigde bedrijven met 100 of meer werknemers. De resultaten van het onderzoek laten zien dat het kostenmotief (Doh, 2005; Farrell, 2005) in belangrijke mate bijdraagt aan de verbetering van de concurrentiepositie. Toegang tot personeel en veronderstelde leereffecten gerealiseerd door middel van een offshoring strategie hebben (nog) geen invloed op de resultaten. Wel is het zo dat leereffecten worden gerealiseerd door reeds bestaande innovatievaardigheden van bedrijven. In het geval een bedrijf activiteiten verplaatst naar derden en ook activiteiten in eigen beheer houdt op offshore locaties, leidt dit tot positieve resultaten. Daarbij is het zo dat het verplaatsen van zowel van kern- als ondersteunende activiteiten in combinatie met gedane proces innovatie zorgt voor een negatieve invloed op de concurrentiepositie. Hieruit blijkt dat, vergelijkbaar met eerder onderzoek, dat de inzet van vaardigheden essentieel is bij het behalen van resultaat uit internationale strategieën (Hitt, Hoskisson, & Kim, 1997; Subramaniam & Venktraman, 2001; Zahra & Hayton, 2008).

In studie III (hoofdstuk 4) wordt onderzocht op welke wijze een offshoring strategie gebruikt kan worden als groeistrategie, waarbij eveneens wordt onderzocht wat de invloed van *absorptive capacity* op deze relatie is. Dit laatste is in de context van offshoring het vermogen om kennis en vaardigheden aanwezig op offshore locaties te integreren in de activiteiten op de thuisbasis (Lane, et al., 2001). Voor het uitvoeren van deze studie is samengewerkt met partner Deloitte en is er een database met snelgroeiende bedrijven samengesteld. Een belangrijke bevinding van deze studie is dat offshoring inderdaad kan bijdragen aan het realiseren van bedrijfsgroei als verondersteld door Lewin & Peeters (2006b). Het blijkt dat deze groei wordt veroorzaakt door het verplaatsen van kernactiviteiten. Daarbij laten de resultaten zien dat groeiende bedrijven offshoring gebruiken als een kostenstrategie maar ook als *entrepreneurial* strategie om de groei te verhogen. Het absorptievermogen van een onderneming is ook van invloed op de te realiseren groei. Een hogere *absorptive capacity* gecombineerd met het



verplaatsen van bedrijfsactiviteiten naar derden in het buitenland, het zogenaamde *offshore outsourcing*, draagt bij aan een sterkere groei.

In studie IV wordt gekeken naar het effect van offshoring processen op locatiekeuze. Meer specifiek richt het onderzoek zich op het effect opgebouwde ervaring op de locatiekeuze. De resultaten laten zien dat naarmate de tijd vordert, de kans op *farshoring* wordt vergroot. Daarnaast wordt expliciet aandacht besteed aan de opgebouwde offshoring ervaring. Hieruit blijkt dat als een bedrijf *farshoring* ervaring heeft opgebouwd, de kans op *nearshoring* groter wordt. Met andere woorden, ondernemingen lijken in eerste instantie te streven naar *farshoring*, maar zien vervolgens wellicht weer de (relatieve) voordelen van *nearshoring*.

Een korte samenvatting van de studies en een aantal implicaties voor het management worden in onderstaande tabel samengevat.

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1. Offshoring is een multi-dimensionele strategie die kan worden gebruikt voor (1) het realiseren van kostenvoordelen, (2) het verkrijgen van toegang tot arbeidskrachten en (3) toetreding tot nieuwe markten. Het onderzoek laat zien dat kleine ondernemingen kosten voordelen kunnen realiseren, terwijl grote ondernemingen kosten en resource voordelen behalen. Middelgrote bedrijven kunnen overwegen de strategie als kosten-, resource-, en *entrepreneurial* strategie toe te passen.
  2. Duidelijke strategische doelstellingen (de strategische kenmerken), keuzes ten aanzien van functie, eigendomsstructuur en locatie (de organisatie kenmerken) en ondernemingsvaardigheden stellen bedrijven in staat hun offshoring strategie te laten bijdragen aan het realiseren van de algehele ondernemingsstrategie. Kleinere ondernemingen laten zien relatief veel engineering, R&D en product ontwerp functies te verplaatsen. Middelgrote bedrijven offshoren relatief veel naar nabij gelegen landen. De eigendomsstructuur verschilt niet als gevolg van ondernemingsomvang. Kleinere bedrijven zien zichzelf dus niet beperkt door de vaak genoemde nadelen van hun ondernemingsomvang.
  3. Managers van grote bedrijven (> 100 werknemers) laten zien dat offshoring strategieën invloed hebben op hun concurrentiepositie. Het offshoring van kern- en niet-kernactiviteiten en het gebruik van verschillende eigendomsstructuren (in eigen beheer en uitbesteden) zijn onderzocht. De combinatie van verschillende type activiteiten heeft een negatief en de combinatie van eigendomsstructuren heeft een positieve invloed. Deze laatste is alleen aanwezig als een bedrijf vaardigheden op het gebied van proces innovatie heeft opgedaan. Dit laat zien dat een offshoring strategie mede wordt bepaald door reeds bestaande vaardigheden van een onderneming om de de strategie tot een succes te maken. Aanvullend laat de studie zien dat de concurrentiekracht alleen verhoogd kan worden door het realiseren van kostenvoordelen. De toegang tot resources in internationale markten leidt (nog) niet tot versteviging van de concurrentiepositie.
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4. Het management van groeiende bedrijven kan groei versnellen door het offshoren van kernactiviteiten. Bij de onderzochte bedrijven zorgt *outsourcing* (uitbesteden) ook voor extra ondernemingsgroei mits de onderneming zogenaamde absorptive capacity bezit. Dit is het vermogen om kennis en vaardigheden van de buitenlandse locatie(s) te integreren in de bedrijfsvoering. Het verdient daarom de aanbeveling om deze *absorptive capacity* te ontwikkelen en via een offshoring strategie in te zetten om ondernemingsgroei te faciliteren. Op deze wijze kan kennis aanwezig op internationale locaties gebruikt worden om de bedrijfsvoering te verbeteren. Daarnaast zorgen kostenargumenten en *entrepreneurial* motieven voor ondernemingsgroei.

5. Ook voor offshoring strategieën is het van belang vast te stellen op welke wijze bedrijven deze strategie in de tijd toepassen. De resultaten laten zien dat in de loop van de tijd de kans dat bedrijven *farshoren* groter wordt, en dat er dus eerst relatief vaker *nearshoring* plaatsvindt. Maar, als bedrijven eenmaal *farshore* ervaring hebben, dan neemt de kans toe dat zij gaan *nearshoren*. De voordelen van het *farshoren* zijn wellicht minder groot dan aanvankelijk gedacht. Managers dienen bij hun besluitvorming ten aanzien van offshoring dan ook rekening te houden met het belang van ervaring en de effecten hiervan op de strategie in de tijd. Tot slot laten de resultaten zien dat functie en eigendomsstructuur niet van invloed zijn op de kans te *nearshoren* dan wel te *farshoren*.

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Deze samenvatting geeft enkel een kort overzicht van de wijze waarop het onderzoek is uitgevoerd en de belangrijkste resultaten ervan. Voor een volledig overzicht en verslag van het verrichte onderzoek wordt verwezen naar de eerdere hoofdstukken van deze dissertatie.



## **CURRICULUM VITAE**

Marja W. Roza – van Vuren (Everdingen, Netherlands, October 19, 1979) received her M.Sc. degree in Strategic Management (Cum Laude) from the Rotterdam School of Management, Erasmus University Rotterdam, in the Netherlands. After a few years in investment fund business, Marja Roza returned to university to learn more about business strategy. She is currently employed as business consultant corporate recovery and restructuring and affiliated with the department of Strategic Management and Business Environment at the Rotterdam School of Management, Erasmus University. Her research interests include international business strategy, firm strategy, business development, growth, innovation, firm performance and entrepreneurship. She has been involved in setting up research collaborations with governmental organizations and business partners.

Her work has been published in Dutch business press, like in *Economisch Statistische Berichten* and by *Stichting Maatschappij en Onderneming* (in Dutch). She is preparing submissions to international journals. Moreover, her work has been presented at the Academy of Management (Chicago 2009), Academy of International Business (Milan 2008, San Diego 2009), s Group for Organizational Studies (Vienna 2007), European International Business Academy (Fribourg 2006). She also serves as ad-hoc reviewer for *Journal of Management Studies*, *International Business Review* and various annual international conferences.

Marja Roza has taught several Bachelor and Master courses on strategy and entrepreneurship and supervised various master theses. She also taught in the 2-year part-time MScBA program for professionals. During her PhD trajectory, she has been member of the University Council of the Erasmus University Rotterdam and member of the representative board of the national PhD Association of the Netherlands (het PNN).

Marja lives in Rotterdam, is married and has a daughter of seven and a son of two years old. Besides academia, she has a passion for business and real estate.



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## THE RELATIONSHIP BETWEEN OFFSHORING STRATEGIES AND FIRM PERFORMANCE IMPACT OF INNOVATION, ABSORPTIVE CAPACITY AND FIRM SIZE

How do offshoring strategies relate to firm performance? And how are innovation, absorptive capacity and firm size influencing this relationship? This research investigates how firms of varying size, well-established firms and growing firms may profit from relocating business activities to foreign locations. Offshoring strategies are conceptualized as consisting of both organizational attributes, i.e. function offshored, governance mode and location, and strategic attributes, i.e. cost, resource and entrepreneurial drivers. Data has been collected in Europe and the US in collaboration with (1) the Offshoring Research Network (ORN), (2) Statistics Netherlands (CBS) and Statistics Europe (Eurostat), and (3) business partners. First, the results show that firms of different sizes, i.e. small, medium-sized and large firms, may all profit from offshoring strategies. Different theories, among which transaction cost economics, the resource-based view and entrepreneurship theory, help to explain the different rationales these firms may have for their respective strategies. Second, this research indicates that well-established firms do not – or not yet – move beyond cost advantages to improve their competitive position. By applying learning theory, innovation is shown to have an impact on the relationship between offshoring strategy, i.e. function diversity and governance diversity, and competitive position. Third, the knowledge-based view of the firm helps to demonstrate that companies realize additional firm growth by offshoring core functions, while the effect of outsource offshoring on firm growth is contingent upon absorptive capacity. Fourth, the changes over time that firms exhibit in their location choice are explained by way of internationalization theory. While nearshore experience is important for farshoring, experience with farshoring also increases the likelihood of nearshoring, which is an indication of the importance of experience.

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