

Time to Success in Offshoring Business Processes

A Multi Level Analysis

Thomas Hutzschenreuter · Arie Y. Lewin · Stephan Dresel

Abstract:

- This paper contributes to the emerging debate about offshoring of support functions in international business research. We analyze 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.

Keywords: Offshoring · Performance · Success · Path dependencies · Heterogeneity · Cultural distance

Received: 22.08.2008 / **Revised:** 23.01.2009 / **Accepted:** 12.11.2009 / **Published online:** 26.01.2011
© Gabler-Verlag 2010

Prof. T. Hutzschenreuter (✉) · S. Dresel
Dietmar Hopp Endowed Chair of Corporate Strategy and Electronic Media Management,
WHU – Otto Beisheim School of Management, Vallendar, Germany
e-mail: th@whu.edu

Prof. A. Y. Lewin
The Fuqua School of Business, Duke University, Durham, US

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 1960s the relocation of support functions as IT, HR, finance and accounting, etc. started as recently as the 1990s (Lewin and Couto 2007). Thereby, firms' expectations in offshoring are high as well as manifold. According to Lewin and Peeters (2006a), 55% of the companies expect cost savings of 30% 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 also used non-financial indicators as longevity or the failure rate of a foreign entity (e.g., Jiatao and 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 and Peeters 2006b)? An entity reaching the defined savings target of 50% 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 and Islam 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 and Peeters 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.

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 and Peeters (2006b) show that about 25% 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 and Vahlne 1977). In contrast, the implementation-specific configuration (second aspect) relates to strategic choices of the management team (Child 1972; Hutzschenreuter et al. 2007; Miles and Snow 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 and Hu 2002; Jiatao and Guisinger 1991; Pangarkar and 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 to operate, involved risks and degree of expertise.

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 and Welch 1994; Fisher and Ranasinghe 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 and Vermeulen 1998; Benito and Welch 1994; Vermeulen and Barkema 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 and Welch 1994), will make serious errors (Gatignon and Anderson 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 and Rosenzweig 2001; Leiblein and Miller 2003). In fact, there are considerable path dependencies and companies differing 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 and March 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 and Powell 1983; Haunschild and Miner 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 and Faggian 2005; Levitt and March 1988). As we know from Lewin and Couto (2007) the number of 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 1980s 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.

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 and Couto 2007; Lewin and Peeters 2006b) most of the support functions are transferred to Asia, particularly to India and China. Theory and practice indeed show that 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 and Rosenzweig 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 and Hu 2002; Hofstede 2001). Firms face the problem that local employees, suppliers, partners and governmental officials have different belief systems, values and expectations (Fisher and Ranasinghe 2001; Gomez-Mejia and Palich 1997; Slangen and 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 and Ranasinghe 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 and 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 and Singh 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 and Rosenzweig 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 and Mirza 2000; Jiatao 1995; Yigang and Chi 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 and Glaister 2002; Chan 1995;

Newbould et al. 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 and Lim 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 and Glaister 2002; Jiatao 1995). This partner might be better capable of managing local labor force, suppliers and governmental authorities (Jiatao 1995; Kogut and Singh 1988; Yigang and Chi 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 and Glaister 2002; Woodcock et al. 1994; Yigang and Chi 1999). Therefore, some scholars argue that joint ventures are intrinsically inefficient because of complex management relationships (Boateng and Glaister 2002; Pangarkar and Lim 2003).

The external governance mode represents an interesting low-commitment alternative which has significant advantages (Maskell et al. 2007). An external provider has more expertise and specialized knowledge about offshoring projects and can operate on a larger scale (Chalos and Sung 1998; Heikkilä and Cordon 2002; Prahalad and Hamel 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 et al. 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 lose 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 and Hilmer 1994; Razzaque and Cheng 1998). Firms may also lose 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 and Gilley 2005; Schilling and Steensma 2002).

Hypotheses

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 incor-

porate 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 and Anderson 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 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 and Rosenzweig 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 and March 1988; Pennings and 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 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 and Feldman 1996; Audretsch and Stephan 1999; Capello and Faggian 2005). They learn vicariously from other firms (Huber 1991; Levitt and March 1988) and complete—sometimes even substitute—their own experience (e.g., Srinivasan et al. 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 spillover 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.

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 and Rosenzweig 2001; Chen and Hu 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 and Barkema 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 know-how and forces the management to learn how to operate in the new environment (Newman and Nollen 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.

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 and Couto 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 and Welch 1994; Vermeulen and Barkema 2002). The management team capable of driving these tasks is limited in capacity (Eisenhardt and Martin 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 and Ranasinghe 2001; Franko 1976; Stopford and Wells 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 and Hamel 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.

Methodology

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 in 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 directly 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 and Overton 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% 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).

Measure 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 have 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 and Singh 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 and Slangen 2009; Fisher and Ranasinghe 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 dis-

cussed 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 and Li 2000). It is represented by the number of employees which is a widely established measure in the literature (e.g., Gatignon and Anderson 1988). Additionally, we incorporated the industry affiliation of the firms differentiating between financial, manufacturing, services, trade and other industries (Chang and Rosenzweig 2001; Kogut and Singh 1988; Lopez-Duarte and 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 and Lim 2003). To cover the effect of the host governments' attitudes we integrated the FDI restrictiveness index of the OECD (Koyama and Golub 2006) as a control variable. Similarly, some researchers 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 and Peeters 2006a, b). However, the achievement of the cost savings is not trivial and requires 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

Table 1: Descriptive statistics and correlations

| Variables | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|-------------------------------------|-------|-------|---------|---------|---------|--------|---------|---------|--------|--------|--------|--------|----|
| 1. Time to reach cost savings level | 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 | 0.431 | 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) | 1.981 | 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 |

*p < 0.05; **p < 0.01

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. 2005). 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 and Takeuchi 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 1 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, Wassermann and Kutner (1985).

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:

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

whereas

$$z_i^j = b_0^j + b_1 \text{EXPE}_i + b_2 \text{PUKO}_i + b_3 \text{HETG}_i + b_4 \text{CULT}_i + b_5 \text{GMOS}_i + b_6 \text{SIZE}_i + b_7 \text{INDU}_i + b_8 \text{SCAL}_i + b_9 \text{FDIR}_i + b_{10} \text{GDP}_i + b_{11} \text{COSV}_i + b_{12} \text{FUNC}_i \quad (2)$$

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 ($k=0,1,\dots,12$).

Results

The results of the ordinal logistic regression using the above specified equations are presented in Table 2. 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.

Table 2 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 impact for the total sample ($p < 0.1$) and significant impact for 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 sub-sample. 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 sub-samples.

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 contrast, the hypothesis of a longer time to achieve the target values for an internal governance mode is clearly confirmed ($p < 0.01$) for all firms in both categories.

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 sub-samples 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.

Table 2: Results of ordinal logistic regression for time required to achieve expected savings level and service level

| Perspective | Variables | Time to achieve planned savings | | | | | | | | |
|------------------------------|---------------------------------|---------------------------------|---------|-------|----------|---------|-------|----------|---------|-------|
| | | All firms | | | US firms | | | GE firms | | |
| | | b value | STE | Sign. | b value | STE | Sign. | b value | 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 off-shoring | Firm-specific experience | | | | | | | | | |
| | Publicly available knowledge | | | | | | | | | |
| | Heterogeneity | | | | | | | | | |
| Impl. specific configuration | Cultural distance (Kogut Singh) | | | | | | | | | |
| | Cultural distance (perceived) | | | | | | | | | |
| Statistics | Governance mode | | | | | | | | | |
| | -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 2: (continued)

| 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 | b value | STE | 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 | | | | | | | | | | | | | | | |
| Impl. specific configuration | Heterogeneity | | | | | | | | | | | | | | | |
| | Cultural distance (Kogut Singh) | | | | | | | | | | | | | | | |
| | Cultural distance (perceived) | | | | | | | | | | | | | | | |
| | Governance mode | | | | | | | | | | | | | | | |
| Statistics | -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 2: (continued)

| Perspective | Variables | Time to achieve planned savings | | | | | | | | |
|------------------------------|---------------------------------|---------------------------------|---------|-------|----------|---------|-------|----------|---------|-------|
| | | All firms | | | US firms | | | GE firms | | |
| | | b value | STE | Sign. | b value | STE | Sign. | b value | STE | Sign. |
| Control variables | 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 | |
| Premises for off-shoring | 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) | ** |
| Impl. specific configuration | 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) | *** |
| Statistics | -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 2: (continued)

| 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. |
| Control variables | 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 | - | (0.244) | ** | -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 | | |
| Premises for offshoring | 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) | *** |
| Impl. specific configuration | 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) | *** |
| Statistics | -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 | | |

*p<0.1; ** p<0.05; *** p<0.01

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 and Pretorius 2003). By consequence, the measurement of offshoring success based on revenues is not applicable. As we know from previous research (Lewin and Couto 2007; Lewin and Peeters 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 and Chow-Ming 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 and Chow-Ming 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 and Couto (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 and Guisinger 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.

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 and Hu 2002), capabilities (Boateng and Glaister 2002) and commitment of all involved partners (Demirbag and Mirza 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 and Peeters (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 diverse (e.g., access to knowledge and qualified personnel, develop new business opportunities etc., Lewin and Peeters 2006a, b). 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 1980s, the last ones covered in our sample occurred in 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 and Wagner Iii 1994; Doty and Glick 1998; Harrison et al. 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.

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 if 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 and Barkema 2002).

Acknowledgements: The authors would like to thank the anonymous MIR reviewers and the editors-in-chief of MIR, Michael-Jörg Oesterle and Joachim Wolf, for their comments and developmental editorial guidance.

References

- Agarwal, S. (1994). Socio-cultural distance and the choice of joint ventures: A contingency perspective. *Journal of International Marketing*, 2(2), 63–80.
- Andersson, U., Forsgren, M., & Pedersen, T. (2001). Subsidiary performance in multinational corporations: The importance of technology embeddedness. *International Business Review*, 10(1), 3–23.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, 14(3), 396–402.
- Audretsch, D. B., & Feldman, M. P. (1996). R&D spillovers and the geography of innovation and production. *American Economic Review*, 86(3), 630–640.
- Audretsch, D. B., & Stephan, P. E. (1999). Knowledge spillovers in biotechnology: Sources and incentives. *Journal of Evolutionary Economics*, 9(1), 97–107.
- Barkema, H. G., Shenkar, O., Vermeulen, F., & Bell, J. H. J. (1997). Working abroad, working with others: How firms learn to operate international joint ventures. *Academy of Management Journal*, 40(2), 426–442.
- Barkema, H. G., & Vermeulen, F. (1998). International expansion through start-up or acquisition: A learning perspective. *Academy of Management Journal*, 41(1), 7–26.
- Benito, G. R. G., & Welch, L. S. (1994). Foreign market servicing: Beyond choice of entry mode. *Journal of International Marketing*, 2(2), 7–27.
- Blind, K. (2006). Explanatory factors for participation in formal standardisation processes: Empirical evidence at firm level. *Economics of Innovation & New Technology*, 15(2), 157–170.
- Boateng, A., & Glaister, K. W. (2002). Performance of international joint ventures: Evidence for West Africa. *International Business Review*, 11(5), 523–541.
- Capello, R., & Faggian, A. (2005). Collective learning and relational capital in local innovation processes. *Regional Studies*, 39(1), 75–87.
- Chalos, P., & Sung, J. (1998). Outsourcing decisions and managerial incentives. *Decision Sciences*, 29(4), 901–919.
- Chan, P. S. (1995). International joint ventures vs. wholly owned subsidiaries. *Multinational Business Review*, 3(1), 37–44.

- Chang, S.-J., & Rosenzweig, P. M. (2001). The choice of entry mode in sequential foreign direct investment. *Strategic Management Journal*, 22(8), 747–776.
- Chen, H., & Hu, M. Y. (2002). An analysis of determinants of entry mode and its impact on performance. *International Business Review*, 11(2), 193–210.
- Child, J. (1972). Organizational structure, environment and performance: The role of strategic choice. *Sociology*, 6(1), 1–22.
- Crampton, S. M., & Wagner Iii, J. A. (1994). Percept-percept inflation in microorganizational research: An investigation of prevalence and effect. *Journal of Applied Psychology*, 79(1), 67–76.
- Demirbag, M., & Mirza, H. (2000). Factors affecting international joint venture success: An empirical analysis of foreign-local partner relationships and performance in joint ventures in Turkey. *International Business Review*, 9(1), 1–35.
- Dess, G. G., Rasheed, A. M. A., McLaughlin, K. J., & Priem, R. L. (1995). The new corporate architecture. *Academy of Management Executive*, 9(3), 7–20.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160.
- Doty, D. H., & Glick, W. H. (1998). Common methods bias: Does common methods variance really bias results? *Organizational Research Methods*, 1(4), 374–406.
- Doz, Y. L., & Hamel, G. (1998) *Alliance advantage: The art of creating value through partnering*. Boston: Harvard Business School Press.
- Drogendijk, R., & Slangen, A. (2009). Hofstede, Schwartz, or managerial perceptions? The effects of different cultural distance measures on establishment mode choices by multinational enterprises. *International Business Review*, 15(4), 361–380.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10–11), 1105–1121.
- Ernst, D. (2002). Global production networks and the changing geography of innovation systems. Implications for developing countries. *Economics of Innovation & New Technology*, 11(6), 497–523.
- Farrell, D. (2003). *Offshoring: Is it a win-win game?* (pp. 1–15). San Francisco: McKinsey Global Institute.
- Farrell, D. (2005). Offshoring: Value creation through economic change. *Journal of Management Studies*, 42(3), 675–683.
- Farrell, D., Kaka, N., & Sturze, S. (2005). Ensuring India's offshoring future. *McKinsey Quarterly*, (Special Edition), 74–83.
- Fisher, T. F., & Ranasinghe, M. (2001). Culture and foreign companies' Choice of entry mode: The case of the singapore building and construction industry. *Construction Management & Economics*, 19(4), 343–353.
- Franko, L. G. (1976). *The European multinationals: A renewed challenge to American and British big business*. Stanford: Greylock.
- Gatignon, H., & Anderson, E. (1988). The multinational corporation's degree of control over foreign subsidiaries: An empirical test of a transaction cost explanation. *Journal of Law, Economics & Organization*, 4(2), 305–336.
- Gomez-Mejia, L. R., & Palich, L. E. (1997). Cultural diversity and the performance of multinational firms. *Journal of International Business Studies*, 28(2), 309–335.
- Graham, J. W., Hofer, S. M., & MacKinnon, D. P. (1996). Maximizing the usefulness of data obtained with planned missing value patterns: An application of maximum likelihood procedures. *Multivariate Behavioral Research*, 31(2), 197–218.
- Haiyang, C., & Hu, M. Y. (2002). An analysis of determinants of entry mode and its impact on performance. *International Business Review*, 11(2), 193–210.

- Harrison, D. A., McLaughlin, M. E., & Coalter, T. M. (1996). Context, cognition, and common method variance: Psychometric and verbal protocol evidence. *Organizational Behavior & Human Decision Processes*, 68(3), 246–261.
- Haunschild, P. R., & Miner, A. S. (1997). Modes of interorganizational imitation: The effects of outcome salience and uncertainty. *Administrative Science Quarterly*, 42(3), 472–500.
- Heikkilä, J., & Cordon, C. (2002). Outsourcing: A core or non-core strategic management decision? *Strategic Change*, 11(4), 183–193.
- Hennart, J.-F. (1988). A transaction costs theory of equity joint ventures. *Strategic Management Journal*, 9(4), 361–374.
- Hofstede, G. H. (1994). Management scientists are human. *Management Science*, 40(1), 4–13.
- Hofstede, G. H. (1980). *Culture's consequences, international differences in work-related values*. Beverly Hills: Sage.
- Hofstede, G. H. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations*. Thousand Oaks: Sage.
- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1), 88–115.
- Hutzschenreuter, T., Pedersen, T., & Volberda, H. W. (2007). The role of path dependency and managerial intentionality: A perspective on international business research. *Journal of International Business Studies*, 38(7), 1055–1068.
- Jiatao, L., Guisinger, S. (1991). Comparative business failures of foreign-controlled firms in the United States. *Journal of International Business Studies*, 22(2), 209–224.
- Jiatao, L. (1995). Foreign entry and survival: Effects of strategic choices on performance in international markets. *Strategic Management Journal*, 16(5), 333–351.
- Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23–32.
- Kaka, N. (2003). A choice of models. *McKinsey Quarterly*, 4(Special Edition), 46–47.
- Khan, H., & Islam, M. S. (2006). Outsourcing, migration, and brain drain in the global economy: Issues and evidence. *U21 Global Working Papers Series*, 4, 1–18.
- Kogut, B., & Singh, H. (1988). The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19(3), 411–432.
- Koyama, T., & Golub, S. (2006). *OECD's FDI regulatory restrictiveness index: Revision and extension to more economies, organisation for economic cooperation and development* (pp. 1–17). Paris.
- Leiblein, M. J., Reuer, J. J., & Dalsace, F. (2002). Do make or buy decisions matter? The influence of organizational governance on technological performance. *Strategic Management Journal*, 23(9), 817.
- Leiblein, M. J., & Miller, D. J. (2003). An empirical examination of transaction- and firm-level influences on the vertical boundaries of the firm. *Strategic Management Journal*, 24(9), 839.
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, 14(1), 319–338.
- Levy, D. L. (1995). International sourcing and supply chain stability. *Journal of International Business Studies*, 26(2), 343–360.
- Levy, D. L. (2005). Offshoring in the new global political economy. *Journal of Management Studies*, 42(3), 685–693.
- Lewin, A. Y., & Peeters, C. (2006a). The top-line allure of offshoring. *Harvard Business Review*, 84(3), 22–24.
- Lewin, A. Y., & Peeters, C. (2006b). Offshoring work: Business hype or the onset of fundamental transformation? *Long Range Planning*, 39(3), 221–239.
- Lewin, A. Y., & Couto, V. (2007). *Next generation offshoring: The globalization of innovation* (pp. 1–109). Durham: Duke University, The Fuqua School of Business.

- Lopez-Duarte, C., & Garcia-Canal, E. (2002). The effect of firm and host country characteristics on the choice of entry mode: Empirical evidence from Spanish Firms. *Journal of Management & Governance*, 6(2), 153–168.
- Lu, J. W. (2002). Intra- and inter-organizational imitative behavior: Institutional influences on Japanese firms' entry mode choice. *Journal of International Business Studies*, 33(1), 19–37.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71.
- Maskell, P., Pedersen, T., Petersen, B., & Dick-Nielsen, J. (2007). Learning paths to offshore outsourcing: From cost reduction to knowledge seeking. *Industry & Innovation*, 14(3), 239–257.
- Miles, R. E., & Snow, C. C. (1978). *Organizational strategy, structure, and process*. New York: McGraw-Hill.
- Myloni, B., Harzing, A.-W. K., & Mirza, H. (2004). Host country specific factors and the transfer of human resource management practices in multinational companies. *International Journal of Manpower*, 25(6), 518–534.
- Neter, J., Wasserman, W., & Kutner, M. H. (1985). *Applied linear statistical models: Regression, analysis of variance, and experimental designs*, Homewood. Illinois: R.D. Irwin.
- Newbould, G. D., Buckley, P. J., & Thurwell, J. C. (1978). *Going international: The experience of smaller companies overseas*. London: Associated Business Press.
- Newman, K. L., & Nollen, S. D. (1996). Culture and congruence: The fit between management practices and national culture. *Journal of International Business Studies*, 27(4), 753–779.
- Nonaka, I. O., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- Pan, Y., & Li, X. (2000). Joint venture formation of very large multinational firms. *Journal of International Business Studies*, 31(1), 179–189.
- Pangarkar, N., & Lim, H. (2003). Performance of foreign direct investment from Singapore. *International Business Review*, 12(5), 601–624.
- Pennings, J. M., & Barkema, H. (1994). Organizational learning and diversification. *Academy of Management Journal*, 37(3), 608–640.
- Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79–91.
- Quinn, J. B., & Hilmer, F. G. (1994). Strategic outsourcing. *Sloan Management Review*, 35(4), 43–55.
- Rangan, S. (2000). The problem of search and deliberation in economic action: When social networks really matter. *Academy of Management Review*, 25(4), 813–828.
- Rasheed, A. A., & Gilley, K. M. (2005). Outsourcing: National- and firm-level implications. *Thunderbird International Business Review*, 47(5), 513–528.
- Razzaque, M. A., & Cheng, C. C. (1998). Outsourcing of logistics functions: A literature survey. *International Journal of Physical Distribution & Logistics Management*, 28(2), 89–107.
- Roth, P. L. (1994). Missing data: A conceptual review for applied psychologists. *Personnel Psychology*, 47(3), 537–560.
- Schilling, M. A., & Steensma, H. K. (2002). Disentangling the theories of firm boundaries: A path model and empirical test. *Organization Science*, 13(4), 387–401.
- Simmonds, P. G. (1990). The combined diversification breadth and mode dimensions and the performance of large diversified firms. *Strategic Management Journal*, 11(5), 399–410.
- Slangen, A. H. L., & van Tulder, R. J. M. (2009). Cultural distance, political risk, or governance quality? Towards a more accurate conceptualization and measurement of external uncertainty in foreign entry mode research. *International Business Review*, 18(3), 276–291.
- Smith, M., & Pretorius, P. (2003). Application of the TOC thinking processes to challenging assumptions of profit and cost centre performance measurement. *International Journal of Production Research*, 41(4), 819–828.

- Srinivasan, R., Haunschild, P., & Grewal, R. (2007). Vicarious learning in new product introductions in the early years of a converging market. *Management Science*, 53(1), 16–28.
- Stopford, J. M., & Wells, L. T. (1972). *Managing the multinational enterprise: Organization of the firm and ownership of the subsidiaries*. New York: Basic Books.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- Terpstra, V., & Chow-Ming, Y. (1988). Determinants of foreign investment of U.S. advertising agencies. *Journal of International Business Studies*, 19(1), 33–46.
- Tihanyi, L., Griffith, D. A., & Russell, C. J. (2005). The effect of cultural distance on entry mode choice, international diversification, and MNE performance: A meta-analysis. *Journal of International Business Studies*, 36(3), 270–283.
- Verburg, R. M., Drenth, P. J. D., Koopman, P. L., Muijen, J. J. V., & Wang, Z.-M. (1999). Managing human resources across cultures: A comparative analysis of practices in industrial enterprises in China and The Netherlands. *International Journal of Human Resource Management*, 10(3), 391–410.
- Vermeulen, F., & Barkema, H. (2002). Pace, rhythm, and scope: Process dependence in building a profitable multinational corporation. *Strategic Management Journal*, 23(7), 637–653.
- Woodcock, C. P., Beamish, P. W., & Makino, S. (1994). Ownership-based entry mode strategies and international performance. *Journal of International Business Studies*, 25(2), 253–273.
- Yigang, P., & Chi, P. S. K. (1999). Financial performance and survival of multinational corporations in China. *Strategic Management Journal*, 20(4), 359–374.