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*Offshoring of Support Functions:
Selection of Governance Modes and Time to Success*

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DEFINITIONS

EUR	Euro
GDP	Gross Domestic Product
IB	International Business
IT	Information Technology
ITIL	Information Technology Infrastructure Library
JV	Joint Venture
MCAR	Missing completely at random
ORN	Offshoring Research Network
R&D	Research and Development
SSC	Shared Service Center
VIF	Variance Inflation Factors

1 INTRODUCTION

Offshoring is nowadays a widely spread phenomenon. Firms already started in the 60s and 70s to transfer manufacturing work to low-cost countries (Lewin & Peeters, 2006b; Schaaf, 2004). They are using the opportunity to even transfer white collar work as IT (Information Technology), HR (human resources), finance and accounting and others. According to Lewin *et al.* (2006a) primary objective has been to realize cost advantages, to gain access to qualified personnel and to increase flexibility (see Figure 1). Particularly after the burst of the dotcom bubble in 2001 many firms had to reduce their cost line significantly (Lewin *et al.*, 2006b). By consequence, many firms started to leverage offshoring not only to transfer manufacturing related work but also to transfer their support functions.

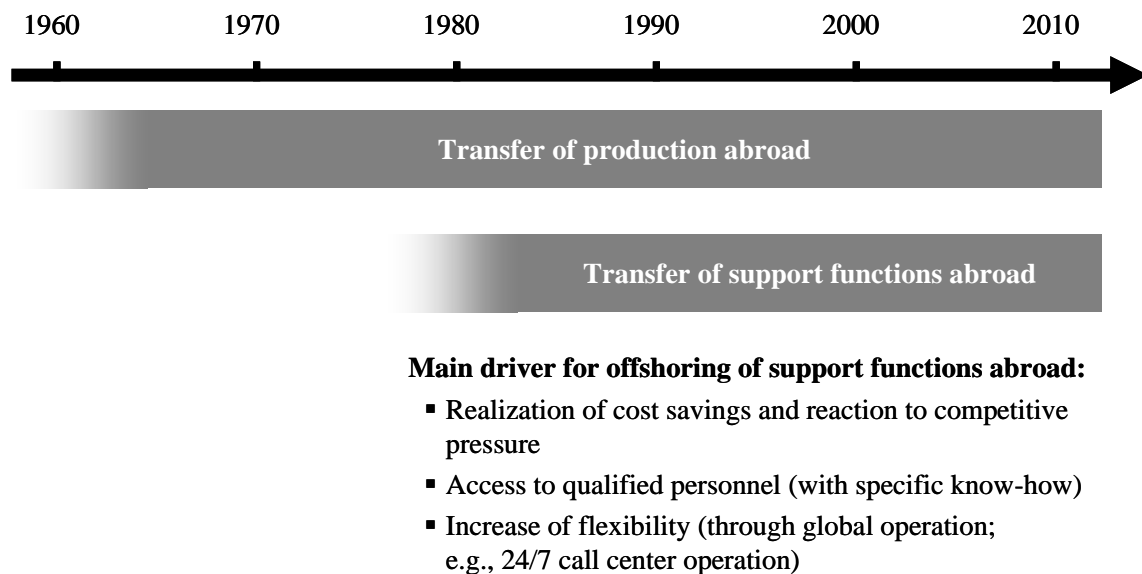


Figure 1: Evolution of offshoring since the 60s and firms' objectives to transfer activities to foreign countries (c.f. Hutzschenreuter et al., 2007a)

The following chapters follow Hutzschenreuter, Dresel & Ressler *et al.* (2007a) and explain the background of offshoring, its differentiation from outsourcing, and its relevance for today's firms.

1.1 Research Context

Based on the technological progress of telecommunication and IT in the last years firms are nowadays capable to relocate individual tasks or even complete processes to foreign countries (Ramamurti, 2004). With the power of digitalization many processes can be easily operated at geographically dispersed locations. Only the finalized product of the work will be transferred to the home country. By transferring parts of their value chain abroad firms can leverage the much lower salary levels in emerging and developing countries.

A reliable estimate of the worldwide volume of offshoring is hardly possible due to lack of consistent data (Schaaf, 2004). For example, Schaaf (2005) estimated a global offshoring volume of about US Dollars 40 billions in 2005. For individual countries an educated guess of the offshoring volume is easier. For example, India provided in 2005 offshoring services with a total volume of about US Dollars 17 billions (Sharma, 2005) and the Indian offshoring providers employed about 700.000 people. So far, there is not any indication for a stop of the offshoring boom of the firms. Whereas the primary target of offshoring are the realization of cost advantages future activities will focus on gaining access and conquering new markets (Farrell, 2004).

Offshoring represents a new type of internationalization from a scientific perspective. In the past internationalization has been a stepwise process. First, firms started to export domestic product and services abroad. Second, they transferred parts of their manufacturing capacities abroad to serve foreign markets. Finally, they even imported foreign made products to the home countries to leverage the advantages of an foreign production. This evolution path of internationalization has been described intensively by Vernon (1966; 1979) and Johanson *et al.* (1977; 1990). However, today's firms behave differently. They transfer its support functions directly to foreign host countries without any previous internationalization experience. In some cases firms are even "born global" (Knight & Cavusgil, 2004; Lewin, 2005) and rely on the potential of offshoring from their first day (Kenney & Dossani, 2005).

Such a change in the internationalization process of firms challenges our well established understanding of internationalization and its fundamental principles (Ramamurti, 2004). In the scientific community there are intense discussions ongoing about the underlying mechanisms of offshoring. For example, there is still no consensus about the “net effect” of offshoring on the job market in developed nations (Farrell, 2005; Levy, 2005). Or, there are discussions whether offshoring can be also utilized by small and medium sized firms or solely by multinational enterprises (*e.g.*, Dossani & Kenney, 2006; Farrell, Laboissiere, & Rosenfeld, 2006). Obviously, there is a serious need for further research on offshoring or as Ramamurti (2004, S: 281) phrased it: “TB [international business] scholars have the opportunity to lay bare the implications of this new trend, compare it with past trends in manufacturing, and highlight the management implications...”.

1.2 Enabler of Globalization and Offshoring

Globalization and offshoring would not have been possible without the technological developments in IT and telecommunications (Hutzschenreuter *et al.*, 2007). The increase in computing power and affordable storage capacities enabled the digitalization of documents, their digital processing and archiving in data bases. Broadband connections and the global internet guarantee a worldwide access to this data and made developing nations potential host countries for offshoring. Overall, there are three phenomena that fostered the development of global communication networks:

- the growing availability of international data and telecommunication networks since the 80s due to fast growing global financial markets (Baukowitz & Boes, 1996),
- the development of proprietary data and telecommunication systems by international corporations during the same period,

- the modernization of communication networks based on the internet boom since the 90s and the establishment of standardized communication platforms that are easily accessible by any firm, public institution and private person.

The largest contribution has been made by the internet boom. On the one hand, it triggered a fast expansion of broadband structures in fixed line as well as mobile networks. On the other hand, the internet's underlying principle of an open and easily accessible platform triggered the harmonization of network infrastructures. This trend occurred in the developed nations but also in the developing countries, and is one of the corner stones for the offshoring boom in these regions.

In addition to growing networks, the common business trend to harmonized and standardized processes enabled a bundling and centralization of firms' activities. Such standardized processes can be easily controlled by a firm's management team even if the headquarter is geographically disparate from the provisioning unit (as in case of offshoring). Albeit, standardization and harmonization are desirable but not mandatory for offshoring. Figure 2 illustrates the example of an issuer and financial service provider that firstly centralized its support functions in a shared service center and secondly offshored it.

An often cited example for a highly standardized industry is the software industry. The ITIL (Information Technology Infrastructure Library) concept is very common and widely accepted by software companies. It encompasses not only technical specifications but also methodologies to organize processes, to setup IT organizations and even defines roles and responsibilities.

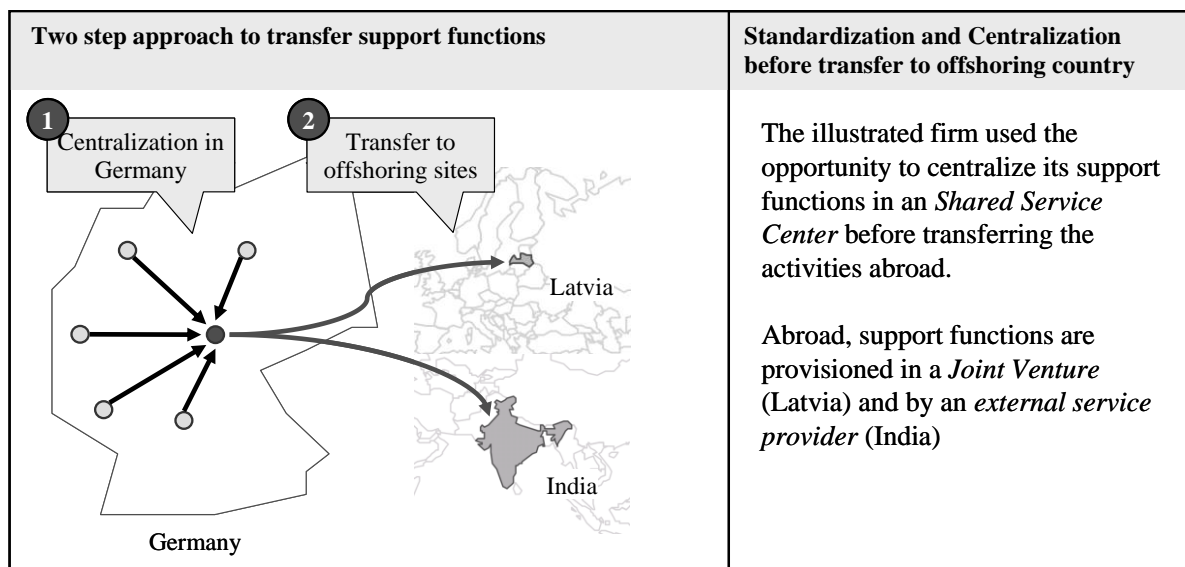


Figure 2: Example of an insurer and financial service provider that first centralized its support functions in shared service centers and second transferred it (c.f. Hutzschenreuter et al., 2007a)

The harmonization of IT has been also driven by the deployment of “de-facto standard” software applications. Software vendors as SAP or Oracle offer comprehensive, industry specific solutions that are dominating the software market for business applications. For example, the SAP FI/CO module supports nearly all processes in the finance and controlling domain and makes the deployment of additional software applications (of other software vendors) superfluous. A standardized IT simplifies the data exchange, reduces the need for expensive software interfaces and enables economies of scale (same software is used by many firms).

Finally, the cessation of the “uno-actu principle” is another cornerstone of the offshoring boom. The uno-actu principle was dominating the services industry before the digital age started (Bhagwati, 1987). According to this principle services have to be supplied at the location where the recipient “consumes” them. In some domains as tourism or administrative interactions with municipal authorities this principle is still valid, but in many other industries digitalization and new communication channels (e.g., online platforms) did annihilated the principle. In the past for example, a subscription for a telephone connection required a mandatory visit in a retail branch.

Nowadays, the customer subscribes online or if he is not capable to do his, its subscription is forwarded to a customer center in a low-wage country.

1.3 Host Countries for Offshoring Activities

The preference for specific offshoring countries clearly depends on the home country of a firm. For example, the most important offshoring regions for German firms are Eastern Europe and Asia according to Hutzschenreuter *et al.* (2007a). With respect to Eastern Europe, limited cultural differences, a limited geographic distance and the absence of time differences simplify the transfer of activities to these countries. Face-to-face meetings can be easily arranged without or with limited logistical efforts, conference calls can be easily scheduled as there are no time shifts, and a significant number of German and English speaking employees are available. But also a transfer to Asia is promising and offers considerable benefits:

- Based on the time differences cost efficient 24h service operations can be easily realized. For example, night shifts in call centers are transferred from Europe to Asia avoiding expensive night premiums.
- In Asia there is a huge labor pool of qualified and highly skilled employees. Using offshoring many Western firms get access to this talent pool.
- In some regions quality levels are even higher than in the Western world. For example, due to the large volume of software development projects there are highly skilled and specialized software developers in India.
- A bundling of activities across the globe enables economies of scale and offers significant cost savings potentials.

There are various pros and cons for each offshoring country. So, it is crucial that firms make a thorough selection based on clearly defined criteria when they decide to offshore. According to Farrell *et al.* (2005b) the underlying criteria are:

- *Cost*: Firms have to take the total cost including infrastructure cost and taxes into account.
- *Availability of service providers*: In case of a transfer to external service providers number and quality of these partners are decisive. Firms should consider size of local market for offshoring services, its share in exported services and the number of local service providers.
- *Market potential*: A firm might measure the size of the local market by the country's GDP, growth rate and accessibility of local market.
- *Risk*: This component covers security risks, regulatory restrictions, investment risks and data protection risks.
- *Local environment*: It covers governance support, business and living environment, and the convenience of doing business.
- *Quality of infrastructure*: It is taking telecommunication and network service infrastructure into account as well as covers the availability of real estate.

1.4 Offshoring of Support Functions

Going forward we will focus on offshoring of white collar-work. Such functions are not directly involved in manufacturing processes or in the provision of services but they *support* those (*c.f.* Stabell & Fjeldstad, 1998) and their common characteristics are (i) *supportive character* – the support function enables the operation of manufacturing processes by provisioning and administration of all required resources, (ii) *internal clients* – services provided by support entities are primarily utilized by internal clients and not by external ones (*e.g.*, payroll services of HR are utilized by the employees but not by customers), (iii) *no immediate benefit for customers* – customers can only benefit from the support activities of a firm in combination with other core processes (*e.g.*, billing capabilities of a firm are useless for a customer unless he has recently bought a product and needs some support with respect to his invoice). Generally speaking, each firm needs support processes

to run its operations (only in specific situations a firm might not require one or another support function). The most relevant support functions are (Hutzschenreuter *et al.*, 2007):

IT: Main tasks of IT are set up and operation of data centers and of data/ voice networks (*e.g.*, planning, maintenance, configuration, development, etc.), desktop management (setup, software updates, maintenance), software development and conduction of projects. Typical activities which are transferred to offshoring countries are configuration management, testing, software development, maintenance and internal IT support (*cf.* Erber & Sayed-Ahmed, 2005; Henley, 2006).

Call centers: They are the first point of contact to clients and provide additional information (*e.g.*, about product details), receive client orders (*e.g.*, catalog firms), are in charge of customer service, complaint management or customer research (*e.g.*, conducting phone interviews). Out of these activities customer service and help desk are most commonly offshored (*e.g.*, Heckley, 2005).

Procurement: Major processes in procurement are inventory control, identification of material requirements, budgeting, selection of suppliers, purchase ordering, receipt of goods, handling of payments, etc. Typical offshoring activities are data entries and management of purchase orders (Grün, 1994).

HR: It addresses human resources planning, development, management, controlling or appraisal processes and payroll (*e.g.*, Armstrong, 2001; Frazee, 1996). Examples for offshoring are payroll, support of recruiting processes (*e.g.*, screening of applications) or handling of extraordinary payments for expats.

Finance and Accounting: It covers book-keeping, billing, inventory management, controlling, treasury, liquidity management, etc. Examples for offshoring are handling of travel expenses, billing and accounts receivable management (*e.g.*, Krishnaswamy & Pashley, 2007).

Product development: Product development covers the definition of product specifications, evaluation of new product ideas and concepts, design of blueprints, drafting and testing of prototypes, supporting start phase of mass production. Examples for offshoring are the preparation of user manuals, testing of prototypes or the preparation of product information for marketing purposes (e.g., Maskell, Pedersen, Petersen, & Dick-Nielsen, 2006; Patel & Vega, 1999).

Research and Development: Major activities are the development of new product features or manufacturing techniques, design and conduction of experiments or stress tests, simulation, management of patents, etc. Typical examples of offshored activities are the conduction of standardized tests, preparation and refinement of research reports or conduction of market studies and surveys (e.g., Kuemmerle, 1999; Maskell *et al.*, 2006; Reddy, 1997).

1.5 Differentiation between Offshoring and Outsourcing

The terms offshoring and outsourcing are frequently mixed up or are used in a wrong context. **Offshoring** refers to the fact that a service is provisioned abroad. The origin of the term is not clear. According to Schaaf (2004) “offshoring” has been introduced in financial economics and means offshore centers with low tax rates and very rigid banking confidentiality standards. Other sources refer to the Caribbean Islands that have been used by US companies in the 70s and 80s to process simple data entry activities (Union Network International, 2003). Nowadays, the term offshoring means the transfer of service provisioning activities to a foreign country, and depending on the host country three types are differentiated:

- “*Onshore*” refers to a provision of services in the home country of a firm.
- “*Nearshore offshoring*” refers to a provision in a foreign country but on the same continent (also called “nearshoring”).
- “*Farshore offshoring*” refers to a provision in a foreign country that is on another continent



Figure 3: Different types of offshoring from the perspective of German firms (c.f. Hutzschenreuter et al., 2007a)

Figure 3 illustrates the different types of offshoring from the perspective of German firms, Figure 4 shows the example of a manufacturer of medicinal products, appliances and equipment that transferred its IT to nearshore as well as farshore locations.

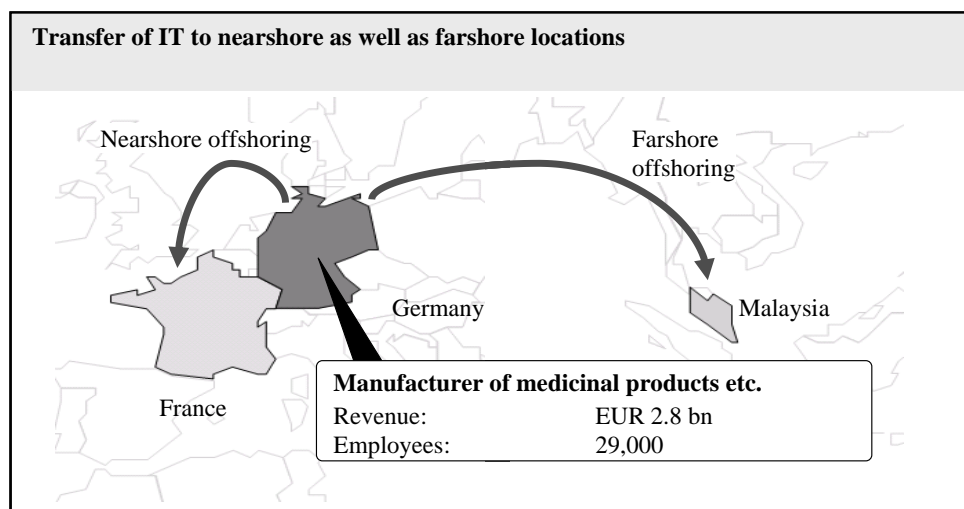


Figure 4: Manufacturer of medicinal products, appliances and equipment that transferred its IT to nearshore as well as farshore locations (c.f. Hutzschenreuter et al., 2007a)

In contrast to offshoring, **outsourcing** refers to the fact that a service is provisioned outside the firm by an external service provider. This does *not* necessarily mean that the service is supplied abroad (in particular, outsourcing is *not* a synonym for offshoring). The term “outsourcing” is a composition of the three words **Outside**, **Resource** and **Using** (Dittrich & Braun, 2004) and basically means the “usage of external resources”. As part of an outsourcing contract a firm’s processes are handed over to an external provider.

A firm has to choose for each support function whether it will be provisioned internally (*internal governance mode*) or by an external partner (*external governance mode*). Between the two governance modes there are also intermediate forms as *joint ventures* (JVs). Main characteristic of a JV is the joint utilization of shared resources (partners invest their capital, know-how or other assets in a joint firm). The objectives of JVs are to split costs, to share risks, to realize economies of scale or to get access to know how.

JVs might be in some countries the one and only viable option to setup a local entity. In China for example, the foundation of a local firm that is wholly owned by a foreign enterprise is not allowed or associated with strict regulations.

1.5.1 Various Alternatives of Service Provisioning

Offshoring and outsourcing reflect two independent parameters to define the service provisioning in a firm (Hutzschenreuter *et al.*, 2007). Both dimensions can be freely combined, resulting in four potential alternatives of service provisioning (see Figure 5).

A) Internal service provisioning in home country. The support functions are provided within the firm (internal governance mode) and in the firm’s home country. Two sub-types can be differentiated: a de-central provisioning or a centralized provisioning in a Shared Service Center (SSC). In a SSC processes of a specific support function are bundled in a single entity serving the

whole firm. The harmonized/ standardized processes guarantee an efficient provision of the services (based on economies of scale).

B) *External service provisioning in home country.* The services are provisioned by an external service provider located in the firm's home country. This alternative represents the "classical" outsourcing concept that has been practiced by many firms before the offshoring boom started in the 90s. Firms have been primarily outsourcing their support functions to achieve first cost savings.

C) *Internal service provisioning in offshoring country.* Services are still provided within the firm but the supplying entity is transferred to a site abroad. The host country for the new site might be on the same continent (nearshore offshoring) or somewhere else on the globe (farshore offshoring). Main drivers for such a transfer are potential cost advantages, competitive pressure or access to skilled labour pools, etc.

D) *External service provisioning in offshoring country.* The combination of offshoring and outsourcing is the most promising alternative, also named "offshore outsourcing" (Allweyer, Besthorn, & Schaaf, 2004; Pohl & Onken, 2003). In this alternative service provisioning is transferred abroad and simultaneously to an external service provider. This alternative enables the firms to combine the advantages of offshoring and the benefits of outsourcing. The relevance of offshore outsourcing is continuously increasing due to standardization and harmonization of processes (*c.f.* chapter 1.2).

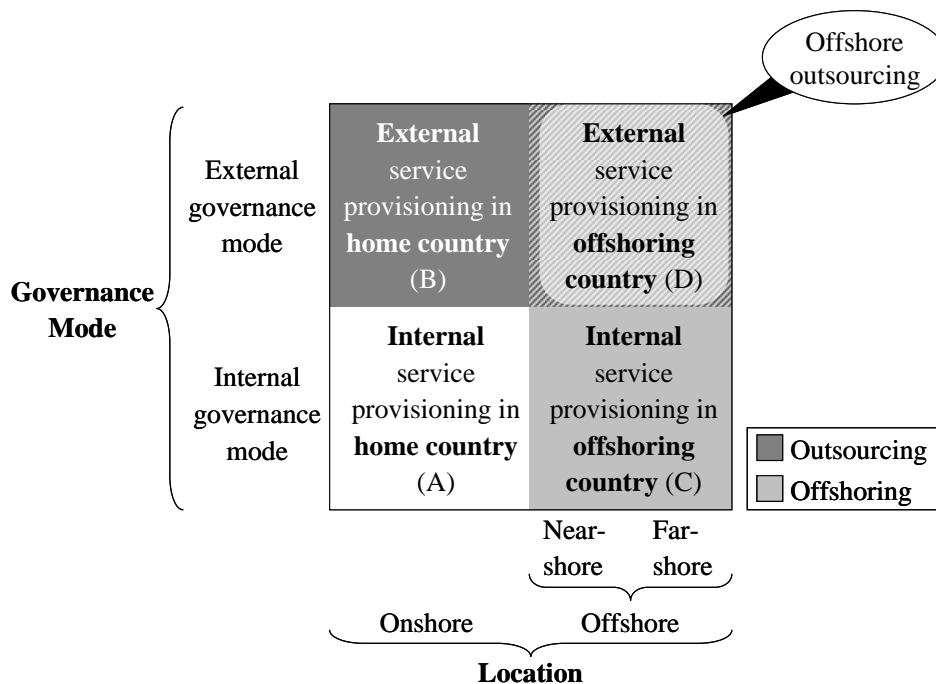
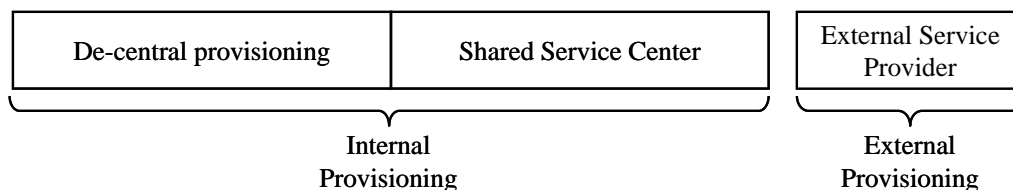


Figure 5: Potential alternatives of service provisioning in a firm (c.f. Hutzschenreuter et al., 2007a)

The reader should be aware that only in case of an internal provisioning in the home country (A) a *de-central* provisioning is applicable. In the other cases (B, C, D) a de-central provisioning is hardly viable due to significant coordination efforts. Figure 6 summarizes all relevant alternatives. In case of an onshore provisioning there are three relevant governance modes: an internal de-central provisioning, an internal centralized provisioning (in a SSC) and an external provisioning by a service provider. Regarding an offshore provisioning of services there are four potential modes: an internal provisioning, a joint venture with a local partner, a joint venture without a local partner and the provisioning by an external service provider. Figure 7 illustrates a mechanical engineering company that uses various types of provisioning alternatives.

Onshore governance modes



Offshore governance modes

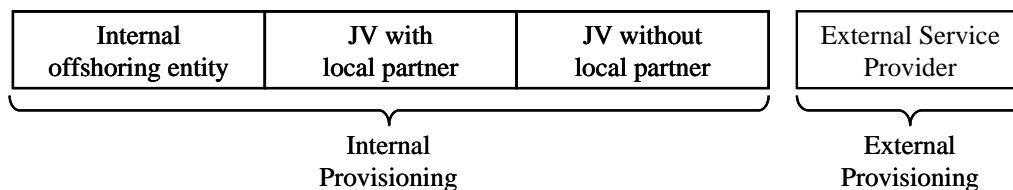


Figure 6: Relevant alternatives of service provisioning (c.f. Hutzschenreuter et al., 2007a)

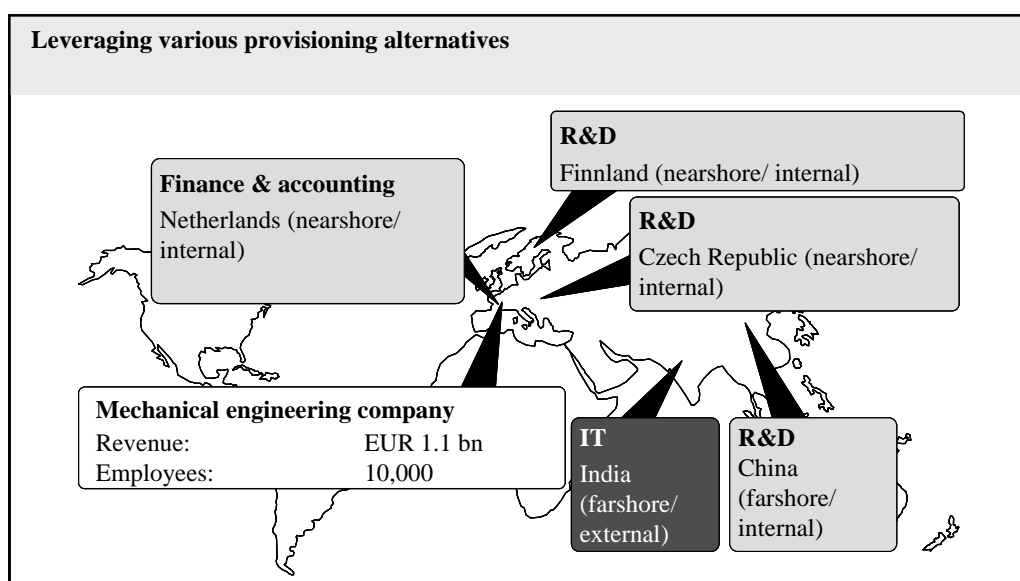


Figure 7: Example of mechanical engineering company leveraging various provisioning alternatives (c.f. Hutzschenreuter et al., 2007a)

With respect to the further analysis we will subsume joint ventures under an internal governance mode as we assume that equity holders of a joint venture can exert influence over the foreign entity that is similar to that exerted in wholly-owned subsidiaries.

Before transferring the activities to the new offshoring site the firms have to make some preparations. They have to lay the infrastructural as well as organizational foundation for the transfer. Regarding the first aspect an appropriate IT infrastructure is crucial. Most support functions rely on a sophisticated IT infrastructure, and high demands are made on interoperability and compatibility. A successful offshore operation requires a fast and robust data exchange technology between the site abroad and the headquarter.

The second aspect refers to organizational prerequisites. As discussed before, the provision of support functions should be centralized for offshoring as well as outsourcing. However, not every firm with offshoring plans provides its support activities centrally and in a standardized way. For such firms it is recommended to perform the transfer in three steps. In the first step, the provision should be standardized. The second step is the centralization of the service provisioning (within the firm) and the establishment of a SSC. The resources are bundled to a central entity serving the whole enterprise. The third step is the transfer of the entity to the offshoring country and/or to an external service provider.

1.5.2 Selecting an Appropriate Alternative for Service Provisioning

Firm have to consider the pros and cons of the potential provisioning alternatives. Depending on the support function in scope and other firm-specific factors one or another alternative should be applied. In principle, each firm can liberally select one of the presented provisioning alternatives. However, practice shows that some alternatives are more often used for specific support functions than others since every function has its specific needs.

The pros and cons of the provisioning location are mainly driven by the geographical and cultural distance between a firm's home and the selected host country. On the one hand, offshoring offers significant cost advantages and access to highly skilled labor pools (among other advantages). On the other hand, the geographical separation can cause significant language barriers,

cultural discords, additional logistical efforts, or might hamper an exchange of information. More details about the challenges of an offshore provision can be found in the chapter 2 and 3.

Likewise, internal as well as external governance modes have their specific pros and cons, too (see Figure 8). In case of an external governance mode a firm can leverage the expertise of an external service provider and benefits (at least partially) from its economies of scale. However, there are significant disadvantages, too. With an external provider the firm loses control over the offshored entity and in the long run it might even lose its know how and expertise regarding the transferred functions. A more detailed analysis on drivers as well as pros and cons of the various governance modes will be presented in chapter 2.

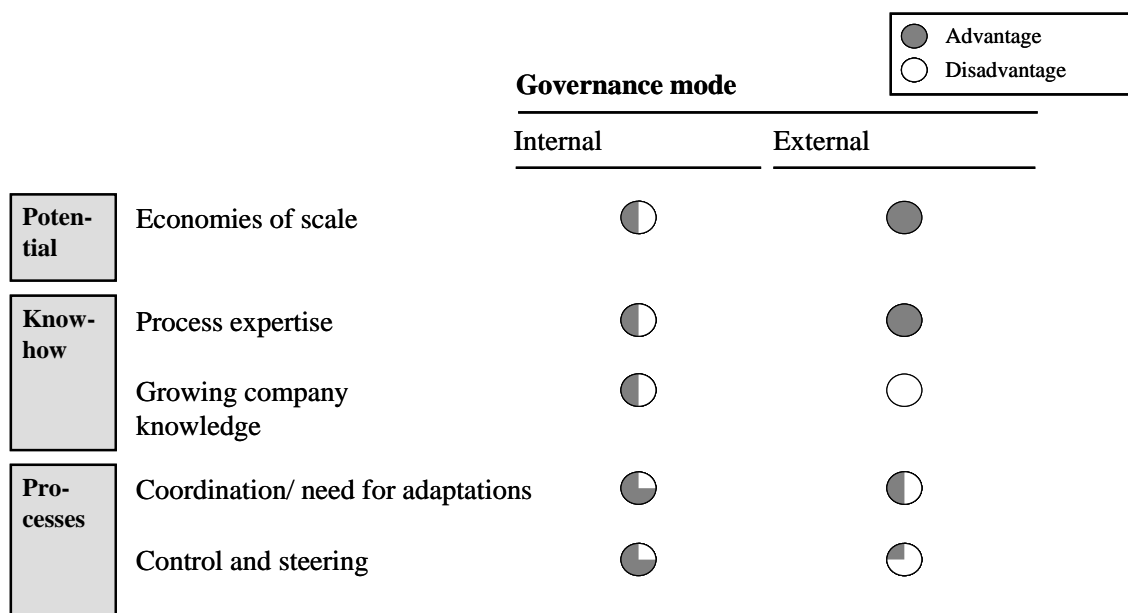


Figure 8: Pros and cons of selected governance mode (c.f. Hutzschenreuter et al., 2007a)

1.5.3 Scope of Transfer and Steering Concept

In addition to selecting the provisioning mode firms have to define the scope of the transfer and the future steering model. The scope is determined by the share of activities that will be offshored and/or delivered externally. Figure 9 illustrates the example of a financial service provider that provides the largest share of its IT in the Czech Republic and in Singapore.

Depending on the support function and other internal factors the offshored entity might be steered by the headquarter or can operate more or less autonomously. Is a central control required than a “retained organization” entity is installed in the headquarter. Primary task of this entity is to coordinate activities between headquarter and offshore entity, solve conflicts, to define business requirements and check quality.

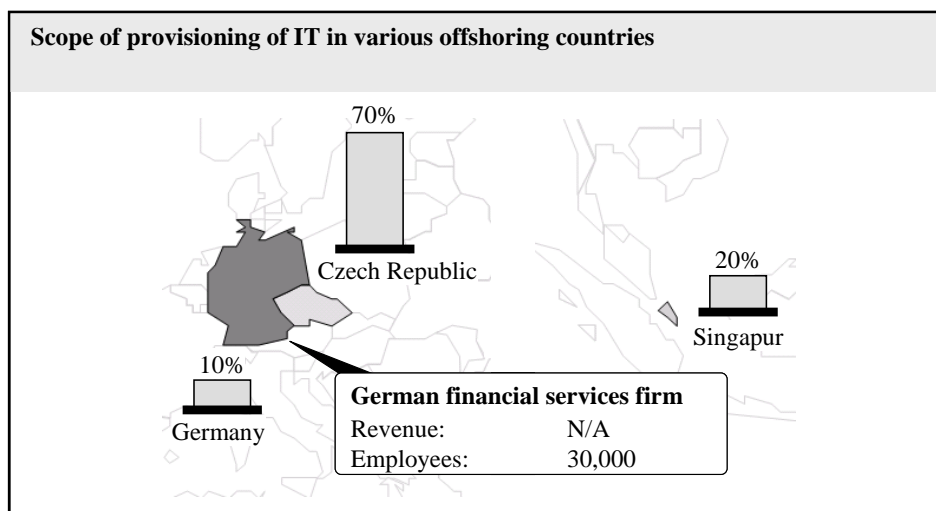


Figure 9: A financial service provider and its provision of the support function IT (c.f. Hutzschenreuter et al., 2007a)

1.6 Research Focus and Motivation

Many research activities on offshoring have been primarily focusing on US firms (for example, Groshen, Hobijn, & McConnell, 2005; Matloff, 2004), although first investigations of Lewin *et al.* (2007) have disclosed significant differences between US and non-US firms. To stay focused in our research we will primarily investigate the offshoring behavior of US and German firms. On the one hand, this enables us to leverage the existing literature, on the other hand, we can reveal additional insights coming from peculiarities of a firm’s home country. We did particularly choose German firms as a ‘reference group’ as Germany is the largest economy in Europe and the third largest globally (with a Gross Domestic Product of more than 2 trillion Euros, Statistisches Bundesamt, 2006), and German firms have a long track record of offshoring activities. According to Handwerk

(2004) Deutsche Bank has been under the first ones in Germany which transferred its IT to India, and its subsidiary Deutsche Software Limited started its software development operation in Bangalore already in the early 90s. So, we can observe enough offshoring activities of German firms to conduct a longitudinal analysis, and a comparison between US and Germany might disclose further insights.

As in any internationalization step the governance mode in an offshored entity impacts overall performance, achievable savings and is of strategic relevance (*e.g.*, Haiyang & Hu, 2002; Lu, 2002; Simmonds, 1990; Woodcock, Beamish, & Makino, 1994). So, we identified in a first step the factors that influence a firm's governance mode choice for its offshoring activities and determine their impact. In the second step we will focus on the success of offshoring activities. For firms there are two main criteria to measure success: Did the transferred entity achieve its targets and how much time did it take to achieve these (Lewin *et al.*, 2006b)? Whereas the first part of the question has been already answered by the research community (*e.g.*, Farrell, 2003, 2005), we do not yet know much about the second part. So, we will analyze what factors influence the time a firm takes to achieve its expected cost savings and its targeted service level.

1.7 Approach and Structure

In order to approach our research focus as outlined above, we have organized the subject matter into two separate 'sub-studies', equivalent to the next two chapters. This approach ensures that complexity remains manageable, and that different aspects specific to every dependent and independent variable construct receive sufficient attention.

Chapter 2 analyzes the choice of governance mode for international offshoring activities based on a multidimensional framework. We hypothesize that firms choose between an internal or external mode based on their institutional environment, the offshoring behavior of similar firms in their reference group, firm-specific characteristics and objectives, and the particular setting of

specific implementations. We compare the offshoring behavior of US and German firms and point out their differences.

Chapter 3 focuses on success factors of offshoring activities. We analyze the time a firm takes to achieve its expected cost savings and its targeted service level. Based on theoretical argumentation we hypothesize that firm-specific offshoring experience, publicly available knowledge on offshoring, path dependencies, cultural distances, and the chosen governance mode influence the success of offshoring activities. We test our hypotheses with an analysis of offshoring implementations of US and German firms.

The following two chapters will start by positioning the work in its relevant research context and by providing a review of the extant literature. Next, theoretical background for offshoring in general and with respect to the research question will be provided. On this basis, every study will thoroughly develop a theoretical argument on the causal relationships between a set of independent variables and their impact on a firm's governance mode choice and on the time a firm takes to achieve its expected cost savings and its targeted service level. We will summarize the underlying hypotheses and will test them empirically. Each study will introduce the empirical research methodology, including data sources, sampling consideration, data characteristics and the empirical estimation approach. After presentation of the empirical results, every sub-study will close with a discussion that reflects on research contribution, limitations, suggestions for future research and implications on management practice.

Every sub-study corresponds to a self-contained article manuscript. After presenting these two studies in Chapters 2 and 3, Chapter 4 will briefly summarize the results and close with an outlook.

2 GOVERNANCE MODES FOR OFFSHORING ACTIVITIES

The following chapter is based on, and follows Hutzschenreuter *et al.* (2011). As outlined, this chapter analyzes the choice of governance mode for international offshoring activities based on a four-fold framework that integrates multiple theoretical perspectives. Firms choose between an internal or external mode based on their institutional environment, the offshoring behavior of similar firms in their reference group, firm-specific characteristics and objectives, and the particular setting of specific implementations. We test our relationships using detailed data on offshoring activities of US and German firms. Based on the outcomes we conclude that each dimension of the chosen framework is needed to explain the governance mode decisions of firms and this overarching framework may also be applicable to other topics in internationalization research.

2.1 Introduction

Firms in developed economies have been offshoring manufacturing work to low-cost countries since the 60s when considerable differences in labor costs motivated them to offshore blue-collar jobs. In the 90s a new type of offshoring emerged as companies started to move administrative and technical functions (*e.g.*, IT, call center, product development) abroad to save on labor costs and to tap into new sources of talented and highly-skilled employees (Lewin *et al.*, 2006a). This has been particularly true since the burst of the dotcom bubble in 2001.

Traditionally, internationalization has been a stepwise process in which firms first export products and services, then transfer parts of their production to serve foreign markets, and finally re-import products back to the home country. The offshoring of white-collar functions represents a new type of internationalization. Firms are not necessarily taking a step-by-step approach in transferring support functions (Doh, 2005). They might establish a call center abroad or transfer IT

activities to a country where costs are lower without having any aspirations of conquering new markets. Thereby, they feel insecure about benefits and shortcomings, and lack knowledge about transferring and managing offshoring activities abroad. At the same time, because firms are not slowly easing into working in foreign environments there is some uncertainty about the benefits of offshoring and a sense of insecurity about managing offshoring entities abroad. In the face of such ambiguity, firms must decide on the governance mode of their foreign offshoring activities (*e.g.*, Demirbag & Mirza, 2000; Jiatao, 1995; Yigang & Chi, 1999).

As in regular internationalization activities setting the governance mode in an offshored entity is a central component that impacts its performance and the achievable savings (Lu, 2002). The governance mode is of high strategic importance, as each mode offers specific benefits (*e.g.*, exploring know-how, access to qualified personnel) as well as risks (*e.g.*, losing intellectual property, dependency from service provider). Possibly most important of all, the governance mode is a significant determinant of the overall success of foreign activities (*e.g.*, Haiyang *et al.*, 2002; Simmonds, 1990; Woodcock *et al.*, 1994). It is no wonder then that choosing the correct governance mode for the offshoring entity is so important and that the interest in how firms do that is so great.

In this article we identify the factors that influence a firm's governance mode choice for its offshoring activities and determine their impact. We focus primarily on internal and external governance modes. In case of an internal governance mode the firm owns the foreign entity whereas in case of an external governance mode the firm outsourced its activities and leverages an local service provider. To uncover the relevant factors which determine the governance mode choice we build a multidimensional framework comprised of four distinct analytical perspectives and discuss (i) the impact of the institutional environment wherein firms are embedded in their home country (*e.g.*, culture, political and economical factors, etc.), (ii) impact of the surrounding population of similar firms, (iii) impact of firm-specific characteristics (*e.g.*, managerial intentions),

and (iii) impact of individual settings of a particular implementation (*e.g.*, chosen host country). We analyze the impact of each of them on the governance mode choice using data on the offshoring of IT, call centers, HR, finance & accounting, procurement, R&D and product development of 407 US and 95 German firms. In the following pages, we summarize the relevant literature, derive research hypotheses, present our methodology and then our results. We conclude by pointing out the limitations of our study and its contributions.

2.2 Theoretical Background

The offshoring of support activities has reached substantial proportions. Research institutes estimate a total revenue volume of about US\$40 billion in 2005 (Schaaf, 2005). Despite the remarkable volume of offshoring and its omnipresence in the media (Levy, 2005), managers underestimate the intricacies involved. Firms face in offshoring many of the challenges that are typical of an internationalization step (*e.g.*, adjust to culture in the host country, transfer management methods and values, make adaptations to their home-grown organizational structures and systems, Barkema, Bell, & Pennings, 1996; Benito & Welch, 1994; Fisher & Ranasinghe, 2001). The knowledge and capabilities for coping with these challenges of offshoring are not standardized commodities and cannot easily be obtained. They have to be built within the firm or acquired from external sources that have the needed expertise (Eisenhardt & Martin, 2000; Makadok, 2001). An appropriate organizational model is required and whatever approach is chosen, significant managerial effort is needed to implement it (Agarwal & Ramaswami, 1992).

2.2.1 Potential governance modes for offshoring

Firms that go abroad to serve foreign markets have to first decide (Kogut & Singh, 1988) between creating a subsidiary abroad or acquiring an existing foreign company. They then must determine the optimal degree of ownership. They can own a foreign subsidiary completely or hold a share in it, that is, joint venture, and at times purely contractual arrangements suffice (Chang &

Rosenzweig, 2001; Hennart, 1988; Tihanyi, Griffith, & Russell, 2005). Firms offshoring activities very rarely acquire a foreign entity, but they do establish new ones abroad. If they do start afresh, they have three options: internal governance based on a wholly-owned subsidiary; a joint venture; or external governance, also called offshore outsourcing, which is a contract-based arrangement (Kaka, 2003). Lewin *et al.* (2007) have shown that joint ventures are rarely used for offshoring. US firms, for example, use it for just five percent of their offshoring implementations (Lewin *et al.*, 2007). Because the equity holders of a joint venture can exert influence over the foreign entity that is similar to that exerted in wholly-owned subsidiaries, we abandon the differentiation between these two modes in the remainder of this paper and treat both as internal governance.

The mode of governance affects (a) the degree of control a firm has over its foreign operations, (b) the amount of effort required to implement and operate the offshored entity abroad, (c) the level of risk associated with offshoring implementation, and (d) the extent of know-how a firm can access or leverage. By using an internal governance mode, firms can retain their existing organizational structures transferring them to offshoring locations with limited adaptations, and exert full control over offshored entities without running the risk of conflicts with partners or service providers (over quality issues and targeted service levels). On the other hand, they have to cope with all the challenges and adversities of an offshoring implementation on their own with their lack of local knowledge potentially causing serious delays in the establishment of the offshoring entity or putting them at a disadvantage in resolving problems. Furthermore, they have to provide all of the financial and managerial resources needed to establish and run the offshoring entity (*e.g.*, hiring and training of employees, acquiring governmental permissions, managing daily business), and if it fails, they are in the uncomfortable situation to shut-down the offshored entity and write-down their investments.

By using an external governance mode, firms transfer their support functions to a service provider and free limited resources for other business activities. At the same time they have the chance to

access critical knowledge on offshoring not available within the firm (Das & Bing-Sheng, 2000; Zhao & Calantone, 2003). An external service provider might not only have more specialized knowledge and expertise in a given area, but might also be able to operate on a larger scale which may result in significant cost advantages for the firm (Chalos & Sung, 1998; Heikkilä & Cordon, 2002; Prahalad & Hamel, 1990). However, there can be significant disadvantages with an external mode. Managers may spend so much time and effort on information exchange and coordination with the foreign service provider that efficiency gains are cancelled out (Levy, 1995; Rasheed & Gilley, 2005; Schilling & Steensma, 2002). It is also often the case that firms must share sensitive information and they run the risk of valuable knowledge becoming available to competitors (Leiblein, Reuer, & Dalsace, 2002), a particularly serious issue in offshoring of product engineering and R&D activities. Keeping in mind that some host countries have less restrictive laws (or do not apply them in a restrictive way) the loss of intellectual property may represent a serious threat. Furthermore, firms may also lose control over transferred functions, become dependent on a service provider, and so open the door to opportunism and abuse (Quinn & Hilmer, 1994; Razzaque & Cheng, 1998).

2.2.2 Theoretical framework

As we have shown, the transfer of an activity to a host country is a manifold challenge and each governance mode has advantages and disadvantages. We are aware of no theoretical strand that exhaustively explains by itself the choice of governance mode. We believe what is needed is a framework that integrates multiple theoretical perspectives ranging from the influence of a firm's institutional environment to the challenges presented by each given implementation. According to Lewin *et al.* (2004b) organizational selection and adaptation processes can be analyzed from the perspective of: (a) the institutional environment of a firm, (b) the population surrounding a firm and (c) firm-specific characteristics. While there are many overlapping, even complementary theories that attempt to explain elements of each dimension, as far as we can tell no all-embracing

theoretical concept exists. Thus, we borrow from several theoretical streams to build a framework for a comprehensive picture of the governance mode decisions of firms. This approach allows us to get a much broader understanding of the governance mode choice than the analysis of individual theoretical perspectives. We discuss major decision mechanisms and show where well known literature might be applicable in the offshoring context.

Chandler (1990) showed that nation states greatly influence managerial practices and organizational adaptation. Each firm is embedded in an institutional environment of norms, standards and expectations which are country-specific and primarily based on historical, cultural, political, economical and social factors (Lewin & Kim, 2004a; Roberts & Greenwood, 1997). These nation-specific traits drive sustained variations in organizational and institutional capabilities (Kogut, 1991). A nation-state imprints its characteristics on a firm's organizational structure and processes. These characteristics are omnipresent, can severely constrain a firm's management team, and so may substantially influence the offshoring behavior of firms. Managerial practices vary country by country and are rooted in history, the traditional role played by the government, legal and educational systems, culture and language, and capital markets (Calori, Lubatkin, Very, & Veiga, 1997; Lewin *et al.*, 2004a). Furthermore, values, and socio-cultural norms and belief systems in the home country shape the design and implementation of offshoring activities and by extension influence the choice of governance mode. Lewin and Couto (2007) indicate already a connection between nation-states and governance mode choice in their findings that US, British and Dutch firms have a much higher likelihood than German or Spanish firms of using an external governance mode.

Firms try to evaluate and imitate the organizational structures and processes of other firms in an effort to benefit from the experiences of those firms. They are especially likely to try to do this when they are in doubt about their own strategies (DiMaggio & Powell, 1983; Haunschild & Miner, 1997), and offshoring is often seen as unknown territory. Many inexperienced firms are uncertain

about potential benefits of offshoring, and wary of its costs and so they rely on what they can learn about offshoring from the activities of other firms. Such mimetic behavior is typified by the population level perspective. Firms copy the offshoring behavior of other firms that they perceive to be successful, gaining legitimacy and increasing their likelihood of survival. Inter-firm imitation might result in many firms in the population making the same governance mode choice (Lu, 2002).

Every firm has its own set of prerequisites for managerial action and pursues its own objectives according to its firm-level perspective. A firm that lacks offshoring experience does not have the know-how to interact with local service providers, employees and governmental institutions (Barkema & Vermeulen, 1998; Benito *et al.*, 1994; Vermeulen & Barkema, 2002). This thwarts offshoring ambitions and can push a firm into selecting a particular governance mode. However, with every transfer step a firm can gain experience and build capabilities for future offshoring activities, in other words, advance on its development path (Barkema, Shenkar, Vermeulen, & Bell, 1997; Johanson *et al.*, 1977; Johanson & Vahlne, 1978). So, the development path of a firm represents a certain legacy for making governance mode decisions. At the same time, decision-makers will leverage their remaining managerial discretion to pursue strategic targets (Hutzschenreuter, Pedersen, & Volberda, 2007b), and the management team will use its discretion in part trying to shape the firm's environment so as to make it less vulnerable to external influences (Miles & Snow, 1978, 1994), and also especially in pursuing deliberate strategic objectives and reacting to surrounding forces. The objectives in offshoring might be the realization of cost advantages, enabling growth or access to new markets (Lewin *et al.*, 2007; Lewin *et al.*, 2006a), and coming full circle, achievement of those targets will necessitate, or at least encourage, the choice of a particular governance mode.

The last critical component of our framework is implementation-specific elements and reflects an additional perspective which has not been covered in the original framework of Lewin *et al.* (2004b). The implementation-specific elements include the kinds of functions to be transferred, to

which geographic locations, and the mechanics of the process. The institutional environment, the surrounding population of firms, and firm traits explain certain tendencies in making governance mode choices. Implementation is different in that it is specific to a particular offshoring effort. The choice of governance mode is motivated, even necessitated, by the function to be transferred, the intricacy of the transferring and operating activities, and the firm's existing home country governance mode. Some governance modes are particularly appropriate for certain functions to be offshored (Lewin *et al.*, 2007; Lewin *et al.*, 2006b). For example, US firms choose an external governance mode more often for IT than for finance and accounting (Lewin *et al.*, 2006b). Obviously, there are some functions that can be detached more easily from an organization than others. For instance, some activities involve a lot of intellectual property and confidential information, others are idiosyncratic and require the transfer of tacit knowledge. The challenges associated with externalizing such tasks, and the resulting reluctance of firms to do so, are evident. The specific requirements of the function to be transferred, and equally the mechanics of accomplishing that, influence the governance mode decision. The targeted host country is also a decisive factor (Agarwal, 1994; Kogut, 1988). US firms will face different challenges in transferring support activities to India than to Canada. In India they may experience problems in transferring management techniques and corporate values and adapting organizational structures and processes to the new environment (Gatignon & Anderson, 1988; Stopford & Wells, 1972). Obviously, a firm considers such difficulties in selecting a particular governance mode decision. Finally, a firm has to take into account the organizational structure already in place for an activity. As re-use of an existing governance mode can keep adaptations to a minimum, a firm will weigh the costs and benefits of re-using established organizational structures by continuing use of a particular governance mode (an overview on the presented framework is shown in Figure 10).

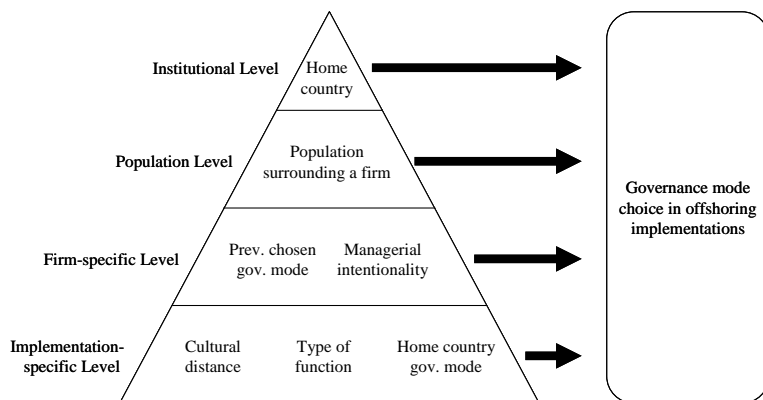


Figure 10: Multidimensional framework

In the following section, we analyze in detail the last three components related to the actions of other firms, its firm-specific characteristics, and the fit between a particular activity and the existing organizational structure for determining a firm’s choice of governance mode. A firm’s governance mode decisions adapts to these components and trigger a variety of different strategies. Later on, we will resume the impact of the firm’s institutional environment and so complete our four-fold framework.

2.3 Hypotheses

2.3.1 Population level perspective

Despite the fact that there were some early movers in offshoring during the 80s, substantial interest in offshoring can be traced to 2001 when the dot com bubble burst and many firms started looking for ways to reduce costs. Until that time, only a limited number of firms had acquired comprehensive expertise in offshoring. Even today many companies still lack a detailed understanding of the relevant particulars of offshoring and are uncertain about its benefits and shortcomings. In such situations firms look to other companies for cues how to transfer activities to offshoring countries. They try to find models on which they can base their own offshoring decisions and imitate the structure of other firms (DiMaggio *et al.*, 1983; Haunschild *et al.*, 1997). Consequently a firm may come to resemble other firms in its offshoring behavior that share a given

set of environmental conditions (DiMaggio *et al.*, 1983), and over time the structures of the firms tend to become more and more similar to the point of homogeneity in organizational forms, or as Haveman (1993) put it, mimetic isomorphism. In offshoring the imitation might occur with respect to various managerial decisions as the choice of the host country, the type of activities to be transferred or the governance mode choice. Firm mimetic behavior may be caused by a desire for legitimacy which encourages them to copy widely-applied practices (Meyer & Rowan, 1977), or it might be that frequently used forms come to be taken for granted. In fact, this has been also confirmed in interviews conducted during our study as some decision makers acknowledged that various activities may have been transferred because it is a common industry trend. Firms may not even be aware of this process and have neither the desire nor the intention of imitating others. The copying might occur through employee transfers, consulting firms that imprint their offshoring concepts on several different firms or during the normal information exchange in industry and trade associations (DiMaggio *et al.*, 1983). Such an information exchange may focus among other things on advantages or disadvantages of specific governance modes (*e.g.*, level of control, flexibility, access to external resources and expertise), on feasibility of specific modes for certain host countries or type of functions to be offshored. Overall, we derive the hypothesis:

Hypothesis 1: The probability of a firm selecting a given governance mode will be greater the higher the number of surrounding firms having that governance mode.

2.3.2 Firm level perspective

As indicated before many inexperienced firms face uncertainty and doubts about offshoring and may imitate other firms. However, firms can also cope with uncertainty by acquiring their own knowledge and by building their offshoring expertise. The seminal work of Johanson *et al.* (1977) stresses the relevance of experience and knowledge in general internationalization. Over time a firm can gain experience in controlling foreign offshoring entities, learn how to recruit, train and manage foreign employees, and work with external providers abroad, all of which enhances general

understanding and specific competences as well as fostering a more accurate perception of foreign risks (Gatignon *et al.*, 1988). Obviously, these steps facilitate successful offshoring implementation. For example, firms with offshoring experience are better prepared to organize a successful and smooth transfer of their activities. They will know the typical issues around culture and local labor laws, and have a good understanding what type of functions can be transferred successfully. They may be in the comfortable situation to have proven transfer concepts and time schedules in place, know about typical quality issues and have the expertise to quickly fix them. Be that as it may, experienced firms may not be able to freely choose their favored governance mode. Not everything that is learned from one offshoring experience can easily be applied to the next one. Some experience is only applicable to particular governance modes (Leiblein & Miller, 2003). Hence, companies differ in their expertise and capabilities to successfully implement certain governance modes dependent on their hitherto existing development path. The implementation of an external mode requires substantial skills in identifying and evaluating offshoring service providers, negotiating with them and managing them (Doz & Hamel, 1998; Rangan, 2000). For example, a mid sized-company willing to transfer its IT department to India has to cope with serious challenges to find the right partner in India, to negotiate appropriate service levels and to get a fair price. Obviously, such required skills can hardly be acquired with an internal governance mode. Consequently, a manager who has experience with internal offshoring implementations will be strongly motivated to build on that experience and again choose an internal governance mode, and vice versa for external provisioning (Chang *et al.*, 2001). This process reflects “intra-organizational imprinting” (Lu, 2002). Whenever a certain organizational decision is made, than there is a high likelihood that the same decision will be made in the future again. Or as Meziars (1990) argues, as the frequency of adoption of new decisions based on the chain of past decisions increases the original organizational adaptation is more likely to be taken for granted. Additionally, affected employees may be skeptical about offshoring activities and resist structural changes (Folger, Daniel,

& Skarlicki, 1999), because of their fears about potential changes in their own responsibilities, loss of authority, unfamiliar tasks, disruption of established processes and structures, and the necessity to reshape or build new social relationships (Giangreco & Peccei, 2005). In short, a change in governance mode may overwhelm some employees and make them reluctant to support the inevitable change process (Cummings, Huse, & Worley, 1997; Giangreco *et al.*, 2005). The management team may believe that resistance to organizational change can be curtailed by using existing governance models. In summary, we derive the hypothesis:

Hypothesis 2a: The probability of a firm selecting a given governance mode will be greater the greater the number of times it has previously chosen that governance mode.

A firm's decision to offshore will also depend on the personal preferences of its managers. This perspective goes back to the idea of strategic choice (Miles *et al.*, 1978, 1994; Thompson, 1967). According to Lewin *et al.* (2007; 2006b), for most firms cost reduction is an important, or very important, driver of offshoring, albeit that other drivers are gaining in importance (Couto, Mani, Lewin, & Peeters, 2006). The combination of offshoring and outsourcing promises to lead to significant cost advantages (Maskell *et al.*, 2006). These advantages emerge from classical scale effects (Barthelemy, 2003; Heikkilä *et al.*, 2002) in combination with the low labor cost advantages in the offshoring country (Farrell, 2005; Khan & Islam, 2006). Particularly, in case of simple offshoring activities as call centers such scale effects may be substantial. These activities can be easily taken over as well as managed by the service provider, and service quality can be simply monitored by the firm. Therefore, companies for which cost reduction is a primary motivator an external governance mode is likely to be particularly interesting. Nonetheless, there are also drawbacks to be taken into consideration, *e.g.*, loss of control or dependency on a provider (Quinn *et al.*, 1994; Razzaque *et al.*, 1998), decline in innovation (Bettis, Bradley, & Hamel, 1992), loss of expertise and crucial capabilities (Rasheed *et al.*, 2005). These drawbacks might become painfully aware particularly in case of knowledge intense functions as product development, R&D or

product design. Albeit, a firm that attaches more importance to cost savings is more likely to be willing to take the risks of outsourcing and will also be more likely to decide in favor of an external governance mode. Thus, we derive the hypothesis:

Hypothesis 2b: The more important cost saving as a motive for offshoring, the greater a firm's likelihood of selecting an external governance mode.

Cost advantages are not an exclusive offshoring driver. Lewin *et al.* (2006b; 2006a) found that a number of firms use offshoring to access new markets or to support growth and, in fact, in a later study a third of the firms rated access to new markets as an important driver for offshoring. At first glance, this is surprising. Setting up distribution channels or exporting products would seem to be more appropriate vehicles for entering new markets. What we have to keep in mind is that offshoring can be used to achieve several objectives at the same time. Cost advantages might be the primary objective, but companies can pursue access to new markets at the same time. Offshoring can also lay the groundwork abroad for sales-orientated activities later. A company can use offshoring to gain experience of all kinds, connect to a local culture, build relationships, in essence get a start in the host country. The investments in case of an internal mode support the company to establish a long-term presence in the market (Agarwal *et al.*, 1992). Starting from such a basis the access of local markets is substantially eased. The firm gains experience about local labor market, specific laws, cultural values and behavioral patterns. It has a local management team in place which might act as a nucleus for future market activities. An external governance mode can also represent the first step towards market entry, albeit that the firm has much less interaction with the local environment as most contact is limited to the service provider. The firm gathers less knowledge about local employees, suppliers, governments, etc. and does not have an opportunity to learn about local culture and so, the firm does not build (or only to limited extend) a local basis for future market expansion activities. Thus, the firm is less prepared for any market entry in the future and so we derive the hypothesis:

Hypothesis 2c: The more important market-seeking as a motive for offshoring, the greater a firm's likelihood of selecting an internal governance mode.

Undoubtedly one benefit of an internal governance mode is that it brings opportunities for learning in the host country. This might be in many cases the basis for future growth in the host country as well as home country. With an internal governance mode the firm gains additional resources and incorporates knowledge and talent of its new employees. This may be a vital source for future growth. The firm extends its footprint and has full flexibility and control over the offshored entity. It is not restricted by contracts with service providers and may easily extend or modify the service portfolio provided by the offshored entity to support its growth ambitions. It fully exploits the growth opportunities on its own and does not share with an external service provider. But the internal governance mode also ties up a lot of internal resources and many firms with growth ambitions have restricted resources, for instance they cannot free enough employees to drive other growth opportunities (Eisenhardt *et al.*, 2000; Teece, Pisano, & Shuen, 1997). The cost of hiring and training new employees is a drain on resources, so can reduce benefits and delay implementation. By consequence, there are also advantages to have an external partner. He takes over tasks lifting the burden from employees of the firm and leaving them free to focus on activities that might more directly foster the growth of the firm. The partner might provide know-how which might be vital to realize the growth opportunities and which is not accessible in the firm. He may provide extra resources which are not available internally. In essence, the firm gives up direct experience and the opportunity to extend its work force that could be important to success in the future, in order to leverage an external partner to get quick access to know-how and other resources. Obviously, an internal as well as an external governance mode might be promising to foster growth. Thus, we derive two hypotheses:

Hypothesis 2d: The more important growth as a motive for offshoring, the greater a firm's likelihood of selecting an external governance mode.

Hypothesis 2e: The more important growth as a motive for offshoring, the greater a firm's likelihood of selecting an internal governance mode.

2.3.3 Implementation-specific perspective

In addition to the influence other firms, and of firm-specific elements, there are implementation-specific constraints to be considered in making governance mode choices, i.e. the type of function to be transferred, where it is to be transferred, and the hitherto used governance mode.

No governance mode is feasible for all support functions. We take potential functional effects into account by dividing support functions into three groups: knowledge-intensive functions such as R&D, product development and design, idiosyncratic functions including finance and accounting, HR and procurement, and quasi-autonomous functions like IT and call center. Knowledge-intensive functions are characterized by open-ended, less strictly defined processes. Tasks are performed by highly-skilled employees with expertise in specific areas (Ernst, 2002; Farrell, Kaka, & Sturze, 2005a). An unrestricted exchange of ideas is vital in innovation-related activities, and an external governance mode might hamper that and thus undermine innovativeness (Lundvall, 1992). Functions might be of strategic importance, represent core capabilities, and even encapsulate confidential information (Kumar, 1996), and as a consequence firms are often reluctant to externalize them. All of these factors would seem to point to using an internal governance mode for knowledge-intensive functions, nevertheless, external procurement is being used more and more in this domain. Infosys or Wipro offer a wide portfolio of engineering services and provide a high-quality product (Engardio *et al.*, 2005). Firms are outsourcing R&D and product development activities in a bid to increase their flexibility and to gain access to specialized resources (*e.g.*, Allweyer *et al.*, 2004; Carson, 2007; Khan, Currie, Weerakkody, & Desai, 2003). Employees capable of designing and engineering new products are scarce. Some engineering activities can be shifted relying on “open innovation” (Chesbrough, 2003) thus accessing the knowledge resources of an external partner. But so far, very few companies have the strategies and capabilities in place that

enable them to fully leverage the contribution of an external partner and as a result, an external mode might still be rather exceptional for knowledge intensive functions.

Idiosyncratic functions are particularly firm-specific and require detailed knowledge about existing processes and structures. An external governance mode may not be ideally suited as it is a major challenge to transfer this kind of knowledge to a service provider as its tacit nature means that most of it is not easily codifiable (Nonaka & Takeuchi, 1995; Polanyi, 1962, 1966). Highly complex activities such as procurement, finance and accounting are equally ill-suited to an external governance mode. Furthermore, home country-specific legal regulations can hamper the transfer of this kind of knowledge (Myloni, Harzing, & Mirza, 2004; Verburg, Drenth, Koopman, Muijen, & Wang, 1999), as the effort it takes to meet such requirements can mean that the service provider may lose economies of scale and scope. Once again, an external governance mode is less promising.

Quasi-autonomous activities like call centers and IT are typically modularized and so they are more easily detachable from the rest of the organization. Compared to what is involved with some other functions, call center tasks are low in complexity. A moderately well-educated staff of agents is usually satisfactory and newly-hired employees can be trained relatively quickly. On the other hand, IT can be highly complex. Nevertheless, there is a long tradition of externalizing IT activities and that often means a modular organizational structure enabling an easy transfer. Whether it is due to ease of transfer or tradition, call center and IT are activities that are outsourced quite often.

What we detail above are factors that point towards an internal or external governance mode. Yet, within every function there are activities which might be more or less detachable, more or less complex, and more or less restricted by concerns about confidentiality. Thus we can only argue that there will be certain tendencies. In summary, we derive the hypothesis:

Hypothesis 3: There is a greater likelihood of a firm selecting an external governance mode for autonomous functions than for knowledge-intensive or idiosyncratic functions.

There is the “what” to be offshored, and there is the “where”. Both are decisive considerations. According to IB theory, cultural differences between the home and the host country significantly increase the complexity of transferring functions abroad (Agarwal, 1994; Chang *et al.*, 2001). The more culturally distant two countries are, the more the organizational characteristics of the firms in those countries will differ (Lincoln, Hanada, & Olson, 1981), as culture is a determinant of organizational and administrative practices and of employee expectations (Kogut *et al.*, 1988). Those located in the home country have to interact with those who are working offshore, be they colleagues, employees of a local service provider or others, who have different belief systems and values. There may be interpersonal difficulties that hamper operations in the offshored entity. Overcoming such barriers can be difficult, although it is vital for a successful offshoring implementation. Managers have to adapt well established structures, systems and processes to the new environment in order to run the offshored functions in an efficient manner. More complex or additional control mechanisms may be necessary to steer the offshored entity. Thus, the ambiguity that goes hand and glove with offshoring to a foreign country results in an inability to assess costs and risks, which in turn generates uncertainty which, of course, managers want to avoid, or at least reduce (Agarwal, 1994; Fisher *et al.*, 2001). In these circumstances, managers feel less confident about successfully adapting and so have a stronger need for external support (Benito *et al.*, 1994). By using a service provider, managerial tasks can be assigned to local staff with local roots and experience, who are familiar with the local culture (Fisher *et al.*, 2001), and who are better able to manage the local workforce (Franko, 1976; Stopford *et al.*, 1972). Firms can rely on the established structure of the service provider and more quickly achieve the expected results with respect to service quality or savings. The integration of a partner might make up for the lack of appropriate resources within the firm and help to mitigate problems related to cultural distance.

Taking an external partner simultaneously necessitates sharing control of the transferred functions. This may result in a dependency from the service provider who might act opportunistically and

takes advantage of the setting (Quinn *et al.*, 1994; Razzaque *et al.*, 1998). The firm has to make an effort to coordinate activities, and creates the risk to lose expertise or intellectual property (Leiblein *et al.*, 2002; Levy, 1995; Rasheed *et al.*, 2005). Thus, an external governance mode is not necessarily advisable for every offshoring implementation. A balance has to be struck between the benefits of knowledge enrichment through an external source and the disadvantages associated with using an external service provider. The greater the cultural distance, the more the advantages of an external mode outweigh the disadvantages. We therefore derive the hypothesis:

Hypothesis 4: The greater the cultural distance between the home country of a firm and the host country, the greater a firm's likelihood of selecting an external governance mode.

A change in governance mode, be it from an internal governance mode to an external one or vice versa, always entails other challenges. Such changes require new structures and control mechanisms, as well as changes in the current status of management processes and managerial roles (McIvor & McHugh, 2000; Schilling *et al.*, 2002), and this causes disruption in established coordination mechanisms that have evolved within the current boundaries of the firm (Nelson & Winter, 1982; Yuri, Pollock, & Porac, 2004). These changes are particularly challenging in case of offshoring activities. The management is not only stressed by the transfer to the host country but also by the change of the governance mode. When there is in-sourcing, that is, switching from an external to an internal governance mode, new human, organizational and physical structures need to be provided. For instance, a new management team must be built, a new organizational structure has to be in place, and new IT interfaces developed or existing ones adapted. And all of these changes have to fit in the new environment at the host country. In outsourcing, switching from an internal to an external governance mode, even when the local workforce and most of the physical infrastructure is provided by the external service provider, means that the company needs resources to build dedicated technical interfaces and to coordinate cooperation with the provider. In addition, an appropriate organizational structure for cooperation with the external provider itself

has to be installed. Keeping in mind that the external provider is located at the host country these tasks are very resource demanding. All of these tasks require special managerial expertise, particularly as it has to take place at the host country (at least partially). But, the management team capable of driving such adaptations in a foreign country may be limited in capacity (Eisenhardt *et al.*, 2000; Teece *et al.*, 1997). Hence, a change in the governance mode can overwhelm the management team and force it to postpone, or even abandon, other important firm activities. Furthermore, the required organizational changes sometimes make affected employees feel insecure and when that happens they tend to increase their resistance to offshoring activities (Stanislao & Stanislao, 1983). Reluctance on the part of employees to support the inevitable change process undermine the offshoring efforts of management (Cummings *et al.*, 1997; Giangreco *et al.*, 2005). Overall, a change in governance mode might overstretch the available managerial resources of a company and also might have a negative impact on the overall profitability of a company.

In contrast, firms that do not adopt a different governance mode at the offshoring site might be able to leverage abroad the mode that exists at home (albeit some changes to adapt to local conditions are inevitable). Managers and other employees will be familiar with the existing governance mode, organizational structures, and processes optimized in the past and so the firm will benefit from existing knowledge and capabilities and an ongoing learning process. Retaining the existing structure calls for less adaptation on the part of employees and so ensures stability thereby reducing the risk of failure. For these reasons, companies prefer to retain their current governance mode. We therefore derive the hypothesis:

Hypothesis 5: There is a greater likelihood of a firm retaining the existing governance mode of the home country in the offshoring location than of selecting another governance mode.

2.4 Methodology

2.4.1 Data sample

We used data provided by the Offshoring Research Network (ORN, 2007) to test our hypotheses. The ORN is a joint effort of several research teams in the US and in Europe. In response to a lack of robust and detailed firm-level data on the emerging trends in offshoring, in 2004 ORN launched a multi-year international study on offshoring by US and European firms. This study consists of separate country-specific surveys that query the past, current and planned offshoring activities of firms. The content and the data collection processes, namely by surveys, are essentially the same, with the exception of some minor national considerations.

We discuss here the data collection process for German firms. (Details of the process for US firms are available upon request from the authors.) We contacted by email and telephone the 500 largest German companies in terms of annual sales in 2005, identified senior managers to guarantee an appropriate overview across all support functions, and asked them to complete an online questionnaire about their offshoring activities in IT, call centers, finance and accounting, human resources, purchasing, product development and R&D. We based the list of the 500 largest German companies on a ranking provided by Die Welt, a well-known German newspaper which identifies the largest German companies yearly. We received completed surveys from 124 respondents, most of whom were senior officers, 28 percent being top executives (CEOs, board members, senior vice presidents) or individuals reporting directly to persons in such positions, another 55 percent were division or department heads, and the remaining 17 percent were managers. Given their personal involvement as well as positioning in the firm, we believe that our respondents have been knowledgeable informants, whose responses are reasonably accurate to our survey. To check on non-response bias we selected randomly some non participating firms and asked about reasons for non participation. The firms stated primarily lack of resources, confidentiality concerns and company policies. Further statistical checks did neither show

significant differences on our major variables among the responses from early versus late respondents nor significant differences on demographic variables as company size and industry affiliation among participating and non-participating firms. Based on this outcome we believe that non-response bias is not a problem in our data (Armstrong & Overton, 1977). Finally, five questionnaires were excluded as they were from persons at subsidiaries of parent companies otherwise covered in the study. Of the remaining 119 companies, 42 already reported having performed offshoring activities that represented in total 178 offshoring implementations, the average size of which was about 76,000 employees. This is comparable to the responses to the US survey with 122 US firms having offshoring entities in 447 sites around the globe, having an average size of 41,000 employees. Overall our sample includes 525 offshoring implementations in all.

2.4.2 Measurement of variables

Our dependent variable is a dichotomous variable that takes the value of one if the offshoring implementation was governed internally and zero if it was governed externally. The independent variables were operationalized as follows: To measure the impact of the surrounding firms (population) on the choice of the governance mode we determined the governance mode choices of other firms (with the same country of origin) for the year the focal offshoring implementation was undertaken. In detail we calculated the average share of internal implementations in the specific year and used it as an independent variable. To cope with finite size effects in early years we used moving averages over five years to obtain a continuous and steady proxy for the preferred governance mode in the population. Offshoring experience with a particular governance mode was determined by the number of previous offshoring implementations and their previously used governance modes. To account for the ratio between internal and external modes as well as for frequency of use, we built a composite index which covers both dimensions. We determined the number of internal and external implementations launched in the past, and used the ratio between

them as an index reflecting past tendency to use a particular mode. The ratio was represented by a number between -1 and +1 where -1 represents an offshoring path with external implementations exclusively and vice versa for +1. A number in-between indicates that a mix of governance modes was used in the past. To account for the frequency we multiplied that number by the total number of previous implementations. For example, a firm that had implemented four internal offshoring activities and an external one in the past would have an internal implementations share of 80 percent. This share mapped to a figure between -1 and +1 is represented by a value of 0.6. Multiplied by the total number of 5 implementations this results in an index value of 3. This sophisticated method allows us to measure the amount of experience with a specific governance mode as well as the uniformity of governance modes previously used. To do so we had to incorporate not only the last recent offshoring activity but also the complete history of previous implementations of the firm in scope.

We obtained the relative importance of various motives for offshoring. We asked managers to rate the importance of cost savings, access to new markets, and growth on a five-point Likert scale. We also included a categorical variable in our analysis which differentiates between three different types of functions: (a) knowledge-intensive functions such as R&D, product development and design, (b) idiosyncratic functions such as finance and accounting, HR and procurement, and (c) quasi-autonomous functions such as IT and call center. Cultural distance between the home and the host country was operationalized with two different measures. On one hand, we asked respondents to rate the risk of cultural differences on a five-point Likert scale. On the other, we measured cultural distance based on the Kogut-Singh index (Kogut *et al.*, 1988) which we calculated as the square root of the difference between two countries in Hofstede's four cultural dimension (power distance, individuality, masculinity and uncertainty avoidance) while controlling for variance in each dimension. This method has been widely used in international entry mode research (*e.g.* Agarwal, 1994; Benito & Gripsrud, 1992; Fisher *et al.*, 2001).

The operationalization of the governance mode used previously in the home country was similar to that used for our dependent variable. However, we had to take into account that the previous operations in the home country were conducted in several entities using different governance modes. In this specific case the previous governance mode is represented by a mix of governance modes. To cover this ambiguity, we used an index variable defined as the share of internal governance modes in the previous entities in the home country. For example, there were three entities in the home country and one of them had an internal governance mode. The resulting index value is 0,33. This sophisticated method allows us to leverage all data points even in case of ambiguous governance mode in the home country.

Our control variables include home country of firm and its firm size. As described before the nation-state and the institutional environment may have a substantial influence on a firm's control mechanisms and governance structures (DiMaggio *et al.*, 1983). The home country is modeled by a dichotomous variable that takes a value of one for German firms and zero for US firms. With respect to firm size, many internationalization studies did show, that it can explain the firm's strategy and so it has always been of interest to scholars (Pan & Li, 2000). As discussed previously, firms, especially small and medium-sized ones, lack the managerial resources that are needed for internationalization (Kor & Mahoney, 2000, 2004; Mahoney & Pandian, 1992; Penrose, 1995, p 43). Such firms are constrained in terms of capital, cash flow, managerial capacity and other resources (Benito *et al.*, 1994; Pan *et al.*, 2000), and need to concentrate more on a few offshoring activities (Agarwal *et al.*, 1992). In contrast, larger companies have a greater capacity to commit resources and absorb risks (Agarwal, 1994; Buckley & Casson, 1976; Shan, 1991), and as a result it is easier for them to achieve economies of scale and scope and to build up knowledge (Pan *et al.*, 2000). Therefore, we included the number of employees at a firm, a widely established measure in the literature for firm size (*e.g.*, Gatignon *et al.*, 1988), as a control variable.

A first check of the data revealed that significant parts of the sample were not entirely available because some surveys were returned incomplete. As data for individual variables were missing for more than 5 percent of our observations, list-wise deletion of incomplete observations would have significantly reduced sample size and thus compromised model power so this was deemed unacceptable (Roth, 1994). Little's MCAR test (Little & Rubin, 1987) confirmed that data was not missing completely at random ($p < 0.001$). Thus, we used SPSS's EM method to impute missing values, following the methodology literature's recommendation to prefer ML-based imputations over other methods (Graham, Hofer, & MacKinnon, 1996).

Table 1 displays the means, standard deviations and correlations of the variables. Most of the correlations among the variables are relatively small. Furthermore, an examination of the variance inflation factors (VIF) for all of the independent variables reveals that all values are close to 1. The largest VIF value is 1.96, which is far below the threshold of 10 as recommended by Neter (1985). So, the potential impact of multicollinearity effects is limited.

Variables	Mean	STD	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Size	2,397	2,996	1								
2. Prevalent governance mode	0,548	0,153	0,274 ***	1							
3. Prev. impl. gov. mode	0,356	1,959	0,070 *	0,156 ***	1						
4. Growth	2,730	0,937	-0,075 *	-0,128 ***	-0,104 ***	1					
5. Cost savings	3,394	0,771	0,146 ***	-0,054	0,040	0,150 ***	1				
6. Access to new markets	1,529	1,148	0,142 ***	0,307 ***	0,139 ***	0,213 ***	-0,119 ***	1			
7. Perceived cultural distances	1,852	0,902	0,224 ***	0,140 ***	-0,075 *	-0,092 *	0,241 ***	-0,027	1		
8. Kogut and Singh index	2,678	0,890	0,008	-0,282 ***	-0,042	0,124 ***	0,064	-0,011	-0,060	1	
9. Home country gov. mode	0,866	0,188	0,210 ***	0,155 ***	0,174 ***	0,163 ***	-0,072 *	0,297 ***	-0,007	0,056	1

Table 1: Descriptive statistics (table does not include categorical variables; * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$)

2.4.3 Method for testing the hypotheses and model

We used a logistic regression for modeling the choice of governance mode. To test our hypotheses, we estimate the probability of an internal governance mode for implementation i by the logit model

$$P_i = 1 / (1 + \exp(-z_i)) \quad (I)$$

whereas

$$z_i = b_0 + b_1 \text{ POPU}_i + b_2 \text{ EXPE}_i + b_3 \text{ COST}_i + b_4 \text{ MAKT}_i + b_5 \text{ GROW}_i + b_6 \text{ FUNC}_i + b_7 \text{ CULT}_i + b_8 \text{ GMHC}_i + b_9 \text{ HOCO}_i + b_{10} \text{ SIZE}_i \quad (II)$$

The probability of observing an internal governance mode for implementation i is determined by the preferred governance mode in the population (POPU_i), the firm's experience with a particular governance mode (EXPE_i), the importance of the cost-savings motive (COST_i), the importance of access to new markets motive (MAKT_i), the importance of the growth motive (GROW_i), the type of function to be offshored (FUNC_i), the cultural distance between home and host country (CULT_i), the previously used governance mode in the home country (GMHC_i), the home country of the investor (HOCO_i), and the size of the firm (SIZE_i).

2.5 Results

The results of the logistic regression are presented in Table 2. A positive sign for a coefficient indicates that the probability of an internal governance mode increases when the underlying explanatory variable increases and vice versa for a negative sign.

Perspective	Variables	Expected signs	Model 1 (control variables)											
			All firms		US firms		German firms							
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.
Control variables	Intercept	N/A	-0,091	(0,125)			-0,029	(0,129)	***		1,130	(0,228)	***	
	Size	N/A	0,031	(0,031)		1,031	0,000	(0,036)		1,000	0,114	(0,058)	*	1,121
	Home country	+	1,417	(0,218)	***	4,125			N/A					N/A
Popul. level	Prevalent governance mode	+												
Firm-specific level	Prev. impl. gov. mode	+												
	Cost savings	-												
	Access to new markets	+												
Implementation-specific level	Growth	+/-												
	Knowledge intense functions	+												
	Idiosyncratic functions	+												
Statistics	Autonomous functions	N/A												
	Perceived cultural distances	-												
	Kogut and Singh index	-												
Statistics	Home country gov. mode	+												
	-2 Log-Likelihood		656,468				480,972				172,772			
	Chi-Square		50,997				0,000				3,695			
Statistics	Degrees of freedom		2				1				1			
	Significance		0,000				0,995				0,055			
	Cox and Snell		0,093				0,000				0,021			
Statistics	Nagelkerke		0,125				0,000				0,033			
	McFadden		0,072				0,000				0,021			
	N		525				347				178			

Perspective	Variables	Expected signs	Model 2 (population level)											
			All firms		US firms		German firms							
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.
Control variables	Intercept	N/A	-2,190	(0,479)	***		-2,001	(0,684)	***		-1,770	(0,884)	**	
	Size	N/A	-0,015	(0,033)		0,985	-0,032	(0,038)		0,969	0,037	(0,064)		1,038
	Home country	+	0,582	(0,270)	**	1,789			N/A					N/A
Popul. level	Prevalent governance mode	+												
Firm level	Prev. impl. gov. mode	+												
	Cost savings	-												
	Access to new markets	+												
Implementation level	Growth	+/-												
	Knowledge intense functions	+												
	Idiosyncratic functions	+												
Statistics	Autonomous functions	N/A												
	Perceived cultural distances	-												
	Kogut and Singh index	-												
Statistics	Home country gov. mode	+												
	-2 Log-Likelihood		632,878				472,006				159,776			
	Chi-Square		74,587				8,966				16,691			
Statistics	Degrees of freedom		3				2				2			
	Significance		0,000				0,011				0,000			
	Cox and Snell		0,132				0,026				0,090			
Statistics	Nagelkerke		0,179				0,034				0,142			
	McFadden		0,105				0,019				0,095			
	N		525				347				178			

Table 2: Determinants of offshoring governance mode (internal mode, *p<0.1; ** p<0.05; *** p<0.01; value in brackets represents std. error; items with “N/A” are not applicable)

Perspective	Variables	Expected signs	Model 3 (firm specific experience)														
			All firms		US firms		German firms										
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.			
Control variables	Intercept	N/A	-0,074	(0,133)			-0,036	(0,140)			0,976	(0,236)	***				
	Size	N/A	0,021	(0,032)		1,021	0,001	(0,038)		N/A	0,088	(0,060)		1,092			
	Home country	+	1,070	(0,231)	***	2,914								N/A			
Firm level	Prev. impl. governance mode	+			***	1,944			0,836	(0,113)	***	2,306		0,285	(0,146)	*	1,330
	Cost savings	-															
	Access to new markets	+															
Implementation level	Growth	+/-															
	Knowledge intense functions	+															
	Idiosyncratic functions	+															
Statistics	Autonomous functions	N/A															
	Perceived cultural distances	-															
	Kogut and Singh index	-															
Statistics	Home country gov. mode	+															
	-2 Log-Likelihood		577,100				401,648					167,657					
	Chi-Square		130,365				79,324					8,810					
Statistics	Degrees of freedom		3				2				2						
	Significance		0,000				0,000				0,012						
	Cox and Snell		0,220				0,204				0,048						
Statistics	Nagelkerke		0,297				0,272				0,077						
	McFadden		0,184				0,165				0,050						
	N		525				347				178						

Perspective	Variables	Expected signs	Model 4 (managerial intentionality)														
			All firms		US firms		German firms										
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.			
Control variables	Intercept	N/A	0,046	(0,532)			-1,538	(0,696)	**		4,826	(1,413)	***				
	Size	N/A	0,033	(0,033)		1,033	0,003	(0,038)		N/A	0,135	(0,074)	*	1,144			
	Home country	+	1,250	(0,239)	***	3,491								N/A			
Firm level	Prev. impl. governance mode	+															
	Cost savings	-	-0,307	(0,132)	**	0,736			-0,067	(0,156)		0,935		-1,015	(0,401)	**	0,363
	Access to new markets	+	0,437	(0,095)	***	1,549			0,458	(0,114)	***	1,580		0,807	(0,223)	***	2,242
Implementation level	Growth	+/-							0,126	(0,107)		1,134		0,398	(0,132)	***	1,489
	Knowledge intense functions	+															
	Idiosyncratic functions	+															
Statistics	Autonomous functions	N/A															
	Perceived cultural distances	-															
	Kogut and Singh index	-															
Statistics	Home country gov. mode	+															
	-2 Log-Likelihood		616,445				447,275					140,459					
	Chi-Square		91,020				33,697					36,008					
Statistics	Degrees of freedom		5				4				4						
	Significance		0,000				0,000				0,000						
	Cox and Snell		0,159				0,093				0,183						
Statistics	Nagelkerke		0,215				0,123				0,291						
	McFadden		0,129				0,070				0,204						
	N		525				347				178						

Table 2 (continued): Determinants of offshoring governance mode (internal mode, *p<0.1; ** p<0.05; *** p<0.01; value in brackets represents std. error; items with “N/A” are not applicable)

Perspective	Variables	Expected signs	Model 5 (firm level variables)												
			All firms		US firms		German firms								
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	
Control variables	Intercept	N/A	0.228	(0.578)			-1.741	(0.791)	**		4.819	(1.426)	***		
	Size	N/A	0.033	(0.035)			0.015	(0.041)			0.126	(0.075)	*	1.134	
	Home country	+	0.938	(0.253)	***	1.034	2.555	N/A						N/A	
Firm level	Prevalent governance mode	+													
	Prev. impl. gov. mode	+	0.609	(0.095)	***	1.838		0.799	(0.130)	***	2.224		0.203	(0.124)	1.225
	Cost savings	-	-0.394	(0.146)	***	0.675		-0.102	(0.180)		0.903		-1.081	(0.410)	***
	Access to new markets	+	0.403	(0.102)	***	1.496		0.470	(0.128)	***	1.601		0.742	(0.230)	***
Implementation level	Growth	+/-	0.191	(0.117)		1.211		0.506	(0.155)	***	1.658		-0.549	(0.281)	*
	Knowledge intense functions	+													
	Idiosyncratic functions	+													
	Autonomous functions	N/A													
Statistics	Perceived cultural distances	-													
	Kogut and Singh index	-													
	Home country gov. mode	+													
	-2 Log-Likelihood		542.868												
	Chi-Square		164.597												
	Degrees of freedom		6												
	Significance		0.000												
	Cox and Snell		0.269												
	Nagelkerke		0.364												
	McFadden		0.233												
N			525											178	
Model 6 (function to be transferred)															
			All firms		US firms		German firms								
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	
Control variables	Intercept	N/A	-0.591	(0.160)	***		-0.556	(0.172)	***		0.771	(0.278)	***		
	Size	N/A	0.037	(0.032)			0.005	(0.038)			0.122	(0.060)	**	1.130	
	Home country	+	1.494	(0.225)	***	1.037	4.456	N/A						N/A	
Firm level	Prevalent governance mode	+													
	Prev. impl. gov. mode	+													
	Cost savings	-													
	Access to new markets	+													
Implementation level	Growth	+/-													
	Knowledge intense functions	+	0.978	(0.260)	***	2.658		1.021	(0.300)	***	2.776		0.846	(0.514)	2.330
	Idiosyncratic functions	+	1.128	(0.239)	***	3.089		1.205	(0.265)	***	3.335		0.827	(0.538)	2.287
	Autonomous functions	N/A	N/A					N/A							
Statistics	Perceived cultural distances	-													
	Kogut and Singh index	-													
	Home country gov. mode	+													
	-2 Log-Likelihood		625.761												
	Chi-Square		81.704												
	Degrees of freedom		4												
	Significance		0.000												
	Cox and Snell		0.144												
	Nagelkerke		0.195												
	McFadden		0.115												
N			525											178	

Table 2 (continued): Determinants of offshoring governance mode (internal mode, *p<0.1; ** p<0.05; *** p<0.01; value in brackets represents std. error; items with “N/A” are not applicable)

Perspective	Variables	Expected signs	Model 7 (cultural distances)											
			All firms		US firms		German firms							
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.
Control variables	Intercept	N/A	0.926	(0.393)	**		0.839	(0.454)	*		2.458	(0.734)	***	
	Size	N/A	0.076	(0.034)	**	1.079	(0.039)			1.052	0.139	(0.064)	**	1.149
	Home country	+	1.519	(0.233)	***	4.570	N/A						N/A	
Popul. level	Prevalent governance mode	+												
Firm level	Prev. impl. gov. mode	+												
	Cost savings	-												
	Access to new markets	+												
Growth		+/-												
	Knowledge intense functions	+												
Implementation level	Idiosyncratic functions	+												
	Autonomous functions	N/A												
	Perceived cultural distances	-	-0.536	(0.112)	***	0.585	(0.131)	***	0.539	(0.222)	-0.266	(0.222)		0.767
Statistics	Kogut and Singh index	-	-0.048	(0.111)		0.954	(0.129)		1.055	(0.224)	-0.354	(0.224)		0.702
	Home country gov. mode	+												
	-2 Log-Likelihood		631,629				455,564				168,833			
Statistics	Chi-Square		75,836				25,408				7,634			
	Degrees of freedom		4				3				3			
	Significance		0.000				0.000				0.054			
Statistics	Cox and Snell		0.135				0.071				0.042			
	Nagelkerke		0.182				0.094				0.067			
	McFadden		0.107				0.053				0.043			
	N		525				347				178			

Perspective	Variables	Expected signs	Model 8 (previously used gov. mode)											
			All firms		US firms		German firms							
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.
Control variables	Intercept	N/A	-0.091	(0.125)			-0.029	(0.129)			-1.879	(0.784)	**	
	Size	N/A	0.031	(0.031)		1.031	(0.036)			1.000	0.107	(0.063)	*	1.113
	Home country	+	1.417	(0.218)	***	4.125	N/A						N/A	
Popul. level	Prevalent governance mode	+												
Firm level	Prev. impl. gov. mode	+												
	Cost savings	-												
	Access to new markets	+												
Growth		+/-												
	Knowledge intense functions	+												
Implementation level	Idiosyncratic functions	+												
	Autonomous functions	N/A												
	Perceived cultural distances	-												
Statistics	Kogut and Singh index	-												
	Home country gov. mode	+												
	-2 Log-Likelihood		656,468				480,972				151,477			
Statistics	Chi-Square		50,997				0.000				24,990			
	Degrees of freedom		2				1				2			
	Significance		0.000				0.995				0.000			
Statistics	Cox and Snell		0.093				0.000				0.131			
	Nagelkerke		0.125				0.000				0.208			
	McFadden		0.072				0.000				0.142			
	N		525				347				178			

Table 2 (continued): Determinants of offshoring governance mode (internal mode, *p<0.1; ** p<0.05; *** p<0.01; value in brackets represents std. error; items with “N/A” are not applicable)

Perspective	Variables	Expected signs	Model 9 (integrated model)											
			All firms			US firms			German firms					
			b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.	b value	STE	Sign.	Odd rat.
Control variables	Intercept	N/A	-1.878	(0.925)	**	1.020	-3.775	(1.289)	***	1.014	0.998	(2.428)		1.077
	Size	N/A	0.020	(0.039)		1.387	0.014	(0.048)	N/A		0.074	(0.088)		
	Home country	+	0.327	(0.321)										
Popul. level	Prevalent governance mode	+	3.938	(1.135)	***	51.295	3.026	(1.848)	***	20.605	4.025	(1.728)	**	55.970
	Prev. impl. gov. mode	+	0.589	(0.097)	***	1.803	0.803	(0.136)	***	2.233	0.098	(0.125)		1.103
	Cost savings	-	-0.224	(0.162)		0.800	0.055	(0.197)		1.057	-1.236	(0.610)	**	0.291
Firm level	Access to new markets	+	0.327	(0.108)	***	1.387	0.396	(0.138)	***	1.485	0.643	(0.263)	***	1.903
	Growth	+/-	0.152	(0.126)		1.164	0.459	(0.163)	***	1.583	-0.534	(0.321)	*	0.586
Implementation level	Knowledge intense functions	+	0.867	(0.299)	***	2.379	1.049	(0.366)	***	2.855	-0.039	(0.645)		0.962
	Idiosyncratic functions	+	1.020	(0.271)	***	2.773	1.160	(0.324)	***	3.191	0.106	(0.655)		1.112
	Autonomous functions	N/A	N/A				N/A				N/A			
	Perceived cultural distances	-	-0.304	(0.135)	**	0.738	-0.254	(0.172)		0.776	-0.217	(0.308)		0.805
	Kogut and Singh index	-	-0.012	(0.130)		0.988	0.075	(0.153)		1.078	-0.437	(0.299)		0.646
Statistics	Home country gov. mode	+	N/A				N/A				4.087	(1.243)	***	59.581
	-2 Log-Likelihood													111,042
	Chi-Square													65,425
	Degrees of freedom													11
	Significance													0.000
	Cox and Snell													0.326
	Nagelkerke													0.434
	McFadden													0.284
	N													347

Table 2 (continued): Determinants of offshoring governance mode (internal mode, *p<0.1; ** p<0.05; *** p<0.01; value in brackets represents std. error; items with “N/A” are not applicable)

Table 2 presents nine different models to verify the proposed hypotheses in detail. Model 1 includes only the control variables, Model 2 adds the impact of surrounding firms, Model 3 the experience effect, Model 4 the impact of managerial intentionality, Model 5 the impact of all firm-specific variables, Model 6 the effect of the functions to be transferred, Model 7 the impact of cultural distances, and Model 8 the influence of the previously used governance mode in the home country. Finally, Model 9 includes all effects simultaneously. Each model is structured similarly. The first column named “All firms” illustrates the results for both US and German firms. The second and third column named “US firms” and “German firms” show the results for the respective sub-samples. The expected signs for the coefficients of the explanatory variables are also given.

Hypothesis 1 states that firms imitate the offshoring behavior of other firms. This is clearly confirmed in Model 2. US as well as German firms tend to choose the governance mode of surrounding firms (for both sub-samples $p < 0.01$). Also Hypothesis 2a can be confirmed (Model 3). For both sub-samples we observe a preference for using the governance mode used for previous offshoring implementations. This relationship is highly significant for US firms ($p < 0.01$), less so for German firms ($p < 0.1$). The picture is more ambiguous for Hypotheses 2b and 2c. Cost savings, Hypothesis 2b, are significant drivers of offshoring for the total sample ($p < 0.05$) as well as for the German sub-sample ($p < 0.05$), but not for the US sub-sample. In contrast, market-seeking, Hypothesis 2c, is highly significant in both sub-samples ($p < 0.01$). US firms that list growth as a reason for offshoring prefer to use an internal governance mode ($p < 0.01$) while the reverse is true for German firms ($p < 0.05$). This supports both Hypotheses 2d and 2e. Model 5 includes all firm-specific variables. The results confirm those of Models 3 and 4 with some minor adjustments. Model 6, 7 and 8 add implementation-specific factors. Model 6 shows a significantly higher probability of using an internal mode for knowledge intensive and idiosyncratic functions than for autonomous functions for both the total sample and the US sub-sample. Model 7 tests Hypothesis

4 that predicts that cultural distance is negatively related to an internal governance mode choice. Perceived cultural distance is significant ($p < 0.01$) in the total sample as well as in the US sub-sample, but significance of Kogut-Singh index cannot be confirmed. Model 8 tests Hypothesis 5. The results for the German sub-sample clearly show ($p < 0.01$) firms conforming to the governance mode prevalent in the home country, but due to some deficiencies in the data this could not be tested for the total sample or the US sub-sample. Model 9 tests all the hypotheses simultaneously. For the total sample the results remain unchanged except that the impact of the home country and that of cost savings as a driver for offshoring lose significance.

Turning to the control variable, there is no consistent picture with respect to the size of the firm. In contrast, there is a significant difference in the governance mode choice between firms in different institutional environments. This can be clearly observed in our data. Compared to US firms, German firms have a significantly higher likelihood of using an internal governance mode ($p < 0.01$).

In summary, all hypotheses are confirmed in the total sample as well as partially in the sub-samples. The integrated model reaches reasonable Cox and Snell, Nagelkerke and McFadden pseudo R squares (*e.g.*, Cox & Snell, 1989; McFadden, 1974; Nagelkerke, 1991). Most variables are stable in the models separately testing hypotheses, specifically Models 2 to 8, as well as in Model 9, the integrated model.

2.6 Discussion

The primary objective of our study is to identify which factors influence the choice of governance mode in offshoring of support functions. As we know from internationalization theory (*e.g.*, Haiyang *et al.*, 2002; Simmonds, 1990) the governance mode has a pivotal role and is a significant determinant of the overall success of foreign activities. We derived a theoretical framework comprised of four different perspectives to describe influencing factors based on the multi-

dimensional framework of Lewin *et al.* (2004b). We analyzed in detail the impact of the offshoring behavior of others within a firm's group of reference, the effect of firm-specific characteristics, and the impact of a range of particulars specific to a given implementation. The results of our empirical analysis using data from the combined offshoring implementations of 525 US and German firms provide clear support for our hypotheses.

Population level. Our analyses clearly indicate that firms follow other firms that are in the home country in devising their offshoring strategies. They have a demonstrable tendency to copy the offshoring behavior of other firms which face the same environmental and institutional conditions (DiMaggio *et al.*, 1983; Haunschild *et al.*, 1997). Every firm compares itself with other firms and forms its objectives not only on its own experience but also to some extent on the methods, procedures and success of other firms (Cyert & March, 1963; Festinger, 1954; Levitt & March, 1988). Consequently, their decisions are influenced by the strategies and intentions of other firms. Despite this, it is reasonable to suppose that firms do not compare themselves to every other firm, but to specific firms within their frame of reference. Haunschild *et al.* (1997) introduced three different types of imitation processes: frequency-based, trait-based and outcome-based. Frequency-based imitation means that firms copy the organizational structures that have been implemented by large numbers of other firms (Haunschild *et al.*, 1997). This represents the imitation approach of firms which we extensively discussed before. Trait-based imitation means that they copy practices used by a subset of firms based on given traits. For instance, they might imitate the organizational structures and processes of firms with a high favorable reputation in a given area, from the same industry or with similar firm size, and in doing so, they are using reputation as a proxy for the adequacy of the organizational structures chosen by the target firm. Some firms might even have multiple reference groups. To investigate whether trait-based imitation is relevant in offshoring, we performed a supplementary analysis and used solely large firms as a reference group (similar to the study of Haveman, 1993). As before, we clearly observe an impact from surrounding firms.

However, the impact of the reference group is less than it is in case of frequency-based imitation. This indicates that trait-based imitation on the basis of size, as a measure for reputation, seems to be less relevant. Outcome-based imitation takes trait-based imitation one step further. It assumes that firms are able to evaluate the particular actions of other firms that have contributed to a positive result. Of course, very sophisticated information gathering and analytical abilities are required to follow such an approach as it implies that a firm can judge from the outside the actions of other firms, challenging in most situations, more difficult still in offshoring. Getting reliable information on the success of other firms about the success of governance models abroad is quite difficult. Firms face an especially high degree of uncertainty about outcomes when they offshore. Thus, outcome-based imitation might not be possible in case of offshoring, and as a result firms can be expected to follow more often frequency-based or trait-based imitation processes.

Experience. We also confirmed the impact of previous offshoring implementations on a firm's governance mode choice. Companies prefer to re-leverage the governance modes of previous offshoring implementations. It is natural that firms would want to keep existing structures and leverage existing knowledge. We argued that firms learn through the implementation of a given governance mode (Chang *et al.*, 2001). Firms build distinctive competencies, have different levels of knowledge, and are more or less capable of implementing a particular mode successfully based on their previous experience. Each firm evolves in a different way and has to cope with its own firm-specific path dependencies in each transfer step (Nelson *et al.*, 1982).

Managerial intentionality. In addition to the path dependencies we also verified the influence of managerial intentionality. As Hutzschenreuter *et al.* (2007b) pointed out, managerial objectives are often excluded from analyses of internationalization phenomena. We clearly demonstrate that managerial intentionality plays a vital role in offshoring decisions (see pseudo-R-squares in model 4). This outcome may encourage other researchers to follow the call of Hutzschenreuter *et al.* (2007b) to attach more importance to this topic. We prove specifically the impact of cost

reduction, market access, and growth strategies. Surprisingly US firms which declared they offshored for growth tended to prefer an internal governance mode, while their German counterparts relied more on external modes. This result is in line with our hypothesized relationships. However, such a diametrically opposed outcome is striking and merits further investigation. US and German have a different attitude to realize growth. The German firms leverage external resources to free up employees who are staffed on growth topics. In contrast, US firms rely on the offshore hired employees to foster further growth. This outcome is even more surprising when we keep in mind that German firms much more often prefer an internal governance mode. Regarding the two other motives, cost reduction and market access, the outcomes are as expected and have been confirmed in many interviews with practitioners (which we held during conduction of our study).

Function type. As we have written, there are situation-specific constraints beyond the influence of firm-specific ones. Not all support functions have the same feasibility for a specific governance mode. It is much more likely that firms will use an internal governance mode for knowledge-intensive and idiosyncratic functions than for autonomous ones primarily because of the characteristics of the respective activities. While knowledge-intensive and idiosyncratic functions are characterized by less standardized processes or firm-specificities that hamper external delivery, autonomous functions are typically modularized and so more easily detached. The outcome is not surprising, but a more detailed analysis of the US data revealed further insights, including that the impact of the function is amplified by the size of the firm. The larger a firm, the more relevant the impact of the function. This may be because in small firms the characteristics we outlined previously are less pronounced. It might be easier for small firms to codify knowledge and transfer it to an external provider, though without doubt, there are also highly sophisticated processes in small companies and their transfer to an external partner is not trivial. However, the sheer volume of highly complex processes might be expected to be less in a smaller firm than in a larger firm,

and so despite a complex environment, it might be easier for a service provider to acquire the relevant knowledge and to set up appropriate processes. Furthermore, idiosyncrasies might be less decisive for small firms, and so perhaps for them, maybe particularly because of them, might be based on very firm-specific rather than standardized activities, and so as we have just argued, it might be easier for an external service provider to quickly get a grip on those processes because they are relatively limited in number. Whatever the reasons behind it, the function-specific aspects for the offshoring behavior are less pronounced for small firms than for large ones.

Cultural distance. We argued that governance mode choice is not only influenced by the type of activity to be transferred but also by some characteristics of the host country. We found, in line with many other scholars (*e.g.*, Benito *et al.*, 1994), that the cultural distance between the home and target country significantly impact the offshoring efforts of a firm. These challenges may be more effectively addressed by using an external partner (Fisher *et al.*, 2001). We were able to confirm the relationship between the cultural distance between two locales and a preference for an external mode of governance. However, German firms seem to behave differently than US firms. This may be for historical reasons or it may be due to specific market conditions in the home countries. German firms have a long tradition of internationalization, and in many cases have shown an ability to cope with foreignness. One often cited example is the dye industry which German firms dominated world-wide for many years (Murmans, 2003), with five German firms controlling about 75 percent of the global market in the early 1900s (Redlich, 1914). This was mainly based on an appropriate alignment between governmental institutions and the educational system. Sophisticated business education especially allowed German firms to rise to the top in some industries from the end of the 19th century to the beginning of the 20th (Usdiken, Kieser, & Kjaer, 2004). German firms can look back on a long history of international activities and based on that might have more know-how and a lower risk for going international nowadays. In addition, some might argue that there is a more pragmatic reasoning for the proficient handling of cultural distances by German

firms. Whereas US companies can leverage a large home market, the size of the German market often prompts firms to go abroad to grow. That this is the case is clearly seen in the very high export orientation of the German economy. Germany has had a large trade surplus for many years, for example, in 2005 German exports of goods and services exceeded imports by US\$150 billion (OECD, 2007), in contrast to a US trade deficit of US\$762 billion. Furthermore, German firms not only go abroad to conquer new markets but also to avoid what they see as disadvantageous regulatory settings at home. Taxes, social security contributions and high and inflexible regulation of the labor market represent substantial barriers for growth (Deutsche Bundesbank, 1997). German internationalization activities may be seen as an escape from institutional constraints in the home country (Witt & Lewin). Like their US peers, German firms face difficulties arising from cultural differences, but German firms seem to take on those challenges more readily because of the sense of confidence their industrial history gives them and because the relative size of their national market and regulatory environment prompt them to do so.

Our measure of cultural distances led to a surprising observation. We asked managers to rate the risks of offshoring in light of perceived cultural differences, a subjective measure. We also used the well-established Kogut-Singh index (Kogut *et al.*, 1988) to capture cultural differences, an objective measure. We observed the impact of cultural difference like those we describe above solely with the subjective measure. This counterintuitive result might be due to a universal, yet unnoticed, distinction between general cultural distance and the distance actually relevant to offshoring. Whereas general cultural distance might be decisive for sales-orientated internationalization steps, its relevance for offshoring activities could be limited, because the firm interacts with a limited number of parties, mainly employees, suppliers and governmental institutions. In the former case though, a firm has to interact with retailers or directly with numerous and diverse customers. This requires a deep understanding of local culture and the adaptations that must be made to it. In responding to our questions about cultural differences, perhaps respondents did only take into

account cultural distance as it relates to offshoring (Tihanyi *et al.*, 2005). Be that as it may, the ambiguous outcome resulting from the Kogut-Singh index is in line with many other studies on governance mode decisions. Zhao *et al.* (2004) cite in their extensive meta-analysis on entry mode studies a substantial number of articles that reveal positive, negative, and even insignificant relationships between cultural distance and a chosen entry mode. Still, they were capable of predicting a significant impact of the Kogut-Singh index based on their empirical analysis. At the same time, there is now extensive debate about the general applicability of Hofstede's seminal work (1980) on cultural distance upon which the Kogut-Singh index is based. The authors of the 2006 GLOBE project argue that there might be substantial deficiencies in Hofstede's scoring of cultural dimensions, and by extension in the Kogut-Singh index (*cf.* Hofstede, 2006; Javidan, House, Dorfman, Hanges, & De Luquet, 2006; Smith, 2006). Obviously, further investigation is needed.

Previously existing governance mode. Offshoring and the relocation of activities are major challenges. Firms must become familiar with new cultural and structural settings in the host country, yet managerial capacity to adapt to new settings are limited. Adopting a governance mode at the offshoring site that has not been in use in the home country causes additional complexity. New organizational structures and control mechanisms and changes in processes are needed to be established at the offshoring site, causing additional stress on managerial resources. Employees tend to resist any organizational change as they feel uncomfortable about structural adjustments, and so they might hamper the change process (Cummings *et al.*, 1997; Giangreco *et al.*, 2005). Hence, companies prefer to use the existing governance mode of the home country at the offshoring site. To confirm this hypothesized relationship, we checked whether the companies do indeed use at their offshoring sites the same governance mode as previously used in the home country. Due to a deficiency in our data set we were able to test this relationship only for German firms which clearly confirmed the expected offshoring behavior.

Institutional environment. With respect to the impact of the home country there is a clear difference in the governance mode decisions between the US and German firms. Whereas the likelihood of a US firm choosing to use an internal governance mode abroad as opposed to an external one is about 1 to 1, a German firm is about four times more likely to do so. This finding is in line with the earlier observations of Lewin *et al.* (2007). The different ratios show that there are substantial differences in the offshoring behavior of US and German firms. The reason for this may be based on different institutional environments. In Germany, we can observe a serious exertion of control by the government as state-owned and controlled firms, inhibition of dismissals without valid reasoning and others (Lewin *et al.*, 2004a). This can hamper firm efforts to realize one business opportunity or another and coerce firms into more traditional business behavior. The consequences of such country-specific configurations are enormous. In Germany, there is a greater orientation towards the welfare of workers and firms devote more resources to their professional development (Calori & Dufour, 1995). Due to the strong influence of works councils the German firms are more conservative than their US peers, are less willing to pursue short-term strategies, and want to be entirely in control of all corporate functions. Thus, an externalization of activities might be less promising from the perspective of a German firm. In contrast, US firms are more intensively profit orientated and tend to pursue the kind of short-term targets that markets reward. Therefore, the chance to realize cost savings by offshoring in the absence of governmental and societal pressure is likely to encourage them much more than their German peers to externalize parts of their activities. This outcome is quite surprising. Despite the current emphasis on global markets, players and competition, our data shows striking dissimilarities between these two different nations-states. There are country-specific reasons for offshoring that are based on a nation's history and its contemporary situation. Firms have to be particularly thorough when they probe and imitate the offshoring strategies of firms in other countries.

Four-fold framework of governance mode choice. In addition to the implications of all of these individual variables, our framework itself (see Figure 10) is highly relevant. As we can derive from Table 2, a single perspective could not satisfactorily explain offshoring behavior. Comparing the different perspectives and their corresponding pseudo-R-squares in Table 2 (items Cox and Snell, Nagelkerke, McFadden), we see that each individual perspective contributes to the explanation of the variance in governance mode decisions. Furthermore, there is a clear indication that the institutional environment alike the population surrounding a firm and firm- as well as implementation-specific characteristics substantially determine a firm's governance mode choice. With such an extended, four-folded framework we are capable of explaining governance mode decisions to a substantial extent. Nevertheless, many internationalization studies that discuss governance mode decisions in sales-orientated internationalization activities (*e.g.*, Barkema *et al.*, 1997; Gatignon *et al.*, 1988), focus on just one or two perspectives. Obviously, such an approach ignores valuable explanatory power from other perspectives. So, our results encourage other researchers to use our framework not only in the offshoring but also in the more general internationalization context.

2.7 Limitations and suggestions for further research

We managed to build a consistent framework of multiple theoretical perspectives explaining the governance mode choice of firms. Each of the used perspectives substantially contributes to our understanding of a firm's choice. Albeit, we have to acknowledge that the presented structure may only be a starting point for further research activities. Future studies may use our framework to analyze the interactions between the individual dimensions and its aligned impact factors in more detail. By doing so, our framework may be the basis for a much more complex coevolutionary framework as some of the key properties are already available *e.g.*, multilevelness/ embeddedness or path and history dependence (*c.f.* Lewin & Volberda, 1999).

We tested our theoretical framework with data on the offshoring activities of US and German companies in an effort to verify the impact of the institutional environment. A broader scope including firms from other nations would undoubtedly provide additional insights into the discussed effects of the institutional environment. Because our data only includes the offshoring activities from just two countries, we were able to analyze home country effects only on the basis of a dichotomous dummy variable. Thus, it would be beneficial to enhance the analysis with further data from other nations.

Further, in looking at the influence of surrounding firms we made no allowances for the evolutionary nature of offshoring even though in the early stage of offshoring, the number of firms with credible experience was obviously limited. Clearly one could hardly expect that in the early days of offshoring firms had a sizable impact on the governance mode decisions of one another. However, in the course of time as more and more firms offshored the pressure “to follow the pack” increased. Future analyses might look more closely at this phenomenon. We also assumed that each surrounding company has the same impact, but in practice some firms act more as role models than others. Firms might look more to companies in the same industry or that have a similar geographic footprint. Some firms might even have multiple reference groups (firms with the same size, firms with the same level of internationalization, firms offering similar products, etc.). So, it might be interesting to see what type of reference groups exist and what type has the most relevant impact. With our test using solely large firms as a reference group we did a first step in this direction. However, further studies are necessary to analyze the impact of surrounding firms based on these and other different measures of this kind.

Regarding firm level variables we analyzed the impact of cutting costs, enabling growth and access to new markets motives. The argumentation for these motives is not surprisingly very “intuitive” and could be mostly confirmed. Based on our outcomes future research might go one step further and analyze more complex motives. Many European firms may offshore not as a proactive

approach, but in reaction to extensive regulation of business and inflexibilities in the labor market (*c.f.* Witt *et al.*, 2007). Especially in the early days of offshoring, governance mode decisions may also have been influenced by the desire to buy political favor in certain countries by using an internal governance mode (Delios & Henisz, 2003). Additionally, the interaction between motive factors might reveal interesting and counterintuitive insights. Realizing cost savings as well as accessing new markets might not be achievable with the same governance mode. So, the impact of one motive might be moderated by the other motive. Also interactions with variables on the implementation level might uncover further insights. For example, the impact of the cost savings motive might be much less relevant for knowledge intense functions as product development or R&D than for autonomous functions as IT and call centers.

We included cultural distance as a source of complexity in offshoring and demonstrated its significance. Geographical, economic or administrative distances may also be motivators for a particular governance mode choice (Ghemawat, 2001; Terpstra & Chwo-Ming, 1988), and so could also prove fertile ground for future studies. We joined wholly-owned implementations and joint ventures into an internal governance mode in contrast to an external one because our sample size did not allow use of a more fine-grained analysis and to treat joint ventures as a separate governance mode. At the same time, elimination of joint ventures was not advisable, if only to avoid the loss of additional data points. Further studies differentiating between purely internal and external governance modes, and also joint ventures with various types of equity share, could provide additional insights.

Some parts of our argumentation, specifically the advantages and disadvantages of an external governance mode, are derived from the manufacturing outsourcing literature. However, we were not able to determine if all our conclusions could be equally applied to the external delivery of white-collar activities as well. Gereffi (2005) indicates that there might be substantial similarities

and that much of the blue-collar offshoring phenomenon may be replicated in white-collar offshoring.

2.8 Conclusion and implications

We have demonstrated that firms make their governance mode decisions based on the institutional environment, the surrounding population of similar firms, firm-specific characteristics, and the individual settings of a particular implementation. Based on the outcomes, we conclude that the multi-dimensional framework is effective in explaining governance mode decisions, and might also be applicable to other aspects of internationalization.

Our research implies that the choice of governance mode should be based on several components, an outcome that should be of particular interest to managers. Firms should be aware of national historical strengths and take the institutional environment of their home countries into account as well. Copying strategies that originated in other countries might be misleading, or worse, while on the other hand, analyzing the offshoring strategies of other firms in the home country might be beneficial. It may be inevitable that the managers of firms compare their offshoring efforts to those of other firms. That is not necessarily harmful, however, firms should not blindly copy the offshoring strategies of other companies. For example, German firms should not in all respects, imitate the offshoring behavior of US firms, and certainly not without question.

In looking at firm-specific factors, we found that companies should keep in mind path dependency effects. By following a deliberate offshoring path firms can build required offshoring capabilities, limit inevitable organizational adaptations to a minimum, and reduce the resistance of the employees to structural change. The management team has to select an appropriate governance mode in light of the specific offshoring objectives of the firm. Not all targets can be equally well achieved with every governance mode. Finally, firms may have to prioritize their offshoring aims and pursue a limited set of targets. Some governance modes are better suited than others for given

offshoring functions. If a firm settles on an inappropriate governance mode it might very well endanger the results of an offshoring effort. This can especially be so in firm-critical functions such as R&D and product development as these functions represent critical competencies and are likely to incorporate intellectual property. Furthermore, as we have shown, managers ignore cultural distance to the target country at their peril. Executives must take into consideration the hitherto existing governance mode in the home country as a change in governance mode can overwhelm employees and management alike. Making the wrong governance mode decision or improperly managing firm capabilities can not only jeopardizes the success of a given implementation, but can overstretch the limited sources of the firm and so have a detrimental impact on day-to-day business, and in the long-run have a negative impact on overall firm performance.

3 TIME TO SUCCESS IN OFFSHORING ACTIVITIES

The following chapter is based on, and follows Hutzschenreuter *et al.* (2010). As outlined, this chapter analyzes the success of offshoring activities and focus on the time a firm takes to achieve its expected cost savings and its targeted service level. We hypothesize that firm-specific offshoring experience, publicly available knowledge on offshoring, path dependencies, cultural distances, and the chosen governance mode influence the success of offshoring activities.

An analysis of detailed data about 525 offshoring implementations of US and German firms confirms the anticipated relationships and provides further crucial insights.

3.1 Introduction

Offshoring of white-collar work is nowadays a widely-spread phenomenon. Firms from all industrialized countries undertake offshoring. Whereas the transfer of manufacturing work to low-cost countries has been already practiced in developed economies since the 60s the relocation of support functions as IT, HR, finance and accounting, etc. started as recently as the 90s (Lewin *et al.*, 2007). Thereby, firms' expectations in offshoring are high as well as manifold. According to Lewin *et al.* (2006a), 55 percent of the companies expect cost savings of 30 percent or even more. In fact, firms not only want to realize cost reductions but also leverage offshoring to enhance service levels, to repel competitive pressure or to access qualified personnel. Realization of these diverse targets is rather challenging. It is no surprise that the attention of researchers and management executives towards this topic grows continuously and a clear need emerges to understand the specific success factors of offshoring.

To evaluate success of internationalization activities, researchers have been primarily focused on two components. On the one hand, they analyzed the success of foreign entities based

on financial indicators as return on assets, etc. that rely on published or unpublished figures (*e.g.*, Chan, 1995). On the other hand, they used also non-financial indicators as longevity or the failure rate of a foreign entity (*e.g.*, Jiatao & Guisinger, 1991). However, all these success indicators have their specific constraints. For example, Andersson *et al.* (2001) named different financial reporting conventions, reluctance of parent companies to provide non-consolidated data and the problem of data reconciliation from different firms. Obviously, a thoughtful approach to assess the success of offshoring activities is mandatory.

For a management team which is responsible for an offshoring activity other criteria might be particular relevant: Has the transferred entity achieved its targets and how much time did it take to achieve these (Lewin *et al.*, 2006b)? An entity reaching the defined savings target of 50 percent after three years might be outstanding from a target-achievement perspective but alarming from an implementation-time perspective. Unfortunately, the drivers that underlie these two distinct aspects might be different or even work in opposite directions. For example, the achievement of extensive cost savings might require a transfer to a country with very low wage and salary levels as the Philippines (Khan *et al.*, 2006). But, local infrastructure issues and a low education level might make a fast and efficient implementation impossible. A high savings level might be associated with an overlong implementation phase that ties up extra resources (*e.g.*, regular operations in home country have to be continued and new operations in host country have to be ramped up simultaneously), causes frictions in other business areas and might even delay other important projects. Thus, we have to differentiate between success aspects based on achieved performance levels and others based on the time to achieve these. Whereas the first one is a well-known story and has been already analyzed (*e.g.*, Farrell, 2003, 2005) not much attention has been paid to the second one although it gets more and more relevant in practical business life. Firms are expecting fast payback periods from their activities. They get more and more reluctant to perform projects with long implementation phases. For them it gets more and more critical to quickly achieve the

“steady state” in order to reap the rewards of their activities. The later they achieve their expectations the less successful the project. In order to stay abreast of this development our article focuses on the time aspect to measure success. In particular, we investigate the impact of various factors on time to reach the expected cost savings and the targeted service level. As we know from previous research (e.g., Lewin *et al.*, 2006b), taking out cost and improving service levels are under the most relevant of these (aside others as repelling competitive pressure, etc.). We perform our analysis with detailed data on 525 offshoring implementations of support functions as IT, call center, HR, finance & accounting, procurement, R&D and product development performed of US and German firms.

3.2 Theoretical background

Despite the growing relevance of offshoring of support functions and its omnipresence in media (Levy, 2005), we do not have much insights on factors influencing whether firms actually achieve their high expectations in offshoring and if so how much time they take. Lewin *et al.* (2006b) show that about 25 percent of offshoring implementations do not reach their expected cost reductions or targeted service level. Obviously, offshoring is not trivial and a successful implementation is a major challenge for the management of a firm. To understand which factors impact the success of an offshoring implementation we rely on a two dimensional framework. On the one hand, we know that each firm comprises specific *premises* for offshoring activities. Based on the previous development path and its offshoring knowledge, firms are more or less capable to perform transfers successfully. On the other hand, a firm might influence with its implementation-specific *configurations* the success of an offshoring activity. For every transfer step, the management team has to decide about fundamental, configurational components as the choice of the host country and the governance mode. The first aspect links to path dependencies, firm-specific traits and generally available knowledge about offshoring that cannot be changed by the management team and might even demonstrate an intrinsic limitation for the offshoring success. For example, a firm lacking

offshoring experience has no knowledge how to interact with local suppliers, employees and governmental institutions. This makes the transfer of activities more difficult, but with each transfer step a firm can gain experience and build its capabilities for future offshoring activities (Barkema *et al.*, 1997; Johanson *et al.*, 1977). In contrast, the implementation-specific configuration (second aspect) relates to strategic choices of the management team (Child, 1972; Hutzschenreuter *et al.*, 2007b; Miles *et al.*, 1978). Decision makers use their discretion to implement an organizational configuration that might promise the uppermost outcomes for the firm. This configuration has to be defined along two main components: the host country wherein the transferred activities will be located in the future (Haiyang *et al.*, 2002; Jiatao *et al.*, 1991; Pangarkar & Lim, 2003) and the governance mode for provisioning these activities (Jiatao, 1995; Simmonds, 1990; Woodcock *et al.*, 1994). The first component relates to country-specific intricacies. An internationalization activity is made substantially difficult when a firm decides to transfer its support activities to countries that are very dissimilar from a cultural perspective and where the firm has no experience (Agarwal, 1994). The second component links to advantages and drawbacks of particular governance modes. Each governance mode has its peculiarities regarding level of control, effort to implement and operate, involved risks and degree of expertise.

3.2.1 Offshoring knowledge and path dependencies as vital premises for success

When firms want to economize the advantages of a transfer abroad, they have to deal with a variety of challenges. Firms need to build relationships with a wide range of organizations and individuals, *e.g.* local employees, suppliers, intermediaries, banks and governmental institutions in the host country (Benito *et al.*, 1994; Fisher *et al.*, 2001). They have to transfer management methods and values, to decide on appropriate arrangements for organizing their business activities and to adapt organizational structures and processes (Barkema *et al.*, 1998; Benito *et al.*, 1994; Vermeulen *et al.*, 2002). Over time, a firm gains experience on controlling foreign entities and learns how to recruit, train and manage foreign employees and interact with local suppliers, etc. This facilitates a

successful offshoring implementation. In contrast, inexperienced firms are less confident about the local market (Benito *et al.*, 1994), will make serious errors (Gatignon *et al.*, 1988) and might be less successful with their offshoring implementations. Nevertheless, not all acquired knowledge can be easily “transcribed” from one case to another one. Some experience is applicable only to specific offshoring regions or particular governance modes (Chang *et al.*, 2001; Leiblein *et al.*, 2003). In fact, there are considerable path dependencies and companies differ in their expertise and capabilities of successfully implementing offshoring activities dependent on their background.

Supplementary to these “self-made” experiences, companies can learn vicariously from surrounding firms, imitating or avoiding activities from others (Huber, 1991; Levitt *et al.*, 1988; March, 1991). Many firms are lacking a detailed understanding of offshoring and are uncertain about potential shortcomings and drawbacks. They look to other firms for cues and rely on what they can learn from them (DiMaggio *et al.*, 1983; Haunschild *et al.*, 1997). The inter-firm knowledge transfer is enabled by suppliers or customers with offshoring experience, employee turnovers, partnerships and industry associations, consultancies that provide their advisory service to several firms, standardization boards, universities and research-centers (Blind, 2006; Capello & Faggian, 2005; Levitt *et al.*, 1988). As we know from Lewin *et al.* (2007) the number offshoring activities has been continuously increasing since its early days. More and more firms gain offshoring experience and more and more know-how on offshoring is available, that helps firms to boost success of their offshoring activities. By consequence, firms in the 80s had to cope with different conditions starting their offshoring activities than firms nowadays.

Overall, success of an offshoring implementation might be affected by this “publicly” available knowledge, the general offshoring capabilities of a firm and its governance-mode-specific experience acquired along its offshoring path.

3.2.2 Impact of specific configuration of an offshoring implementation on success

Even with considerable offshoring experience a transfer is not trivial. As previous studies show (e.g., Lewin *et al.*, 2007; Lewin *et al.*, 2006b) most of the support functions are transferred to Asia, particularly to India and China. Theory and practice indeed show, the cultures in these countries are quite different from the Western ones (Hofstede, 1980). These differences are significantly increasing the complexity of a transfer abroad and hamper the application of existing offshoring know-how (Agarwal, 1994; Chang *et al.*, 2001). As we know from many studies, the more distant two countries from a cultural perspective are the more different the organizational characteristics and administrative practices of firms in these countries will likely be (Chen & Hu, 2002; Hofstede, 2001). Firms face the problem that local employees, suppliers, partners and governmental officials have different belief systems, values and expectations (Fisher *et al.*, 2001; Gomez-Mejia & Palich, 1997; Slangen & van Tulder, 2009). For managers it is difficult to apply their acquired knowledge on managerial techniques, structures and processes. In fact, the operation in a foreign environment causes inability to assess costs and risks associated with investments and operations (Agarwal, 1994; Fisher *et al.*, 2001). Hence, existing organizational characteristics and managerial practices cannot be directly applied to the offshored entity but have to be adapted to suit local environment. Individuals have to learn how to act in the new environment and to adjust their behavior to the new settings (Newman & Nollen, 1996).

Despite these substantial disadvantages many firms decide to transfer their support functions even to culturally distant countries, because many of these promise low wage and salary levels and vast pools of qualified personnel. The firms are willing to cope with the cultural complexity and try to address this issue with an appropriate governance mode. Thereby, they can choose from a wide spectrum of potential alternatives. When we consider a sales-oriented internationalization case, the governance mode is typically defined by two decisions (Kogut *et al.*, 1988). On the one hand, the company can decide whether it wants to acquire a foreign company or

establish a new one. On the other hand, it has to decide on the degree of ownership. It can own the foreign subsidiary as a whole or only possess a certain share (joint venture). Pure contract-based entry modes are also possible (Chang *et al.*, 2001; Hennart, 1988; Tihanyi *et al.*, 2005). When we apply this framework to offshoring of support functions, the first decision might not be applicable. The acquisition of a foreign unit to perform own support functions abroad is very unusual in case of offshoring. So, only the establishment of a new foreign entity is a conclusive option and three potential alternatives evolve: (i) contractual case representing the external governance mode, also called (offshore) outsourcing, (ii) joint venture and (iii) wholly owned subsidiary representing the pure internal governance mode (Kaka, 2003). From IB theory we know that each of these governance modes has its specific advantages and drawbacks in internationalization activities (*e.g.*, Demirbag *et al.*, 2000; Jiatao, 1995; Yigang *et al.*, 1999). The modes clearly differ with respect to level of control a firm can exert on its foreign operations, required efforts to implement and operate the foreign entity, risk involved in implementing offshoring activities, and scale of expertise and know-how a firm can access. With an internal governance mode, firms have entire control over their foreign entities (Boateng & Glaister, 2002; Chan, 1995; Newbould, Buckley, & Thurwell, 1978). They can leverage existing structures that were already successfully applied in the home country and employ them abroad (partially without or only with minor changes). A protracting integration of joint venture partners or service providers is not necessary. However, firms have to invest substantial financial resources and managerial capacities to establish foreign operations (Pangarkar *et al.*, 2003; Woodcock *et al.*, 1994). In addition, firms have to cope with all challenges and problems on their own. Without the appropriate offshoring experience, even minor issues can delay the time plan of an implementation and endanger the success of the offshoring project.

In joint ventures, firms can pool complementary resources, assets and capabilities and benefit from the endowment of a local partner (Boateng *et al.*, 2002; Jiatao, 1995). This partner

might be better capable of managing local labor force, suppliers and governmental authorities (Jiatao, 1995; Kogut *et al.*, 1988; Yigang *et al.*, 1999). But, there are also substantial drawbacks, since significant resources and experience are necessary to identify an appropriate partner and negotiate the corresponding contracts (Woodcock *et al.*, 1994). In addition, resources adapting to new partners and coordinating strategic goals, policies and management structures are necessary (Boateng *et al.*, 2002; Woodcock *et al.*, 1994; Yigang *et al.*, 1999). Therefore, some scholars argue that joint ventures are intrinsically inefficient because of complex management relationships (Boateng *et al.*, 2002; Pangarkar *et al.*, 2003).

The external governance mode represents an interesting low-commitment alternative which has significant advantages (Maskell, Pedersen, Petersen, & Dick-Nielsen, 2007). An external provider has more expertise and specialized knowledge about offshoring projects and can operate on a larger scale (Chalos *et al.*, 1998; Heikkilä *et al.*, 2002; Prahalad *et al.*, 1990). As in case of a joint venture, the service provider has a better understanding of the local environment. This promises a fast implementation and the establishment of highly efficient processes. Furthermore, an external governance mode enables firms to focus on its core competencies (Dess, Rasheed, McLaughlin, & Priem, 1995). Several activities in the area of support functions might not represent core competencies of a firm (*e.g.*, finance and accounting, legal services). But, there are also significant drawbacks of an external governance mode. Firms risk to loose control over the transferred activities. This may result in a dependency from the provider who might react opportunistically and takes advantage of the setting (Quinn *et al.*, 1994; Razzaque *et al.*, 1998). Firms may also loose expertise and competence in specific functions or valuable knowledge disseminates to the market (Leiblein *et al.*, 2002). Finally, additional efforts for coordination and information exchange with the provider might sweep off the previously discussed efficiency advantages (Levy, 1995; Rasheed *et al.*, 2005; Schilling *et al.*, 2002).

3.3 Hypotheses

3.3.1 Effect of path dependencies and knowledge on offshoring success

As we discussed before, the development path of a firm defines crucial premises for the offshoring success of a firm. A company already having extensive offshoring expertise and appropriate resources to undertake the transfer does not necessarily have to incorporate an external partner and the firm might decide in favor of an internal mode. Companies without any offshoring background lack appropriate knowledge and expertise to handle the process of transferring, managing and monitoring a foreign entity (Gatignon *et al.*, 1988). In case of problems efficiency and effectiveness of processes and routines deteriorate. So, more costs will occur, potential cost savings vanish and the expected service level cannot be achieved. In subsequent offshoring activities a firm can benefit from previous learnings (Jiatao, 1995) and lay the foundations for an efficient transition phase (even so not all learnings might not be directly applicable). With this appropriate know-how, a firm ensures a fast realization of expected savings and service level. In summary, companies that do not have the appropriate capabilities and experience will suffer inappropriate processes as well as routines and need more time to reach the cost savings or the expected service level. Thus, we derive the hypothesis:

Hypothesis 1: The more offshoring experience a firm has the less time is required to achieve expected cost savings and the targeted service level.

Some parts of the knowledge gathered in previous implementations are not effortlessly applicable in similar settings (Leiblein *et al.*, 2002). In fact, there are many capabilities which are only useful for a specific governance mode. The knowledge based on experience made with an internal governance mode cannot be exerted directly to an external mode and *vice versa* (Chang *et al.*, 2001). A firm whose experience is built on numerous implementations with an internal governance mode has amplified its expertise with ongoing repetitions and established feasible routines and processes

for the implementation of an internal governance mode (Levitt *et al.*, 1988; Pennings & Barkema, 1994). However, it has not much knowledge how to successfully cooperate with an external service provider. Obviously, the employment of heterogeneous governance modes in the offshoring path results in a flattened learning curve and slowed implementation pace. In case of an homogeneous offshoring path, a firm might benefit from previous learnings and can leverage synergies. It can rely on a single type of experts and does not need to have knowledgeable specialists available for the implementation of internal and external governance modes. Overall, the homogeneity in the offshoring path enables a fast implementation and a quick realization of expected savings and targeted service level. Thus, we derive the hypothesis:

Hypothesis 2: The time required to reach expected cost savings and the targeted service level increases when a company uses heterogeneous governance modes at offshoring sites.

Beyond such firm-specific experience in the course of a firm's offshoring-path there are also publicly accessible sources of know-how on offshoring. Firms "absorb" knowledge from the external environment and incorporate it (Audretsch & Feldman, 1996; Audretsch & Stephan, 1999; Capello *et al.*, 2005). They learn vicariously from other firms (Huber, 1991; Levitt *et al.*, 1988) and complete - sometimes even substitute - their own experience (*e.g.*, Srinivasan, Haunschild, & Grewal, 2007). The more firms conduct offshoring activities the more knowledge on offshoring is available. Obviously, starting conditions for offshoring activities are different depending on the publicly accessible know-how that has been continuously increasing by time.

The knowledge spill over from external sources is based on relations to other firms with offshoring experience, institutions as universities or research centers investigating the offshoring phenomenon or individuals with the appropriate capabilities. The firms can leverage this knowledge to avoid pitfalls, to improve the processes of implementation and to get a more realistic estimation about benefits or risks of offshoring. Thus, we derive the hypothesis:

Hypothesis 3: The more general information is available about offshoring the less time is required to reach expected cost savings and the targeted service level.

3.3.2 Effect of cultural distances on offshoring success

Beyond these premises for a successful implementation the firms influence the outcomes of the offshoring activities by the choice of an appropriate host country. As we argued before, the cultural distance between home and host country makes an efficient and successful offshoring implementation difficult (Chang *et al.*, 2001; Chen *et al.*, 2002; Hofstede, 2001). Organizational structures, managerial practices and processes have to be adapted to suit the local environment at the offshoring site. As long as these adaptations are implemented incompletely or inadequately, the foreign entity operates with deficient processes and routines (Vermeulen *et al.*, 2002). These deficiencies restrain service quality and annihilate potential cost savings. Hence, a large cultural distance might overwhelm the managerial resources by its complexity and extends the implementation phase in which the offshoring entity suffers still inappropriate organizational structures. Supplementary, a large distance might hamper the application of existing knowhow and forces the management to learn how to operate in the new environment (Newman *et al.*, 1996). Overall, as cultural distance creates complexity adding too much of it will prolong the implementation phase and the time to achieve expected cost savings and targeted service level. Thus, we derive the hypothesis:

Hypothesis 4: The larger the cultural distance between home and host country the longer it takes to achieve expected cost savings and the targeted service level.

3.3.3 Effect of chosen governance mode on offshoring success

As discussed before, the governance mode can significantly influence the success of an offshoring implementation. Each governance mode has its specific advantages and drawbacks, and with regards to the time to achieve the expected targets clear differences emerge. Keeping in mind, that

joint ventures are not so much common for offshoring (Lewin *et al.*, 2007), we focus on the differentiation between an external and an internal governance mode. In case of a pure internal governance mode, a firm is in charge to undertake all tasks required to transfer an entity on its own. This includes recruiting new employees, training them, setting-up local infrastructure, etc. (Benito *et al.*, 1994; Vermeulen *et al.*, 2002). The management team capable of driving these tasks is limited in capacity (Eisenhardt *et al.*, 2000; Teece *et al.*, 1997). In fact, the implementation of an offshoring activity puts a high load on the management team and a considerable amount of time is necessary to perform all relevant tasks of the transfer. A firm can accelerate this transition process by incorporating an external service provider. By leveraging a partner, the managerial tasks can be assigned to local staff with local roots and experience, which is more familiar with local culture as well as politics and which is better able to manage a local workforce and relationships with suppliers or governments (Fisher *et al.*, 2001; Franko, 1976; Stopford *et al.*, 1972).

Furthermore, there might be an even more pragmatic reason why an external governance mode results in a faster implementation. A cooperation with an external partner is based on contractual agreements. Depending on the design of the contract, the partner might be fully in charge to guarantee the achievement of the set targets within a certain period of time. In contrast to these advantageous time savings there are also time consuming activities that are caused by the incorporation. As discussed before the identification and evaluation of adequate suppliers is not trivial and requires extra time (Doz *et al.*, 1998; Rangan, 2000). However, as service providers get more and more experienced and professionalized the required amount of time for these activities shortens. On the top of that, a firm will typically screen offshoring capabilities as well as experience of the potential partners and choose the one where it expects a fast and smooth transition. By selecting the right service provider the firm can further shorten the required amount of time to achieve its targets. In summary, we assume that the advantages of an external governance mode

prevail and we derive that the incorporation of an external partner results in a faster implementation. This leads us to the hypothesis:

Hypothesis 5: The time required to achieve expected cost savings and the targeted service level is lower in case of an external governance mode.

3.4 Methodology

3.4.1 Data sample

In order to test our hypotheses, we used data provided by the Offshoring Research Network (ORN). The ORN is a joint effort of several research teams in the US and in Europe. In response to lack of robust and detailed firm-level data on the emerging offshoring trend, ORN launched in 2004 a multi-year international study on offshoring in US and European firms. The study consists of separate country-specific surveys which query previous, current and planned offshoring activities of firms. Each survey has been scrutinized with country specific pretests. Except for minor national peculiarities, data collection process of the surveys are alike. The data sample underlying this paper is based on the third ORN survey and covers 128 US and 42 German companies with offshoring experience. In the average, these firms have about 44 thousand employees. 41% of the analyzed firms are in the service industry (transportation, health care etc.), another 27% operate in the manufacturing industry, 19% in the financial industry and the remaining 13% in other industries. These firms coordinate 525 offshoring implementations across the globe. 36% of these implementations are located in India, 11% in China and 12% in other Asian countries; further 11% of the entities are in Europe and another 11% in Eastern Europe. The remaining entities are in Latin America (10%) or other countries. With respect to the transferred functions firms prefer primarily to offshore IT (31%), call center (18%), Finance and Accounting (13%) and R&D (12%). Other functions are below 10%. The larger part of the offshoring activities are implemented with an internal governance mode (57%). The first of the

implementations was already launched 1980, the last one covered in this sample in 2006. We are covering this long time period to observe long time effects as for example the impact of publicly available knowledge and to ensure that we have enough data points to perform a meaningful analysis.

Exemplarily, we briefly discuss the data collection process for the German firms (details about the process in other countries can be provided upon request by the authors). Focus in Germany has been on the top 500 companies according to their annual sales in 2005. We contacted these companies by email or phone, identified a contact person with a high seniority level to guarantee an appropriate overview across all support functions and asked them to fill out an online questionnaire about their offshoring activities in IT, call centers, finance and accounting, human resources, purchasing, product development and R&D. 124 respondents returned a completed survey. 83% of respondents were members of senior management (*e.g.*, CEOs, members of board, senior vice presidents, division heads) or direct reports to them. Given their personal involvement and positioning in the firm, we believe that our respondents have been knowledgeable informants, whose responses to our survey are reasonably accurate even in case of early offshoring transitions. To check on non-response bias we contacted randomly some non participating firms and asked for feedback. The firms stated primarily company policies, confidentiality concerns and lack of resources as reasons for rejecting participation. Some did not provide any explanation. Further tests showed neither significant differences on our major variables among the responses from early versus late respondents nor significant differences on demographic variables as company size and industry affiliation among participating and non-participating firms, suggesting that non-response bias is not a problem in our data (Armstrong *et al.*, 1977). Out of the 124 filled questionnaires 5 were excluded as they were affiliated to parent companies already covered in the study. From the remaining 119 German companies, 42 are already performing offshoring and have 178 offshoring implementations.

A first check of the total data sample revealed that significant parts of the data were not completely available due to incompletely filled surveys. As data for individual variables was missing for more than 5 percent of observations, list-wise deletion of incomplete observations would have significantly reduced sample size and thus compromised model power and was therefore deemed unacceptable (Roth, 1994). Little's MCAR test confirmed that data was not missing completely at random ($p < 0.001$). Thus, we used SPSS's EM method to impute missing values, following the methodology literature's recommendation to prefer ML-based imputations over other methods (Graham *et al.*, 1996).

3.4.2 Measurement of variables

The two *dependent variables* were measured as two separate items. The respondents of the survey were asked to indicate for each offshoring activity on an ordinal scale how much time it took to achieve the expected cost savings and the targeted service level. The respondents could choose between four categories '0 to 1 month', '2 to 5 months', '6 to 12 months' and 'more than 12 months'. Each offshoring activity has been classified in one of these four categories and an ordinal value from 1 to 4 has been assigned.

The *offshoring experience* of a firm was covered by previous offshoring activities. Based on the launch year, we determined for every offshoring activity the total number of forerunner implementations, previously transferred functions, applied governance modes, selected locations and the length of time since a firm's first implementation. We normalized each item and calculated a composite index on the mean of these five items (Cronbach's alpha 0.80). A high value in the resulting index indicates that at the moment when the offshoring activity took place the firms has had large experience with offshoring and vice versa for a low index.

The *heterogeneity of the offshoring path* of a firm was measured as an index covering all hitherto existing offshoring implementations of a firm. In a first step, we determined the share of internal/external out of all implementations and measured the heterogeneity as the deviation from

the most similar offshoring path using one governance mode solely. In a second step, we multiplied this measure by two to ensure that the index varies between 0 for non heterogeneity to 1 for maximum heterogeneity. For example, a firm which owns 3 internal and 2 external implementations has a share of 60% internal and 40% external implementations. The closest non heterogeneous offshoring path - meaning one governance mode only - would have been 5 internal and 0 external implementations resulting in a share of 100% internal implementations. The difference between the actually chosen offshoring path and the closest single-governance-mode path is 40%. Multiplying this value by 2 is resulting in the final heterogeneity index of 0.8.

The *publicly available knowledge* was measured by the number of existing offshoring implementations observed in our data sample. In detail, the amount of available knowledge in a specific year is represented by the number of observed implementations in the respective time frame. The more offshoring implementations exist the more offshoring knowledge gets dispersed and the more information is publicly available. To cope with finite size effects in early years we used an exponential trend line to obtain a continuous and steady proxy for the variable.

The effect of the *cultural distance* between the home and the host country has been operationalized with two different measures. On the one hand, we measured the cultural distance based on the Kogut-Singh index (Kogut *et al.*, 1988) which calculates the distance as the average of the differences between the two countries in four cultural dimensions while controlling for variance in each dimension at the same time. The underlying dimensions are power distance, individuality, masculinity and uncertainty avoidance (Hofstede, 1994). We did not consider the fifth dimension “long term orientation” as it has been only available for a limited subset of observed host countries. The Kogut-Singh index based on the four dimensions has been widely used in the international entry mode research and has been approved by recent studies (*e.g.*, Drogendijk & Slangen, 2009; *e.g.*, Fisher *et al.*, 2001). On the other hand, the respondents were asked to rate the risk of “cultural differences” on a five point Likert scale, too.

The chosen *governance mode at the offshoring site* was measured as a dichotomous variable differentiating between an internal and an external governance mode. As discussed above, we did not cover the rarely used joint ventures and dropped the corresponding cases.

Regarding the control variables, we checked on size of the firm, industry affiliation, FDI restrictiveness and GDP per capita in target country, scale and scope of the offshoring step, level of expected cost savings and type of the transferred support functions. In many internationalization studies, the size of a company is crucial. It can explain the firm's strategy and has always been of interest for scholars (*e.g.*, Pan *et al.*, 2000). It is represented by the number of employees which is a widely established measure in the literature (*e.g.*, Gatignon *et al.*, 1988). Additionally, we incorporated the industry affiliation of the firms differentiating between financial, manufacturing, services, trade and other industries (Chang *et al.*, 2001; Kogut *et al.*, 1988; Lopez-Duarte & Garcia-Canal, 2002).

According to previous research host governments' attitudes with respect to foreign investment is a key factor that impacts success of internationalization initiatives (Lu, 2002). These attitudes might be represented by infrastructural support, easy granting of work permissions, etc. (Pangarkar *et al.*, 2003). To cover the effect of the host governments' attitudes we integrated the FDI restrictiveness index of the OECD (Koyama & Golub, 2006) as a control variable. Similarly, some researches argued that the success of internationalization activities might be influenced by the GDP of the target country and should be controlled. So, we also integrated the GDP per capita as a control (*e.g.*, Barkema *et al.*, 1997).

Furthermore, we incorporated a variable controlling scale and scope of the transfer step. Obviously, a simple offshoring step in which only one activity is transferred is more manageable than simultaneous transfers of several activities (scale) from various support functions (scope) to different offshoring locations (scope). In the second case, the need for organizational adaptations is much higher and triggers substantial organizational changes. Whereas in case of a single offshoring

effort, the effects on the organization might be limited, large scale transfers always require extensive adaptations of the organizational structure. Three dimensions were taken into account to measure the scale and scope. We determined the number of implementations that occurred in the same year and identified the number of involved target regions and affected support functions. We normalized these three figures and calculated a composite index on the mean of these three items (Cronbach's 0.70). A high index indicates that it was a complex transition and vice versa for a low index. In addition, we controlled the actually expected cost savings of the considered implementations. As discussed above, for many companies the primary goal of offshoring is the reduction of costs (Lewin *et al.*, 2006b, 2006a). However, the achievement of the cost savings are not trivial and require time. So, the aspiration level might influence the time to achieve these and we checked whether there is an impact of extraordinarily high or low expectations (more/ less than one standard deviation above/ below the average of expected cost savings). In our statistics we assigned to each transition a variable indicating high, normal or low expectations. Finally, not all support functions seem to have the same feasibility for being offshored. To cover potential function-specific effects we included a categorical variable in our analysis that differentiates between *knowledge intensive functions* as R&D, product development and design, *idiosyncratic functions* as finance and accounting, HR and procurement, and *quasi-autonomous functions* as IT and call center. The knowledge intensive functions are characterized by less strictly defined processes and open-ended activities. The tasks are rarely transaction based and require high skilled employees with detailed expertise in specific domains (Ernst, 2002; Farrell *et al.*, 2005a). Activities in idiosyncratic functions are particularly firm-specific and require detailed knowledge about existing processes and structures. Transferring this knowledge is a major challenge in the implementation phase. Most of the knowledge is not easily codable due to its tacit character (*e.g.*, Nonaka *et al.*, 1995). Additionally, there exist far-reaching and home country-specific legal regulations that also complicate a transfer (Myloni *et al.*, 2004; Verburg *et al.*, 1999). With respect to these intricacies a fast implementation

seems to be less likely. Finally, the quasi autonomous functions as IT and call center are typically modularized in many firms and more easily detachable from the rest of the organization. They represent functions that are offshored quite often and require less complex adaptations at the offshoring site.

Table 3 displays the means, standard deviations and correlations of the above named variables. Most of the correlations among variables are relatively small. Furthermore, an examination of the variance inflation factors (VIF) for all of the independent variables reveals that all values are close to 1. The largest VIF value is 4.38, which is far below the threshold of 10 as recommended by Neter *et al.* (1985).

Variables	Mean	STD	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Time to reach cost savings	3,00	0,75	1										
2. Time to reach service level	2,77	0,76	0,61**	1									
3. Size	0,60	0,91	-0,11**	-0,13**	1								
4. Scale and scope	-0,01	0,79	-0,07*	-0,19**	0,09*	1							
5. FDI restrictiveness	0,30	0,12	0,12**	0,08*	-0,07	-0,06	1						
6. GDP per capita host country	12,55	11,71	-0,11**	-0,07	0,06	0,01	-0,85**	1					
7. Firm-specific experience	-0,02	0,78	-0,01	-0,04	0,09*	0,06	0,05	-0,14**	1				
8. Publicly available knowledge	0,43	0,23	-0,11**	-0,15**	-0,23**	-0,03	0,19**	-0,26**	0,27**	1			
9. Heterogeneity	0,07	0,13	0,20**	0,15**	0,16**	0,18**	0,03	-0,11**	0,36**	-0,06	1		
10. Cultural distance (Kogut Singh)	1,98	1,10	0,05	0,08*	-0,09*	0,10**	0,25**	-0,37**	0,09*	-0,01	0,19**	1	
11. Cultural distance (perceived)	2,92	0,90	0,12**	0,11**	0,02	-0,05	0,03	-0,04	0,10**	-0,09*	0,00	-0,07*	1

Table 3: Descriptive statistics (table shows mean, standard deviation and correlations of the used variables; * $p < 0.05$; ** $p < 0.01$; number of employees per 1,000)

3.4.3 Method for testing the hypotheses and model

For modeling the time required to achieve the expected offshoring targets, we used an ordinal logistic regression. To test our hypotheses, we estimate the probability $P_i(j)$ that it takes time j (ordinal scale of time variable) for the implementation i to reach the expected cost savings or the targeted service level by the two equations:

$$P_i(j) = \frac{\exp(z_i^j)}{1 + \exp(z_i^j)} - \frac{\exp(z_i^{j-1})}{1 + \exp(z_i^{j-1})} \quad (I)$$

whereas

$$z_i^j = b_0^j + b_1 \text{EXPE}_i + b_2 \text{PUKO}_i + b_3 \text{HETG}_i + b_4 \text{CULT}_i + b_5 \text{GMOS}_i + b_6 \text{SIZE}_i \\ + b_7 \text{INDU}_i + b_8 \text{SCAL}_i + b_9 \text{FDIR}_i + b_{10} \text{GDP}_i + b_{11} \text{COSV}_i + b_{12} \text{FUNC}_i \quad (II)$$

Hence, the probability $P_i(j)$ is determined by the factors firm-specific offshoring experience (EXPE_i), publicly available knowledge (PUKO_i), heterogeneity of offshoring path (HETG_i), cultural distance (CULT_i), governance mode at the offshoring site (GMOS_i), size of the firm (SIZE_i), industry affiliation (INDU_i), scale and scope of offshoring activity (SCAL_i), FDI restrictiveness (FDIR_i) and GDP per capita (GDP_i) of the host country, expected cost savings level (COSV_i), function specificity (FUNC_i) and their respective coefficients b_k ($k=0,1,\dots,12$).

3.5 Results

The results of the ordinal logistic regression using the above specified equations are presented in Table 4. A *positive sign* in the identified coefficients indicate an *increase in the time* required to achieve the expected savings and service targets respectively and *vice versa* for a negative sign.

Perspective	Variables	Time to achieve planned savings								
		All firms b value	All firms STE	Sign.	US firms b value	US firms STE	Sign.	GE firms b value	GE firms STE	Sign.
Control variables	Size	-0,098	(0,115)		0,321	(0,179)	*	-0,153	(0,175)	
	Financial industry	-0,207	(0,382)	**	-0,117	(0,409)		2,257	(2,068)	
	Manufacturing industry	-0,703	(0,302)	***	-0,418	(0,331)	***	1,504	(1,933)	
	Services industry	-0,813	(0,303)	***	-0,970	(0,323)	***	1,822	(1,954)	
	Trade industry	-1,687	(0,581)	***	-2,424	(0,659)	***	1,628	(2,225)	
	Other industries		N/A			N/A			N/A	
	FDI restrictiveness	1,690	(1,360)		-0,147	(1,833)		2,121	(2,252)	
	GDP per capita host country	0,005	(0,014)		-0,014	(0,020)		0,015	(0,023)	
	Scale and scope	-0,146	(0,117)		-0,354	(0,133)	***	0,282	(0,348)	
	High sav. expectations	-0,949	(0,245)	***	-1,120	(0,275)	***	-0,262	(0,737)	
Low sav. expectations	0,659	(0,264)	**	0,326	(0,330)		1,137	(0,499)	**	
Knowl. intens. functions	-0,181	(0,224)		-0,286	(0,268)		0,046	(0,493)		
Idiosyncratic functions	0,129	(0,215)		0,058	(0,246)		-0,217	(0,488)		
Autonomous functions		N/A			N/A			N/A		
Premises for offshoring	Firm-specific experience									
	Publicly available knowledge									
Heterogeneity										
Impl. specific configuration	Cultural distance (Kogut Singh)									
	Cultural distance (perceived)									
	Governance Mode									
Statistics	-2 Log-Likelihood	1064,5			756,2			274,8		
	Chi-Square	44,9			55,0			15,7		
	Degrees of freedom	12			12			12		
	Significance	0,000			0,000			0,207		
	Cox and Snell	0,082			0,128			0,120		
	Nagelkerke	0,093			0,147			0,132		
	McFadden	0,040			0,068			0,054		
	N	525			402			123		

Table 4: Results of Ordinal Logistic Regression for time required to achieve expected savings level and service level (* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$; number of employees per 100,000; GDP in 1,000 US dollars; other industries and autonomous used as reference group)

Perspective	Variables	Time to achieve expected service level					
		All firms STE	US firms STE	GE firms STE	b value	Sign.	Sign.
Control variables	Size	-0,055 (0,112)	0,021 (0,173)	0,027 (0,174)			
	Financial industry	-0,325 (0,377)	-0,225 (0,402)	-0,670 (2,136)			
	Manufacturing industry	-0,179 (0,295)	0,018 (0,324)	-0,211 (2,015)			
	Services industry	-0,656 (0,298)	-0,661 (0,314)	-0,105 (2,033)	**	**	
	Trade industry	-0,802 (0,568)	-1,461 (0,634)	2,123 (2,363)	**	**	
	Other industries	N/A	N/A	N/A			
	FDI restrictiveness	0,475 (1,325)	-0,525 (1,786)	1,462 (2,243)			
	GDP per capita host country	-0,001 (0,014)	-0,004 (0,019)	0,000 (0,023)			
	Scale and scope	-0,480 (0,117)	-0,499 (0,132)	-0,809 (0,346)	***	***	**
	High sav. expectations	-0,405 (0,234)	-0,554 (0,255)	-0,516 (0,732)	*	*	*
	Low sav. expectations	0,461 (0,261)	0,274 (0,325)	0,892 (0,488)	*	*	*
	Knowl. intens. functions	-0,063 (0,218)	-0,023 (0,257)	-0,029 (0,489)			*
	Idiosyncratic functions	0,126 (0,210)	0,366 (0,240)	-0,855 (0,488)			*
Autonomous functions	N/A	N/A	N/A				
Premises for offshoring	Firm-specific experience						
	Publicly available knowledge						
	Heterogeneity						
Impl. specific configuration	Cultural distance (Kogut Singh)						
	Cultural distance (perceived)						
Statistics	Governance Mode						
	-2 Log-Likelihood	1150,5	834,3	281,0			
	Chi-Square	31,6	33,4	17,6			
	Degrees of freedom	12	12	12			
	Significance	0,002	0,001	0,130			
	Cox and Snell	0,058	0,080	0,133			
	Nagelkerke	0,065	0,090	0,146			
	McFadden	0,027	0,038	0,059			
	N	525	402	123			

Table 4 (continued): Results of Ordinal Logistic Regression for time required to achieve expected savings level and service level (* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$; number of employees per 100,000; GDP in 1,000 US dollars; other industries and autonomous used as reference group)

Perspective	Variables	Time to achieve planned savings					
		All firms STE	Sign.	US firms STE	Sign.	GE firms STE	Sign.
	Size	-0.434 (0.127)	***	-0.152 (0.199)		-0.303 (0.196)	
	Financial industry	0.173 (0.403)		0.211 (0.433)		0.880 (2.103)	
	Manufacturing industry	-0.736 (0.315)	**	-0.432 (0.358)		-0.653 (1.993)	
	Services industry	-0.355 (0.320)		-0.531 (0.350)		-0.035 (2.003)	
	Trade industry	-1.454 (0.597)	**	-1.942 (0.697)	***	-1.076 (2.330)	
	Other industries	N/A		N/A		N/A	
	Scale and scope	-0.262 (0.126)	**	-0.501 (0.148)	***	0.046 (0.397)	
	FDI restrictiveness	2.787 (1.432)	*	0.506 (2.026)		1.409 (2.381)	
	GDP per capita host country	0.002 (0.016)		-0.023 (0.022)		0.005 (0.027)	
	High sav. expectations	-1.079 (0.255)	***	-1.248 (0.287)	***	-0.357 (0.789)	
	Low sav. expectations	0.677 (0.281)	**	0.295 (0.365)		1.174 (0.537)	**
	Knowl. intens. functions	-0.251 (0.236)		-0.299 (0.288)		-0.085 (0.519)	
	Idiosyncratic functions	-0.088 (0.229)		-0.068 (0.269)		-0.429 (0.531)	
	Autonomous functions	N/A		N/A		N/A	
	Firm-specific experience	-0.051 (0.136)		-0.001 (0.163)		-0.257 (0.294)	
	Publicly available knowledge	-1.594 (0.467)	***	-1.641 (0.542)	***	-0.829 (1.195)	
	Heterogeneity	4.931 (0.832)	***	5.662 (0.988)	***	4.139 (1.892)	**
	Cultural distance (Kogut Singh)	0.038 (0.091)		-0.091 (0.112)		0.263 (0.211)	
	Cultural distance (perceived)	0.429 (0.103)	***	0.533 (0.122)	***	0.281 (0.228)	
	Governance Mode	1.047 (0.204)	***	0.968 (0.242)	***	2.208 (0.550)	***
	-2 Log-Likelihood	966.7		671.4		250.2	
	Chi-Square	142.7		139.8		40.2	
	Degrees of freedom	18		18		18	
	Significance	0.000		0.000		0.002	
	Cox and Snell	0.238		0.294		0.279	
	Nagelkerke	0.271		0.339		0.308	
	McFadden	0.129		0.172		0.138	
	N	525		402		123	

Table 4 (continued): Results of Ordinal Logistic Regression for time required to achieve expected savings level and service level (* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$; number of employees per 100,000; GDP in 1,000 US dollars; other industries and autonomous used as reference group)

Perspective	Variables	Time to achieve expected service level								
		All firms		US firms		GE firms				
		b value	STE	Sign.	b value	STE	Sign.	b value	STE	Sign.
	Size	-0,309	(0,120)	**	-0,386	(0,188)	**	-0,126	(0,192)	
	Financial industry	-0,039	(0,392)		0,040	(0,421)		-1,898	(2,227)	
	Manufacturing industry	-0,090	(0,304)		0,068	(0,341)		-1,581	(2,132)	
	Services industry	-0,230	(0,312)		-0,213	(0,335)		-1,284	(2,142)	
	Trade industry	-0,564	(0,584)		-1,025	(0,665)		0,442	(2,485)	
	Other industries		N/A			N/A			N/A	
	Scale and scope	-0,613	(0,129)	***	-0,615	(0,143)	***	-1,203	(0,400)	***
	FDI restrictiveness	1,074	(1,379)		0,852	(1,916)		0,474	(2,360)	
	GDP per capita host country	-0,005	(0,015)		0,001	(0,021)		-0,024	(0,027)	
	High sav. expectations	-0,529	(0,244)	**	-0,716	(0,267)	***	-0,760	(0,783)	
	Low sav. expectations	0,534	(0,271)	**	0,440	(0,347)		0,960	(0,517)	*
	Knowl. intens. functions	-0,204	(0,228)		-0,090	(0,272)		-0,295	(0,508)	
	Idiosyncratic functions	-0,085	(0,221)		0,260	(0,256)		-1,414	(0,533)	***
	Autonomous functions		N/A			N/A			N/A	
	Firm-specific experience	-0,216	(0,131)	*	-0,149	(0,154)		-0,649	(0,296)	**
	Publicly available knowledge	-1,539	(0,450)	***	-1,818	(0,517)	***	-0,873	(1,178)	***
	Heterogeneity	3,553	(0,779)	***	3,750	(0,908)	***	5,588	(1,908)	***
	Cultural distance (Kogut Singh)	0,191	(0,089)	**	0,239	(0,107)	**	0,130	(0,207)	
	Cultural distance (perceived)	0,289	(0,098)	***	0,357	(0,113)	***	0,128	(0,225)	***
	Governance Mode	0,937	(0,195)	***	0,875	(0,227)	***	1,450	(0,530)	***
	-2 Log-Likelihood		1068,5			760,1			262,2	
	Chi-Square		113,6			107,6			36,4	
	Degrees of freedom		18			18			18	
	Significance		0,000			0,000			0,006	
	Cox and Snell		0,195			0,235			0,256	
	Nagelkerke		0,217			0,265			0,281	
	McFadden		0,096			0,124			0,122	
	N		525			402			123	

Table 4 (continued): Results of Ordinal Logistic Regression for time required to achieve expected savings level and service level (* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$; number of employees per 100,000; GDP in 1,000 US dollars; other industries and autonomous used as reference group)

Table 4 illustrates two different models to verify the proposed hypotheses. Model 1 shows the control variables only, models 2 the full integrated model. Both models are structured similarly. The first section covers the time to achieve the cost savings, the second one the time to achieve the service level. Each section is split in three columns (all firms, US sub-sample, German sub-sample).

As the results show the hypothesized relationship between time to achieve cost savings and firm-specific offshoring experience cannot be confirmed. Although, there is some for the total sample ($p < 0.1$) and significant impact the German sub-sample ($p < 0.01$) in the time to achieve service level. Regarding publicly available knowledge there is a strong confirmation ($p < 0.01$) in both categories (time to achieve cost savings and time to achieve service level) for the total sample and the US subsample. With respect to the effect of the heterogeneity in the offshoring path the impact is significant ($p < 0.05$) or highly significant ($p < 0.01$) in both categories and for both subsamples.

Regarding the impact of cultural distances the corresponding hypothesis is clearly confirmed using the perceived cultural differences in both sections for the total data sample ($p < 0.01$) and US sub-sample ($p < 0.01$). With respect to the Kogut-Singh index we can only observe a significant result in the total sample and the US sub-sample for the time to achieve expected service level. In addition to this analysis, we tested our hypotheses in separate models covering specific hypotheses per model in order to check consistency of our results (not illustrated in table 2). With respect to time to achieve the cost savings the results are nearly stable for the total sample (apart from some significance for the Kogut-Singh index). Regarding time to achieve the expected service level, the explanatory variables remain highly significant ($p < 0.01$). However, significance for the firm-specific experience was not anymore observable. With respect to subsamples the results are almost stable in both categories. The variables remain on the same significance level as in the integrated model or slightly change.

the results are almost stable in both categories. The variables remain on the same significance level as in the integrated model or slightly change.

The control variables reveal interesting insights, too. For the time to achieve cost savings as well as service level the level of expected savings might have a significant impact. The higher the expected savings the less time a firm requires to achieve this level. This relationship can be observed in the total sample and partially in the US and German sub-samples, too. Additionally, we can also observe some significance on size as well as on scale and scope. The higher scale and scope of an offshoring activity the less time is required to achieve the service level. This counterintuitive relationship can be observed for the total data sample but also for the sub-samples. The other control variables do not show any consistent picture.

3.6 Discussion

Previous studies in IB research investigating the success of internationalization activities are primarily focused on measuring financial performance based on indicators as return on asset or return on equity (*e.g.*, Chan, 1995). However, such measures do not seem to be appropriate for the evaluation of offshoring activities. Whereas sales-orientated internationalization steps are revenue driven and the entities abroad are organized as profit centers, most offshoring entities are cost driven and set up as cost centers (Smith & Pretorius, 2003). By consequence, the measurement of offshoring success based on revenues is not applicable. As we know from previous research (Lewin *et al.*, 2007; Lewin *et al.*, 2006b), cost savings and increase in service levels are under the most relevant offshoring objectives for firms. Furthermore, a complex organizational change as the transfer of an entity abroad might be either directly evaluated with respect to achieved cost savings/ enhancement of service level or by the time to achieve these. Whereas the first ones have been already discussed in literature (*e.g.*, Farrell, 2003, 2005) the last one is rather new, gets more and more relevant in business life and has been analyzed in detail by us.

To identify the relevant success factors we argued that the time to achieve a firm's offshoring targets is influenced by path dependencies. Firms can learn from previous offshoring activities how to cope with the new challenges and how to successfully cross borders (Barkema *et al.*, 1997; Terpstra *et al.*, 1988). In subsequent offshoring activities a firm can benefit from this learning and lay the foundations for an efficient transition phase. Unfortunately, we could hardly confirm this relation. This outcome is surprising. Many studies on sales-orientated internationalization steps have proven the relevance of experience to build the required capabilities (*e.g.*, Barkema *et al.*, 1997; Terpstra *et al.*, 1988). A potential explanation for this unexpected outcome might be an "inefficiency trap" wherein many firms are getting caught during their offshoring path. Firms beginning with offshoring will start with the "low hanging fruits". They transfer activities with a limited complexity and which are highly standardized. For these tasks savings and expected service levels can be quickly achieved. In the course of time, the quick wins are implemented and the firms continue with the transfer of more complex activities. However, the required expertise to cope with the higher complexity might have not yet been acquired. By consequence, a firm might not achieve its targets as fast as in the past anymore and might even have to accept a drop in its offshoring success. Finally, when the firm develops organizational capabilities for managing the offshoring of more complex activities it gets back to its previous success story and quickly achieves its target levels. Overall, we might not observe a continuously decrease of time to achieve target levels but there might be a U shaped curve.

With respect to the heterogeneity of the offshoring path we argued that firms which vary the governance modes take more time to implement their offshoring activities. By varying the governance modes in the offshoring path a firm's learning curve is flattened and the implementation pace is slowed. This relationship has been clearly observed for US and German firms. Furthermore, we could clearly confirm the impact of the publicly available knowledge. There are external sources of know-how and firms can learn vicariously from others. They can leverage

this know-how to achieve their offshoring targets faster. However, we have to be aware that not all firms can profit equally from the available knowledge. There might be barriers which hamper some firms to gather and leverage the publicly available know-how. Comparing US and German firms we can observe a strong relationship for US firms whereas there is no impact on German firms. The US firms benefit from the publicly available knowledge that helps them to quickly achieve their targets. A potential explanation for this outcome might be a different level of “offshoring maturity”. As we know from Lewin *et al.* (2007) US firms adopted offshoring at a faster pace than their European colleagues. So, a significant share of the overall available knowledge is based on the offshoring activities of US firms and available in English only. It is obvious, that US firms can leverage the existing knowledge much easier than German firms. The consequences are obvious. German firms may be less capable to benefit from the publicly available knowledge.

Offshoring and a relocation of activities is a major challenge. Organizational structures, managerial practices and processes have to be adapted to suit local environments. When a firm is adding too much cultural distance, the management team might be overwhelmed by tasks and the company might need more time to achieve the expected cost savings and targeted service level. There is a clear impact of cultural distances on US firms but not an effect on German firms. This may be for historical reasons or due to specific market conditions in the home countries. German firms have a long tradition of internationalization, and in many cases have shown an ability to cope with the challenges of going abroad. German firms can look back on a long history of international activities and based on that might have more know-how and a lower risk to internationalize nowadays. In addition, some might argue that there is a more pragmatic reasoning for the proficient handling of cultural distances by German firms. Whereas US companies can leverage quite a large home market German firms have had to go abroad in order to enable further growth. Like their US peers, German firms face difficulties arising from cultural differences which might increase the time to reach their expected offshoring targets. But German firms seem to take on

those challenges more readily because of the sense of confidence their industrial history gives them and because the relative size of their national market prompt them to do so.

Furthermore, we could confirm the relevance of the used governance mode for offshoring success. Firms using an internal governance mode are in charge to perform all tasks required to transfer an entity on its own. By incorporating an external partner a firm can assign managerial tasks to local staff with local roots that are more familiar with the local settings and hence speed up the transition process. This has been clearly confirmed in our data. This is not surprising, as many IB studies have already proven in the past the impact of the chosen governance mode on the success of internationalization activities (*e.g.*, Jiatao, 1995; Jiatao *et al.*, 1991; Woodcock *et al.*, 1994). Despite this clear and consistent confirmation this relationship might be less pronounced in future offshoring implementations. The benefits of an external partner might lose relevance in the next years. Firms are professionalizing their offshoring activities and get more and more knowledgeable. By consequence, firms using an internal governance mode are catching up and might achieve their targets as fast as with an external governance mode.

Apart from the hypothesized relationships, the control variables revealed further interesting insights, too. We could observe a negative impact of a high aspiration level in terms of expected cost savings and the time to reach these as well as time to reach the service levels. This result is counterintuitive. We assumed that large cost savings are only possible with extensive adaptations which might prolong the implementation phase and the time to reach the target levels. However, data reveals a different relationship. The larger the expected savings the less time has been required to achieve the target levels. An explanation for this unexpected outcome might be that firms with above-average expectations are well prepared for offshoring, too. Based on publicly available information and on self-made experiences many firms might have a realistic picture about what they can achieve with their offshoring activities. They might not expect above-average savings unless they are well prepared. A similar argumentation might be applicable with respect to scale

and scope of an offshoring activity. There is a consistently negative relationship between scale and scope and the time to achieve the service level. Partially, this relation could be observed for the time to achieve the cost savings, too. Surprisingly, more complex offshoring activities correlate with a shorter time to achieve the targets.

Finally, the “consonance” between the time to achieve the savings and the time to achieve the service levels is noteworthy. Most variables influence both aspects simultaneously. When a firm faces an issue during the transition phase both aspects are typically affected. Obviously, it is hardly possible to compensate one aspect with the other one or to ‘sacrifice’ cost savings in favor of a quick achievement of the expected service level. This means for managers that the room to maneuver in case of problems is limited.

3.7 Limitations and suggestions for further research

With our analysis we investigated pivotal elements of offshoring success. However, there might be further aspects that are not yet covered. For example, internationalization research has shown that capital intensity (Haiyang *et al.*, 2002), capabilities (Boateng *et al.*, 2002) and commitment of all involved partners (Demirbag *et al.*, 2000), maturity of the offshored entity (Jiatao, 1995) and others have an impact, too. Further research might take these and other elements into account. Also an expansion of the factors investigated in our study might reveal additional insights. In particular, a further analysis of the path dependencies might be promising. Lewin *et al.* (2006b) showed that firms seem to follow a typical offshoring path. They start their activities with IT, then move to functions as Finance and Accounting and then continue with even more complex functions as R&D and product engineering. We do not yet know much about the principles underlying this process. A similar mechanism might apply with respect to the chosen offshoring locations. Based on made experiences in a specific offshoring country a firm might select again the same location (based on positive experience) or in contrast excludes the specific country from further offshoring

locations (due to negative experience). Obviously, there might be path dependencies based on previous offshoring locations. Additionally, it might be worthwhile to consider path dependencies in the history of the offshoring *partners*. The more experience the service provider gained in previous offshoring projects the faster the firm might achieve its savings and target levels. So, the aspect of learning might directly as well as indirectly via the offshoring partner impact the success of offshoring.

We concentrated on the differentiation between an internal and external governance mode. However as we discussed at the beginning, firms might choose from a wider spectrum of potential alternatives. Thus, studies differentiating between pure internal and external governance modes as well as joint ventures with various types of equity shares might provide additional insights. Furthermore, we tested our theoretical framework only with firms headquartered in the US and Germany. A broader scope which includes firms from other areas such as Japan and South Korea or other European countries might provide additional insights into the offshoring phenomenon. This might enrich our understanding about the impact of cultural origins or institutional environments.

In our analysis, we focused on the two crucial success factors: time to achieve expected savings and time to achieve expected service targets. While both aspects are important for firms with offshoring ambitions the objectives of offshoring are more divers (*e.g.*, access to knowledge and qualified personnel, develop new business opportunities etc., Lewin *et al.*, 2006b, 2006a). Future research should add additional aspects to analyze the entire range of factors that altogether represent offshoring success.

Our first offshoring observations go back to the 80s, the last ones covered in our sample occurred 2006. The lengthy time frame has been crucial for our analysis to observe long time effects as the impact of publicly available knowledge as well as to obtain enough data for stable analytical results. However, we have to keep in mind that offshoring behavior of firms might have

changed over time. So, future research might add further components to analyze such time period aspects.

Lastly, one further limitation is the fact that the observation for each offshoring implementation is based on a common source. Measured success and its antecedents have been provided by the same respondent. It could be therefore argued that the sources of information reflect a common-source bias. However, this argument is considerably weakened as the responders have been neither aware of explicit purpose nor the hypotheses of the study. Additionally, there are severe research discussions which argue that the effect of common source biased is limited (although admitting that there are effects, *e.g.* Crampton & Wagner Iii, 1994; Doty & Glick, 1998; Harrison, McLaughlin, & Coalter, 1996). Keeping in mind that it was neither possible to incorporate a second respondent (due to the required seniority of the respondent) nor that there are publicly available success measures we accepted consciously this limitation.

3.8 Conclusion and implications

With our study we have contributed to the offshoring research and have demonstrated that the offshoring success of firms depends on various factors. Our research implies that managers should be aware of the impact of offshoring-specific premises and the implementation-specific configuration of a transfer step. By leveraging their offshoring experience or using publicly available knowledge firms can cope with potential problems in the implementation phase and avoid associated delays. In addition, firms should aim for a homogenous offshoring path. Varying governance modes would deteriorate the opportunity to leverage acquired capabilities and slow down the implementation pace. So, the management team should plan the various offshoring activities holistically and when appropriate should stick to a certain mode.

In addition, large cultural distances overstretch a firm's resources coping with the organizational adaptations to local settings and cause an overlong implementation phase. Firms can

address this challenge by applying an appropriate governance mode. They might consider the incorporation of an external service provider contributing with local expertise. Managers, who follow a different path run the risk to overstretch the limited sources in their firms or do not have the appropriate capabilities for a successful offshoring implementation. In this case, an offshoring activity might have a detrimental impact on the regular day-to-day business, which can result in a negative firm performance (Vermeulen *et al.*, 2002).

4 SUMMARY AND OUTLOOK

As in any internationalization step the governance mode in an offshored entity impacts overall performance, achievable savings and is of strategic relevance. So, we identified in a first step the factors that influence a firm's governance mode choice for its offshoring activities and determined their impact. In a second step we focused on the success of offshoring activities. In detail, we analyzed what factors influence the time firm takes to achieve its expected cost savings and its targeted service level.

4.1 Choice of governance mode

As we know from internationalization theory, the transfer of an activity to a host country is a challenge and each governance mode has advantages and disadvantages. The governance mode in an offshored entity is a central component that impacts its performance and the achievable savings (Lu, 2002). It is of high strategic importance and a significant determinant of the overall success of foreign activities (*e.g.*, Haiyang *et al.*, 2002; Simmonds, 1990; Woodcock *et al.*, 1994). So, we identified the factors that influence a firm's governance mode choice for its offshoring activities and determine their impact.

As we are aware of no theoretical strand that exhaustively explains by itself the choice of governance mode, we derived a theoretical framework based on Lewin *et al.* (2004b) comprising four different perspectives to describe influencing factors:

- the institutional environment of a firm
- the population surrounding a firm
- firm-specific characteristics
- implementation-specific elements

The last component has not been covered in the original framework of Lewin *et al.* (2004b). The institutional environment, the surrounding firms, and firm traits explain certain tendencies in making governance mode choices whereas implementation is different in that it is specific to a particular offshoring effort.

Each firm is influenced by its institutional environment of norms, standards, history, governmental, legal and educational systems, culture and language, values etc. (*e.g.*, Calori *et al.*, 1997; Chandler *et al.*, 1990; Lewin *et al.*, 2004a). With a comparative analysis of US and German firms we could clearly confirm this impact. There is a much larger likelihood of a German firm to use an internal governance mode than of US firms. This outcome is surprising. Despite the widely accepted phenomenon of “globalization” there are obvious dissimilarities between firms of two different nations-states.

Firms try to evaluate and imitate the organizational structures and processes of other firms in an effort to benefit from the experiences of others. Many inexperienced firms do not have insights about potential benefits of offshoring, are worried about costs and so they rely on what they can learn about offshoring from the activities of other firms. Such mimetic behavior is represented by the population level perspective. Our analyses clearly indicate that firms follow other firms in their home country in devising their offshoring strategies. They copy the offshoring behavior of other firms which face the same or similar institutional and business conditions.

The third component that we analyzed are firm-specific characteristics. A firm that lacks offshoring experience does not have the know-how to interact with local service providers, employees and governmental institutions (Barkema *et al.*, 1998; Benito *et al.*, 1994; Vermeulen *et al.*, 2002). This hampers offshoring ambitions and can force a firm to select a particular governance mode. However, with every transfer step a firm gains experience and builds its knowledge base, in other words, advances on its development path (Barkema *et al.*, 1997; Johanson *et al.*, 1977, 1978). We clearly confirmed the impact of previous offshoring implementations on a firm’s governance

mode choice. Companies prefer to re-leverage the governance modes of previous offshoring implementations.

At the same time, decision-makers will leverage their remaining managerial discretion to pursue strategic objectives and reacting to surrounding forces. These objectives might be the realization of cost advantages, access to new markets or enabling growth (Lewin *et al.*, 2007; Lewin *et al.*, 2006a), and last but not least, achievement of those targets will necessitate, or at least encourage, the choice of a particular governance mode. The impact of managerial intentionality has been clearly proven by our analysis. In detail, companies for which cost reduction is a primary motivator an external governance mode is likely to be particularly interesting as it combines the cost advantages of offshoring and outsourcing. Furthermore, the more important market-seeking as a motive for offshoring, the greater a firm's likelihood of selecting an internal governance mode. Albeit, enabling growth as a motive did show an ambivalent impact. US firms which declared they offshored for growth tended to prefer an internal governance mode, while their German counterparts relied more on external modes. Such an opposed outcome is remarkable. US and German have a different approach to realize growth. The German firms leverage external resources to free up employees who are staffed on growth topics. In contrast, US firms rely on the offshore hired employees to foster further growth.

The last component of our framework, the implementation-specific elements, include the type of function to be transferred, to which geographic locations, and the mechanics of the process. The choice of governance mode is motivated, even necessitated, by the function to be transferred, the intricacy of the transferring and operating activities, and the firm's existing home country governance mode. Some governance modes are particularly appropriate for certain functions to be offshored (Lewin *et al.*, 2007; Lewin *et al.*, 2006b). Not all support functions have the same feasibility for a specific governance mode. It is much more likely that firms will use an internal governance mode for knowledge-intensive functions (R&D, product development, design)

and idiosyncratic functions (finance and accounting, HR and procurement) than for autonomous ones (IT and call center) primarily because of the characteristics of the respective activities. While knowledge-intensive and idiosyncratic functions are characterized by less standardized processes or firm-specificities that hamper external delivery, autonomous functions are typically modularized, so more easily detached and more often externalized.

The targeted host country is also decisive (Agarwal, 1994; Kogut, 1988). For example, US firms will face different challenges in transferring activities to India than to Canada. In India they will experience problems in transferring management techniques and corporate values and adapting organizational structures and processes to the new environment (Gatignon *et al.*, 1988; Stopford *et al.*, 1972). We found, in line with many other scholars (*e.g.*, Benito *et al.*, 1994), that the cultural distance between the home and target country significantly impact the offshoring efforts of a firm. These challenges may be more effectively addressed by using an external partner (Fisher *et al.*, 2001). However, German firms seem to behave differently than US firms. German firms have a long tradition of internationalization, and in many cases have shown an ability to cope with foreignness. So, cultural distances are less decisive for them.

Finally, a firm has to take into account the organizational structure already in place in its home country. As re-use of an existing governance mode can keep adaptations to a minimum, companies prefer to use the existing governance mode of the home country at the offshoring site.

In summary, our multi-dimensional framework explains governance mode decisions to a substantial extent. Nevertheless, many internationalization studies that discuss governance mode decisions in sales-orientated internationalization activities (*e.g.*, Barkema *et al.*, 1997; Gatignon *et al.*, 1988), focus on just one or two perspectives. Our results should encourage other researchers to use our framework not only in the offshoring but also in the more general internationalization context.

4.2 Success factors in offshoring

For firms there are two critical measures to evaluate success of offshoring activities: did the transferred entity achieve its targets and how much time did it take to achieve these? Whereas the first question has been already answered (*e.g.*, Farrell, 2003, 2005) the second one has not been analyzed. Using a new framework we identified the factors that influence the time a firm takes to achieve its expected cost savings and its targeted service level.

Our framework covers two dimensions: On the one hand, there are firm-specific *premises* for offshoring activities, on the other hand, the implementation-specific *configuration* as chosen host country and governance mode impacts the success of the offshoring activity.

The premises for offshoring relate to path dependencies, firm-specific characteristics and generally available knowledge on offshoring. A firm can learn from previous offshoring activities and will benefit in subsequent transfers. Unfortunately, our analysis did not confirm this relation which is surprising as many studies on sales-orientated internationalization steps have proven the relevance of experience (*e.g.*, Barkema *et al.*, 1997; Terpstra *et al.*, 1988). With respect to heterogeneity in the offshoring path there is clear evidence that firms which vary the governance modes take more time to achieve their offshoring targets. By using altering modes a firm's learning curve is flattened and implementation pace will be slowed. Furthermore, there is clear evidence of the impact of publicly available knowledge. The more knowledge on offshoring is generally available the faster firms achieve their targets.

The transfer of activities abroad is a major challenge. In the home country established structures, practices and processes have to be adapted to suit local environments. Our analysis shows that firms which are adding too much cultural distance overwhelm its management team and employees and delay the success of its offshoring activities.

Furthermore, there is clear evidence in our data that the chosen governance mode impacts the offshoring success. By incorporating an external service provider a firm can assign managerial tasks to local staff with local roots that are more familiar and more efficient and hence speed up the transition process.

Eventually, there is a clear “consonance” between the time to achieve the savings and the time to achieve the service level. Most identified factors influence both aspects simultaneously. When a firm faces an issue during the transition phase both aspects are typically affected and the management team cannot compensate one aspect with the other one.

4.3 Future of offshoring

Based on the analysis of governance modes and success factors in offshoring we want to discuss the future of offshoring and what might be future trends. This discussion is based on and follows Hutzschenreuter *et al.* (2007a).

There are first indications that current offshoring activities are only the precursor for a more comprehensive transformation process in organizations. According to Lewin (2005) such transformation process is based on three phenomenon:

- commoditization of organizational processes
- emergence of intermediary organizations and hybrid organizational forms
- third-party service providers and other outsourcer OEMs moving up the value chain.

As outlined by Hutzschenreuter *et al.* (2007a) standardization of processes is one of the crucial prerequisites for successful offshoring. This trend of standardization will continue in the future. In the past the majority of processes has been firm-specific, requiring detailed know how and an adequate organization. Today, a significant share of processes are standardized and operated in a similar kind (Schaaf, 2005) enabling considerable cost savings. In future, more and more firms are willing to outsource processes that are not their core competencies to benefit from such savings.

According to Hutzschenreuter *et al.* (2007a) the share of external governance modes in offshoring activities has continuously increased since 2001. For 2007 a share of 28 percent and a further growth in the next years is expected. By consequence, it is more and more important for firms to enable an efficient integration of external service provider. This can be achieved by flexible and easily adaptable organizations. There will be new kinds of firms as intermediary organizations. Their core competence will be an efficient and effective coordination of various types of service providers. For today's enterprises this is a challenge. They have to learn how to manage a network of service providers. Individual business units in a firm may not plan and act independently with respect to offshoring activities but firms have to coordinate these activities centrally. Some firms even installed a central offshoring coordinator.

Furthermore, there will be new governance models that are compositions of existing models. For example, in Build-Operate-Transfer models activities are provided in a first step by external suppliers (Build-Operate). In the second step, the client has the opportunity to take over these activities (Transfer). Another example is the flexible provision of activities in cooperation with an external supplier. If a firm exceeds its capacity, the supplier takes over the activities to cover the peak utilization. Typical examples can be found in finance and accounting. At the end of a fiscal year there are typical resource constraints. These can be (at least partially) addressed by leveraging external resources for a certain amount of time.

The continuous coordination of several external service providers impedes management and steering of a firm. In fact, the today's offshoring activities represent a severe challenge and the growing network of service providers will increase complexity further. The firms have to develop adequate management tools to manage this complexity. For example, firms have to define generally binding regulations which can be applied to the whole network of partners instead of partner-specific and individual contracts.

In the course of this meshing-up phenomenon external service providers not only focus on low value offshoring activities. Hitherto, most providers in low cost countries have been used due to their low salary levels. With the continuous improvement of educational systems and increase in professionalism service providers will extend their service portfolios and offer high value services as analysis of X-ray pictures, translation and processing of medical and psychological research texts, editorial selection of stories for an international news agency etc. (*e.g.*, Levy, 2005; Schaaf, 2005). These non-transactional services require a new type of cooperation. In the past service providers have been considered as pure suppliers. In the future they should be considered as strategic partners. For a successful cooperation trust and not excessive quality checks are vital.

Albeit, there will be significant changes even in the domain of established offshoring activities as software development. Established enterprises as IBM, EDS, Accenture will be in competition with offshoring service providers as Wipro or Tata. Some Indian offshoring provider are even today heavy weights in the business world. For example, total revenue of Tata Consultancy Services in 2007 has been 2.3 bn EUR (Tata Consultancy Services, 2006).

The proposed changes represent significant challenges. To be successful in the future firms have to break down established operating models and to develop new competencies (Couto *et al.*, 2006). One of the most crucial competencies will be to manage human resources of a firm globally. Firms need the capability to recruit and coordinate its employees globally. In the past one of the key management tasks has been to decide what local team had to perform what local activities. In the future top management has to identify what teams are available across the globe and where to leverage them. The factor labor is loosing its link to a specific region and gets a globally available production factor (Doh, 2005). For firms it will be decisive to manage their resources globally. Decision makers have to know salary levels in various regions, to learn how to build and steer international teams and how to overcome regional boundaries. Today, we are talking about “US” or “German” enterprises. In the future we will talk about international firms and these firms are

not only international due to globally distributed and sold products and services but due to a globally provision of these. Some start-ups as the software company Ketera have been completely relying on offshoring since their first days (Kenney *et al.*, 2005). Half of their employees are working in Bangalore. These firms skip the typical steps of internationalization as outlined by Vernon (1966) or Johanson *et al.* (1977). These firms are so called “born global” firms (Knight *et al.*, 2004).

Due to the increase in complexity it is getting more and more difficult to achieve the expected benefits of offshoring. As of today many firms only offshore activities that are easily transferable. However, due to the expected offshoring of high value activities firms will need to accept lower saving potentials. Albeit, this might be less critical as expectations in offshoring are changing (Lewin *et al.*, 2007). For example, access to qualified personnel is a continuously increasing driver for offshoring. Potentially, today’s driver as realization of cost savings might be even irrelevant for some firms.

We will see what enterprises will be successful. Today, there are even some large enterprises which (partially) deny offshoring and rely on a provision in its home country. We are looking forward to seeing whether these firms pursue this strategy or move to a global provision of its activities.

In summary, relevance of offshoring will continuously increase due to growing standardization, new types of organizational forms, increasing number of transfers of high value activities. Particularly, the continuing concentration of firms on their core competences and indispensable know-how will foster the offshoring of activities.

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