

Offshoring of Advanced and High-value Technical Services Antecedents, Process Dynamics and Firmlevel Impacts

Ørberg Jensen, Peter D.

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PhD Thesis

**OFFSHORING OF ADVANCED AND HIGH-VALUE TECHNICAL
SERVICES: ANTECEDENTS, PROCESS DYNAMICS AND FIRM-
LEVEL IMPACTS.**

Peter D. Ørberg Jensen

Department of Intercultural Communication and Management

Copenhagen Business School

Denmark

TABLE OF CONTENTS

	Page
Acknowledgements	6
Summary	7
<i>PART ONE</i>	
<i>THEESIS INTRODUCTION</i>	<i>10</i>
1. THE THEME AND OUTLINE OF THE THESIS	10
1.1 Objective of the Thesis	10
1.2 Contribution of the Thesis	10
1.3 Research Questions	11
1.4 Contents of the Thesis Introduction	12
2. DIMENSIONS OF OFFSHORING RESEARCH	14
2.1 What is Offshoring?	14
2.2 Advanced Services Offshoring and International Business Research	16
2.3 A Multidimensional Model of Offshoring Research	18
2.4 Recent Contributions in Services Offshoring Research and the Multidimensional Model	21
3. THE RESEARCH PAPERS OF THE THESIS: METHODOLOGY AND SUMMARY	25
3.1 Methodology	25
3.2 Offshoring in Europe – Evidence of a Two-Way Street from Denmark	34
3.3 The Antecedents of Offshoring Advanced Tasks	36
3.4 A Passage to India: Process Models and Advanced Services Offshoring to India.	37
3.5 A Learning Perspective on the Offshoring of Advanced Services	38
4. THE FUTURE OF ADVANCED SERVICES OFFSHORING: A NEW PERSPECTIVE ON A NEW GENERATION OF OFFSHORING	40
4.1 The Rapid Evolution of the Offshoring Agenda for Managers and Scholars	40
4.2 Tasks	43
4.3 Firm Strategy	48
4.4 Organization	50
4.5 Business linkages	51
5. CONCLUSIONS	54
5.1 The Future Offshoring Research Agenda	54
5.2 Propositions for Offshoring Research	56
5.3 Propositions for Managers in Home and Host Firms	58
REFERENCES	61
<i>PART TWO</i>	
<i>OFFSHORING IN EUROPE – EVIDENCE OF A TWO-WAY STREET FROM DENMARK</i>	<i>69</i>
I. WHAT WE ALREADY KNOW ABOUT OFFSHORING IN EUROPE	71
II. THE NEW DANISH DATA: SCOPE AND METHODOLOGY	74
Conceptual Framework	74
Enterprise Survey	78
Interviews with Companies and Estimation of the Job Impact of Offshoring and Inshoring	79
Educational Characteristics of Affected Workers	81
III. DATA FINDINGS	82
Overall Scope of Offshoring and Inshoring	82

	Offshoring	83
	Impact of Offshoring on Individuals with Different Skill Levels and Job Functions	86
	Quantitative Impact of Offshoring on Particular Job Functions	87
	Inshoring	88
	Impact of Inshoring on Individuals with Different Skill Levels and Job Functions	90
	Quantitative Impact of Inshoring on Particular Job Functions	90
	Comparison of Tasks Offshored and Inshored	91
IV.	CONCLUSION AND POLICY IMPLICATIONS	93
	REFERENCES	97
PART THREE	THE ANTECEDENTS OF OFFSHORING ADVANCED TASKS	108
1.	INTRODUCTION	110
2.	OFFSHORING OF ADVANCED TASKS AND ITS ANTECEDENTS	112
2.1	International Business Literature on the Offshoring of Advanced Tasks	112
2.2	A Disaggregated View of the Firm's Value Chain	114
3.	HYPOTHESIS DEVELOPMENT	116
4.	METHODOLOGY	120
4.1	Data Compilation and Sample Characteristics	120
4.2	Statistical Test and Operationalization of Variables	122
5.	RESULTS	127
5.1	Correlations	127
6.	DISCUSSION	130
7.	STUDY LIMITATIONS	136
8.	CONCLUSIONS	137
	END NOTES	139
	REFERENCES	140
PART FOUR	A PASSAGE TO INDIA: PROCESS MODELS AND ADVANCED SERVICES OFFSHORING TO INDIA.	151
1.	INTRODUCTION	153
2.	OFFSHORING OF ADVANCED SERVICES	154
3.	THE OFFSHORING PROCESS AND PROCESS MODELS	156
4.	METHODOLOGY	161
4.1	The case approach	161
4.2	The longitudinal perspective	161
4.3	Case selection strategy and theory-building	162
4.4	Data	162
5.	EMPIRICAL RESULTS	163
5.1	Case-study 1	163
5.2	Case-study 2	167
5.3	Case-study 3	169
6.	DISCUSSION	171
6.1	Advanced services offshoring, process dynamics and future development	171
6.2	Managerial challenges in offshoring firms	173
7.	LIMITATIONS OF THE STUDY	174
8.	CONCLUSIONS	175
	REFERENCES	176

PART FIVE	A LEARNING PERSPECTIVE ON THE OFFSHORING OF ADVANCED SERVICES	186
1.	INTRODUCTION	188
2.	OFFSHORING OF ADVANCED SERVICES	189
3.	OFFSHORING AND ORGANIZATIONAL LEARNING	191
4.	METHODOLOGY	194
4.1	The case approach and level of analysis	194
4.2	The longitudinal perspective	195
4.3	Case selection strategy and theory-building	195
4.4	Data	196
5.	EMPIRICAL RESULTS	197
5.1	Initial Offshoring Strategies and Contents of Offshoring Projects	198
5.2	Strategic Learning Effects (within-case analysis)	199
5.3	Systemic Learning Effects (within-case analysis)	204
6.	DISCUSSION	208
6.1	Strategic Learning and Business Development	209
6.2	Systemic Learning and Organizational Change	211
6.3	Managerial Implications	212
7.	LIMITATIONS OF THE STUDY	213
8.	CONCLUSION	213
	NOTES	215
	REFERENCES	216
Appendix	Interview Questions on Organizational Learning	225

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Peter D. Ørberg Jensen

Frederiksberg, December 2008

Summary

This PhD thesis addresses one of the most intensely debated phenomena over the past decade within the realm of international business: Firms' relocation of value chain activities to other parts in the network of multinational corporation (MNC) or to external suppliers/services providers in foreign countries (hereinafter referred to as *offshoring*), often to destination countries with lower cost structures. Whereas the offshoring of manufacturing tasks has existed for several decades, and has been analyzed in the international business literature, the offshoring of advanced services tasks from developed country firms to destination countries such as India, which offer an attractive cocktail of low costs and highly skilled labour, is a more recent phenomenon. The offshoring of this type of services tasks forms the subject of this PhD thesis.

Advanced services work is characterized by the fact that the tasks are only codified to a limited extent and necessitate frequent communication between the professional staff involved. Furthermore, such tasks require that the persons responsible for execution to a large extent exercise discretionary judgment and decision-making in the work process. Interestingly, in parts of the management literature, the offshoring of tasks of this nature is not recommended, but nevertheless there is an increasing trend of advanced services offshoring in the business world. This may seem like a paradox, yet at the same time it strengthens the interest in both a deeper understanding of the strategic rationale that underpins the decision to offshore, of how the offshoring process evolves, and of the resulting impacts on, respectively, the offshoring firm and the services providing firm. As the title indicates, this PhD thesis explores these three aspects of advanced services offshoring.

The thesis consists of *four research papers* and a *Thesis Introduction* section that introduces the topic, reviews the offshoring literature and addresses a number of themes based on the four research papers. The empirical foundation of the thesis consists of a survey among 1,500 firms located in Denmark and a number of detailed, longitudinal case studies of offshoring of advanced and high-value technical services (IT and engineering services) from large Danish firms to large Indian firms.

The four research papers make a theoretical and empirical contribution to the emergent strand of research in the international business literature on advanced services offshoring which currently is the subject of much interest from the international business research community. Since offshoring of advanced services is a relatively new trend, there are presently divergent views on the implications of the trend. However, extant research provides merely limited documentation of the three main aspects – antecedents, process dynamics and firm-level impacts – addressed in the thesis. Notably, previous contributions in the field have most often not investigated questions pertaining to the process dynamics and firm-level impacts. Sceptics have claimed that offshoring of advanced services comes close to selling the “crown jewels” of the firm and that offshoring of such high-value activities include a significant risk of “hollowing-out” the competitiveness of Western firms and countries. Although advanced services offshoring at some point may be expected to bring diminishing marginal value to the offshoring firm, this thesis does not contribute to the scepticism. On the contrary, the thesis shows several positive dimensions of advanced services offshoring, from the viewpoint of the offshoring firm as well as for the providers of services.

The main conclusions of the research papers may be summarized in the following four points:

First, the thesis shows that offshoring flows do not imply a uniform flow of business functions and tasks away from Denmark. Offshoring is a rather complex phenomenon which also includes the offshoring from firms located in other countries whose tasks are relocated to Denmark. The data analysis (based on survey data and firm interview) indicates that the direct employment impact of offshoring from firms located abroad *to* firms located in the eastern part of Denmark is greater than the direct, negative, employment impact of offshoring *from* firms in the region.

Second, based on survey data from Denmark, the thesis shows that offshoring of various types of advanced tasks is driven by a certain set of firm strategies and firm characteristics which is fundamentally different than the offshoring of standardized and simple tasks, i.e. the offshoring

practice known for several decades. This indicates that a “new generation” of offshoring is emerging. This new generation is driven by a different firm-strategic rationale which cannot fully be explained and understood by the established knowledge on the offshoring of manufacturing tasks. On the contrary, it requires investigation which takes into consideration a range of firm-specific and task-specific aspects related to the services tasks in question.

Third, data from case studies of collaboration between Danish and Indian firms do not show any indication of hollowing-out of the Danish firms and the risk of declining competitiveness as a result of their offshoring to India. The Danish and Indian firms engage in an interaction where both parties in various ways gain from the collaboration. Both firms gain in terms of strategic and systemic (organizational) learning where the collaboration with, respectively, the Danish and Indian partner provides access to new knowledge, and where the collaboration becomes a catalyst for a strategic and organizational development process in the firms.

Fourth, the experiences from the collaboration on offshoring between Danish and Indian firms suggest that once firms engage in advanced services offshoring, the scale and scope of the collaboration evolve rapidly in the following stages of the process. This seems to suggest that although advanced services offshoring is a relatively new phenomenon, its importance and magnitude may continue to grow in the future.

Finally, the thesis discusses a number of dimensions related to the emergence of a “new generation” of offshoring, i.e. offshoring of advanced services, and concludes with some implications for the future offshoring research agenda.

PART ONE: THESIS INTRODUCTION

1. THE THEME AND OUTLINE OF THE THESIS

“Offshoring is the essence of globalization”.

Nadathur S. Raghavan, Co-founder, Infosys Technologies
Bangalore, India, July 2006

1.1 Objective of the Thesis

Offshoring (i.e. the transfer of a business process to a different country) of technical and administrative services is a fundamental element in the reorganization of the world economy that follows in the wake of the opening of markets, the emergence of new and powerful technologies and a number of other powerful drivers. For this reason it is at the same time a very fascinating and very complex phenomenon that we, in my view, do not understand sufficiently well at present. In view of this, the ambition of this PhD thesis on offshoring is to contribute with some clarity and better understanding of the offshoring phenomenon, notably concerning the offshoring of advanced and high-value technical services (i.e. services which are executed by highly educated staff, often with significant professional experience, and which are of high importance for the offshoring firms). If the findings and conclusions of my research prove to be relevant to both scholars and firm managers, then the objective of the thesis is fulfilled.

1.2 Contribution of the Thesis

The thesis contributes to the emergent literature on a “new generation” of offshoring which in recent years has gained momentum, namely the offshoring of advanced services from developed countries to developing countries and emerging economies. The thesis introduces new theoretical perspectives, supported by empirical data, on the strategic, learning and process dimensions of advanced services offshoring. The findings of the thesis shed light on the three elements mentioned in the title of the

thesis – the antecedents, process dynamics and firm-level impacts of advanced services offshoring – which I see as main types of relevant dependent variables in offshoring research.

One of the questions repeatedly raised in recent years in the offshoring research community is whether new theories need to be developed to explain the recent and present surge in offshoring, including advanced services offshoring. The point of the departure I take in this thesis is that new theory might be required, but first we need to investigate whether and how established theories can be applied to the present day offshoring phenomenon. In the research papers I therefore draw on different theories (trade, international business theories, organizational learning) to explore the suitability of theories in connection with advanced services offshoring. My answer is that many of these theories are valuable in this respect, but also that the emergence of advanced services offshoring has certain implications for which theories can be used in a meaningful way. In view of the findings of my studies, I argue, first, that only theory which has an embedded dynamic dimension can be used in connection with advanced services offshoring; second, that theories used must be able to accommodate the special features of advanced services; third, that offshoring research should include the firm strategic and organizational context to better understand why some firms succeed while others fail with offshoring. I elaborate these points in the concluding section of this chapter.

1.3 Research Questions

Since this thesis consists of four research papers, each of these papers is designed with a specific research question in mind. In order to provide an overview of the thesis in this introduction paper, it is appropriate to formulate an *overall* research question that covers the research undertaken in the four papers:

- *What are the antecedents, processes and impacts of advanced services offshoring?*

While this overall research question summarizes the contents of the research papers it is also clear that they are merely small contributions to this very encompassing question. It seems very likely that the

three dimensions of the research question – antecedents, processes, impacts – will continue to shape the offshoring research agenda in the coming years. As noted by Professor Farok Contractor, one of the co-organizers of a conference on “offshoring, outsourcing and the organizational and geographical relocation of high-value company functions” in April 2007 at Bocconi University in Milan, the current status of offshoring research in this field appears to be that there are now some contributions on the antecedents of offshoring of advanced and high-value functions but there is very little we know about the processes and impacts of offshoring.

This overall research question is expressed more specifically in the four research papers. These are summarized in Figure 1.

Figure 1: Research Papers and Research Questions

Research Paper	Specific Research Questions Addressed
Jensen et al (2007) “Offshoring in Europe: Evidence of a Two-Way Street from Denmark”.	What is the scope of, respectively, offshoring to and from (eastern) Denmark? What is the resulting labour impact?
Jensen and Pedersen (2007) “The Antecedents of Offshoring Advanced Tasks”	What are the antecedents of, respectively, the initial decision to offshore and the offshoring of more advanced service and manufacturing tasks in the firm value chain?
Jensen (2008a) “A Passage to India: Process Models and Advanced Services Offshoring to India	How do business linkages, which are founded on the collaboration on advanced services offshoring, evolve over time? What are the similarities in the dynamics of the offshoring process between firms from different business sectors?
Jensen (2008b) “A Learning Perspective on Advanced Services Offshoring”	What are the learning effects in home and host firms from advanced services offshoring? How do these learning effects influence strategic business development and organizational change in home and host firms?

1.4 Contents of the Thesis Introduction

The PhD thesis consists of four research papers that analyze the offshoring theme from different perspectives. Using the format and logic of scientific journal papers in the fields of business and management, each of the four papers addresses distinct issues relating to the overall theme of the

thesis. Since the research papers all evolve around the same theme, this introduction concentrates on the linkages between the research papers and it presents some perspectives that cut across the research papers and reflections at a more general level.

The remainder of this introductory chapter includes the following:

Section 2 outlines and discusses some of the different dimensions of offshoring research. One of my overall reflections on the services offshoring literature and the experiences emerging from the research carried out for the thesis is that it does not seem likely that we will arrive at a “general theory” of services offshoring. Rather, services offshoring is a phenomenon that may be analyzed and understood at different levels of analysis, from different perspectives and through the use of many different theories (and even through the combination of two or more theories). *Section 2* presents a model that illustrates and incorporates important dimensions of offshoring research. I use this model to summarize and review some of the important contributions in the literature on services offshoring from recent years.

Section 3 discusses the methodologies applied in the papers and summarizes the main findings and conclusions from the four research papers in the thesis.

Section 4 takes a view beyond the research papers of the thesis. While the research papers are all founded on empirical data, the nature of the analyses inevitably becomes interpretations of historical data of the past – at best of the recent past. The next, and natural, question is: what are the future trends in offshoring? This section addresses this question and I discuss some of the elements in a future offshoring scenario for the “new generation offshoring” of advanced services offshoring and contrast the characteristics of this scenario with the “old generation” offshoring of manufacturing tasks. I use some of the findings from the four research papers as indications to support the view that this new generation offshoring scenario is emerging.

Section 5 concludes with some main issues and challenges in the coming years’ offshoring research agenda and presents propositions for future research on advanced services offshoring and for managers in home and host firms that engage in advanced services offshoring.

2. DIMENSIONS OF OFFSHORING RESEARCH

2.1 What is Offshoring?

The academic literature and the media debate refer to the offshoring phenomenon under different terms. Besides “offshoring” these include “outsourcing” (e.g. Kakabadse and Kakabadse, 2000), regardless of whether the business process is located at home or abroad, “global sourcing” (e.g. Kotabe, 1992), “international outsourcing” (e.g. Mol et al, 2004) and the “globalization” of manufacturing or services tasks (e.g. Dossani and Kenney, 2007). The definition made by UNCTAD in the 2004 version of the *World Investment Report* provides some clarity over the terms. This definition and the distinction between offshoring and outsourcing are reproduced in Figure 2 below.

Figure 2: Offshoring and outsourcing – some definitions (adapted after UNCTAD, 2004)

	Internalized production	Externalized production
<i>Location</i>		
Home country	Domestic in-house production	Domestic outsourcing
Foreign country <i>”Offshoring”</i>	(Captive) offshoring	Offshore outsourcing

The figure clearly shows that there are two main dimensions underpinning the phenomenon. One is the ownership dimension, or the make-or-by decision, which is a classic topic that dates back to Coase’s (1937) discussion on the nature and boundaries of the firm. The other is the spatial dimension that concerns the location of the business process, either in the home country or in a foreign country. It is the latter dimension regarding the location of the business processes which is the focus of this thesis. In accordance with UNCTAD (2004), I use the term “offshoring” to denote *both* firm-internal (“captive offshoring”) and firm-external (“offshore outsourcing”) relocation of activities to a foreign

country. Since the publication of UNCTAD's 2004 report, this terminology has emerged as the reference point for recent academic contributions (e.g. Lewin and Peeters, 2006; Manning et al, 2008; Pyndt and Pedersen, 2006).

However, interviews conducted with a sample of Danish firms that took part in the survey on offshoring used in Jensen et al (2007) and Jensen and Pedersen (2007) show that the UNCTAD (2004) 2-by-2 model above does not capture all modes for the organization of the interface between home and host firms. Instead of the distinction between two strategic options, either firm internal production or engaging with an external supplier/service provider, it is more precise to understand the distinction between "captive" offshoring and offshore outsourcing as two extreme points in a continuum with a range of different options for firm-internal respectively firm-external location of production. One option right in the middle between these extremes is the international joint venture (IJV) firm where the business process is relocated to an IJV co-owned by two different firms in the home and host countries. Such a firm is included in the case studies of advanced services offshoring from Danish firms to Indian firms in Jensen (2008a; 2008b) where the engineering services offshored from a Danish engineering firm is located in an IJV which the Danish firms jointly owns in a 50/50 shared ownership model with a large Indian construction and engineering firm. Another example of this continuum includes a manufacturer of medical equipment which has a high degree of integration with an external supplier located abroad. Here, the Danish firm takes care of all training of the supplier's staff, and it has its own staff permanently stationed at the supplier's premises. Surely, it fits with the ownership definition of offshore outsourcing, but the strategic and functional integration between the firms turns it into a type of cooperation quite different from the arm's length relationship which seems to be the implicit organizational model in figure 2 above. Such a model is quite similar to what Kakabadse and Kakabadse (2000) describe as the "keiretsu" model with reference to the close-knit relation between Japanese firms and their suppliers which exist despite the fact that they are separate firms. Examples at the opposite end of the spectrum include a range of the Danish MNCs interviewed in the study that transfer tasks to and from subsidiaries located abroad (see Jensen et al, 2007). Although these tasks are transferred internally in the MNCs, the client unit pays the provider units for

the services provided, each unit has its own sales budget and the price of the service is an outcome of an ongoing negotiation process (see also Forsgren et al, 2005, for a discussion on relations between different units in the MNC network). These services are therefore traded in a type of exchange not entirely different from the exchanges that take place between separate firms in the market place. In other words, firm-internal relocation sometimes takes place in exchanges similar to those found in the market, while firm-external relocation sometimes has similarities with the exchanges found between internal units in a firm. All of this means that the ownership dimension is a relevant but not sufficient variable since the business linkage between the firms in offshoring partnerships is influenced by a range of other factors (see Gereffi et al, 2005 for a discussion) which potentially could influence the process and impact of offshoring in more important ways than the ownership variable.

The ownership dimension in offshoring is, however, an interesting research question in its own right (and incidentally one of the themes on my future research agenda), but it is not the subject of the four research papers in the thesis. The ownership structure of the firms in the case studies of offshoring collaboration between Danish and Indian firms places the cases towards the lower right quadrant in figure (two cases of offshore outsourcing to an external Indian services provider, one case of offshoring to the IJV mentioned above) but it not the research question investigated. Instead, the point of departure I take is that the issues and challenges concerning management, implementation, quality, knowledge transfer to a large extent are of the same nature regardless whether the relocation of business processes takes place in a firm-internal or a firm-external process. In my view a far more important question (which is addressed in Jensen 2008a, 2008b) than the ownership dimension is the strategic space and options that emerge in the wake of offshoring operations and how each of the two parts in the business linkage can and do react strategically on the experiences gained from offshoring.

2.2 Advanced Services Offshoring and International Business Research

While the offshoring of advanced, high-end services to developing countries is still relatively limited, it seems likely to grow significantly over the coming decade and become one of the key strategic issues on the agendas of all firms with international activities (not merely the MNCs). Time series data

of offshoring firms support the view that services offshoring is still in an early stage but seems to be rapidly evolving (Lewin and Peeters, 2006). The importance of the services offshoring trend for firms, industry sectors and nations is coined by Dossani and Kenney (2007) who note that: “Services offshoring has the potential to reorganize the global economy more profoundly than did the movement of manufacturing from developed to developing countries” (Dossani and Kenney, 2007, p. 787).

Offshoring took off as a research field in the international business literature of the 1960s and followed an emerging phenomenon whereby US multinational corporations offshored labor-intensive manufacturing processes to low-cost production zones in developing countries like Mexico and the Philippines (Moxon, 1975; Stopford and Wells, 1972; see Maskell et al, 2007, for a summary). Vernon (1966) also addressed the topic in his work on the product cycle and international investment. However, the offshoring of more advanced services, including various administrative and technical tasks in e.g. engineering, IT, R&D and finance, are a relatively new phenomenon (Lewin and Peeters, 2006). In particular, more advanced services appear to be of interest in this regard because they are of a fundamentally different nature than the simple and standardized tasks that are usually performed by low-skilled workers in manufacturing and which are the type of tasks that have been subjected to offshoring for several decades.

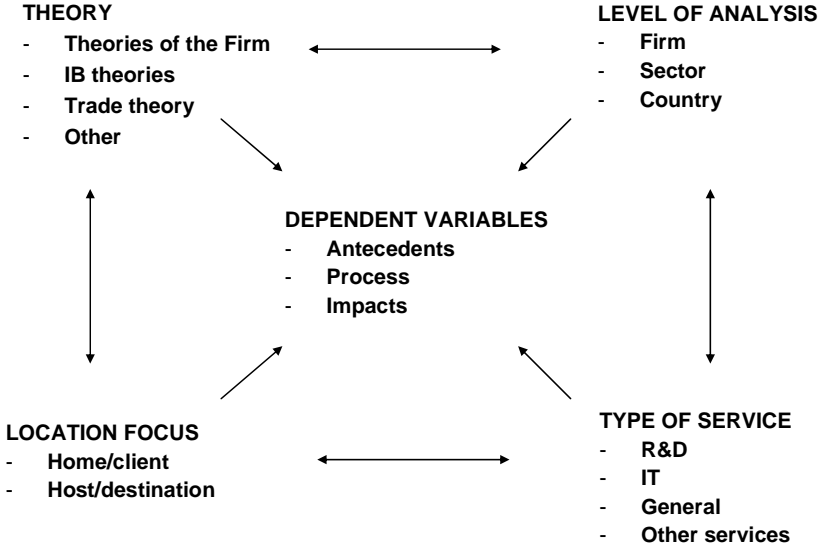
Despite the fact that offshoring has become a much debated topic both in the public policy debate, in the business press, and increasingly also in the academic literature, it is my assessment that in the field of advanced services offshoring we have so far seen merely the tip of the iceberg. Advanced services offshoring is presently not well understood, yet it will evolve and deepen in the coming decade. Interestingly, advanced services are tasks that are most often not seen as suitable for offshoring. For example, Aron and Singh (2005), in a discussion on why many firms encounter failure in offshoring, clearly state: “*What a firm doesn’t measure it can’t offshore well*” (Aron and Singh, 2005, p. 140). Nevertheless, firms do offshore such tasks. Judging from my consultations and interviews with around 30 firms from Denmark and India since 2005, it seems quite clear that firms are looking to the academic community for sense-making and guidance in the field. In view of the rapid development in

the offshoring business practices, it will, in my view, be a major challenge for business scholars to keep up with this pace and respond to the needs of business and society at large while at the same time produce novel research that meets academic standards.

2.3 A Multidimensional Model of Offshoring Research

With reference to a number of recent articles (Kedia and Lahiri, 2007, Niederman et al, 2006; Youngdahl and Ramaswani, 2008) I have argued in my research papers that it is necessary to have a framework with several dimensions and many different theoretical perspective in order to understand offshoring. As mentioned initially, services offshoring is a phenomenon that may be analyzed and understood at different levels, from different perspectives and through the use of many different theories. In this section I identify some dimensions that are frequently included in the research on services offshoring and which I find relevant as part of a multidimensional model for reviewing a selected sample of recent contributions in services offshoring research. These dimensions are visualized in Figure 3.

Figure 3: A Multidimensional Model of Offshoring Research



The overall research question presented earlier outlines three main dimensions – antecedents, process, and impacts – of offshoring research which are also reflected in the title of the thesis. The three dimensions represent at the same time a taxonomy of dependent variables that may be used to

categorize recent contributions in offshoring research as the three broad constructs match the focus of most articles on services offshoring: First, the *antecedents* are the important factors or events that precede the offshoring decision and influence the behaviour of firms involved in offshoring. This includes both firm-internal antecedents, such as the firm strategy and strategic decisions, and firm-external antecedents, such as the emergence of improved technology that enables the offshoring of services or shortage of skilled labour that create an incentive for firms to engage in or expand offshoring activities. Second, the *process* variable includes questions regarding the implementation of offshoring, how offshoring firms approach and carry out offshoring, business linkages between clients and service provider firms and other similar issues. The time dimension is important in relation to this variable since the notion of process refers to a sequence of events, actions or decisions and the linkages and paths between those events etc. Third, the *impact* variable concerns the impacts of services offshoring, both intended and unintended, which appear at the national level, the sector level, the firm level (which is the level of analysis investigated in the thesis research papers), or even at the individual level.

The three dependent variables are interrelated because the antecedents of offshoring influence the course and dynamics of the offshoring process, and the antecedents and the offshoring process together influence the impacts of offshoring. For example, in Jensen and Pedersen (2007) we show that the offshoring of more advanced tasks is an outcome of a set of antecedents that differ from those that precede the offshoring of less advanced tasks. The process of offshoring this type of advanced service tasks, which is investigated in the detailed studies of the offshoring from Danish firms to Indian firms (Jensen, 2008a, 2008b), is founded on intensive technologies and characterized by a high degree of reciprocal interdependence between the tasks and within the teams. This follows a different path than the offshoring of manufacturing tasks which rely on long-linked technologies in a sequential production process (see Stabell and Fjeldstad, 1998, and Thompson, 1967, for a discussion of *intensive* and *long-linked* technologies). Lastly, the dominant strategic motive (antecedent) underpinning the offshoring of simple manufacturing and service tasks is cost-savings while the offshoring of advanced services is driven by a broader set of strategic motives. This difference between the strategic motives

will shape the firm-level impact of offshoring. For example, the broad range of strategic and systemic learning effects identified in the advanced services offshoring partnerships between Danish and Indian firms (Jensen, 2008b) would seem less likely when offshoring is driven solely by the efficiency-seeking motive.

The remaining four analytical dimensions in figure 3, respectively theory, level of analysis, location focus and type of service, are typically applied in various combinations (hence the two-way arrows in the figure) to analyze and explain one or more of the dependent variable. *Theory* refers here to the type of theory, or theories, applied in research. The services offshoring phenomenon may be analyzed through many different theoretical lenses. Theories of the firm (transaction cost economics, resource-based view of the firm, knowledge-based view of the firm) and international business theories (e.g. internationalization strategy and internationalization process theories, liability of foreignness and others) constitute two main theoretical families which are discussed by scholars in the context of services offshoring. Trade theory is a third type of theory which in some cases is applied as the theoretical foundation of services offshoring (e.g. Farrell, 2005). *Level of analysis* concerns whether the research is done at the country level, sector/industry level or at the firm level. Other levels of analysis exist and are used in connection with offshoring, for example regarding the importance of offshoring for regional cluster (Andersen, 2006) and the level of city is another relevant level of analysis. However, for the sake of overview I use the three levels of analysis which are the most frequently applied. The *location focus* describes whether the research (mainly) addresses issues related to the home base/country of the offshoring firm or issues related to the host/destination context. Most often authors concentrate on either the home or the host context, but the two are not mutually exclusive and some articles includes both dimensions, such as Bunyaratavej et al (2007) and two of my research papers (Jensen, 2008a, 2008b). As for the *type of service* offshored, this includes a long list of different services (e.g. in the latest questionnaire of the Offshoring Research Network, an international research project led by Professor Arie Lewin of Duke University, more than 30 different types of technical and administrative services, within different groupings such as “financial services”, were listed) and for the sake of simplicity I specify here only IT and R&D as two main types. The

term “general” in the model refers to articles that do not focus on one specific type of services, but discusses services offshoring at a generic level across different types of services (and sometimes with manufacturing offshoring included, too).

2.4 Recent Contributions in Services Offshoring Research and the Multidimensional Model

I will use the multidimensional model here to provide a brief overview of a sample of 20 recent journal articles on services offshoring. Recent years have seen the publication of more than 20 journal articles on services offshoring. The 20 articles is a selected sample of articles that differ in focus and content but all, in my view, are significant contributions to the literature on services offshoring. In Figure 4 below each article is marked in the cells which relate to the dimensions included in the article. The purpose of this categorization is to provide an overview of the dimensions covered in recent, high-quality research on services offshoring and particularly identify the dimensions that seem to be addressed only to a limited extent. In addition, the four thesis research papers are inserted in the bottom of the figure to allow for a comparison with the sample of 20 journal articles.

Figure 4: Services Offshoring Research and the Multidimensional Model of the Offshoring Research Agenda – Categorization of 20 recent (2004-2008) journal articles on services offshoring

JOURNAL ARTICLES	DEPENDENT VARIABLES			ANALYTICAL DIMENSIONS*			
	Antecedents	Process	Impacts	Theory	Level of Analysis	Location Focus	Type of Service
1. Aron & Singh (2005)		√		Other	Firm	Home	General
2. Blinder (2006)			√	Trade	Country	Home	General
3. Bryson (2007)	√		√	Other	Firm, Country	Home/Host	IT, Other
4. Bunyaratavej et al (2007)	√		√	IB	Country	Home/Host	General
5. Carmel & Schumacher (2005)		√		IB	Firm	Home	IT
6. Doh (2005)			√	IB, TotF	Firm	Home	General
7. Dossani & Kenney (2007)			√	IB, Other	Firm, Sector, Country	Home/Host	General
8. Farrell (2005)			√	Trade	Firm, Country	Home	General
9. Graf & Mudambi (2005)	√			IB	Firm	Home	IT
10. Karmarkar (2004)		√		n.a.	Firm	Home	General
11. Kedia & Lahiri (2007)		√		TotF	Firm	Home/Host	General
12. Kotabe & Murray (2004)	√			IB, TotF	Firm	Home	General
13. Levy (2005)			√	Trade	Country	Home	General
14. Lewin & Peeters (2006)	√	√		Other	Firm	Home	General
15. Li et al (2008)			√	Other, TotF	Firm	Home/Host	General
16. Manning et al (2008)	√			Other	Firm	Home/Host	IT, R&D, Other
17. Maskell et al (2007)	√	√		IB, Other	Firm, Sector	Home	General
18. Metters & Verma (2008)	√			Other	Country	Home	General
19. Murtha (2004)	√			IB	Firm	Home	General
20. Youngdahl & Ramaswamy (2008)	√			Other	Firm	Home	General
THESIS RESEARCH PAPERS							
Jensen et al (2007)	√		√	Trade	Country	Home	General
Jensen & Pedersen (2007)	√			IB	Country	Home	General
Jensen (2008a)		√	√	Other	Firm	Home/Host	IT, Other
Jensen (2008b)	√	√	√	Other	Firm	Home/Host	IT, Other

Note: IB = International Business Theories; TotF = Theories of the Firm

The sample consists of an equal distribution of conceptual articles (11 articles) and articles based on empirical data (9 articles) that are collected and analyzed specifically for the particular study.

Although the journal articles selected for this sample do not make up the entire bulk of services offshoring research that has appeared in recent years, some interesting and indicative observations can be found across the sample of articles:

First, as regards the theoretical perspectives applied in the articles, theories in the field of international business seem to be the most frequently used (8 of 20 articles). However, the sample is not dominated by international business theories as a broad range of theoretical perspectives is applied. Services offshoring is analyzed not only through trade theory (3 of 20 articles) and theories of the firm (4 of 20 articles), but also through a range of other theories, such as co-evolutionary theory (Lewin and Peeters, 2006; Manning et al, 2008), supply chain management (Maskell et al, 2007) and a business history perspective (Metters and Verma, 2008). Notably, the relevance of a learning perspective on services offshoring is mentioned in several articles, but only applied and analyzed with empirical data in two of the thesis research papers (Jensen, 2008a, 2008b).

Second, the vast majority of journal articles discuss services offshoring at a general level. Only few articles address services offshoring at a more specific level with a selected focus on selected services types/tasks. In the articles that do adopt a more specific focus (4 of 20 articles), the analyses concentrates on IT, and in one case (Manning et al, 2008) with some detailed data on the offshoring of R&D services. As I shall argue later in section 5.1, there is a need to conduct offshoring research at more detailed and disaggregated levels of the firm value chain, yet none of the selected articles carry out research at this level.

Third, concerning the level of sophistication of the offshored services, some of the articles discuss offshoring of advanced professional services (Bryson, 2007) or knowledge-intensive services and R&D (Lewin and Peeters, 2006; Li et al, 2008; Maskell et al, 2007; Murtha, 2004), but there are still very few empirical data and articles that specifically address advanced services offshoring.

Fourth, the dominant focus in the sample is the home base, either the home country or the home/offshoring firm. Some articles (5 of 20 articles) do focus on the host destination of services offshoring, most often as part of a combined, dyadic discussion of the home base and host destination. Among these, Dossani and Kenney (2007) and Li et al (2008) seem to treat the host destination to the greatest extent, but none of the articles have an exclusive focus on the host destination/firm.

Fifth, the level of analysis most frequently applied is the firm level (15 of 20 articles) and combined with predominant focus on the home base, this illustrates that most articles concentrate on aspects relating to MNCs of the developed countries. The empirical articles that include the firm level do generally not analyze the influence from the business sector context on the firms, but discuss services offshoring at the firm level across business sectors. Again, this reflects that there are not many empirical studies that address services offshoring at a more specific and disaggregated level of analysis, although it should be mentioned that there are recent journal articles with a sector perspective which are not included in the sample of 20 articles (e.g. Grote and Täube, 2007)

Sixth, as regards the dependent variables included in the journal articles, research on the antecedents of services offshoring, and offshoring in general, stands out as the dominant theme (10 of 20 articles) which is treated either exclusively or combined with one of the two other dependent variables. Research on the impacts of services offshoring is addressed in a range of articles (8 of 20 articles), but in four of these eight articles it is a conceptual discussion which mainly concern the impact on jobs and employment in developed countries of both manufacturing and services offshoring. The process variable is addressed by a number of authors (6 of 20 papers) but only three articles include empirical data in their analysis and discussion of the offshoring process (Carmel and Schumacher, 2005, adapted after Carmel and Agarwal, 2002; Lewin and Peeters, 2006; Maskell et al, 2007). For this reason these articles are included in my research paper on the dynamics of the offshoring process (Jensen, 2008a).

3. THE RESEARCH PAPERS OF THE THESIS: METHODOLOGY AND SUMMARY

This section presents the applied methodology and summarizes the main findings and conclusions of the four research papers. Section 3.1 describes the methodology of the thesis. This includes, first, an outline of the survey on offshoring among Danish firms and case studies of advanced services offshoring (section 3.1.1); second, a discussion on the value of using both quantitative and qualitative methods and data in the thesis and how these methodologies combined create synergies among the findings of the study (section 3.1.2); third, a discussion on the location dimension of the study. Sections 3.2 – 3.5 contain the summaries of the research papers and the headlines of the sections below give the respective titles of the papers.

3.1 Methodology

3.1.1 Research design: Firm survey and case studies

The four research papers use two different sets of data and different methodologies: Jensen et al (2007) and Jensen and Pedersen (2007) use survey data from Denmark, while the two other papers (Jensen, 2008a, 2008b) use interview data from firm case studies from Denmark and India (the methodologies and data are also described in the four papers).

Survey among Danish firms: The data presented in Jensen et al (2007) and Jensen and Pedersen (2007) originate from a study carried out by this author in collaboration with a team of consultants and scholars in the second half of 2005. Our cross-sectional data form the bulk of the analysis, but in addition we draw on more qualitative data sources. We interviewed a sample of about 25 offshoring firms participating in the survey to ensure data quality and get a more detailed understanding of offshoring in Danish firms. The study covers the eastern regions of Denmark which in 2005 represent 45% of the total Danish population and 47% of national GDP in 2005. We have excluded the outsourcing of tasks to domestic Danish firms from the study, which focuses on the relocation of tasks somehow rooted in Denmark prior to offshoring. Additional firm interviews show that business

processes are rarely transplanted identically in the destination country, as firms seize the opportunity to reorganize and introduce new elements in the business processes.

The quantitative analysis is based on a survey of the total population of firms in the eastern regions of Denmark in the following sectors: manufacturing, utilities (electricity, gas and oil), transportation, financial (banking, insurance) and business services. Firms in these sectors can carry out offshoring through either their primary activities in the value chain or their secondary activities (e.g. administrative/back-office activities). This set of sectors includes roughly the same sectors as those in a study by The Danish Economic Council, a think-tank funded by the Danish government, which in 2004 conducted a large study regarding the offshoring of jobs from Denmark (Danish Economic Council, 2004). However, we expanded the sample to include sectors in which Denmark, particularly its eastern region, hosts large companies likely to offshore back-office functions. To include a maximum of firms conducting offshoring, we thus focused the study on the sectors where offshoring is most likely to occur. Since the survey is not all-inclusive, firms with offshoring activities outside these sectors, e.g. a supermarket chain offshoring its IT activities, are excluded. This creates a potential bias, but we assume one that mainly affects the percentage of offshoring firms and not the factors determining the respective practices of offshoring and advanced offshoring.

Firms with fewer than 10 employees are excluded from the sample, offshoring rarely being an option for such small firms. This leaves a total population of 3,580 firms in the selected sectors. We contacted all firms four or five times by phone at regular intervals during the six-week data collection period. This gave each firm ample opportunity to participate, and systematic monitoring during data collection ensured that the ultimate share of participating firms in each segment in terms of sector, geography and size corresponded to the actual share of firms in the population. In terms of sector, geography and size of the firms, we thus believe the sample to be highly representative of the firms. In total, we obtained usable responses from 1,504 firms, which make the response rate 42%.

Each firm has a unique identification number provided by the Danish Commerce and Company Agency, a government body. Using this identification code, we linked the survey data for each firm to

individual firm data in official databases. This allows us to broaden the analysis range to include such key figures and accounting information as return on equity and capital investments. Furthermore, this combination of primary data (survey data) and secondary data (official firm statistics) makes the problem of common-method bias less of an issue.

Case studies of advanced services offshoring from Danish firms to Indian firms: The study includes three case studies, and each case study involves one Danish firm and its Indian offshoring business partner, for a total of six firms. The nucleus of each of the three case studies is the interaction and exchange of services between the units located in Denmark and India respectively. In all three cases, these services are organized in projects, and the project level thus functions as the primary level of analysis. Since all Danish and Indian firms are large firms, each with several thousand employees, the project level was originally expected to be the sole level of analysis. Given the large size of the firms and the comparatively limited size of the offshoring projects, the initial expectation was that the impacts of offshoring to India would be too minute to permeate beyond the project level and the units directly involved. It turns out, however, that some impacts go further and occur also at the firm level which therefore functions as the study's second level of analysis.

The ability to trace changes over time is a major strength of case studies (Pettigrew, 1990; Yin, 2003). The Danish-Indian offshoring collaborations were launched in their operational phase during the spring and summer of 2006. The first round of research interviews were implemented in the period between late October 2006 and January 2007. The second, and final, round of research interviews were conducted in August and September 2007. The case studies cover a period between approximately 1 year and up to 17 months in the longest running case study. In longitudinal research, the definition of the time frame of a study is crucial, as Pettigrew (1990) points out: *"For the practitioner of longitudinal research, issues of time are critical and pervasive. How does the choice of the time series influence the perspective of the researcher? When does the process begin and end? When is the appropriate moment to make assessments about outcome evaluation? Is time just events and chronology or is time a socially constructed phenomenon which influences behaviour?"*

(Pettigrew, 1990, p. 271). As regards the beginning of the case studies of the Danish and Indian firms, all firms in the study had shorter or longer periods of internal considerations, conceptualization and strategy formulation and varying degrees of prior experience which makes it difficult to identify one single point in time when the case studies “began”. Although the study’s focus is on the operational phase and the dynamics of this phase, it is clear that there are historical legacies and routines in the offshoring Danish firms where present behaviour is a reflection of general routines and strategic orientation coming from the firm’s past rather than the outcome of detailed strategic analysis of the present day situation, and these to some extent shape present behaviour. Following Pettigrew’s (1990) point, there is a beginning, middle and end to every story, but longitudinal research project are not always able to follow through until the end. Since all three pairs of Danish-Indian firms all the way from the beginning to the research project’s cut-off date are defined as long-term partnerships, it is clear that the case studies only capture the *initial phase* of the offshoring collaboration and process between the firms. With regard to Pettigrew’s (1990) point concerning when it is the appropriate moment to make assessments about outcome evaluation, it must be acknowledged that it is a rather early moment to cut off the investigation since the offshoring partnerships and the dynamics of the process will continue to evolve, and the study will only cover part of the process.

Nevertheless, two arguments may be presented in favour of the study’s longitudinal perspective: First, the study captures the early part of the operational phase where the Danish firms start out with limited or no prior experience in the field. Seen from an organizational learning perspective, it seems reasonable to expect that the learning curve in the Danish firms would be very steep, due to the novelty of the venture. Two of the three Indian firms have significant experience in the field, as the providers of services, but have no previous experience in Denmark or Scandinavia. For all firms, Danish and Indian alike, the collaboration with their respective partners is new. Thus, on various dimensions, steep learning curves were to be expected, and as argued in Jensen (2008a, 2008b), this expectation also materialized. Second, since the three pairs of Danish-Indian partners started out with no (or, in one case, some, but very limited) mutual offshoring collaboration experience, the dynamics of the process were from the outset of the study expected to be characterized by a relatively high level

of trial-and-error, adaptation and adjustment. That is, a process with many changes, despite the short time frame, and a process quite different from what one would expect in the collaboration process between firms after many years of stable collaboration where routines prevail and changes are incremental. The study (Jensen 2008a, 2008b) shows that many changes and interesting dynamics appeared in the process, which altogether makes the three longitudinal case studies relevant for an analysis of offshoring process dynamics and organizational learning.

The strategy for the selection of the cases is a crucial part of the research strategy (Flyvbjerg, 2007). It sets the stage for the possibility for generalized use of the findings, and theory-building from case studies, since this is determined by the position of the cases relative to the distribution in the entire population (Eisenhardt, 1989; Flyvbjerg, 2007; Pettigrew, 1990; Yin, 2003). Flyvbjerg (2007) presents a model with different strategies for the selection of cases. Among these, one is central in this study: The “maximum variation” selection strategy. Here, this means that the study is not confined to one industry sector but analyses advanced services offshoring across different professional service firms and sectors. The shared feature between them is that the offshored services are *advanced*, similar to what UNCTAD (2004) categorizes as “high-skill services” which is “the most creative and skill-intensive end of offshored services” (UNCTAD, 2004, p. 151).

Additional selection criteria are applied, but one criterion in particular is essential for the discussion of advanced services because it captures the work process that underpins this type of services: all projects fall in the category described by Stabell and Fjeldstad (1998) as the “*value shop*” model, which is based on Thompson’s (1967) notion of “intensive technology” and is a theoretical expansion of Porter’s (1985) value chain theory. The problem-solving process in value shops is iterative and cyclical with a high degree of reciprocal interdependence between activities, since the perception of the problem and adequate solutions may well change along the way. Examples include work done in hospitals, educational institutions and professional services firms in medicine, law, architecture, and engineering. A classic approach to offshoring would not see these types of projects as candidates for offshoring because the degrees of codification and standardization are too low, there is too much tacit

knowledge involved on the part of the offshoring firm, and it requires too much coordination to make it work. Nevertheless, firms do offshore such projects, despite the challenges involved, and the trend is growing. Yet the knowledge about the dynamics and outcomes of these projects for the home and host firms involved is very sparse.

3.1.2 *The value of quantitative and qualitative methods*

This part of the thesis seems to be a timely place to note that it is a deliberate choice to base the thesis on both quantitative and qualitative data and methods. At times the debate on methodology among academics seems to be a debate on *either* quantitative methodology *or* qualitative methodology. Judging from the discussion at a number of recent years' conferences on offshoring, the scholars that do research on offshoring seem no exception to this either-or symptom. In addition, considering e.g. that only 3% of the articles on international business research published in the Journal of International Business Studies from 1990-1999 (Welch and Welch, 2004), which reflects the difficulties involved in publishing qualitative research in international journals (Birkinshaw, 2004), there seems to be a particular need to discuss the value of qualitative methods in the thesis. The short answer to this issue is that to better understand the many facets of advanced services offshoring we need, in my view, to apply a broad arsenal of both quantitative *and* qualitative methods. The basic rationale for using both quantitative and qualitative methods in the thesis is therefore in line with Flyvbjerg's (2007) point about the relationship between research problem, data and methodology: "*Good social science is problem-driven and not methodology-driven in the sense that it employs those methods that for a given problematic best help answer the research question at hand. More often than not, a combination of qualitative and quantitative methods will do the best task*" (Flyvbjerg, 2007, p. 432). I shall elaborate this point below.

According to Flyvbjerg (2007), quantitative methods are essential e.g. where the aim is to understand the degree to which certain phenomena are present in a given group or how they vary across cases. This rationale for using quantitative methods is identical to this project's use of data from a survey among firms located in Denmark: The survey data may be used to analyze the magnitude of offshoring

and the antecedents of offshoring different types of tasks as well as a range of other characteristics of contemporary offshoring behaviour in Danish firms. The survey data may therefore present the broader landscape into which the case studies are situated. But for the understanding of dynamic, firm-internal processes, quantitative methods and survey data are of little use whereas qualitative methods and data contain nuances and a richness that can help us see points and causal relations that we are unable to pick up in quantitative analytical models. Sturgeon (2000) makes a similar point and a strong argument for the use of detailed case studies as a means to understand linkages and processes in global production networks, i.e. a broad category of studies which also includes this research project. Sturgeon's (2000) point below shows that the best approach is not to replace quantitative methods and data, but to make the two types of methodologies complement each other since they have their respective strengths and weaknesses: *“What is clear is that that macro-level statistics, while they can help us to gain a rough idea about the volume and location of economic activity, provide no insight into the nature of value chain and production network linkages. We must instead rely on the painstaking collection of qualitative field data, which, when used in combination with quantitative data on trade and investment, can begin to reveal an emerging set of global-scale economic patterns.”* (Sturgeon, 2000; p. 1)

I indicated in figure 4 above that the four research papers in various ways relate to three main dependent variables in services offshoring research, i.e. the antecedents, processes and impacts of services offshoring. Figure 5 below provides a more detailed overview of how the main findings of the research papers contribute to the offshoring literature on these dependent variables.

Figure 5: Findings of Research Papers and Dependent Variables

Research Papers	Antecedents	Process	Impact
Jensen et al (2007)	Strategic motives of offshoring firms	-	Job impact of offshoring to and from Denmark
Jensen and Pedersen (2007)	Antecedents of a) the offshoring decision, b) offshoring of advanced tasks	-	-
Jensen (2008a)	-	Evolution of the business linkage between home and host firms over time	Direction of scale and nature of advanced services offshoring
Jensen (2008b)	Strategic motives of advanced services offshoring to India	Emergence of learning in home and host firms over time	Strategic and systemic learning effects in home and host firms

In keeping with the methodological arguments outlined above, figure 5 shows that there are important synergies between the use of both quantitative and qualitative methods in the thesis. These synergies exist in two ways. First, the combined use of the research designs of the four papers enables a coverage of and contribution to *all three types of dependent variable*. Through the quantitative papers only, the process variable would not be addressed, and only one of the two papers contains some data on the (job) impact of offshoring. With the addition of the qualitative papers, all three dependent variables are addressed. For example, in Jensen and Pedersen (2007) we find evidence that the offshoring of advanced tasks in the firm value chain is different from more “classic” offshoring of simple tasks, this finding naturally leads to a range of new questions since this type of offshoring seems to be of a different nature compared to what we have seen in the past. The third and fourth papers of the thesis (Jensen 2008a, 2008b) address this issue and analyze how offshoring unfolds in client and services provider firms that do engage in this type of offshoring and what the processes and impacts are.

Second, the different research designs enable an *explanation of various types* of antecedents, processes and impacts. In this way the four papers complement each other and provide a multifaceted portrait of each of the dependent variables. For example, in Jensen et al (2007) we estimate the magnitude of the net job loss and job gain of offshoring from and to Denmark while Jensen (2008b) takes a different

approach to the impact variable and identifies the strategic and systemic learning effects of advanced services offshoring in home and host firms. By including only the quantitative or, vice versa, only the qualitative papers, more questions would remain unanswered. Furthermore, in one respect the findings support the validity of the other papers: In Jensen and Pedersen (2007) we identify a set of strategic motives behind the offshoring of advanced services and manufacturing tasks and these strategic motives are also apparent in the Danish firms that offshore advanced services in the case studies (Jensen, 2008b). In other words, two independent sets of data support the same observation. In addition, the longitudinal perspective of the case studies makes it possible to analyze how the strategic motives evolve and change over time.

3.1.3 Location: Choice of offshoring and destination countries

Offshoring of advanced services is a phenomenon that concerns all developed economies whose firms offshore tasks to foreign destinations. It also concerns many emerging economies and developing countries that are the destinations receiving the offshored tasks. The empirical data of the thesis include only one offshoring (home) country – Denmark – and one offshoring destination – India, although some data on other destination countries are included in Jensen and Pedersen (2007) at the aggregate level. The boundaries of these two countries in some way set the limit as to the conclusions one may derive from the research papers. It is, however, possible to argue that the findings of the study have relevance beyond the national borders, and that case studies coming from these two countries may be used to make theoretical contributions about advanced services offshoring in the tradition devised by Eisenhardt (1989) and Flyvbjerg (2007).

First, a number of factors make Denmark an interesting choice for as a case country in international business. The Danish economy and firms located in Denmark are highly integrated in the international economy and therefore exposed to global economic flows and trends, including offshoring trends. For example, recent data show that the firms in the Danish economy to a higher extent than other Nordic countries offshore business processes, manufacturing as well as services, to other locations. (Statistics Denmark, 2008) The Danish case may therefore represent a case of how globalization factors play out

in an advanced, open economy with a highly adaptive labour market and a high level of internationalization in manufacturing as well as service sectors. Danish firms are not “first movers” in the field and data from the *Offshoring Research Network* show that although US and European firms started to offshore at the same time, US firms have adopted offshoring more widely and at a faster pace (Lewin and Couto, 2007). In comparison, most of the offshoring Scandinavian firms seem to engage in services offshoring from 2002 and later (preliminary data from the ORN 2008 Scandinavian survey). Nevertheless, the insight gained from the Danish case may be of a similar nature as what may be found in other advanced economies where firms engage in advanced services offshoring to emerging economies and developing countries, notably European countries where English is not the native language.

Second, a similar argument may be used for the selection of India as a case country. While services offshoring goes to many different destination countries, India stands out as the primary choice of location across many different business functions within services (Lewin and Couto, 2007). As argued by Andersen (2006), Indian firms are not just providers of services, but use their cocktail of low-cost labour and highly skilled labour to build capabilities that will work as competitive inroads into various global industries. In other words, India is the leading destination country when it comes to services offshoring, and other existing or would-be destination countries and their firms naturally look to India to learn from the Indian experience and find the keys to unlock the door to the global services offshoring market.

3.2 Offshoring in Europe – Evidence of a Two-Way Street from Denmark

Our paper (Jensen et al, 2007) presents the results from a survey of more than 40 percent of all companies with more than 10 employees in sectors exposed to offshoring from the high-wage eastern region of Denmark. The study finds clear indications of a two-way impact of globalization in the form of activities and jobs being offshored from and inshored to the region. In 2002–05, more jobs were created as a result of the inshoring of activities into the region than were eliminated due to offshoring.

Overall, the employment effects of both offshoring and inshoring were found to be limited to less than 1 percent of all jobs lost to offshoring or gained via inshoring. This clearly indicates that for Denmark the worries in purely numerical terms regarding the employment effects of globalization seem overly alarmist. Both offshoring and inshoring were found to take place in essentially all relevant sectors of the economy, particularly in manufacturing and IT. Hence the label of a two-way street for globalization in eastern Denmark is appropriate.

Job and activity offshoring were found to be concentrated among low-skilled workers in manufacturing and IT, but also to a lesser degree in R&D functions. Inshoring were concentrated among highly skilled and specialized job functions, while medium-skilled administrative, customer relations, and trade functions experienced both job inshoring and offshoring. Globalization therefore has fundamentally exposed all tradable services areas, except management, to the global competition while having a highly unequal effect on the labor market in this high-wage region; destroying low-skilled jobs and bringing in more and higher skilled jobs.

As the inshoring of jobs occurs almost exclusively among the high-skilled portions of the workforce, the importance of a continued emphasis on education, skill upgrading, and life-long learning must be repeated again. It seems obvious from the results of this survey that this is the only way high-wage areas can continue to attract jobs and activities from elsewhere in the world. Increased flexibility is furthermore required of high-skilled workers, as this survey has found evidence that many tasks are being inshored by companies to the region without new employees being added to their payrolls. Evidently, high-wage, high-skilled workers are increasingly asked to take on new and additional tasks to keep their jobs. And while the region and Denmark in general has a relatively well-educated workforce, there is a clear risk that the region in future years could experience a shortage of workers with the longest tertiary educational backgrounds. Preventing such a shortage from occurring either by increasing the number of locals who graduate from such long tertiary programs or by bringing in substantially more highly skilled foreigners must therefore be the priority for Danish national and local policy makers.

3.3 The Antecedents of Offshoring Advanced Tasks

Based on the same dataset from survey among firms located in the eastern part of Denmark as Jensen et al (2007), this study (Jensen and Pedersen, 2007) shows that offshoring of elements of R&D, knowledge, innovation and other advanced tasks differs greatly from the better-known offshoring of less advanced tasks, and challenges the existing theoretical “tool-box” in international business and strategic management (see also Doh, 2005, who argues this point in more depth). In this article we take steps to fill the gap by enhancing understanding of why firms offshore more advanced tasks. In addition to revealing some unexpected results, our findings also raise several questions for future studies.

Using a modified view of the firm’s value chain – a view that distinguishes between activities and tasks – we have identified some characteristics of advanced task offshoring. Our results show that the offshoring of advanced tasks entails a set of characteristics different from those determining whether firms decide to offshore tasks. Moreover, offshoring advanced tasks is an internationalization strategy that clearly departs from a classic, market-seeking internationalization strategy. We find that the offshoring of advanced tasks should be seen through a different lens from mainstream offshoring. Our findings support the parity perspective presented by Bunyaratavej et al. (2007), as our data are consistent with the hypothesis that the search for highly skilled partners and new knowledge abroad drives firms with a high share of knowledge workers to offshore advanced tasks.

In our view, the findings indicate the inability of extant theory to explain new trends in offshoring. In the mainstream literature, offshoring is usually analyzed at the initial stage of the offshoring process, and many other aspects are ignored. Our findings contribute to debates about new trends in offshoring (e.g. of advanced services, R&D, and innovation). Although some limitations constrain the study, they could help shape the future agenda in offshoring research. This includes the possibility for offshoring studies entailing a more minute level of detail with regard to the activities and tasks involved, analyses

of the impacts of advanced offshoring for firms and countries based on longitudinal studies, and more research on the processes and dynamics connected to offshoring advanced tasks.

Anecdotal evidence indicates that offshoring advanced tasks is a relatively new strategy for most firms (Pyndt and Pedersen, 2006). Despite the novelty of advanced task offshoring, this type of offshoring will continue to grow and looks set to become the name of the offshoring game in future. The shortage of qualified staff in Europe and the US, along with the maturation of markets, will intensify the global search for talent and new knowledge.

3.4 A Passage to India: Process Models and Advanced Services Offshoring to India.

This study (Jensen, 2008a) contributes to a long tradition in the international business literature for process models of international processes of the firm. The study develops a framework for the understanding of the evolution of business linkages founded on advanced services offshoring between developed country firms and developing country firms. Based on three cases of advanced services offshoring from Danish firms to Indian firms, I suggest a process model with three stages that captures the dynamics of the early phase (1 – 1½ year) of the offshoring partnerships. Although each of the three partnerships stands out with a set of specific characteristics, there are similarities in the way in which the partnerships evolve from the launch of the collaboration and during the first year of offshoring operations. The similarities between the cases provide empirical support to the proposal that the process model is of general value. The findings may enhance our understanding of the evolution of business linkages founded on advanced services offshoring; an area which several recent authors see as the next wave of offshoring and globalization. The findings are consistent with the overall idea that advanced services offshoring should not be considered as a static situation, which is implicitly the case in the offshoring literature where many contributions do not incorporate this perspective (see also figure 4 above), but rather as a dynamic process that evolves over time.

Moreover, the study shows that the evolution and change that occur in the offshoring partnerships over a relatively short period is significant. This gives an indication of the firm-level impact of advanced services offshoring in the offshoring firms from developed countries: While other recent research contributions have pointed out that offshoring of advanced services and other innovation related activities will grow (Dossani and Kenney, 2007; Lewin and Couto, 2007), this study shows that once firms do engage in this type of offshoring, it will evolve rapidly and it will have deep implications for the management, organization and implementation of work in the offshoring firms due to the iterative and cyclical nature connected to the problem-solving processes of advanced service work.

3.5 A Learning Perspective on the Offshoring of Advanced Services

This paper (Jensen, 2008b) explores organizational learning that occurs over time in both home and host firms and uses learning as a measure of the firm impact of advanced services offshoring. The paper builds on the same dataset from case studies of offshoring of advanced IT and engineering services from Danish firms to Indian firms as in Jensen (2008a). The two papers explore different perspectives since this paper concentrates on the outcomes of the learning process. In contrast, Jensen (2008a) investigates how these outcomes are achieved, i.e. the process dynamics. According to Dodgson (1993), this is a common distinction in the management and business literature on organizational learning.

This study contributes to the emerging literature on offshoring of advanced services by enhancing the understanding of the learning effects in developed country firms and developing country firms. The findings of the study are consistent with the view expressed in the paper's hypothesis that advanced services offshoring is not hollowing-out offshoring firms but instead an opportunity for strategic business development and organizational change. I therefore argue that advanced services offshoring must be understood as an antecedent for strategic business development and organizational change in both home and host firms: When offshoring partnerships mature and firms gain experience, the learning effects in both home and host firms evolve over time and differ in many cases from their initial objectives and expectations. The Danish firms all launched offshoring operations to India

primarily to get access to qualified staff. During the first year of offshoring operations, however, significant learning and change occur in the Danish firms' approach to offshoring and the strategic motives are expanded and include now other motives than merely the resource-seeking motive. In two Danish firms the experience even ignites a process of strategic transformation in the firms. Moreover, the experience gained sets in motion a range of changes at the systemic level as firms change and adapt their organizations to better exploit the advantages of offshoring. These incidents of strategic and systemic learning indicate that the Danish firm match the type of "fundamental transformation" offered by Lewin and Peeters (2006), where firms discover "that offshoring is not so much about taking out costs as it is about enabling them to experiment with radically new ways of doing business" (Lewin and Peeters, 2006, p. 235).

For the Indian firms, the change over time is less dramatic but the partnerships with Danish firms still entail a considerable amount of strategic learning effects that influence the business development of the firms. The Indian firms use their Danish clients to establish bridgeheads in new markets (Denmark, Scandinavia, Europe) and to enhance their capabilities in various technology and business domains. Also at the systemic level, a number of learning effects and organizational changes occur in the Indian firms. The study shows that even large Indian firms can learn from partnerships with the comparatively smaller Danish firms. At a general level, this indicates the potentials for upgrading effects in developing country firms from collaboration with developed country firms.

4. THE FUTURE OF ADVANCED SERVICES OFFSHORING: A NEW PERSPECTIVE ON A NEW GENERATION OF OFFSHORING

4.1 The Rapid Evolution of the Offshoring Agenda for Managers and Scholars

Since I first became interested in the offshoring phenomenon, in 2004, and until now, in 2008, the offshoring agenda has evolved significantly in just this short time span of around four years. This change is apparent at both the academic, managerial and policy levels. However, to avoid the many aspects and complications involved in the policy debate, I will concentrate the discussion in this section on the academic and managerial dimensions.

An anecdote may serve to illustrate my point on the rapid change in the field: In December 2007 I attended a conference on the globalization of services at Stanford University in California, organized by Rafiq Dossani of Stanford University and Martin Kenney of the University of California at Davis. The conference was held in 2007 for the third consecutive year and gathered an impressive group of business leaders and academics. After the conference Professor Kenney summarized in a private conversation the change in the debate as it had emerged from the first conference in 2005 and till December 2007: At the first conference in 2005, the debate was to a large degree evolving around the question *whether or not* firms should decide to engage in offshoring: What are the pros and cons, what are the potential benefits and hazards, etc. At the second conference in 2006, things had moved on and the focus of the discussion was primarily *how* to do offshoring. The question of whether to do it or not seemed a question of the past. While the how-to-do-it question was still relevant at the December 2007 conference, the dominant theme at the event was the internationalization of the Indian services firms, their emergence as global firms and head-on competitors of Western firms. As Martin Kenney noted, the change in the themes discussed shows that the understanding of services offshoring has taken a significant leap in a short time.

So, when all this happened in the course of a few years, what will be the next steps? Inspired by Kakabadse and Kakabadse's (2000) argument that a new *outsourcing* paradigm is emerging, I pursue

this line of thinking and suggest that it may be beneficial to apply a new perspective on a “*new generation of offshoring*” (i.e. services offshoring and in particular the offshoring of more advanced technical and administrative services), which is the type of term used by several authors to describe recent years’ trend in offshoring (e.g. Bryson, 2007; Dossani and Kenney, 2007; Lewin and Couto, 2007; Manning et al, 2008). A new perspective on an *entire set* of different elements assumes that the offshoring of advanced activities is the manifest action which is correlated to an entire, coherent set of interrelated elements. It is, so to speak, the tip of the iceberg where the offshoring of advanced business activities is the only part visible, but where offshoring is one part of an underlying greater whole.

Kakabadse and Kakabadse (2000) argue that a “new outsourcing paradigm” is emerging and they outline what they see as the characteristics of this paradigm. The authors observe that companies by means of outsourcing are rapidly ‘devolving’ from self-contained, vertically integrated organizations to more virtual entities that rely on business partners to fulfil major parts of their supply and value chain requirements. This effort to externalize and become an extended enterprise bears remarkable resemblance to the Japanese *keiretsu* model. They argue that as a consequence Western managers need to move from arm’s length business relationships towards long-term, collaborative, strategic partnerships with external business partners. They conclude that some organizations have purposely started building integrated value chains with their suppliers and electronic trading communities and as a result, “*outsourcing has become a lever of business transformation and new organizational forms exemplified by joint venture spin-offs and shared service consortia where the focus is on competing for value and not effectiveness in the back office*” (Kakabadse and Kakabadse, 2000, p. 716).

In keeping with the points made by Kakabadse and Kakabadse (2000), what might be the contents of a suitable perspective on a new generation of offshoring? Compared to Kakabadse and Kakabadse (2000) whose discussion evolve around the ownership dimension (the make-or-buy decision), the understanding of a new generation of offshoring must have the cross-border transfer of business processes as the focal point. Figure 6 below summarizes the characteristics of an “old” generation of

manufacturing offshoring to a suggested “new” generation of advanced services offshoring. The two perspectives are compared on four main dimensions regarding tasks, firm strategy, organization, and business linkages.

Figure 6: From an “Old” Generation of Manufacturing Offshoring to a “New” Generation of Advanced Services Offshoring

<i>Dimensions:</i>	”Old Generation Offshoring”	”New Generation Offshoring”
<i>Tasks</i>		
<i>Type of value chain tasks</i>	Mostly manufacturing	Mostly services
<i>Strategic importance of offshored tasks</i>	Relatively low	Relatively high
<i>Complexity of transactions</i>	High degree of codification; low complexity with relatively simple and routine tasks	Low degree of codification and relatively high degree of complexity with advanced and knowledge-intensive tasks
<i>Firm Strategy</i>		
<i>Management role</i>	Strategy formulation, planning and setting of performance targets	Communication, team and process integration and coordination at international/global level
<i>Value creation logic</i>	Specialization and optimization through disaggregation of the value chain	Reorganization and reintegration of the value chain across borders
<i>Primary strategic driver of offshoring</i>	Competitiveness through cost reduction	Competitiveness through knowledge and skill seeking across borders
<i>Organization</i>		
<i>Global firm value chain configuration</i>	Dispersed	Concentrated
<i>Level of global integration</i>	The multi-domestic MNC with relatively little global integration	Trend towards building of critical mass and specialization in regional/global clusters; cross-border exchange of services
<i>Business linkages (intra-firm or inter-firm)</i>		
<i>Type of business linkage</i>	Arms length	Relational (partnership)
<i>Degree of power asymmetry</i>	High degree: Lead firm dominates	Low degree: Bargaining and interdependence

4.2 Tasks

4.2.1 *From offshoring of manufacturing tasks to offshoring of advanced service tasks*

The basic element of this construct is that firms enter the new offshoring generation when they start offshoring more advanced and complex tasks in the value chain instead of merely offshoring simple and standardized value chain activities. I suggest that the offshoring of advanced service tasks is the manifest action which is correlated to an entire, coherent set of interrelated elements, which comprises the other elements listed in figure 6, and that there are many interactions and interdependencies between these elements which make the new generation perspective a very dynamic one.

Using the terminology of Quinn and Hilmer's (1994) work on strategic outsourcing and Prahalad and Hamel's (1990) theory of the core competences of the firm in the offshoring context, the strategic importance of the offshored tasks in the "old" generation perspective is low as mainly (only) non-core tasks are offshored. Contrary to this, the strategic importance of the offshored tasks in the new generation perspective is high as advanced, innovative and creative tasks would typically be very important for the offshoring firm close to the core competencies of the firm (or perhaps even core activities; consider, for example, the offshoring of critical R&D activities which the offshoring firm does not have the capability to perform in the home country).

A somewhat similar discussion seems to exist in the field of R&D internationalization. Gammeltoft (2006) summarizes these dissenting views in the field (which by nature is closely related to the offshoring of advanced services), when he describes a "traditional view" versus a "new view" as regards R&D internationalization. The traditional view, dominating until the late 1970s, describes the R&D activities of MNCs as mainly located in the home base. R&D outside the home base predominantly consists of minor, local adaptations connected with sales and production in the foreign markets. The new view emphasises the ways in which knowledge and innovation processes are becoming increasingly globally polycentric, i.e. where the R&D located outside the Triad (i.e. US, EU, Japan) is no longer merely local adaptation but a wider range of R&D activities including some

high-value R&D functions. It follows that a trend towards a “new view” on R&D internationalization generates more cross-border transfers of knowledge and services, i.e. more offshoring.

4.2.2 *Towards a more detailed understanding of “advanced services offshoring” construct*

UNCTAD’s (2004) definition of “*high-skill services*” which is “*the most creative and skill-intensive end of offshored activities*” (UNCTAD, 2004, p. 151) is used as the operational definition of the *advanced services* construct in the selection of cases for two of the research papers (Jensen, 2008a, 2008b). However, the implementation of the case studies has provided a more detailed insight into the nature and characteristics of advanced services. The nature of offshoring advanced services may consequently be described through two different dimensions in order to complement UNCTAD’s (2004) one-dimensional notion of “high-skill services”. In addition, they may also serve as a framework for describing different approaches to advanced services offshoring in the firms. The two dimensions are, first the level of *complexity* (or “advancedness”) of the tasks offshored, and, second, the degree of *discretionary judgment and decisions* required by the host firm. Each dimension may be understood as a continuum that ranges from high to low. The dimensions may be described as follows.

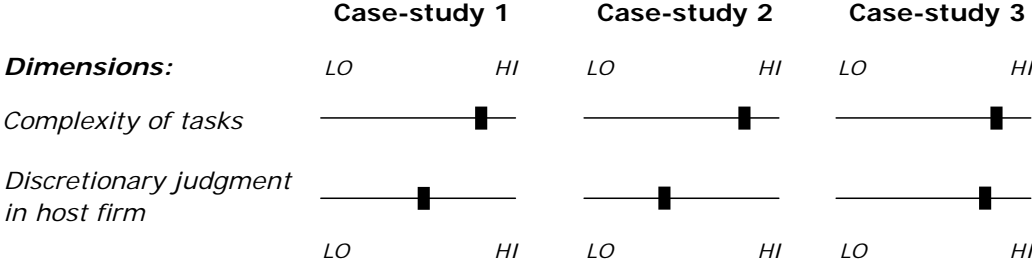
Level of complexity: This dimension is closely related to the skill-intensity included in the notion of “high-skill services” above and refers to the level of technical/professional sophistication of the tasks. Usually the execution of tasks of this caliber would require that the staff have educational backgrounds at university level or similar and quite often coupled with extensive work experience. In Jensen and Pedersen (2007) we distinguish between “less advanced” and “more advanced” tasks and the visualization of this scale in table 1 in the research paper gives examples of advanced tasks, or tasks with a high level of complexity.

Degree of discretionary judgment and decisions in host firms: Certain tasks have a low degree of codification and therefore necessitate that the staff in the destination firm is able to exercise independent judgment in the execution of the tasks based on their educational background and professional experience. This is particularly the case in the type of “value shop” firms/projects (as

defined by Stabell and Fjeldstad, 1998) included in the case studies where the understanding of problems and solutions are defined and redefined throughout the iterative and co-evolutionary work process. At the other end of the spectrum, tasks that are given to the host firm with a precise and detailed set of specifications entail a much lower degree of independent judgment and decision-making on the part of the host firm. Embedded in this dimension is also the level of managerial control applied by the home firm in the day-to-day operations of the host firm. To illustrate the variance involved, an extremely high level of discretion delegated to the host firm would represent a management-by-objectives approach where the home firm upfront would define the problem to be solved but would leave it to the host firm to decide how to solve the problem and which output/solution would be the best to solve the problem at hand. Moreover, this could even include a breakdown and detailing of the problem due to the nature of the problem-solving process in “value shop” firms/projects. In contrast, the other end of the continuum would signify a model where the home firm maintains full control of operational management (e.g. through expatriate managers stationed at the premises of the host firm) and with great detail makes all management decisions which are then implemented by host firm staff.

While all three cases of Danish-Indian offshoring collaboration belong to the “high-skill services” category, since a significant amount of the tasks offshored (although not all tasks) match this definition, more nuances come into the picture when the two new dimensions are applied. Figure 7 below applies the two dimensions to the three case studies. Since the two dimensions have emerged ex-post, they have not been included explicitly in the interviews, but all interviews have included questions and extensive discussion on the nature and characteristics of the offshored tasks and on the management of the business linkages between home and host firms. The assessment in figure 7 is based on these data.

Figure 7: Two Dimensions of Advanced Service Tasks Offshored (applied to offshoring partnerships between Danish and Indian firms)



As regards the level of complexity of the offshored tasks the three cases are at the same level. The tasks relocated to India were previously executed by Danish engineers and IT experts with educational backgrounds at bachelor and master levels and are now delegated to their Indian peers. The indication of the level of sophistication is not in the extreme high end of the continuum due to the fact that the entire bundle of tasks offshored consists of tasks with a high level respectively medium level of sophistication. The indication in figure 7 therefore represents an aggregate assessment of the level of task sophistication.

Concerning the level of discretionary judgment required by the host firm staff, there is some variation between the three cases. In case study 1, a large portion of the IT systems in the Danish bank are products of own development and with scarce documentation underpinning the systems there are many projects where the possibility for exercising independent judgment has been limited. However, in some projects the Indian firm has supplied business development experts where the essence of their tasks has been independent judgment. Thus far the Danish firm maintains a high degree of management control as all projects with offshored tasks are lead by Danish project managers. In some large projects Indian task managers located in India are charged with day-to-day management of project components and responsible for ongoing communication and reporting to the project manager. Considerations exist in the Danish firm concerning a greater delegation of responsibility to the Indian teams in the future.

In case study 2, the Indian engineers use a technology developed by the Danish firm to carry out the detailed engineering on the transport infrastructure (bridges, tunnels, roads) projects. Moreover, for all the Indian engineers recruited thus far there has been a period of introduction to European technical standards which are different from the standards used in India. These two factors combined have, during the period covered by the study, meant that the Indian engineers have mainly been asked to execute tasks according to instructions with limited room for independent judgment. The Danish firm is, however, very conscious about the importance of creating attractive career paths for the Indian engineers, which involves gradually increasing responsibilities and room for discretionary decisions for the Indian staff. Furthermore, the firm wishes to make optimal use of the Indian engineers as their experiences mature. Both these aspects suggest that the level of independent judgment will increase in the future.

In case study 3 the room for discretionary judgment and decision on the part of the Indian staff appears as the highest among the three case studies. While all projects that have parts of the work done offshore are lead by Danish project managers, as in the two other cases, one of the Danish firm's original objectives behind engaging with the Indian firm was to get access to highly qualified resources that could complement and add to the technical competences in the Danish firm. The Indian staff was therefore from the outset expected to contribute significantly to the projects, not only by implementing the work but also by adding significant value to the results of the projects which is why Indian staff is involved in the project process from the very beginning. However, all aspects of the implementation of the projects are done in close coordination with the Danish counterparts. As coined by the offshore manager of the Danish firm: *"We want our Indian consultants to be creative, but we define the framework for their creativity"*.

To sum up this discussion, the Danish firms have all offshored fairly advanced service tasks, with some of the tasks in this portfolio being even very advanced. As the relationships between the firms mature it is possible that the level of complexity of the tasks offshored will increase further. However, the level of discretionary judgment given to the Indian firms is still relatively limited with the Danish

firms in full management control. Where some level of discretionary authority is given to the Indian firm it remains closely coordinated with the Danes. Although it can be expected to increase somewhat in the future it seems unlikely that the Danish firms will reach a stage where they will grant extremely large discretionary powers to their Indian counterparts, at least in the medium term range (next 5 years). In addition, when the dimension regarding discretionary judgment is added to the construct of advanced services offshoring, the data further support the point made in Jensen (2008b) that there is no indication that a “hollowing out” of the Danish firms has occurred nor that it is likely to happen anytime soon.

4.3 Firm Strategy

The classic task for top management is to formulate firm strategy, set the performance targets accordingly and ensure strategy execution. As noted by Mintzberg and Waters (1985) this is the *deliberate strategy* (closely related to a classic scientific management perspective) as opposed to the *emergent strategy*, which occurs over time as “*a pattern in a stream of decisions*” (Mintzberg and Waters, 1985, p. 257). In the new generation of advanced services offshoring such important tasks still prevail but the management role is complemented with additional challenges. When tasks are advanced, creative and innovative, hard to codify and possibly with a good deal of tacit knowledge, a lot of reciprocities between the different stakeholders (experts, managers, clients/end-users) are needed in the implementation process to achieve the best result. To make this process succeed, communication, integration and coordination of the resources in the network are required to ensure that the parties involved, and located in different countries, act in a coherent way. Mastering such tasks will be a central competence for managers in order to create competitive advantages through advanced services offshoring. In my case studies of Danish-Indian offshoring collaboration (Jensen, 2008b), the experiences from the offshoring process have a catalytic effect on the strategic learning of the Danish firms that eye new business opportunities as offshoring evolves. This strategic change in Danish firms follows the pattern of an emergent strategy described by Mintzberg and Waters (1985) where firms embark on the offshoring collaboration with one set of strategic intentions, but these

intentions are sufficiently flexible to adapt to the learning that occurs along the way and new strategic motives are added.

The notion of *value creation logic* mentioned in Figure 6 is taken from Stabell and Fjeldstad's (1998) proposition for a theory on value creation in firms. Using this line of thinking, the understanding of a new generation of offshoring goes beyond the "old" generation's logic of specialization and optimization through disaggregation of the activities in the firm's value chain: The logic in the new generation is to create value from reengineering the value chain across borders to establish an integrated global value chain. I agree with Doz et al. (2001) when they argue that in the future competitive advantage will not arise from crossing borders in search of lower factor costs, but it will come from transcending national boundaries to identify and mobilize critical knowledge, technology, market intelligence and capabilities scattered around the world. Notably, the CEO of IBM, Samuel J. Palmisano, later made the same point in an article in *Foreign Affairs* (2006). This may indicate that the approach of dominant MNCs to offshoring is gradually evolving in a manner consistent with the characteristics of a new generation of offshoring.

As shown in numerous studies, the *primary incentive for offshoring* in the "old" generation offshoring is cost-seeking. In the new offshoring generation, the primary incentive for the offshoring firm is different. Cost advantages may still be important, but the predominant motive for offshoring firms is to improve competitiveness through access to different types of knowledge and skills located elsewhere than in the home country. We show in one of the research papers (Jensen and Pedersen, 2007) that while the cost saving motive (mainly related to unskilled, labour-intensive processes) drives a firm's offshoring of less advanced tasks, experienced and knowledge-intensive firms offshore more advanced tasks because they seek more knowledge abroad. These firms follow a different strategy as they seem to offshore advanced tasks for the purpose of making broader and deeper use of their global knowledge network, as they use offshoring to tap into sources of new knowledge or large pools of talented people abroad. However, as we note in the paper, in order to better understand the logic behind this type of offshoring, one has to develop a more detailed understanding of the different tasks,

including their interdependencies and complementarities (which is part of the research question addressed in Jensen, 2008b).

The arguments and findings presented by Maskell et al. (2007) are central to my view on offshoring as a dynamic process where experience is a key determinant in firms' offshoring decisions and behavior and where the classic cost-saving offshoring strategy is complemented or even superseded by other strategic motives. Precisely because of this dynamic process, the "new" generation perspective on offshoring will not totally replace the "old" generation perspective. The two will continue to coexist, as there seems little doubt that, in many cases, firms will continue to engage initially in offshoring due to the expected cost advantages. This is particular the case for manufacturing tasks but also for some standardized, routine services. Our Danish survey data illustrate the continued importance of the offshoring of less advanced tasks. Among the 346 firms that offshored some tasks, 113 (33% of the offshoring firms) had relocated at least one "more advanced" task to a destination abroad, while 219 (63% of the offshoring firms) had only offshored "less advanced" tasks (Jensen and Pedersen, 2007). But once they are in the process, the offshoring experience they gain may function as a bridge they can use to cross the line between the "old" and the "new" offshoring generation. While this is consistent with the arguments of Maskell et al (2007) and Carmel and Schumacher (2005), the move from less advanced to more advanced tasks is also apparent in my case studies of advanced services offshoring from Danish to Indian firms (Jensen, 2008a), although the Danish firms already launch offshoring to India with relatively advanced project work and then expand the scope and complexity of the work offshored later in the process. Hence, *experience* will therefore be the key determinant that enables firms to transcend the old generation offshoring and engage in offshoring in a manner that matches the characteristics of the new perspective on a new generation of offshoring.

4.4 Organization

The main difference between the "old" and "new" generation offshoring concerning the organization of the firm lies in the firm's configuration of its global value chain. While neither advanced services offshoring nor offshoring in general is confined to MNCs, different organizational models of the MNC

in the international business literature are helpful as one explanation of the link between offshoring and firm organization. A traditional model of the organization of the MNC is the “multi-domestic MNC” (Bartlett and Ghoshal, 1998) which implies a dispersed value chain, where the foreign subsidiaries are mini-replicas of the parent firm (see also e.g. Pearlmutter, 1969, who refers to this model as the “ethnocentric” MNC). In contrast, the concentrated value chain configuration is driven by the fundamental idea to build critical mass and specialization in regional, or global, clusters, e.g. with “centres of excellence” in the firm or shared services centres. This configuration of the global value chain is also connected to a different organization of the MNC where there is a more equal, and hence more complex, balance of power and division of responsibilities between the parent company and foreign subsidiaries. The international business literature refers to this organizational model with different constructs, such as the network-based MNC (Forsgren et al., 2005), the MNC heterarchy (Hedlund, 1986), the meta-national MNC (Doz et al., 2001) or the transnational MNC (Bartlett and Ghoshal, 1998). In connection with the new offshoring generation, the point is that when MNCs change their global organization from the multi-domestic model to the transnational (or any similar) model, offshoring of company functions becomes a product of this organizational change. My interviews since 2005 with firms from Denmark and India suggest that this trend of change towards the concentrated value chain configuration is underpinning a significant portion of the cross-border relocation of value chain functions. As for the offshoring of advanced services the data indicate that the desire to create global or regional clusters/centres with critical mass and specialized know-how is an important driver in this respect.

4.5 Business linkages

The nature of the business linkages between client and service provider, or between units of the MNC is closely related to the international organization of the firm described in section 4.4. The change in intra-firm and inter-firm linkages represented by the “new” generation of offshoring may be characterized by two related dimensions, respectively the nature of the *client/service provider business linkage* and the *degree of power asymmetry*.

While the old offshoring generation's business linkage between client/supplier is the arm's length principle, the new generation offshoring entails a different type of linkage with increased partnership between the two parties, where the service provider gets deeper involved in the client organization, which could also imply some level of formal or de facto integration between the client and the service provider. The new model for client/service provider business linkage is labelled the "extended organization" by Kakabadse and Kakabadse (2000) or the "extended enterprise" by Aron and Singh (2005), and both terms essentially cover the same elements.

As a consequence of the change from the arm's length principle to partnership, the power relations change accordingly. In their theory of the governance in global value chains, Gereffi et al. (2005) present five different models of the relationship between the clients and the suppliers in global production networks. In each model, the degree of power asymmetry between client and supplier is different and is used to characterize the relationship and the relative influence of each party. In line with this thinking, the old generation offshoring has a high degree of power asymmetry, meaning that the power in the relationship is unequally distributed and clearly rests with the client. In contrast, the new generation of offshoring has a much lower degree of power asymmetry, meaning that power is more equally distributed between the client and the service provider: The value of the partnership in the new generation of offshoring is very much due to the nature of that relationship as a non-zero-sum-game, with a resulting flow of important synergies. Turning the relationship into a zero-sum-game would be a loss for both parties.

In line with the arguments above, the three case studies of advanced services offshoring from Danish to Indian firms (Jensen, 2008b) show that the nature of advanced technical services paves the way for business linkages between the home and the host firms that are different compared to classic manufacturing offshoring of standardized goods. The characteristics of the services exchanged (low degree of codification, high degree of tacit knowledge) and the work process embedded in value shop firms/projects increase the complexity of managing the process. As a consequence the power distribution and the governance of the business linkage between the home and host units differ from

offshoring in manufacturing contexts and match the relational model as described by Dyer and Singh (1998) and Gereffi et al (2005). The complex exchange of tasks between clients and service providers opens the relationship to a bargaining process since the offshoring firm's critical resources increasingly span firm boundaries and becomes embedded in inter-firm resources and routines. This contributes to the equalization of power between the two firms. Notably, while power in the literature on global value chains above all appears to be rooted in the firm size of the dominant firm in the chain, this is not the situation in the case studies of Danish-Indian offshoring partnerships where two of the three Indian firms are larger than their Danish clients. Instead the key to power in these relationships lies elsewhere, such as the capabilities possessed by each firm and the potential strategic advantages each firm might gain from a continued cooperation. While this argument clearly relates to inter-firm relationships it also concerns intra-firm relationship in the MNC network as Forsgren et al. (2005) point out.

5. CONCLUSIONS

This concluding section sums up some of the main points of the thesis research papers by outlining, first, some comments on the main issues and challenges in the coming years' offshoring research agenda and, second, by presenting some propositions for, respectively, future research on advanced services offshoring and for managers in firms engaged in advanced services offshoring. Following the positivist tradition, the propositions are formulated as arguments about the causal relations between variables (in this case the causal relations between advanced services offshoring and other variables). The propositions for offshoring research may provide the basis for future hypotheses in services offshoring research in order to subject these to empirical tests and investigate whether their claims are "true" or "false". The propositions for managers are of a more prescriptive nature and outline some of the ingredients for successful management of advanced services offshoring.

5.1 The Future Offshoring Research Agenda

The research papers in the thesis address some of the dimensions of advanced services offshoring that are either sparsely analyzed or where extant research shows that there is no consensus. The research papers address, first, the strategic determinants (especially those that go beyond the cost-saving motive) in firms that underpin the decision to offshore more advanced tasks. Second, the impact of advanced services offshoring on organizational learning, strategic business development and organizational change in offshoring firms as well as in the providers of services in developing countries. Third, the dynamics of the offshoring process in firm linkages founded on the offshoring of advanced services.

Recurrent questions in recent years' call for papers for special issues on offshoring and services in international journals (Journal of Management Studies, Journal of International Business Studies, Journal of International Management, Journal of Operations Management), as well as at recent academic conferences on the topic, concern what the appropriate theoretical framework for offshoring is, how theories may be applied in offshoring research, and what the theoretical implications of the

proliferation of offshoring are (see also Doh, 2005, for a discussion). In this respect it is worthwhile to note that research on services offshoring does not start from a clean theoretical slate. It is necessary that services offshoring research uses international business research on FDI and manufacturing offshoring as a stepping stone as well as the theoretical insights from, for example, various theories of the firm, organizational learning and global value chain theory. However, in view of the arguments presented earlier on the difference between the old generation of manufacturing offshoring and the emergent new generation of advanced services offshoring it is also clear that findings from the literature on manufacturing offshoring, which goes back several decades, cannot simply be extrapolated to the field of services offshoring to provide proper explanations of the phenomenon.

Especially research on advanced services offshoring is, as I have argued, different from most previous contributions in the offshoring literature, since very little of this type of offshoring will be subject to the commoditization and standardization in the “industrialized information chain”, described by Karmarkar (2004). There are several reasons for this. First, the high levels of skill requirement, complexity and customization involved in advanced services offshoring. Second, and not least, the problem-solving process in firms that offshore this type of work is iterative and cyclical with a high degree of reciprocal interdependence between activities, since the perception of the problem and adequate solutions may well change along the way (see Stabell and Fjeldstad, 1998 for a discussion). Due to the novel and different nature of services offshoring, research must therefore explore questions that relate specifically to this type of offshoring.

In my view, this leads to a number of themes that are especially relevant for the advanced services offshoring research agenda in the coming years:

First, the question about the *impacts of offshoring* is a highly contentious issue. This is particularly the case for advanced services offshoring which, in the eyes of those focusing on the potential dangers of offshoring to high-cost countries and their firms, would come close to selling the “family jewels” (see Blinder, 2006; Lewin and Peeters, 2006; Trefler, 2005, for discussions on risks). At the same time it is

the key question for offshoring research in general and research on advanced services offshoring in particular. In my view it will take several years before we will obtain a clearer and somewhat consistent picture of the impacts of advanced services offshoring. This is partly due to the fact that advanced services offshoring is a relatively recent phenomenon, which is evolving rapidly, and the long-term impacts will emerge over the next 5-10 years. This is also due to the many levels that might be affected by the impacts of advanced services offshoring. There are several levels of analysis for research on impacts, including the national level, the industry sector level (e.g. offshoring of engineering services is in some ways different from IT offshoring), the industry cluster level (often the same as a city), and the firm level. All these levels of analysis include entities in both developed *and* developing countries, as the latter group is somewhat overlooked in the offshoring literature.

Second, advanced services offshoring plays out differently in different industries and firms. To understand the phenomenon better, more research at *disaggregated levels of the firm value chain* is needed to see how individual tasks are organized and implemented in the offshoring process and what the spill-over effects on home and host firms are. For example, in one of the thesis' papers (Jensen and Pedersen, 2007) we have made some contribution to this effect as we distinguish between "less advanced" and "more advanced" offshored tasks. However, this is but a crude distinction which is founded not on objective criteria for task categorization, but on the subjective assessment of the managers responding to the question in our survey. Future studies would therefore benefit from disaggregating value chain activities, a division that would enable a greater level of detail and clarify transparent criteria for characterizing and analyzing advanced tasks.

Third, advanced services offshoring should be regarded not as a static but as a *dynamic process that evolves over time*. For example, Maskell et al (2007) show that offshoring experience matters and that offshoring seems to be a learning-by-doing process for offshoring firms; my studies suggest that the experience gained with advanced services offshoring in both home and host firms lead to significant knowledge development that result in strategic business development and upgrading of organizations and business processes. However, there is still only little evidence on how the processes of advanced

services offshoring (and the firms involved) evolve over time. The process dynamics theme is particularly relevant for managers (both in home and host firms) who need guidance on how to manage the offshoring process and what the managerial challenges are at various stages of the process. Moreover, the dynamic perspective is important for the theoretical side of services offshoring research. Theories unable to capture the dynamic aspects of services offshoring do, in my view, only have limited explanatory power when applied to empirical cases of services offshoring. A possible solution might be to integrate these theories in various constellations of combined theoretical frameworks where such theories (e.g. transaction cost economics and the resource-based view of the firm) are complemented with other theories that do incorporate a dynamic perspective. This is, however, a discussion that goes beyond the research papers of this thesis as I have not experimented with combined theoretical approaches.

5.2 Propositions for Offshoring Research

In view of the significant change observed in home and host firms over time, the theoretical framework for advanced services offshoring must incorporate a dynamic aspect in order to better capture the changes caused by advanced services offshoring. The dynamic perspective is necessary to avoid the static, zero-sum-game logic that underpins much research on offshoring (as well as the debate on offshoring in the media). Advanced services offshoring in particular must be understood as a non-zero-sum-game, i.e. where there is no fixed share of jobs and knowledge to be divided between firms in developed countries, which is why it is crucial to understand what happens after the firm's initial decision to offshore. Proposition 1 therefore relates both to the use of established theories for the study of advanced services offshoring and to new theory building in the field:

Proposition 1: Engaging in advanced services offshoring is a catalyst for strategic and organizational change in home and host firms.

Based on the research conducted in this thesis I argue that advanced services offshoring (and other types of more advanced tasks) is qualitatively different from the “old generation” offshoring of simple

and standardized manufacturing tasks. Advanced services offshoring follows a different the logic than the old offshoring generation of manufacturing tasks which essentially consists of a cost-seeking strategy. It is therefore fundamental that these differences and the characteristics of the specific services tasks are taken into account in empirical and theoretical studies on advanced services offshoring. This perception of the nature of advanced services offshoring is the rationale behind Proposition 2:

Proposition 2: Advanced services offshoring is a new generation of offshoring which is qualitatively different from offshoring of manufacturing tasks.

My studies show that advanced services offshoring is closely related to the strategic and organizational development of home and host firms. Advanced services offshoring should therefore not be approached as an isolated activity in firms. On the contrary, research in the field must adopt a theoretical approach and research design that takes into account the strategic and organizational context of the firm. This will be crucial for the achievement of deeper insight into why some firms succeed with offshoring while others fail. An improved understanding of the determining factors for success and failure, which is an important but largely unanswered question, must understand how advanced services offshoring unfolds under the influence of the strategic and organizational framework in home and host firms. Hence Proposition 3:

Proposition 3: The strategic and organizational contexts in home and host firms significantly influence the antecedents, process dynamics and impacts of advanced services offshoring.

5.3 Propositions for Managers in Home and Host Firms

Due to the sticky knowledge in the workflow of home firms and the iterative and cyclical problem solving process in value-shop firms, close interaction between onshore and offshore units is required. Because the creation, distribution and sharing of knowledge is a dynamic process with many

feedback-loops, it is beneficial to include offshore teams to a high extent in the day-to-day workflow as well as in the ongoing informal conversation within the project. Offshore managers in home and host firms need to jointly design an organizational framework and workflow that ensures the expansion of project work across borders and time zones. The challenge is not to establish a distinct division of labour between home and host firm. Instead it is to reintegrate flows of knowledge, communication, coordinate the evolving interpretation of problems and solutions between onshore and offshore units and, not least, to exercise leadership that forges the creation of a team. This leads to Proposition 4:

Proposition 4: The probability of success increases when onshore and offshore units are integrated into one team.

My case studies on advanced services offshoring show that initial scepticism typically exists in particular among internal stakeholders in the firms (staff, managers, unions), but also occasionally among the clients. Later in the process rumours and myths may appear with potentially negative influence on the success of the offshoring to India. To overcome and defuse such scepticism it is essential to have a clear and transparent communication practice from the beginning of the process vis-à-vis the key stakeholders, in particular the employees. It is necessary to have a frank communication flow on the objectives, content and implications of offshoring as well as on the successes and barriers that occur along the way. In value shop firms and projects, the intellectual capital is embedded in the human resources, and ensuring a constructive attitude among home firm staff is fundamental for the success of advanced services offshoring. This leads to Proposition 5:

Proposition 5: The probability of success increases when offshoring firms to prioritize frank and transparent communication to the key stakeholders involved.

The management of advanced services offshoring is a complex and constantly evolving task. My research shows that when the business linkage evolves and matures, inter-firm learning increases. As a

result of this maturation process, the host firm understands better the home firm and its business context and may gradually become more deeply engaged in the work processes in the home firms. The interface between the offshoring home firm and the host firm must therefore be subject to continuous assessment in order to strike the right balance and apply the resources in an optimal way at any given stage of the offshoring partnership. As a consequence, the complexity of managing advanced services offshoring increases and requires the attention of senior managers for continuous monitoring of the process. The dynamic nature of advanced services offshoring increases the need for having communication and feedback channels that ensure a flow of information from the operational level (project managers) to the responsible senior managers. This leads to Proposition 6:

Proposition 6: The probability of success increases when senior managers in home and host firms establish a close and ongoing dialogue to monitor progress and ensure the optimal interface between work done onshore and offshore.

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PART TWO:
***OFFSHORING IN EUROPE – EVIDENCE OF A
TWO-WAY STREET FROM DENMARK***

Authored by

Peter D. Ørberg Jensen
Copenhagen Business School
Copenhagen, Denmark

Jacob Funk Kirkegaard
Institute for International Economics
Washington D.C., USA

and

Nicolai Søndergaard Laugesen
Rambøll Management A/S
Copenhagen, Denmark

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***OFFSHORING IN EUROPE – EVIDENCE OF A
TWO-WAY STREET FROM DENMARK***

Abstract

Based on a large Danish survey of companies in tradable goods and services sectors, this working paper presents the results of offshoring and its impact on jobs, adding new perspectives to the globalization debate. Globalization entails a cross-border flow of jobs, but contrary to the mainstream media portrayal of globalization, it is not a one-way but a two-way street. In 2002–05 more jobs were created as a result of offshoring of activities into eastern Denmark from companies outside Denmark (i.e., inshored to Denmark) than were eliminated due to offshoring from companies in the Danish region. Overall, the employment effects of both offshoring and inshoring were found to be limited to less than 1 percent of all jobs either lost to offshoring or gained via inshoring. For Denmark, the worries in purely numerical terms regarding the employment effects of globalization seem overly alarmist. However, the trends revealed in the study do pose challenges for low-skilled workers—the group most negatively affected—and for highly skilled specialists, who face pressure to constantly upgrade their skills. Policy implications can be drawn in view of our results to ensure that labor markets are able to meet the demands of globalizing firms.

Keywords: Labor Market, Offshoring, Offshore Outsourcing, High- and Low-Skilled Workers, Skill Bias, Denmark, Flexicurity

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***OFFSHORING IN EUROPE – EVIDENCE OF A
TWO-WAY STREET FROM DENMARK***

So much has been written about the loss of European jobs to low-cost competitors that it is hardly surprising that much of the European public is very skeptical about globalization and the accompanying phenomenon of offshoring in particular. Yet in reality, very little is known about the true extent of job loss in Europe as a consequence of globalization, and what is known is only one side—the downside—of the story. So far data have been collected only on job loss in Europe from globalization, and hardly any systematically collected information is available on the number of jobs created in Europe as a result of globalization.

This working paper attempts to remedy this imbalance and presents new data from Denmark that cover, for the first time, both jobs lost and jobs created as a direct result of increased global integration and the two-way cross-border transfer of company tasks during 2002–05. Section I briefly describes existing knowledge about offshoring in Europe, section II presents the innovative methodology and analytic scope of the new data from Denmark, section III presents the data findings, and section IV concludes with policy implications for both Denmark and the European Union.

I. WHAT WE ALREADY KNOW ABOUT OFFSHORING IN EUROPE

One thing seems certain—Europeans today view globalization predominantly through the lens of job loss. As can be seen in figure 1, in the vast majority of the EU-15 countries, the word “globalization” is predominantly linked with jobs being lost to lower-wage destinations.

INSERT FIGURE 1 ABOUT HERE

That this fear is particularly strong in the EU-15 countries, while relatively weaker in the ten new member states, is unsurprising as the latter states are frequently among the recipient countries for jobs offshored from the EU-15.

On the other hand, systematic monitoring of the European press by the European Monitoring Centre on Change (EMCC) indicates that even among large-scale layoff incidents¹ due to offshoring (or delocalization), the resulting job loss is a relatively minor phenomenon in the European Union when compared with the number of European jobs that are lost due to business restructuring (downsizing) or bankruptcies. Only about 1 in 25 jobs lost in Europe during 2002–05 was due to offshoring (figure 2).

INSERT FIGURE 2 ABOUT HERE

Of the roughly 50,000 jobs that by this estimate have been lost to offshoring in EU countries,² the manufacturing sector accounts for the largest share—56 percent—of all jobs lost, followed by the financial and business consulting services sector accounting for roughly a quarter jobs lost, and the information and communications technology (ICT) sector accounting for just below 20 percent. On the other hand, all other sectors of the EU economy have hardly been affected by offshoring. This finding that EU offshoring is concentrated in manufacturing, financial services, and ICT is consistent with Jensen and Kletzer’s findings (2005) that these sectors are generally tradable, as well as with Forrester Research Inc.’s findings (McCarthy 2002, Parker 2004), which identify the occupations heavily present in these sectors as the most likely to be affected by offshoring.

¹. An incident must involve a minimum of 100 layoffs from a site of more than 250 employees and affect more than 10 percent of the total workforce in order to be included in the EMCC coverage. See Kirkegaard (2005) for an elaboration on the validity problems involved in the collection of data on offshoring through media monitoring.

². Note that this does not mean a net loss of 50,000 jobs to the EU-25 as a whole, as it is likely that a significant share of jobs lost in one EU member was shifted to another, especially among the 10 new member states.

In addition, numerous consulting company and stakeholder reports, generally based on surveys of clients of the companies, have attempted to map the extent of job loss in Europe to offshoring. A nonexhaustive list includes McKinsey Global Institute (2003, 2004), KPMG (2004), EFILWC (2004), Roland Berger and UNCTAD (2004), TUC (2004), and PWC (2004). These studies generally vary widely in methodology, and the range of estimates of job loss is significant. Little is known about the net job effects in Europe of offshoring because all the data, estimates, and studies previously listed concentrate exclusively on jobs lost to EU member states from offshoring and ignore any potential traffic the other way—i.e., jobs and company tasks flowing into EU member countries from other countries. The reasons for this neglect of the “other side of the street” are several. One is that data are derived from media reports, which for journalistic reasons tend to focus almost exclusively on the bad news of “job loss,” while ignoring the good news of “job creation.” Two, consulting companies focus on the potential for company labor-cost reductions from offshoring jobs to low-cost countries—a focus when rigidly applied rules out the profitable transfer of jobs in the opposite direction. Three, company surveys capturing both the offshoring and inshoring of jobs would have to be very large in scope to capture a significant number of firms engaging in either (or both) and hence be very costly to carry out. Lastly, when politicians explain policies to the electorate, the analytically crucial gross versus net job loss distinction is made irrelevant, as gross job losses are what drive political dynamics.

The remainder of this paper will present this type of data—i.e., from a large company survey that includes specific information about the magnitude and qualitative features of both “jobs offshored from” and “jobs inshored to” a high-wage EU country, Denmark. Before presenting this new data, it is pertinent to consider that when focusing on the offshoring of jobs, Denmark ought to be an excellent country to study as its citizens generally fear the phenomenon (in figure 1, 54 percent of Danes relate globalization predominantly to job loss) and are relatively heavily affected by it. Figure 3 shows that Denmark, in terms of the relative importance of offshoring as a reason for job loss (y-axis) as well as in terms of jobs lost to offshoring as a share of total employment (x-axis), is two to three times more intensely affected than the EU average.

INSERT FIGURE 3 ABOUT HERE

II. THE NEW DANISH DATA: SCOPE AND METHODOLOGY

The data included in this working paper originate in a major study carried out by Rambøll Management³ during the second half of 2005 and funded by the Danish government's Regional Labor Market Councils⁴ of Zealand, Lolland-Falster, and Bornholm regions. These three regions accounted for 45 percent of the total Danish population in 2005 and 49 percent of the national GDP (2003 data).⁵

As such, the results can reasonably be expected to be representative of the country as a whole, although the inclusion of the capital city of Copenhagen—with its assumed higher-than-national-average number of internationally integrated companies—in the survey may possibly bias the data slightly upward. However, as such upward “metropolitan-city bias” can be expected to affect the levels of both offshoring and inshoring, it ought not to influence the relative magnitude of either side, and any net effects will subsequently be unaffected.

Conceptual Framework

The purpose of this study is to analyze the impact of globalization on the quantity and quality of demand for labor in eastern Denmark. While globalization is a fairly general concept, it has in the context of this study been codified operationally into a questionnaire concerning the extent and

³. Information is available at www.r-m.com. This working paper encapsulates the principal results of the study and presents the conclusions drawn from a larger study. The full analysis report is available in Danish only.

⁴. The Regional Labor Market Councils in Denmark comprise local representatives of employer organizations, unions, and regional/municipal government representatives and are responsible for the worker retraining and personalized job search assistance in Denmark. They are funded exclusively by the central government's general tax revenue.

⁵. Data from the national Danish statistical agency at www.dst.dk (accessed January 7, 2006).

characteristics of offshoring of activities from companies in the region, as well as the extent and characteristics of the inshoring of activities to the companies in the region—the opposite flow whereby companies located abroad (Danish and foreign alike) relocate activities to the eastern Danish region. The analysis furthermore includes information about industry sectors and the “transferability of firms’ operations and job functions.” The focus is on existing job functions that potentially can be offshored from Denmark’s eastern region to other countries, as well as on functions that can potentially be moved to the region.

Methodologically, offshoring and offshore outsourcing refer to a firm’s decision to relocate activities, which hitherto had been carried out internally in the firm’s Denmark location, to other units of the firm and/or external partners of the firm located outside the country. Company outsourcing of tasks to domestic Danish companies are thus excluded from the analysis. Subsequently, for the remainder of this working paper, the term “offshoring” is used to cover both organizational modes of international outsourcing. Figure 4 illustrates the outsourcing and offshoring options available to a firm, plus those options included in this analysis. It is also important to note that this survey covers only the offshoring of existing activities from Denmark.

INSERT FIGURE 4 ABOUT HERE

Inshoring refers to the opposite process whereby a firm located outside Denmark transfers operations to a firm located in the eastern region of Denmark.⁶ However, it was frequently not possible for the Danish firm (or foreign subsidiary in Denmark) to assess whether a given new activity in Denmark had been completely relocated to Denmark or was a wholly or partly new activity in the country. The survey design could therefore not define the inshoring of activities in an equally narrow manner as in the case of offshoring from regional firms. As a consequence, inshoring includes both the relocation

⁶. Note that domestic outsourcing from companies in other regions of Denmark to companies located in the eastern region of Denmark are excluded from this definition of inshoring, so that inshoring includes only jobs flowing to the region from outside Denmark’s international borders.

existing activities—previously carried out by a firm located outside Denmark—and investments in new activities in Denmark (i.e., inward FDI into Denmark).

By including inward FDI, the methodological demarcation of inshoring is larger than the corresponding demarcation for offshoring, which only includes the relocation of tasks somehow rooted in Denmark prior to offshoring. This would lead one to expect a relative upward bias in the data findings for inshoring and a resulting bias in the net results. Yet the intent of the survey is to measure the net impact of globalization on the regional Danish labor market, not to measure the net regional balance of global job creation by firms with operations in the region. As outward direct investments impact the regional labor market only through the potential related transfer of existing jobs abroad, it is only through this channel that it is included in this survey.

An argument can be made that outward direct investments from firms in the region to other countries affect the local labor market even in the absence of the relocation of existing jobs as a result of “second-order effects” from forgone investments—investments placed outside rather than inside the region. However, such an argument hinges on the implicit assumption of a 1-1 (or close to) trade-off between jobs created through investments abroad and jobs that could have been created regionally had the investments been placed here. Given the obvious differences in labor productivity levels between countries, individual firms, and individual projects, this assumption is untenable. Jobs created through investment abroad cannot sensibly be equal to jobs forgone at home. In the absence of foreign investment opportunities, firms would have most likely made no new regional investments, and the true counterpart to FDI abroad is therefore zero new jobs rather than “jobs forgone.” Due to this true counterfactual of zero new jobs, this effect is not covered in this working paper. Moreover, one company executive interviewed for the study expressed that the spillover effect of outward direct investments on Danish employment in quite clear and positive terms; he stated, “during recent years we have created some 800 jobs in Malaysia and Indonesia—if we had not done so, we would not have

been able to keep the 400 jobs in Denmark.”⁷ In other words, the direction of the indirect spillover effect on Danish employment from new FDI may be ambiguous.

In the study, a distinction is made between inshoring of activities—production of goods/services located in the Danish region on a long-term or permanent basis by a company abroad even though the company could potentially choose to undertake the activity outside the region—and normal exports and sales. In practice, however, the distinction between the inshoring of activities and the added sale of products and services is blurred. Follow-up interviews with companies participating in the survey have revealed cases where companies have registered “inshoring of activities” in the survey, but it would have been more precise to categorize the activity as standard sales. As a consequence, a small overestimation in the survey data of inshoring of activities is possible.

It is important to stress that offshoring and inshoring do not happen in isolation, as they are part of the broader evolution in a firm’s demand for labor. The underlying processes are flexible and dynamic, and it may be that the offshoring of certain activities and job functions constitutes a precondition for growth of other job functions (see executive’s quote above). Moreover, both offshoring and inshoring may entail synergies and dynamic effects that result in increased job creation in the firm. For these reasons, the aim of the analysis is also to isolate the impact of offshoring and inshoring from the broader evolution in firms’ demand for labor.

Lastly, the operationalization of globalization excludes from the analysis situations where intensified global competition and other driving forces in international markets cause firms located in Denmark to reduce their operations or the number of jobs (i.e., through regular downsizings due to increased competition). Similarly with job creation, the analysis does not include situations where new jobs are created as a result of entrepreneurial initiatives or growth in Danish or foreign firms due to rising demand or market shares in Denmark, even if it cannot be ruled out that globalization has indeed

⁷. For a comprehensive analysis of this issue, see Graham (2000, particularly appendix B).

influenced this growth. The study is therefore a partial analysis of the impact of offshoring and inshoring on the labor market and not a full-scale analysis. This applies to the effects of globalization on both job creation and job destruction.

Enterprise Survey

The analysis is based on a 1,504-company survey among the total population of companies in the region in the following sectors: manufacturing; utilities: electricity, gas, and oil; transportation; and business services.⁸ These sectors are characterized by the fact that offshoring of jobs is possible either through primary activities in their value chain or through secondary activities, such as administrative/back-office activities. This selection roughly follows the same characterizations used by the Danish Economic Council, which, in 2004, presented a major study regarding the offshoring of jobs from Denmark. The current study is expanded to include additional sectors in which Denmark, particularly its eastern region, is host to large companies and where offshoring of back-office functions could be expected.⁹

Hence the analysis only includes sectors in Denmark assumed to have activities that are tradable and that in principle can be offshored and inshored. Both companies with and without international activities are included in the analysis.¹⁰

The total population in the selected sectors is approximately 3,600 companies, of which 1,500 have been interviewed in the survey. The analysis is therefore highly representative of the sector, geography, and size of the companies, with companies employing fewer than 10 employees excluded.

⁸. Based on NACE nomenclature: General Industrial Classification of Economic Activities within the European Community—manufacturing: 15000–36999; utilities (electricity, gas, and oil): 40000–40999; transportation: 60000–64999; financial sector (banking and insurance): 65000–67999; business services: 71000–74999.

⁹. Danish Economic Council (2004) selects 54 sectors within manufacturing and 15 sectors within finance and business services. The reason for this selection is that those sectors are primarily relevant in relation to offshoring.

¹⁰. Here, “international activities” is understood in the broad sense and covers all forms of business activities in which the firm is engaged abroad, e.g. sales, production, project activities, subsidiaries, etc.

In total, the 1,500 firms in the survey constitute 42 percent of the entire population of companies in the region.

Interviews with Companies and Estimation of the Job Impact of Offshoring and Inshoring

The study sheds light on firms' activities when they were engaged in offshoring and/or inshoring during 2002–05 and the employment-related consequences. The consequences are estimated on the basis of responses from companies regarding the number of full-time jobs for four categories of educational levels (unskilled workers, skilled workers, short and medium-length education, and tertiary education), and seven job functions. The companies were screened against a set of criteria (size, industry sector, inshoring/offshoring behaviour, offshoring destination, and others) and placed in six segments through a multivariate, statistical analysis to ensure that the companies in each segment shared similar characteristics.

The current method used to estimate the effects of inshoring and offshoring on employment differs from the methods used in earlier studies.¹¹ While many studies are based on macroeconomic analyses (top-down), the method employed here starts with detailed information from individual companies about the job impact of offshoring and inshoring. This information is then used to estimate the employment effect in the “typical enterprise” (bottom-up), providing a standardized figure of the employment effect for the average company in a segment.¹² The data is then scaled up to an aggregated regional level by including data on the total number of companies and employees at the regional level. To interpret the data in view of this method, it is important to note the following limitations:

¹¹. An example is the above-mentioned analysis by the Danish Economic Council (2004), which uses macroeconomic modeling to assess the job impact of offshoring. See also Ibsen and Westergaard-Nielsen (2005).

¹². The principle may be illustrated by the following example taken from the database: In a segment sample of eight firms, five companies with offshoring had not reduced the number of jobs due to offshoring in one of the four educational categories; three companies had reduced the number of jobs with 1, 4, and 12 full-time jobs for staff respectively. The standardization figure for the typical firm in the sample was on this basis estimated as –2.

- The outcome of the analysis consists of estimates of job impact, not precise figures.
- The survey does not take into account the effect of businesses that disappeared because the company moved entirely out of the region between 2002 and late 2005 and that no longer existed in the region at the time the survey was conducted.
- The analysis does not systematically incorporate the employment effect for Danish subsuppliers that miss out on business opportunities due to offshoring among their clients.

The estimated employment effect is based on variations in employment, which are found to occur in the standardized expression of the “typical company.” Therefore this method does not directly take into account the larger, more spectacular examples of offshoring frequently reported in the media, where a company suddenly reduces its regional workforce by several hundred jobs. Box 1 sums up the scope of the study.

Box 1: What is and is not included in the analysis

The analysis in this working paper focuses on

- 1,504 companies in industries characterized by location-*independent* job functions (including industry, business services, energy, and transport);
- offshoring and inshoring of *existing* activities in the enterprises, as well as the inshoring of new activities from overseas; and
- enterprises located in eastern Denmark (Zealand, Lolland-Falster, and Bornholm regions) with more than 10 employees.

The analysis does not cover

- industries primarily comprising location-dependent job functions (e.g., retailing and the public sector) and;
- positive and negative effects arising from market-driven developments—i.e., the establishment of new entrepreneurial companies or normal downsizing in companies.

Educational Characteristics of Affected Workers

The survey sheds light on the activities of firms engaged in offshoring and/or inshoring during 2002–05 and on the employment-related consequences of those activities. These labor-market consequences are described in terms of the number of full-time jobs based on two parameters—educational attainment and job functions performed—so as to provide a framework for identifying the potentially unequal impact of globalization on different groups of workers.

Four levels of education are included: unskilled worker, skilled worker, short- and medium-length education, and tertiary education. Seven occupations, related to the specific function/activity rather than the specific sector, are identified. This categorization is chosen because the specific function, and not the specific sector, determines whether the jobs are offshored or not.¹³ The seven job categories are listed in table 1.

INSERT TABLE 1 ABOUT HERE

A correlation evidently exists between job function and the level of educational attainment. But it is not as direct as expected. For instance, it is common that employees in IT job functions are self-taught or that staff with both short- and long-term education carry out marketing functions.

It is important to emphasize that the validity of a categorization, such as the one used in this working paper, is inversely related to the degree of flexibility in an organization. As such, it is more difficult to validly identify specific job functions within an organization if companies develop a higher degree of functional flexibility, whereby employees perform several parallel functions. For instance, this occurs when engineers in small- or medium-sized companies have specialist, sales, and management functions.

¹³. Recall that only the five metasectors identified as containing location-neutral employment is included in the survey. See Mann (2003), Kirkegaard (2004), McCarthy (2004), and Parker (2004) for European examples of occupational rather than sectoral analysis of offshoring.

III. DATA FINDINGS

This section focuses on the “two-way street” of offshoring and inshoring. By way of introduction, some overall figures regarding the extent of offshoring from and inshoring to companies in the Danish region are shown. This is followed by a more detailed presentation of some of the findings pertaining to such activity and their implications for companies’ demand for labor. Finally, the relative scope of offshoring and inshoring is broken down into more detailed types of activities and between domestic and foreign companies in order to show this aspect of the influence of the international economic system on the Danish economy.

Overall Scope of Offshoring and Inshoring

Figure 5 shows the overall regional distribution of offshoring and inshoring of activities for the companies in eastern Denmark.

INSERT FIGURE 5 ABOUT HERE

The analysis shows that 43 percent of the enterprises have participated in the international distribution of labor via offshoring and/or inshoring of their activities. Regarding expectations for the near future (1 year), the analysis indicates this proportion will grow substantially. Sixteen percent of those enterprises that have not experienced either offshoring or inshoring of activities in the past three years expect to do so in the coming year.

It is important to emphasize that figure 5 does not provide a comprehensive image of the importance of offshoring and inshoring, as it does not provide information about the quantitative scope of offshoring and inshoring (in terms of the number of workplaces or the financial value). It merely provides a yes/no measure of whether or not offshoring or inshoring has occurred in the individual

firm. A firm heavily involved in offshoring of jobs therefore receives the same weight in figure 6 as a company that has offshored to a much lesser degree.

Bearing in mind these limitations, the survey nonetheless shows that the proportion of enterprises that have acquired activities from overseas is larger than the share of enterprises that have transferred activities abroad. Even when taking into account the possibility of a slight overestimate of the extent of inshoring, as described in the previous section, it is clear that inshoring of activities is widespread.

The survey accordingly shows that the balance of offshoring versus inshoring has thus far been positive. This positive balance indicates that on a net basis the eastern region of Denmark is attracting economic activities from overseas.

Offshoring

As shown in figure 5, 23 percent of the companies in the eastern Danish region have offshored activities during the past three years. To place this in a more international context, a survey carried out by UNCTAD in 2004 found that 39 percent of the top 500 European firms had engaged in offshoring of services alone (UNCTAD 2004, p.153). The use of offshoring among firms located in the Danish region is clearly below that level, with the main reason likely being that the firms in the Danish region are much smaller than the firms on the European top 500. Yet, the finding that nearly a quarter of regional companies with more than 10 employees have offshored tasks is surprisingly high.

The survey indicates that there are several motivations and drivers behind offshoring. In the survey, enterprises rated the importance of different reasons for offshoring on a scale from 1 to 5, where 1 is “no importance” and 5 is “decisive importance.” The enterprises in the analyzed region on average rated “reduce wage costs” at 3.7. By comparison, the enterprises rated “cooperation with external partner necessitated offshoring” at 1.7 on the same scale. A principal finding is that the reduction of

costs—both wage and other costs—is usually the main reason for offshoring of activities but rarely is it the only motive. Figure 6 shows the importance of different motives behind offshoring.¹⁴

INSERT FIGURE 6 ABOUT HERE

When comparing the motives of Danish enterprises for offshoring with corresponding international data, a general picture emerges showing that more strategically based reasons play a lesser role within the Danish region's enterprises than within other international enterprises (Kakabadse and Kakabadse 2002).¹⁵ In addition, the findings from the qualitative interviews with companies suggest that Danish enterprises are generally in the early phase of gaining experience with offshoring. The general impression from follow-up interviews is that a large number of the enterprises, which undertook offshoring during 2002–05, started to offshore activities from Denmark only during the past one or two years, a fairly short time horizon. This may, however, change over time. As described by Maskell et al. (2005), a typical evolutionary pattern for enterprises that offshore their activities is that initially they do it to save money, but eventually there are other motives—for instance, when an enterprise discovers that there is valuable knowledge to be gained from partner enterprises and countries to which its activities are being transferred.

The fact that strategic business development considerations, such as access to new technologies, industry best practices, new skills and markets, play a relatively limited role in offshoring decisions indicates that these regional companies may struggle to benefit from offshoring in the long term as these one-time cost savings are achieved (and realized also by their competitors). Regional offshoring thus seems driven predominantly by short-term considerations, although it is possible that the

¹⁴. Figure 7 is adapted from Kakabadse and Kakabadse (2002).

¹⁵. Kakabadse and Kakabadse (2002) do not describe their sample of European and US companies in detail, but it is likely that the companies are larger than the Danish companies in this study. This may be one explanatory factor behind the differences between Danish and other firms with respect to motivational drivers.

inclusion of FDI (from the region) and the companies' broader internationalization strategies would alleviate this apparent "short termism" present in companies' strategic considerations.

The strong emphasis on cost reduction is also reflected in companies' choices of offshoring destinations. As shown in table 2, Asia and Eastern Europe, where costs are generally lower than in Denmark, are very important destinations for offshoring from Danish companies. However, much offshoring is destined for Western Europe, which underpins the importance of "nearshoring" for Danish companies and reflects that the main trading partners are neighboring countries such as Sweden, the United Kingdom, and Germany.

INSERT TABLE 2 ABOUT HERE

Figure 7 reveals several phenomena regarding offshoring in Denmark. It lists the sectoral division of tasks offshored, although it is important to note that the total population here is not the entire population of companies in the eastern region of Denmark but only 23 percent (or 332 companies of the survey) that have actually offshored activities. More than half of the enterprises have offshored manufacturing activities. Forty-five percent of enterprises that have undertaken offshoring activities have transferred one or more types of service activities, with IT-related tasks being the dominant activity. Hence the offshoring of IT tasks, which has been the subject of considerable attention and debate in the United States and the United Kingdom in recent years, is now decisively also occurring in Denmark. As a subset of services, a relatively large amount of offshoring of research and development (R&D) activities, broadly defined, is also taking place. Twenty-nine percent of offshoring enterprises have offshored various types of R&D activities.

INSERT FIGURE 7 ABOUT HERE

Impact of Offshoring on Individuals with Different Skill Levels and Job Functions

This section focuses on educational qualifications and job functions. The main conclusion of the survey is that enterprises tend to reduce the number of unskilled workers following offshoring and tend to hire more workers with higher education. The survey indicates that standardized manufacturing processes continue to be the main focus of offshoring. Because unskilled employees frequently perform manufacturing activities, which require a relatively low educational attainment, the analysis clearly suggests that offshoring of these activities creates a particularly challenging situation for this group of employees.

Another finding applies to the offshoring of IT activities, where all three types of IT activities—operations, development, and programming—are being subjected to offshoring of relatively advanced activities. This is accompanied by corresponding requirements for IT employees to be able to cope with the change in job content, either by using the freed-up resources to create new activities via innovation or by performing other existing activities that are equally or more complex.

Table 3 shows the changes in employment in the firms after offshoring. At 22 percent, the unskilled staff category has experienced the most cutbacks in employee numbers among the enterprises that have offshored their activities. A somewhat smaller number of enterprises have reduced the number of skilled employees in the wake of offshoring.

INSERT TABLE 3 ABOUT HERE

Staff with short- and medium-length higher education backgrounds have experienced more frequent employee reductions than skilled workers. This could indicate the presence and importance of specialized skills and/or work-specific experience in the latter group. Meanwhile, a relatively large proportion (12 percent) of the offshoring enterprises hired more employees with either a short- or medium-length education after they offshored.

As far as staff with tertiary education is concerned, the analysis shows that enterprises that engaged in offshoring more often took on additional highly skilled employees than they laid off. In other words, offshoring of activities by companies has had a net positive effect on the employment opportunities for highly educated people. Many other factors influence this evolution, but the firms have generally acknowledged that offshoring plays a relatively important role in this respect.

Quantitative Impact of Offshoring on Particular Job Functions

Globalization impacts the demand for individual job functions. Focusing on job functions instead of educational categories provides a more thorough understanding of globalization’s impact on the labor market.

Table 4 lists, by job functions, the number of offshored jobs from the eastern region of Denmark. The total amount of jobs that have been offshored is estimated at 2,697, corresponding to approximately 0.7 percent of the total regional employment during 2002–05, which includes approximately 414,000 people¹⁶ in the included sectors.

INSERT TABLE 4 ABOUT HERE

As mentioned above, the manufacturing sector accounts for approximately 57 percent of the offshored activities in the region. Table 4 shows that among the manufacturing functions, it is primarily the jobs performed by low-skilled workers that are being offshored and only to a lesser extent those performed by highly skilled workers. The offshoring of manufacturing activities, however, also affects workers with more specialized process skills and as such is not confined to the low-skilled workers in the production.

¹⁶. Refers to 414,000 employed in the region for the included sectors in 2004 (Statistics Denmark, PEND11, 2006).

Call center functions (included in sales and customer functions) are offshored to a lesser extent. This is contrary to the trend seen in the United States and the United Kingdom, which can be explained by the fact that the Danish language serves as a barrier to this kind of offshoring.

Administrative functions include accounting, IT, and financial functions. Almost one-third of the total amount of offshored jobs are included in these administrative functions, which corresponds to the high level of offshoring of these types of service activities as described in the previous section. Specialized and management functions have seen a very small degree of offshoring.

Inshoring

As shown in figure 5, 30 percent of companies in the Danish region have had inshoring of activities during 2002–05. More companies have inshored activities compared with the number of companies that have offshored activities. Therefore, the principal result of the survey is that economic globalization in eastern Denmark not only means that activities are offshored from Denmark to other locations but also that it is indeed a two-way street where activities are flowing both to and from the companies located in the region.

In general terms, many factors both positively and negatively influence the desire of enterprises to make investments and establish operations in Denmark. The qualitative interviews in the study made it possible to indicate some of the drivers and motivations. Typical reasons are:

- transfer of existing activity portfolios to or the establishment of new functions in the international company. In these instances, several motives may occur separately or together. Activities
- have been moved to the enterprise in Denmark in order to achieve economies of scale through functional specialization, where particular functions are consolidated in the company's Danish entity (either in the Danish subsidiary or in a Danish company's headquarters).
- are consolidated in the company's Danish entity in order to improve centralized management of the company (applicable to Danish parent companies).

- are consolidated in the company's Danish entity in order to achieve synergy effects from the interaction of one particular function (e.g., product development) with other functions in the value chain.
- placing activities in the Danish enterprise to gain access to labor, competences, and technology that exist in the region's enterprises.

Given that product manufacturing is the activity most often offshored and has received much media attention in the public debate in the past few years, it is notable that the survey shows that product manufacturing is also simultaneously being imported into the region and is the single activity with the highest individual number of inshoring firms (figure 9). Thirty-five percent of enterprises, which have undertaken inshoring of activities, have transferred manufacturing activities into the region from overseas.

The survey also shows there is inshoring of activities in numerous service sectors as well as in R&D activities. Taken as a whole, the broad category of service tasks is the most dominant inshoring activity: a total of 58 percent of enterprises that have engaged in inshoring have imported service activities. A total of 26 percent of enterprises that have engaged in inshoring have imported R&D activities.¹⁷

Most notable about inshoring service activities is that they are disproportionately destined for the Greater Copenhagen area rather than the region as a whole. Fully 71 percent of all activities inshored to the eastern region of Denmark went to the Greater Copenhagen area.¹⁸ This clearly illustrates the importance of possessing a metropolitan city of a certain size in order to attract service-sector activities to a region.

¹⁷. Note that these percentages are calculated based on individual company responses and therefore account for the fact that individual firms may have inshored tasks in multiple service sectors.

¹⁸. Additional regional detail is available in the Danish-only full analysis report.

Impact of Inshoring on Individuals with Different Skill Levels and Job Functions

Not all cases of inshoring have resulted in the creation of new jobs. Only in 36 percent (161 instances) of the 450 instances of inshoring of tasks did companies expand their regional payroll, indicating that close to two-thirds of inshored tasks are taken on solely by the existing eastern Danish workforce. This clearly points to “consolidation of particular tasks” through inshoring as mentioned above. It further illustrates the need for a high-wage workforce—such as the Danish—to be flexible in today’s globalizing world and constantly be willing to take on additional tasks.

However, among the 161 firms that did hire additional workers following the inshoring of tasks, the results show that the same educational groups that benefited from offshoring also benefited from the opposite trend. In brief, inshoring of activities into Denmark results in most jobs going to those with higher education and creation of only a few jobs for the unskilled.

Accordingly, among those enterprises that imported activities, two-thirds of enterprises experienced growth in the total number of employees who possessed a tertiary education (table 5). Half of these inshoring enterprises hired short- and medium-length educated employees, while unskilled and skilled workers were only hired in less than a quarter of the instances.

Quantitative Impact of Inshoring on Particular Job Functions

While job creation followed only approximately one-third of the cases of inshoring of activities, there nonetheless was a significant quantitative impact. Table 6 lists an estimate of the number of jobs created as a consequence of inshoring in the eastern part of Denmark. During 2002–05, 4,185 jobs were created, 55 percent more than the number of jobs lost through offshoring (table 6).

Figure 9 surprisingly shows that numerous manufacturing tasks have been inshored to the region. However as table 6 shows, this inshoring of manufacturing tasks did not create any low-skilled manual jobs. This leads to the conclusion that the manufacturing tasks flowing into the eastern Danish region

were overwhelmingly highly skilled and/or specialized in character, while low-skilled manufacturing tasks were not been brought to the region.

The sales and customer relations' functions saw some inshoring of jobs. This goes against the general trend of moving sales and customers functions to call centers in low-wage countries. The fact that such jobs are still being inshored to Denmark shows the importance of local language in Denmark—one needs to know Danish to operate in Denmark—as well as underlines the general importance of specialized localization of sales and marketing activities.

Administrative functions also grew due to inshoring. As in the case of sales and customer relations functions, this trend contradicts the general trend of offshoring back-office functions to low-wage countries. One explanation for this inshoring of jobs could be the relative success of the Greater Copenhagen region in attracting regional headquarters for multinational companies.

The most striking development in relation to offshoring and inshoring is apparent in the specialist functions category, mainly comprising workers with a higher/tertiary education. Fully 59 percent of the jobs created through inshoring of activities are specialized functions. This illustrates that even though the survey showed the first signs of offshoring of specialist functions and R&D (figure 8), the eastern Danish region simultaneously attracts a far larger number of this type of jobs. The net gain in employment for this group—2,370 jobs—is far larger than the total net gain in employment of approximately 1,500 jobs for all the groups considered in this survey.

Comparison of Tasks Offshored and Inshored

Danish and European concerns regarding the consequences of globalization have, in recent years, focused almost exclusively on offshoring of jobs. Yet, this survey shows that both offshoring and inshoring are occurring for different sectors and types of activities. In other words, a dynamic development of interaction is occurring, which reflects the integration of the region's enterprises into the international economy. For the manufacturing sector, the trend toward two-way traffic is more

pronounced, even though the amount of offshoring of manufacturing from the region is greater than the amount of inshoring.

Table 7 compares the percentages of inshoring and offshoring for each category of activities.

There is a net positive balance between offshoring and inshoring for the following activities: financial services/accounting, product development, knowledge management, R&D activities, and sales and marketing. On the other hand, the following activities are characterized by net offshoring: manufacturing, IT programming, and IT development. The most striking aspect of the net balance comparison in table 7 is that no sector seems to be a one-way street, but rather all sectors are two-way streets—with the most traffic occurring in the manufacturing sector, where it flows pretty steadily in both directions.

Nonetheless, these Danish results mirror US and UK concerns of net losses in product manufacturing and some areas of IT during recent years, while also pointing to net activity gains in high-wage regions in areas such as financial services/accounting, management, and R&D. Therefore when measured by the “task and sector,” globalization is clearly a two-way street. Table 8 shows that traffic patterns by job category are very different. Evidently, low-skilled jobs in eastern Denmark have faced close to a one-way traffic out, while highly skilled, specialized jobs have largely only flowed into the region. Intermediate job categories on the other hand have experienced a two-way traffic, and management has not been affected.¹⁹

This survey hence points clearly to the lopsided job effects of globalization in high-wage regions, with low-skilled jobs disappearing, high-skilled ones appearing, and, most importantly, far more categories of jobs being affected in a two-way manner than in earlier periods. See box 2.

¹⁹. That management functions have not been affected is likely partly because the survey covers only existing companies. Management jobs affected via companies completely leaving the region are not included.

IV. CONCLUSION AND POLICY IMPLICATIONS

This working paper presents the results from a survey of more than 40 percent of all companies with more than 10 employees in sectors exposed to offshoring from the high-wage eastern region of Denmark, and the study has found clear indications of a two-way impact of globalization in the form of activities and jobs being offshored from and inshored to the region. In 2002–05 more jobs were created as a result of inshoring of activities into the region than were eliminated due to offshoring.

Overall, the employment effects of both offshoring and inshoring were found to be limited to less than 1 percent of all jobs lost to offshoring or gained via inshoring. This clearly indicates that for Denmark the worries in purely numerical terms regarding the employment effects of globalization seem overly alarmist.

Both offshoring and inshoring were found to take place in essentially all relevant sectors of the economy, particularly in manufacturing and IT. Hence the label of a two-way street for globalization in eastern Denmark is appropriate.

Job and activity outflows were found to be concentrated among low-skilled workers in manufacturing and IT but also to a lesser degree in R&D functions. Inshoring was concentrated among highly skilled and specialized job functions, while medium-skilled administrative, customer relations, and trade functions experienced both job inshoring and outflows. Globalization therefore has fundamentally exposed all tradable service areas, except management, to global competition while having a highly unequal effect on the labor market in this high-wage region, destroying low-skilled jobs and bringing in more higher-skilled jobs.

Multinational companies were found to be much more likely to engage in offshoring and/or inshoring than domestic companies, and foreign multinationals were found to be inshoring activities to the region far more often than shifting them abroad.

Box 2: Which activities do multinational corporations transfer and where?

Globalization is closely related to the rising importance of multinational companies, also in the eastern Danish region. These are the companies that through their established intraorganizational channels for knowledge and technology flows, administrative capacities, and financial strengths should be more likely than domestic-only companies to exploit any comparative advantages between regions and countries with different wage/talent levels by rapidly relocating their activities in a profit-maximizing manner. Hence a separate analysis of the data was carried out, focusing only on those regional companies that are a part of a multinational group.

First, multinational companies, as expected, are far more likely to participate in the global division of labor than other areas of the domestic-only business community. Among enterprises in multinational groups, only 15 to 20 percent have not been involved in offshoring or inshoring activities over the past three years and do not expect to be involved in the coming year. In contrast, among the total population of enterprises, more than twice as many companies—41 percent—are currently not involved in offshoring or inshoring and do not expect to participate in the next year.

Table B1 shows the flows of tasks inside foreign multinational companies (between their foreign parent company and their regional subsidiaries) and local multinationals (between the local parent company and its foreign subsidiaries).

Table B1: Offshoring and inshoring of tasks by multinational companies, 2002–05

	Offshoring	Inshoring	Net balance
<i>Between foreign parent and local subsidiaries</i>	57	105	48
<i>Between local parent and foreign subsidiaries</i>	83	84	1

Note: Total number of parent companies in survey = 100; total number of subsidiaries = 291.

The results indicate that foreign multinational companies inshore activities to the eastern Danish region almost twice as often as they offshore activities, while local multinational companies transfer activities in and out of their regional headquarters and foreign subsidiaries at an equal level.

Multinational companies as a whole are hence responsible for a net inshoring of activities to the region, and while no employment transfer data are available for only this group, it probably seems

that it contributes positively to regional employment. The fact that foreign multinationals are responsible for positive net flows of activities again illustrates the relative regional success of the Greater Copenhagen region in attracting regional headquarters of such companies. That foreign and Danish multinationals, which ought to have the best opportunities of shifting activities out of the region, bring so many activities to such a high-wage and very expensive location as Greater Copenhagen indicates that the region possesses strong comparative advantages in the areas this survey has found growth in—high-skilled specialized functions—and indicates that presumably even very high tax rates can be overcome to attract high-skilled jobs.

The findings of the survey are therefore roughly in line with what the comparative advantage economic trade theory (Bhagwati et al, 2004; Farrell 2005; Markusen 2005; Samuelson 2004) would predict them to be as the consequences of offshoring and further points to several policy implications for the region, as well as for Europe as a whole.

It is clear that the presence of the metropolitan area of Greater Copenhagen within the eastern Denmark region has been vital to its relative success in attracting jobs. The presence of such a metropolitan area hence seems to be crucial for any high-wage region to prosper in the face of ongoing economic globalization. This further indicates that—seen in isolation—nonmetropolitan and rural areas may suffer under these influences. Such trends will have many distorting effects on local employment opportunities and thereby on housing prices, for example. The latter would clearly be expected to rise in the metropolitan area while declining outside it—a trend seen in recent years in the eastern Denmark region.

As the inshoring of jobs occurs almost exclusively among the high-skilled portions of the workforce, the importance of continued emphasis on education, skill upgrading, and life-long learning cannot be stressed enough. It seems obvious from the results of this survey that only this way can high-wage areas continue to attract jobs and activities from elsewhere in the world. Furthermore, high-skilled workers are required to be flexible, as this survey has found evidence that many tasks are being inshored by companies to the region without new employees being added to their payrolls. Evidently,

high-wage, high-skilled workers are increasingly asked to take on new and additional tasks to keep their jobs.

And while the region and Denmark in general has a relatively well-educated workforce, there is a clear risk that the region could in future experience a shortage of workers with the longest tertiary educational backgrounds. Preventing such a shortage either by increasing the number of locals who graduate from long tertiary programs or by bringing in substantially more highly skilled foreigners must therefore be the priority for Danish national and local policy makers.

Finally, the principal findings of this survey—that an open, flexible, and high-wage region in Europe that has gone a comparatively long way in implementing the policies needed to achieve the EU Lisbon goals can generate more and better jobs from globalization in the early 21st century than it loses to it—ought to encourage European policymakers and stakeholders in those EU countries that have yet to fundamentally reform their economies along the lines outlined in the Lisbon Agenda to move in this direction.

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ANNEX

Table 1: Job functions

Job function	Example
Low-skilled manual work	Manual work in manufacturing, machine operation, machine fitting
Operator and process-related functions	Precision machine work, process manufacturing
Skilled trade and craft operations	Skilled machine fitting, trade and craft work
Sales and customer functions	Call-center work, sales, marketing
Administrative functions	Bookkeeping, secretarial tasks, correspondence clerking, back-office work
Specialized functions	Engineering, consultancy, legal work, logistics/supply chain management
Management functions	Operational and enterprise management

Table 2: Offshoring destinations

Destination	Percent of companies with offshoring
Western Europe	46
Asia	42
Eastern Europe	41
North America	13
South America	4
Other regions	4

n = 332

Table 3: Change in employment after offshoring, by educational category (percent);

Category	Fewer employees	More employees	Unchanged no. Of employees	Do not know
Unskilled workers	22	4	64	10
Skilled workers	15	6	70	8
Short- and medium-length education	19	12	64	5
Tertiary education	13	17	66	5

n = 332

Table 4: Offshoring of jobs, 2002-2005

Job function	No. Of jobs offshored	Percent of total
Low-skilled manual work	826	31
Operator and process-related functions	301	11
Skilled trade and craft operations	527	20
Sales and customer functions	145	5
Administrative functions	791	29
Specialized functions	107	4
Management functions	0	0
Total	2,697	100

Table 5: Growth in employment after inshoring, by educational category (percent)

Category	Growth in employment
Unskilled workers	23
Skilled workers	22
Short- and medium-length education	50
Tertiary education	66
Do not know	1

n = 161

Table 6: Inshoring of jobs, 2002-2005

Job function	No. Of jobs inshored	Percent of total
Low-skilled manual work	0	0
Operator and process-related functions	203	5
Skilled trade and craft operations	291	7
Sales and customer functions	454	11
Administrative functions	766	18
Specialized functions	2,471	59
Management functions	0	0
Total	4,185	100

Table 7: Difference between inshoring and offshoring in relation to activities (percent)

Activities	Inshoring	Offshoring	Net balance (in minus out)
Manufacturing	24%	29%	-5
Financial services/accounting	10%	5%	+5
Sales and marketing	8%	5%	+3
Knowledge Management	7%	3%	+4
IT operations	6%	6%	0
IT programming	5%	9%	-4
Logistics and procurement	4%	4%	0
Customer service center ("call center")	3%	3%	0
Payroll and HRM	3%	3%	0
Product development	10%	5%	+5
IT development	5%	6%	-1
Research and development	8%	5%	+3

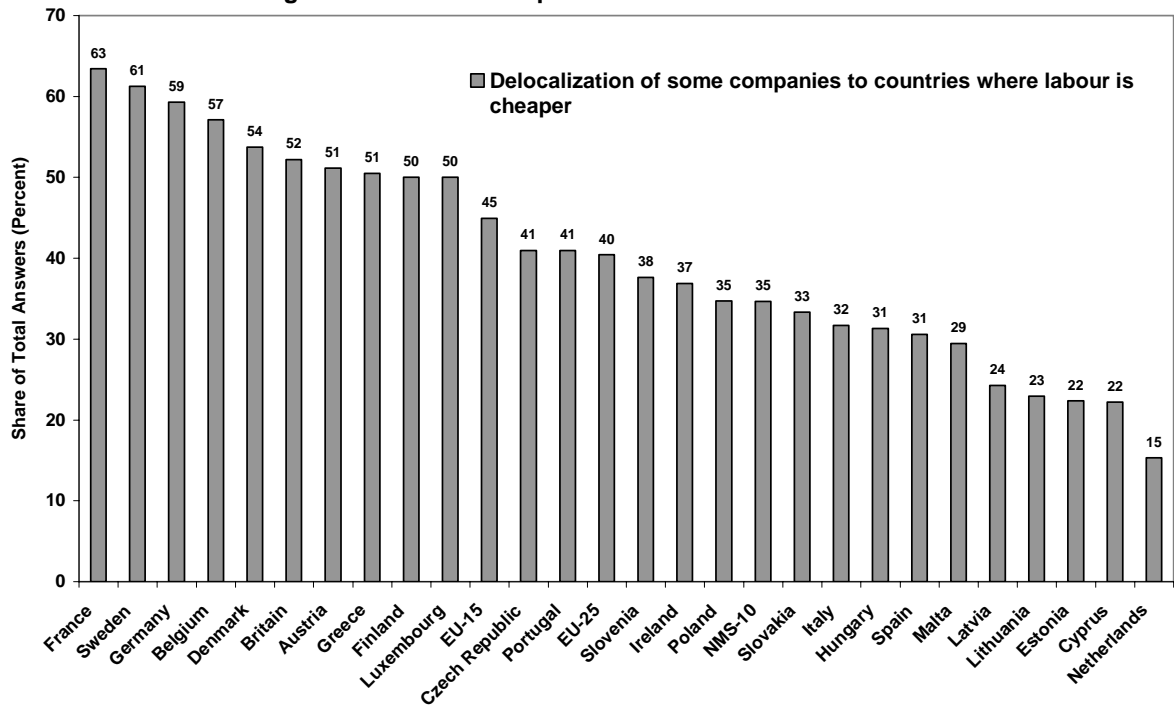
N = 647, total no. of respondents (enterprises) with inshoring and/or offshoring.

Note: Kakabadse and Kakabadse (2002) primarily describe activities related to outsourcing, and the activities described in this study have used most of these categories but have added further activities related to sales and marketing and IT.

Table 8: Net job growth from offshoring and inshoring by job category (no. of jobs)

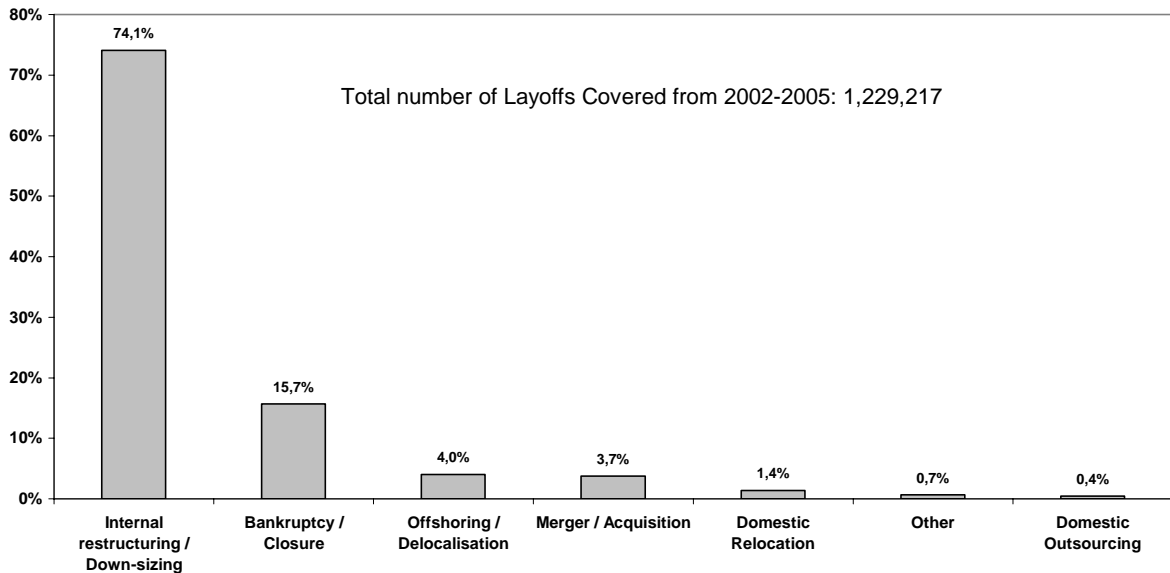
Job function	Offshoring	Inshoring	Net
Low-skilled manual work	-826	0	-826
Operator and process-related functions	-301	203	-98
Skilled trade and craft operations	-527	291	-236
Sales and customer functions	-145	454	309
Administrative functions	-791	766	-25
Specialized functions	-107	2,471	2,364
Management functions	0	0	0
Total	-2,697	4,185	1,488

Figure 1: What Do Europeans Think Of "Globalization"?



Note: Percent answers to the question "There are multiple consequences of the globalization of trade. When you hear the word "globalization", what comes to mind first?" Source: European Commission - Eurobarometer 63, Spring 2005 question Q6.

Figure 2: Job Losses in the EU-25 2002-2005, by Reason of Layoffs



Note: Offshoring/Delocalisation is defined as when the activity is relocated or outsourced outside of the country's borders. Outsourcing is defined as when the activity is subcontracted to another company within the same country, and relocation is when the activity stays within the same company, but is relocated to another location within the same country. Source: EMCC European Restructuring Monitor

Figure 3: Offshoring Intensity By EU Member State

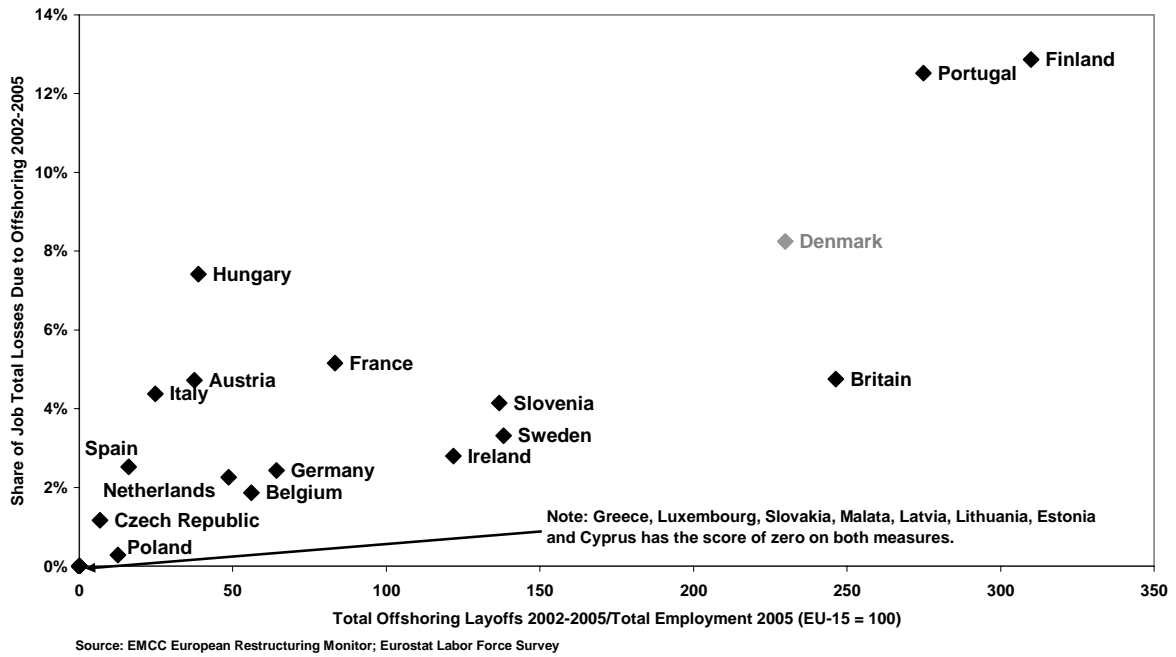


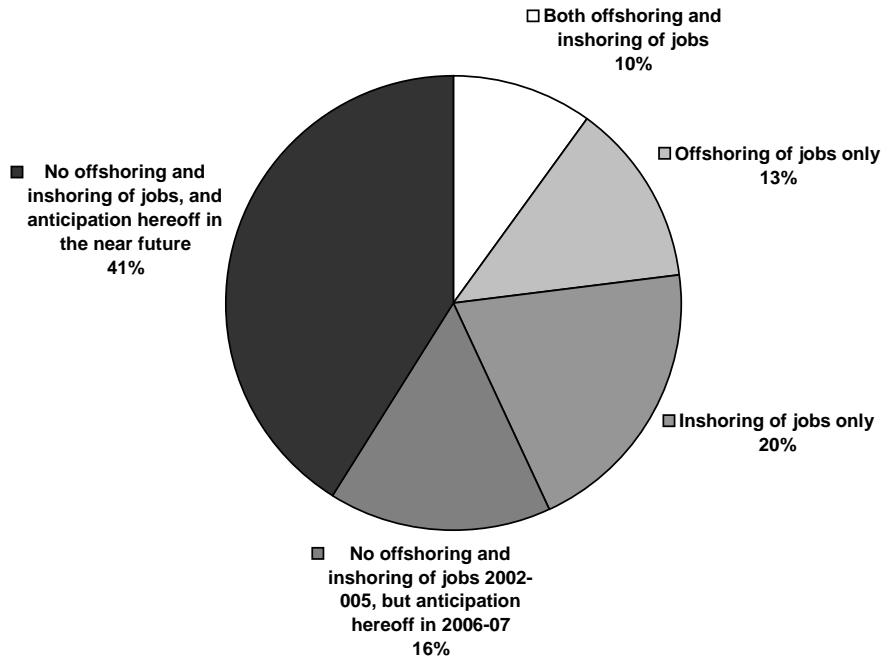
Figure 4: Firms outsourcing and offshoring options

	Internal	External
Domestic	Domestic in-house production	Domestic outsourcing
International (offshoring)	(Captive) offshoring	Offshore outsourcing

Note: Shaded cells indicate option is covered in this study

Source: Adapted from UNCTAD (2004)

Figure 5: Offshoring and Inshoring of Jobs in Eastern Region of Denmark 2002-05



N = 1,504; True population = approximately 3,600. Source: Enterprise Survey, Ramboell Management 2005

Figure 6: Importance of Reasons For Offshoring (1-5 Index, 5 = Most Importance)

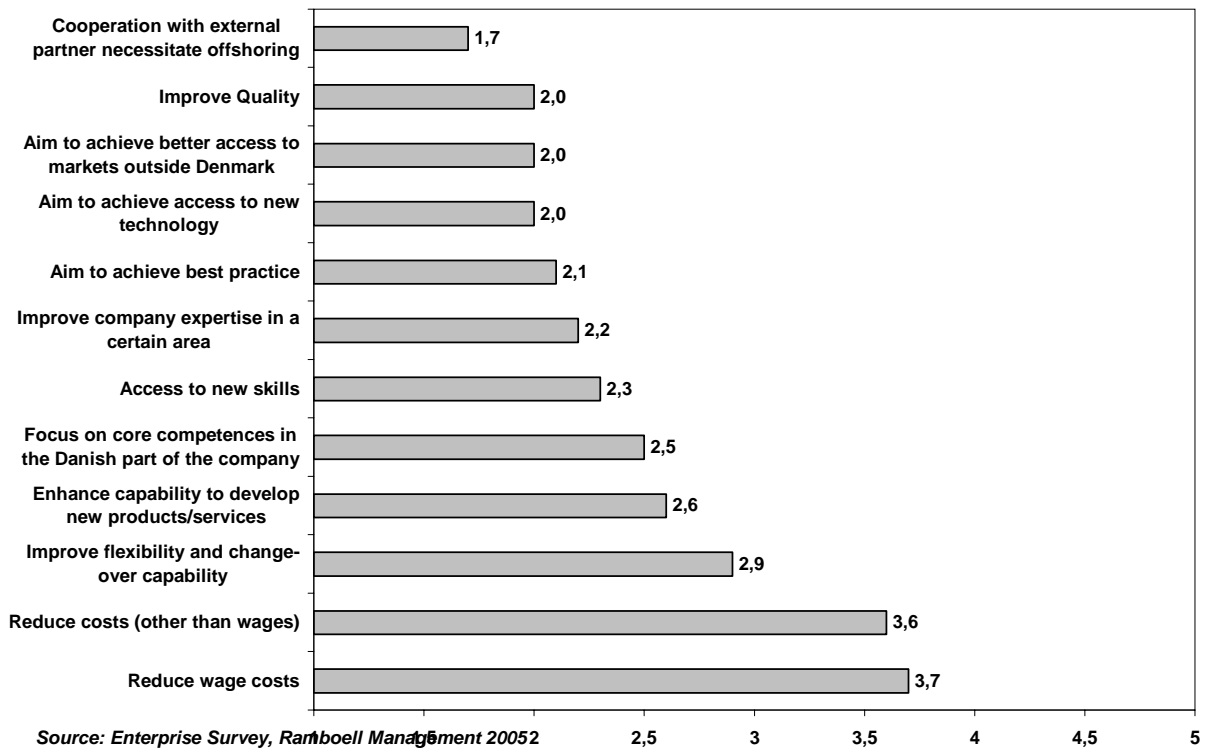


Figure 7: Companies that Have Offshored Activities From Eastern Denmark 2002-2005, by Sector of Activity (1)

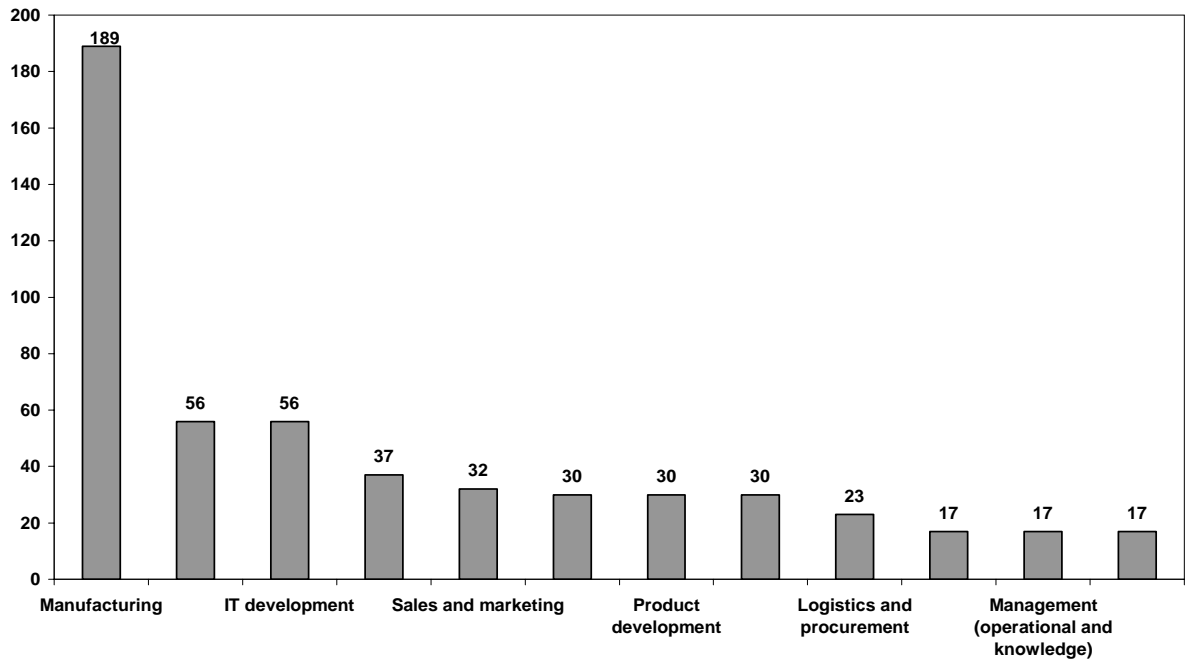
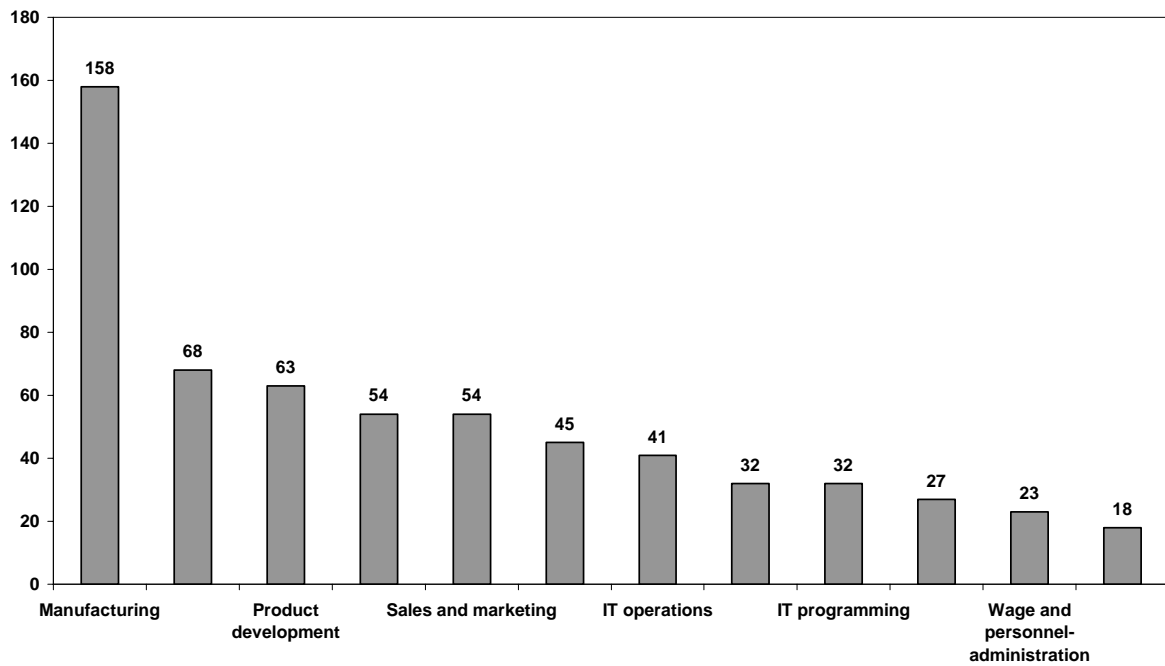


Figure 8: Companies that Have Inshored Activities To Eastern Denmark 2002-2005, by Sector of Activity (1)



PART THREE:

THE ANTECEDENTS OF OFFSHORING ADVANCED TASKS

Authored by

Peter D. Ørberg Jensen
Copenhagen Business School

and

Torben Pedersen
Copenhagen Business School

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THE ANTECEDENTS OF OFFSHORING ADVANCED TASKS

Abstract

This article focuses on the antecedents of advanced offshoring, exploring what causes firms to offshore some of their more advanced tasks. Our findings indicate that while the lower cost of unskilled, labor-intensive processes is the incentive for firms that offshore less advanced tasks, a desire to broaden and deepen global networks of new knowledge spurs highly knowledge-intensive companies to offshore more advanced tasks. We propose that offshoring should be analyzed on a more disaggregated level than is the norm in mainstream offshoring literature as this would allow finer distinctions between the offshoring of more or less advanced activities.

Keywords: Offshoring, global integration, knowledge workers, innovation offshoring, advanced tasks

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THE ANTECEDENTS OF OFFSHORING ADVANCED TASKS

1. INTRODUCTION

Firms have been offshoring simple manufacturing operations for many years, typically to low-cost countries. Many multinational corporations (MNCs) have recently changed their strategy, shifting their offshoring focus to services (UNCTAD, 2004). White-collar, skilled jobs in services (mainly back-office functions) are following blue-collar manufacturing jobs in the move offshore (e.g. Bardhan & Kroll, 2003; Dossani & Kenney, 2004). Technological advances have enabled firms to disaggregate their activities into progressively smaller segments and relocate some to foreign countries (i.e. offshoring). Lewin & Couto (2007) point out that this shift in focus not only relates to services, but also concerns “next-generation offshoring: the globalization of innovation”, which encompasses a broader range of activities in the value chain and cuts across manufacturing and services. This implies the offshoring of more advanced tasks – sometimes termed “innovation offshoring” (Ernst, 2006) – i.e. tasks performed by highly qualified workers, also known as knowledge workers.

In particular, offshoring more advanced tasks raises a number of issues beyond those associated with offshoring simpler, more routine tasks. For example, why do firms offshore their advanced tasks and what kind of firms conduct advanced offshoring? The offshoring of advanced tasks is of interest because it has ramifications both at the societal level (e.g. for employment) and at the business level (e.g. competitive advantage).

The Danish wind turbine producer Vestas provides one example of advanced offshoring. The global industry leader, Vestas, commanding a 25% share of the world market, recently decided to globalize its R&D function by setting up large R&D facilities in Singapore and Chennai in India. As an integral part of relocating its R&D, Vestas clearly defined the division of labor among the R&D facilities and the interfaces between them. The main research on blades and control systems will be conducted in Århus, Denmark; research on mechanical parts will take place in the regional R&D headquarters in

Singapore, while the facilities in Chennai will be responsible for development and testing. Vestas relocated its advanced tasks to Singapore and India for not one but many interrelated reasons, including proximity to key markets, access to talented people (currently in short supply in Denmark), cost advantages and the opportunity to tap into new sources of knowledge.

While we know a great deal about why firms start offshoring less advanced tasks, we have only a vague understanding of why they decide to offshore more advanced tasks. In this article, we attempt to fill this gap by highlighting factors tied to firms' approach to offshoring advanced tasks. Using data stemming from a large survey of firms located in Denmark and spanning 12 manufacturing, technical and service activities, we analyze the factors leading firms to offshore advanced tasks. In addition, we propose that offshoring should be analyzed on a more disaggregated level than is the norm in mainstream offshoring literature. We argue that offshoring should be analyzed at the task level, since this allows finer distinctions between the offshoring of more and less advanced activities.

Our findings indicate that while the lower cost of unskilled, labor-intensive processes is the incentive for firms that offshore less advanced tasks, a desire to broaden and deepen global networks of new knowledge spurs highly knowledge-intensive companies to offshore more advanced tasks.

Surprisingly, companies are equally likely to outsource the offshoring of advanced tasks as they are to offshore the tasks in house (captive offshoring), and offshoring these tasks is equally common in developed and developing countries.

The next section examines the potential for using extant international business research as the theoretical framework for analyzing advanced task offshoring. The following section presents the conceptual framework for our analysis, while the third section describes hypothesis development. A presentation of the methodology follows, including a description of the data used and the operationalization of variables. Finally, the results are presented and discussed.

2. OFFSHORING OF ADVANCED TASKS AND ITS ANTECEDENTS

2.1 International Business Literature on the Offshoring of Advanced Tasks

Offshoring took off as a research field in the international business literature of the 1960s. This research followed an emerging phenomenon whereby US multinational corporations offshored labor-intensive manufacturing processes to low-cost production zones in developing countries like Mexico and the Philippines (Moxon, 1975; Stopford & Wells, 1972). Vernon (1966) also addressed the topic in his work on the product cycle and international investment.

While the writers of these early international business articles shared the view that cost minimization is the primary objective of offshoring, more recent international business models recognize that MNCs use their international reach to generate a location-based competitive advantage that might grow out of low costs as well as unique assets and knowledge (Doz, Santos & Williamson, 2001; Dunning, 1998). A number of studies reveal that, starting in the 1980s, perhaps earlier, some of the world's leading MNCs began distributing sophisticated activities like design and R&D geographically (Cantwell, 1995). Technological advances, especially in the areas of information and communication technology, have enabled companies to disaggregate their activities into progressively smaller segments and eventually offshore more tasks. However, some writers still maintain that cost savings are chiefly why companies decide to offshore, for although other factors may be at play, companies have to be sure of the cost advantages before initiating offshoring in the first place (e.g. Dossani & Kenney, 2004; Farrell, 2005; UNCTAD 2004).

Dunning (1998) proposes four overarching motives for MNCs' international activities: market seeking, resource seeking, efficiency seeking and strategic considerations such as following clients or competitors into foreign markets or otherwise enhancing the asset portfolio. Clearly, the motivation for international activities extends far beyond simple cost minimization, additionally embracing the sourcing of new assets and knowledge abroad.

Although this approach may clarify the initial motive for conducting international activities, e.g. the initial decision to offshore, it tells us little about the dynamics of offshoring, that is, how MNCs gain confidence in offshoring and eventually decide to offshore an increasing number of tasks. Examining the categories of motivation can help explain the logic behind taking the initial offshoring steps, but offers little insight into how the offshoring relationships develop afterwards.

More importantly, advanced tasks fundamentally differ from simpler, more routine tasks which have dominated the previous wave of manufacturing offshoring (Andersen, 2006; Ernst, 2002). Advanced tasks require expertise to execute as well as independent judgment on the part of the implementing person or team, and are far less codified, although codification probably occurs to some extent (Bryson, 2007; Cowan & Foray, 1997). In the 2004 World Investment Report, UNCTAD uses the term “high-skill services”, which denote “the most creative and skill-intensive end of offshored services” (UNCTAD, 2004: 151). The OECD (2004) highlights the high level of information, knowledge intensity and complexity as inherent characteristics of most offshored business services.

Offshoring advanced tasks is much more than just offloading work with a set of specifications to a different location. Creating, distributing and sharing knowledge is a dynamic process with many feedback-loops and must be managed and integrated between the locations to be effective. This requires a deep understanding of the interdependencies between the different tasks –offshored or not – and a meticulous specification of all interfaces. Accordingly, offshoring advanced tasks is not simply an ad-hoc activity that mainly affects how activities are organized in the focal country: to realize the full potential of offshoring, MNCs have to reorganize their activities and workflow in other countries.

In conclusion, we find that although the international business literature offers a more multifaceted view of international activities than the aim of simple cost minimization would imply and shows that companies’ offshoring of advanced tasks is also intended to gain assets and knowledge abroad, the literature needs to be further expanded to explain the dynamics of offshoring and the finer details of interdependence and interface between the tasks conducted by MNCs (onshore and offshore). This is

particularly pertinent when MNCs begin to disaggregate the high-value creation activities and offshore some of the more advanced tasks.

2.2 A Disaggregated View of the Firm's Value Chain

In a recent study based on three consecutive annual surveys (2004-2006) carried out in the US, Lewin and Couto (2007) show that cost reductions remain an important strategic driver. However, their data also show the growing importance of other strategic drivers, notably the desire to obtain access to qualified staff and to increase the speed to market, a tendency indicative of the increasing complexity of offshoring. These important findings suggest the growing sophistication of the work being offshored and of the drivers behind the offshoring. They furthermore emphasize that the same strategic drivers might not determine all the offshored tasks.

Within the offshoring context, Porter's "Value Chain" (Porter, 1985; Pyndt & Pedersen, 2006) often serves as a useful template. Analyzing the value chain involves disaggregating it into specific activities that create the products or services that customers or users value. As an analytical tool, the value chain helps a given firm to identify and strengthen its critical core competences and thus regulate the resources allocated to less critical activities. It has been suggested that firms in developed countries opt to specialize in creative and innovative value chain activities, like R&D, design, marketing and branding, while locating manufacturing or assembly in more cost-effective countries (McCann & Mudambi, 2005).

Prior to the 1990s' surge in advanced offshoring, Reich (1991) highlighted the importance of activity characteristics, pointing out that the globalization of the world's economy entailed a divide between standardized tasks in low-wage economies and high value-added tasks in high-wage economies, where the right knowledge and skills are available. Reich also stated that all jobs of "symbolic analysts" (Reich's term for knowledge workers¹) are subject to relocation considerations. In the same vein, Karmarkar (2004) uses two dimensions to distinguish between different tasks: one distinguishes between simple and complex production processes; the other between standardized and customized

tasks. Karmarkar (2004) combines the two dimensions to create a framework for defining a firm's offshoring strategy. Other scholars (e.g. Bardhan & Kroll, 2003; Gereffi, Humphrey & Sturgeon, 2005; Sanchez & Mahoney, 1996) have similar considerations regarding the level of task complexity and the possibilities for transferring these tasks across firms and locations.

This disaggregated understanding of different tasks leads us to an important critique of how the value chain perspective has been applied in the offshoring debate. Often, a certain value chain activity, such as R&D or IT, is treated as a single constellation (e.g. LTT Research, 2007; McCann & Mudambi, 2005; UNCTAD, 2005), even though the sum total of a firm's activities within e.g. R&D or IT really consists of many detailed and different tasks, some executed by highly educated specialists (knowledge workers) and others not. This critique underpins our assertion that a more disaggregated view of firms' activities is required. Each activity consists of many tasks, and extant research can only explain the dynamics, complementarities and the more specialized division of labor among the different tasks at the aggregated level. Moreover, firms rarely offshore an entire activity like manufacturing, IT or R&D, instead offshoring only some of the tasks related to these activities. We therefore propose a disaggregated perspective focusing on the task rather than on the activity level. In particular, we present a perspective based on how advanced the tasks are.

We argue that all a firm's value chain activities are made up of tasks that are relatively advanced as well as some that are relatively simple. For example, in addition to its more advanced tasks, R&D includes less advanced, standardized and routine tasks, such as tests, patent applications, and documentation. Similarly, manufacturing includes advanced prototype and niche production and less advanced tasks executed by unskilled workers. Table 1 provides a list of 12 different types of activities showing the location of various tasks on a scale from less advanced to more advanced tasks. The table indicates that each activity entails a number of tasks ranging from less to more advanced, and illustrates our theory that the dimension of less versus more advanced tasks² cuts across the value chain activities. The table also lists the 12 activities and related tasks that we investigate in our empirical analysis.

*** INSERT TABLE 1 ABOUT HERE ***

3. HYPOTHESIS DEVELOPMENT

Three elements in the extant literature on offshoring and international business help us understand the characteristics of advanced task offshoring. These are: 1) the factors underpinning firms' location decisions; 2) the global search for talent; and 3) the literature that more directly addresses the offshoring of advanced tasks.

Intrinsically, location is crucial in offshoring because of the home versus abroad decision that firms face. In the literature on location factors, several authors address the interface between the firm's value chain, the attractiveness of the destination, knowledge (especially the ability to transfer knowledge) and human capital (Doh, Bunyaratavej & Hahn, 2007). Building on Dunning's (1998) theoretical framework, Graf and Mudambi (2005) argue that a firm's offshoring location decision and the attractiveness of the location result from internal company factors (offshore objectives, etc.) and external company factors (infrastructure, country risk, and government policy). In this respect, they stress the importance of human capital considerations tied to the location's attractiveness, since even in high-tech domains, the human element is important. The location of human capital is also key to the work by Florida (2002, 2005), who concludes that the more attractive a city, the higher the agglomeration of the "creative class" and, consequently, the higher the concentration of firms. Florida portrays a "spiky" world, in which a small number of cities and regions with high concentrations of skilled and creative workers drive the global economy, with the highest peaks "growing even higher, while the valleys mostly languish" (Florida, 2005: 48; see also Mithas and Whitaker, 2007). Firms will locate tasks in areas where a skilled, capable workforce is present.

To some extent, knowledge and skills are location-specific and sticky, and firms must be present in these areas to tap into the knowledge. Notably, this ability of a desirable workforce to attract firms is considered more important than the reverse, i.e. the presence of firms in a certain area attracting

knowledge workers. Kogut (2004) stresses the fundamental importance of spatial conditions. Input factors, such as knowledge, technology and venture capital, are closely linked to spatial conditions and hence very difficult to move. Therefore, firms must be present in these areas to access the flows of knowledge, technology and capital needed to conduct advanced tasks. Since this combination of knowledge, technology and capital is expected to be more multifaceted and sophisticated in high-income developed countries than in developing countries, we propose the following hypothesis:

- Hypothesis 1: Offshoring to developed countries tends to comprise more advanced tasks, while less advanced tasks will be offshored to developing countries.

Several articles and consulting reports have pointed out that access to highly skilled talent and knowledge is now an important offshoring driver (A.T. Kearney, 2004; Deloitte, 2004; Lewin & Peeters, 2006; Li, Liu, Li & Wu, 2007; Patibandla & Petersen, 2002). This trend is fuelled by an increasing shortage of skilled labor in industrialized countries, particularly scientists and engineers (Lewin, Massini & Peeters, 2007), and by the large pool of highly skilled workers in some emerging nations (Sen & Shiel, 2006; Yifei, von Zedtwitz & Simon, 2007). For instance, almost four times more engineers complete their degrees in China annually than in the US. South Korea – with one-sixth of the US population and one-fifteenth of the US GDP – graduates more engineers than the US (National Science Board, 2006). However, some evidence suggests that the talent pool in countries like China and India is far from bottomless. The McKinsey Global Institute analyzed the potential availability of offshore talent in 28 low-wage nations and the likely demand from service jobs across eight sectors in developed countries (Farrell, Laboissière & Rosenfeld, 2005, 2006). The study shows that developing countries produce far fewer graduates suitable for employment by multinational companies than the raw figures might suggest, with an estimated 8-12% of these graduates meeting the requirements. Nonetheless, the supply of human capital is substantial and growing fast, and some small countries boast surprisingly large numbers of engineers and other highly skilled workers. In addition, Farrell (2006) concludes that the tight labor markets in the well-known hot spots are the exception rather than the rule and that many attractive alternatives are emerging around the world.

Recent data show that firms increasingly depend on external sources of knowledge and increasingly go where the talent is to access the expertise of this highly skilled pool of workers (Lewin & Couto, 2007). Similarly, in a study on the objectives for establishing R&D laboratories abroad, Florida (1997) highlighted the increasing importance of local supply-side factors, particularly access to scientific and technical human capital, in locating knowledge-seeking tasks abroad. We therefore submit this hypothesis:

- Hypothesis 2: The more knowledge seeking abroad motivates a firm, the more advanced the tasks offshored.

Karmarkar (2004) argues that offshoring is only one of several options, and that capital investments in automation may be an alternative to offshoring. Like offshoring, automation makes firms less vulnerable to low-cost competition. Karmarkar highlights capital investment as a strategic option that applies to cases where technology replaces less advanced, routine, assembly-line tasks and labor, and to cases where tasks are more complex and customized (Karmarkar, 2004). However, we argue that capital investments in automation are still more commonly applied to less advanced tasks. Therefore, a high level of capital investment may eliminate or greatly reduce the need to offshore less advanced tasks, and firms with a high level of capital investment will thus primarily offshore more advanced tasks. Against this backdrop, we submit:

- Hypothesis 3: Offshoring from firms with a high level of capital investment will chiefly involve more advanced tasks.

A range of articles has recently been contributed to the literature on advanced offshoring. Some of this research addresses the offshoring of innovation and R&D, generally depicted as a new phenomenon (Ernst, 2006; LTT Research, 2007; Walsh, 2007; Yifei et al, 2007). Interestingly, R&D internationalization among MNCs has surged in recent years (UNCTAD, 2005). Although R&D

internationalization has existed for quite some time (Gammeltoft, 2006), more complex R&D activities are now being established in developing countries (UNCTAD, 2005). Several authors have noted the importance of the *process* in relation to offshoring advanced tasks. Maskell, Pedersen, Petersen and Dick-Nielsen (2007) show that Danish firms offshore an increasing number of advanced tasks as they gain offshoring experience. Carmel and Agarwal (2002) make the same point in the field of IT offshoring. Lewin and Peters (2006) observe that firms largely adopt offshoring practices following an opportunistic, bottom-up, sequential process. Therefore, we put forth this hypothesis:

- Hypothesis 4: The more offshoring experience a firm has, the more advanced the tasks offshored.

Knowledge is crucial to advanced offshoring because the competitiveness of a multinational corporation is closely tied to its ability to balance the need to protect its knowledge with the need to create new knowledge (Murtha, 2004). To create new knowledge, both MNCs and other types of entrepreneurial firms make offshoring part of their knowledge-seeking strategies. Some authors see the globalization of innovation as the emergence of “a new offshoring frontier” (Lewin & Manning, 2007: 2). According to Bunyaratavej, Hahn and Doh (2007), the new logic is that firms do not offshore because they seek input factors that differ from those they have at home. Rather, they look for similarities in inputs when they offshore. Contrary to conventional expectations but in line with the parity perspective, Doh et al (2007) find that a country is more likely to be a destination for services offshoring when conditions are similar in the home and host country. The authors find that high education levels, high average wages and cultural similarities motivate offshore location choices by US companies. In line with the argument that firms look for similar inputs when offshoring, we submit the following hypothesis:

- Hypothesis 5: The higher the share of knowledge workers handling the firm’s activities in Denmark, the more advanced the tasks offshored.

It is widely assumed that a firm must control its valuable resources in order to grow. Hence, most offshoring models have been built around the idea that firms should protect their key knowledge and resources by keeping them in house (e.g. Murray & Kotabe, 1999). It is argued that the more valuable the knowledge and the larger the resource centrality (Mudambi & Tallman, 2007), the greater the incentive to internalize these aspects. In view of the strong arguments for internalization advantages made in the international business literature (Dunning, 1998), especially concerning knowledge-intensive goods and services (Buckley & Casson, 1976; Hennart, 1982) we expect internalization advantages to prevail when it comes to offshoring advanced tasks, an argument that shapes the final hypothesis:

- Hypothesis 6: More advanced offshoring will mainly occur in the form of captive rather than outsourced offshoring.

4. METHODOLOGY

4.1 Data Compilation and Sample Characteristics

The Danish economy and firms located in Denmark are closely tied to the international economy and are thus subject to global economic flows and trends, including offshoring trends. We can therefore view the Danish case as an example of how globalization develops in an open economy with a highly adaptive labor market and a high level of internationalization in the manufacturing and service sectors.

The data presented in this article originate from a study carried out by a team of consultants and scholars (including the authors) under the auspices of the consulting firm Ramboll Management³ in the second half of 2005. While our cross-sectional data form the bulk of the analysis, we also draw on more qualitative data sources. We interviewed a sample of about 25 offshoring firms participating in the survey to ensure data quality and get a more detailed understanding of the offshoring motives,

processes and effects in Danish firms. These qualitative data are inserted throughout the paper to complement the theoretical discussion and findings in the cross-sectional data.

The study covers the eastern regions of Denmark. These regions represent 45% of the total Danish population and 47% of national GDP in 2005.⁴ The results can therefore be expected to be generally representative for the country as a whole, although the inclusion of the capital city of Copenhagen – with a presumably higher proportion of internationally integrated companies than the national average – may bias the data slightly upwards. However, as this upward “metropolitan city bias” is probably common in offshoring, it should not influence other aspects of offshoring.

We have excluded the outsourcing of tasks to domestic Danish firms from the analysis, which focuses on the relocation of tasks somehow rooted in Denmark prior to offshoring. Additional firm interviews show that business processes are rarely transplanted identically in the destination country, as firms seize the opportunity to reorganize and introduce new elements in the business processes.

The quantitative analysis is based on a survey of the total population of firms in the eastern regions of Denmark in the following sectors: manufacturing, utilities (electricity, gas and oil), transportation, financial (banking, insurance) and business services.⁵ Firms in these sectors can carry out offshoring through either their primary activities in the value chain or their secondary activities (e.g. administrative/back-office activities). This set of sectors includes roughly the same sectors as those in a study by The Danish Economic Council, a think-tank funded by the Danish government, which in 2004 conducted a large study regarding the offshoring of jobs from Denmark (Danish Economic Council, 2004). However, we expanded the sample to include sectors in which Denmark, particularly its eastern region, hosts large companies likely to offshore back-office functions. To include a maximum of firms conducting offshoring, we thus focused the study on the sectors where offshoring is most likely to occur. Since the survey is not all-inclusive, firms with offshoring activities outside these sectors, e.g. a supermarket chain offshoring its IT activities, are excluded. This creates a potential bias,

but we assume one that mainly affects the percentage of offshoring firms and not the factors determining the respective practices of offshoring and advanced offshoring.

Firms with fewer than 10 employees are excluded from the sample, offshoring rarely being an option for such small firms. This leaves a total population of 3,580 firms in the selected sectors. We contacted all firms four or five times by phone at regular intervals during the six-week data collection period. This gave each firm ample opportunity to participate, and systematic monitoring during data collection ensured that the ultimate share of participating firms in each segment in terms of sector, geography and size corresponded to the actual share of firms in the population. In terms of sector, geography and size of the firms, we thus believe the sample to be highly representative of the firms. In total, we obtained usable responses from 1,504 firms, which make the response rate 42%.

Each firm has a unique identification number provided by the Danish Commerce and Company Agency, a government body. Using this identification code, we linked the survey data for each firm to individual firm data in official databases. This allows us to broaden the analysis range to include such key figures and accounting information as return on equity and capital investments. Furthermore, this combination of primary data (survey data) and secondary data (official firm statistics) makes the problem of common-method bias less of an issue.

4.2 Statistical Test and Operationalization of Variables

The main objective of the article is to explain what drives firms to offshore more advanced tasks, a decision that differs conceptually from the initial offshoring decision. However, in practice these two decisions (initial offshoring and advanced task offshoring) are not mutually exclusive, as managers might make these decisions simultaneously. Managers might make strategic decisions concerning advanced task offshoring at the outset rather than gradually offshoring increasingly advanced tasks. In this case, sample selection bias becomes a problem (Hamilton & Nickerson, 2003). To resolve the problem, we statistically tested the hypotheses by applying a Heckman model that controls for sample selection bias. The Heckman model basically consists of two equations, the first of which models the

binary decision to offshore (the selection equation), and the second the decision to offshore advanced tasks (the outcome equation). In our case, the dependent variable in the outcome equation is a binary variable regarding the decision to offshore less advanced rather than more advanced tasks. For this reason, we ran a probit model with sample selection (the Heckproc procedure in STATA 10). In this model, the Rho value (and the associated likelihood-ratio test), which correlates the errors in the selection and outcome equations, indicates the extent to which our data have a sample selection problem.

Operationalization of variables for the offshoring decision (selection equation).

Offshoring was measured as a dummy variable that took the value 1 if the firm indicated that it had moved any task abroad previously performed in Denmark during the three-year period (2002-2005). This variable was measured for all 1,504 firms that provided usable responses. In all, 346 firms (23%) had offshored one or more tasks during the period.

The control variables in this selection equation are mentioned in the literature as determinants of firms' decision to offshore in the first place. The equation includes two variables (*firm size* and *multinational company*) that control for firms whose size and MNC relations give them access to more resources and that might thus be able to follow an easier route to offshoring. International experience and the scope of activities outside Europe (the variables denoted as *international experience* and *activities outside Europe*) should also ease the path to offshoring, as the firm might have learned about opportunities for offshoring and how to manage internationally. The variable *financial performance* is added to determine whether poor (or good) performance prior to offshoring forces (stimulates) firms to engage in offshoring. The variable was measured in the year 2000, a period before the time at which we observed any offshoring. The *industry sector* variable controls for the fact that different industries – particularly services and manufacturing – might follow different offshoring patterns. Two other variables included (*share of knowledge workers* and *share of unskilled workers*) control for the composition of the labor force in the firm. Finally, the equation includes level of *capital investment*. Table 2 lists the exact operationalization of each variable.

Operationalization of variables for the offshoring of advanced tasks (outcome equation).

The outcome equation is the main equation in the model. It makes the level of advanced offshoring the dependent variable and includes the test of our six hypotheses.

First, we asked respondents to indicate which activities they had offshored by selecting from a list of 12 activities (Table 1). For those activities for which some tasks were offshored, we asked the respondents to indicate how advanced the offshored tasks were. We measured the level of advanced task offshoring on a five-point scale, where the lower end of the scale indicated that the offshored tasks were (standardized and) non-advanced and the higher end that the offshored tasks were highly advanced. The fact that the measurement is based on individual perceptions of the level of advanced task offshoring makes it difficult to establish the reliability of the more detailed measurements. For this reason, we transformed the scale into a binary variable of less versus more advanced tasks, where the values 1, 2 and 3 indicate less advanced tasks, while 4 and 5 denote the offshoring of more advanced tasks. If the firm indicates that it has offshored more advanced tasks for any of the 12 activities, the (dependent) variable for *offshoring of advanced tasks* obtains the value 1. However, if the firm has offshored only less advanced tasks, it obtains the value 0. Among the 346 firms that offshored some tasks, 113 had relocated at least one “more advanced” task to a destination abroad, while 219 firms had only offshored “less advanced” tasks.

To test the robustness of the results, we also tested the model with a dependent variable as a count variable of the number of offshored advanced tasks. This variable could take the value of 1 to 7 depending on how many advanced tasks that were offshored.

The independent variables in this equation follow from the six hypotheses (see exact operationalization of variables in Table 2). Since we only had data at regional level, we operationalized all *developed countries* (H1) as being all countries in Western Europe and North America. One drawback might be that Japan and Australia were not included among the developed

countries. Statistically, however, very few Danish firms offshore to Japan and Australia (Statistics Denmark, 2006), so this will have a limited effect on the results.

Knowledge seeking (H2) is a multi-item variable based on three items that measure the motives for offshoring on a five-point scale (1= no importance and 5= extremely important). The three items are: access to best practice, access to new technology and access to new competences. The Cronbach Alpha of the three items is 0.85, which is far above the recommended threshold of 0.70 (Hair, Anderson, Tatham & Black. 1995). Taken together, these three items measure the extent to which knowledge seeking is the motive for offshoring.

Capital investment (H3) and automation are measured as assets per employee in 2000, which is prior to the eventual offshoring. These data are obtained from the company database maintained by Statistics Denmark. On average, the firms had assets per employee of USD 143,700 in 2000.

Offshoring experience (H4) is a count measure of the number of activities for which tasks have been offshored among the 12 listed activities (those listed in Table 1). For the firms engaged in offshoring, the variable varies between 1 (i.e. tasks within a single activity are offshored) and 12 (tasks from all 12 activities are offshored). The latter case would involve very broad-based offshoring and include tasks in manufacturing, back-office activities, IT, development and research. Most firms (70%) have only offshored tasks within one activity, 23% of firms have offshored tasks in two to three activities, and only 7% of the firms have offshored tasks in more than three activities.

Share of knowledge workers (H5) is measured as the share of all employees in the firm in Denmark that have a higher university degree, which is in line with Peter Drucker (1959). This includes engineers, business economists and others that have at least a master's level university degree. For all firms, employees in Denmark are categorized as: 1) unskilled employees, 2) skilled employees, 3) employees with a bachelor's degree, and 4) employees with a higher university degree. The relative

size of the latter group is taken as an expression of the share of knowledge workers in the firm. On average, 33.6% of the workforce in the studied firms is categorized as knowledge workers.

Captive offshoring (H6) is a dummy variable that takes the value 1 if the task or tasks are offshored to a subsidiary owned by the firm. Otherwise (i.e. offshore outsourcing), it takes the value 0. In all, 36% of the offshored tasks are captive offshoring, while offshore outsourcing accounts for the remaining 64%.

The six independent variables are formulated to reflect the expectation that they are positively related to the offshoring of advanced tasks.

In addition to formulating hypotheses for the independent variables, we have also included a number of control variables in the equation. We included *firm size* and *belonging to a multinational company* because they indicate access to resources that may ease the path to offshoring advanced tasks. We included the dummy variable on whether the firm has *activities outside Europe* because firms with some international experience beyond Europe might have easier access to offshoring advanced tasks outside Europe.⁶ We included five *industry sector* dummies, with IT and telecommunications as the baseline since IT and telecommunications have the highest level of advanced task offshoring. The *share of unskilled workers* controls for the level of standardization and routinization of the tasks. Finally, we included the two motive variables of *seeking cost advantages* and *market seeking* because they control for other offshoring motives. Table 2 lists the operationalization and data sources for all independent and control variables in the model.

5. RESULTS

5.1 Correlations

Table 3 shows the correlation matrix and descriptive data (mean values and standard deviation). To detect potential problems of multicollinearity, we looked at the correlation coefficients among the independent variables in the models. None of the correlations is above the usual threshold indicating possible multicollinearity ($r > 0.5$, see Hair et al, 1995). In fact, the highest correlation coefficient (0.43-0.46) is between the share of unskilled workers and the share of knowledge workers, which is not surprising as both measures have the same denominator. Hence, the data set does not seem to involve multicollinearity problems.

Heckman model: controlling for sample selection

Table 4, column 2 and 3, shows the results obtained when we simultaneously estimated the two equations in the Heckman sample selection (probit) model with the binary dependent variable. The McFadden's R-square for the two equations is calculated to be 18.5%, indicating that the system of the two equations explains almost one-fifth of the variance in the dependent variable. The Rho value is a measure of the correlation estimate between the errors in the selection and outcome equations. Here, the correlation estimate is 0.51, which is not high given the assumption of sample selection bias in the data. The likelihood-ratio test reported is based on the Rho value and indicates whether the Heckman model (correcting for sample selection bias) is superior to two independent (probit) models for the selection equation and the outcome equation. The null hypothesis that two independent models are as good as the Heckman model cannot be refuted ($\text{Chi}^2=1.53$, $p=0.22$). This implies that selection bias is not a major problem when advanced task offshoring is estimated (the outcome equation), as this decision seems to be independent of the initial decision to offshore (the selection equation).

Three of the six hypothesized variables concerning the offshoring of advanced tasks are significant (at a 5% level of significance) and have the expected positive coefficient in the outcome equation. The results strongly support hypotheses H2 (a knowledge-seeking motive drives the offshoring of

advanced tasks), H4 (the more offshoring experience in the firm, the more advanced the tasks offshored), and H5 (firms with a highly skilled workforce will tend to offshore more advanced tasks). Capital investment (automation) is insignificant, pointing to a rejection of H3. Hence, capital investment appears to be unrelated to the character of the offshored tasks. Notably, H1 regarding location was insignificant, which indicates that advanced tasks are offshored not only to advanced destination countries but also to developing economies. Unexpectedly, H6 on captive offshoring is insignificant, which leads us to conclude that captive offshoring is not more common than offshore outsourcing in terms of advanced task offshoring.

Two control variables are significant at the 5% level, i.e. whether the firm has activities outside Europe and the cost-saving motive. However, while activities outside Europe are significant and positive, the cost-saving motive is significant and negative. These results show that firms with widespread international activities (i.e. activities outside Europe, which is the proximate market for firms located in Denmark) offshore advanced tasks, while achieving cost savings is not an objective when moving advanced tasks offshore. Furthermore, two industry dummies – the metal industry and other industries – are negative and significant at the 10% and 5% levels, respectively. The negative sign signifies that firms in the metal industry or other industries offshore advanced tasks to a less extent than the IT and telecommunications firms that formed the baseline. As for the insignificant control variables, the results show that multinational firms and large firms do not predominate the group of firms that offshore advanced tasks. Finally, the market-seeking motive does not seem to drive the offshoring of advanced tasks.

In the selection equation, the results show that being a large firm and part of a multinational company are strong drivers for offshoring, thus indicating that size and the global (MNC) network provide easier access to initial offshoring, while they had no impact on the offshoring of advanced tasks. The two variables on international orientation – international experience and activities outside Europe – have a major impact (at a 1% level) on the decision of whether to offshore. Industry sector variables show that firms in the metal industry, the electronics industry (both significant at a 1% level) and the

IT and telecommunications sectors (significant at a 10% level) undertake offshoring more than in other sectors (i.e. the baseline industries). As far as financial performance is concerned, the data show no systematic variation in the propensity to offshore (the variable being insignificant). Another interesting finding is that both skill variables (share of knowledge workers and share of unskilled workers) are insignificant in the selection equation, indicating that they do not figure in the decision of whether to offshore. Therefore, although the composition of the firm's labor force has a significant impact on whether the firm offshores less or more advanced tasks, it has no influence on the initial decision to offshore.

Several variables have different impacts and signs when the results of the two equations are compared, which provides further evidence that the initial offshoring and the offshoring of advanced tasks are two independent decisions. In general, the variables that influence the initial decision to offshore are related to the resources (size and multinationality) and the international orientation (international experience and activities outside Europe) of the firm while the decision to engage in offshoring advanced tasks is related more to the firm's knowledge and experience (i.e. employee skills, the knowledge-seeking motive, experience in offshoring and the scope of international activities).

To test the robustness of the results, we also conducted a similar Heckman model with two discrete endogenous variables, where the dependent variable in the outcome equation was a count variable of the number of advanced tasks offshored (instead of the binary variable of advanced task offshoring or not). Table 4, column 2 and 4, also shows the result of this count-based model, which is indicated as all the values in italics. The overall fit of this count-based model is somewhat weaker than the presented binary model, with a log likelihood of 921.0 and McFaddens R-square of 8.5%. However, although the overall fit and the significance level of the parameters are slightly weaker than in the binary model, the results are very similar, as can be seen in Table 4. The hypothesized variables significant in the binary-model there – knowledge seeking, number of offshored tasks and share of knowledge workers – are also significant in the count-based model, but less so in the case of share of knowledge workers. All other results are very similar in the two models.

The similarities in the two models attest to the robustness of the results, as this does not depend on the specification of the dependent variable. Furthermore, the results indicate that our explanatory variables mainly clarify why firms conduct advanced offshoring and to a less extent the degree to which firms conduct advanced task offshoring.

6. DISCUSSION

This analysis of what determines firms' participation in offshoring (in the selection equation) shows that the variables of firm size, multinational status, international orientation, and the metal and electronics industries are positive and highly significant. In other words, the offshoring landscape in Denmark is not a representative reflection of the private sector in Denmark, its being dominated by large MNCs from certain business sectors.

The data also provide information about the strategies used by firms engaging in offshoring. First, while a high level of capital investment (automation) is often considered an alternative to offshoring (Karmarkar, 2004), the analysis shows that capital investment is insignificant, indicating that firms that produce goods and services with both high and low levels of automation participate in offshoring to a similar degree. In other words, automation does not generally seem to be an alternative to offshoring. Rather, firms might do both offshoring and automation simultaneously. Consider, for example, the Danish furniture industry where cheaper manufacturers in Eastern and Central Europe and in Asia have been putting firms under pressure for years. Danish firms have, however, introduced state-of-the-art production technology and automation, a strategy that has kept them competitive. The firm Fritz Hansen Furniture, a high-end manufacturer of exclusive furniture designs, uses modern production techniques at its plant in Denmark. However, only a few, select product lines are still manufactured in Denmark. The manufacturing of most product lines is offshored to suppliers in Eastern and Central Europe as part of the firm's strategy to focus its efforts on marketing the brand and quality of its products.

Second, firms with both relatively positive and less positive financial performances participate in offshoring. This indicates that offshoring is not merely a strategy that financially weak firms are forced to pursue to obtain some quick fixes and financial latitude. Although poor financial performance in some firms seems to influence offshoring strategies, the data indicate that offshoring is also an option for firms with the surplus capital and financial capacity required for this type of long-term business opportunity.

Third, the skill profile of a firm's staff, which can be seen as a reflection of the level of skills and knowledge among the employees in Denmark, does not influence the propensity to offshore. The fact that firms with different skill profiles engage in offshoring indicates that offshoring is not just an attractive strategy for firms with large numbers of unskilled workers in Denmark searching for low-cost labor offshore to replace their relatively expensive Danish blue-collar workers.

The results of the equations, given in Table 4, clearly imply that a number of variables have different impacts on the propensity of firms to offshore advanced tasks compared with the determinants that initially lead a firm to participate in offshoring. This is true for the share of knowledge workers, which is insignificant in the initial decision to offshore, but highly significant in relation to advanced task offshoring. The data shows that firms' offshoring of advanced tasks is consistent with the parity perspective given by Bunyaratavej et al (2007), indicating that firms want more of the same rather than radically different inputs when they offshore advanced tasks. Firms with a high share of knowledge workers at home will offshore more advanced tasks.

While cost savings mainly related to unskilled, labor-intensive processes drive a firm's offshoring of less advanced tasks, experienced and knowledge-intensive firms seeking more knowledge abroad offshore more advanced tasks. These firms seem to offshore advanced tasks for the purpose of making broader and deeper use of their global knowledge network, as they use offshoring to tap into sources of new knowledge or large pools of talented people abroad. However, in order to understand the logic

behind this type of offshoring, one has to develop a more detailed understanding of the different tasks, including their interdependencies and complementarities. Only once this understanding has been developed will we be able to explore the exact division of labor between advanced tasks at home and abroad.

The firm case study below illustrates some of the dynamics between tasks at home and abroad. It also illustrates how a high share of knowledge workers at home is linked to a knowledge-seeking strategy, even in small firms. Lingtech is a small entrepreneurial consulting firm in Copenhagen with a permanent staff of 20 university-educated professionals specializing in linguistics. Lingtech reorganized when it changed its strategy to widen the range of advisory services provided to customers. In-house staff no longer undertook translations and text editing, Lingtech's original business domain. They were instead offshored to a network of experts located outside Denmark. The network, which now includes around 150 freelancers around the world, was built gradually over some years. During this process Lingtech laid off full-time translators located in Denmark and instead hired new staff (also in Denmark). New employees were to have extensive project management and overseas work experience, and to be given responsibility for the workflow and management of the network. Thus, the tasks executed in Denmark would continue to be advanced and knowledge intensive, but would be of a different kind and products of the firm's strategy to move towards higher value-added services. The translation tasks previously performed in Denmark were offshored to take advantage of freelancers' native language skills, and the network was simultaneously expanded to offer a wider range of more sophisticated services to clients.

Surprisingly, the offshoring of advanced tasks to external partners (outsourcing) is as common as the offshoring of tasks to in-house entities (captive offshoring). This result diverges from the strong emphasis on ownership, control and internalization advantages expressed in the international business literature we described earlier and that underpinned our H6. Rather, the result indicates that owning the entire value chain is not as important as it used to be. This result lends support to a point raised by Murtha (2004): "The kinds of knowledge that theorists historically have considered advantageous for

MNCs to internalize often flow openly among unaffiliated individuals and firms linked together in global industry knowledge networks” (Murtha, 2004: 103). However, the simplistic distinction between in house and external may be too crude to explain the intricacies of the link between the advanced nature of the offshored tasks and the governance mode. Another reason for the surprising results may be a measurement problem in the sense that our measure of captive offshoring is a firm-level measure, while a task-level measure would have been more appropriate and more in line with our own arguments.

In addition, advanced tasks seem to be equally offshored to developing countries and developed countries. This locating of tasks in many different countries does not mean that any task can be located anywhere. Our interviews with offshoring firms stress that each location decision is based on a set of underlying country- and firm-specific factors. In other words, location is a crucial strategic parameter of firms’ decision to offshore more advanced tasks. Our result shows that the offshore destination features that attract more advanced task offshoring exist not only in the developed countries but are also scattered across countries at different stages of economic development. A more detailed count of the offshore destinations for more advanced tasks shows that the Asian region is a particularly attractive low-cost destination. Although our quantitative data do not allow for a detailed analysis of the destination countries, their being only at regional or sub-regional level, destination countries, including low-cost countries, also differ. For example, in one of our case studies a large Danish financial institution launched a major IT offshoring operation in India. In the planning phase, the Baltic States as well as other locations in Eastern and Central Europe were considered as offshoring destinations. However, the firm ultimately chose India because it feared the critical mass of the specific skills needed was too small and that the labor market for IT skills was glutted in the European locations.

These results highlight that more advanced tasks are offshored for different reasons and according to a different logic from that of traditional offshoring of less advanced tasks. Along these lines, IBM’s Chief Executive Officer, Samuel J. Palmisano, proposes a new approach to offshoring (2006), a

proposal indicating that an all-new offshoring paradigm is emerging among large, multinational firms. Our findings are consistent with Palmisano's view that some firms offshore certain tasks to access high-quality skills rather than to save costs. Cost advantages are still key in cases where firms offshore less advanced tasks, but the results show this objective to be unimportant for the offshoring of more advanced tasks. This signals that, were the firm seeking cost advantages, it would offshore less advanced tasks. As regards the structural (e.g. size, MNC status, industry) and behavioral aspects (e.g. strategic drivers) of offshoring firms, the findings support the notion that the motivational characteristics of advanced task offshoring (associated with knowledge, learning and experience) differ from the cost-saving motive that both the business press and academic research normally identify with offshoring.

The arguments and findings presented by Maskell et al (2007) are also central to our view of offshoring as a dynamic process in which experience is a key determinant of firms' offshoring decisions and behavior. Firms that are experienced in offshoring and firms that have business activities outside Europe are more inclined to offshore advanced tasks, and we believe these factors signify that experience and learning are relevant drivers for advanced offshoring. Although our cross-sectional data do not allow an analysis of the offshoring process over time, some of our longitudinal data from firm case studies show the importance of experience for a firm's propensity to offshore advanced tasks: when offshoring partnerships mature, firms gain experience that often differs from their initial objectives and expectations. Three large Danish firms all launched their offshoring operations (IT and engineering services) in India in 2006 with the aim of gaining access to qualified scientific and engineering staff. During the first year, however, the offshoring firms significantly changed their approaches, expanding the strategic agenda far beyond the resource-seeking objective. Moreover, the experience gained set in motion a range of changes at the firms' organizational level (structure, workflow, etc.).

In the past much international business literature has addressed the internationalization of firms, with a strong bias towards the market-seeking perspective. Interestingly, however, the offshoring of advanced

tasks does not seem to be generally related to market-seeking strategies (as the correlation is insignificant): For some firms the market-seeking motive is related to the offshoring of advanced tasks while in other firms it is not. For example, Vestas' offshoring of R&D tasks to respectively, Singapore, India and the US, is driven by several motives, and the proximity to the domestic wind-energy in the three countries is one of these objectives. In contrast, the Lingtech case is an example of non-market seeking offshoring. In addition, while the majority of the literature focuses on large firms, our results show that offshoring of advanced tasks is a strategic option for firms of all types and sizes, even small firms as shown in the Lingtech case.

The theoretical implications of our study are four-fold. First, most of the literature on offshoring has focused on the initial decision to offshore. However, the econometric analysis in this article provides evidence that the initial decision to offshore is independent, driven by a different logic from that of the subsequent offshoring of knowledge, innovation and more advanced tasks. Accordingly, theories that focus on the offshoring process and its later stages need to be developed. Second, we argue that offshoring should be analyzed on a more disaggregated level than is the norm in mainstream offshoring literature. Offshoring should be analyzed at the task level, since this allows finer distinctions between the offshoring of different tasks (e.g. less versus more advanced tasks). Third, this study has shown that we need theories that can conceptualize the highly complex structures among tasks and activities, including interdependencies and complementarities. The two cases presented in this article, Vestas and Lingtech, are both examples of firms that have worked on specifying the division of labor and interfaces (including the interdependencies and complementarities) among the different tasks (offshored or not). Finally, this closer understanding of the structure of knowledge and tasks in firms must be seen in a global context whereby sources of knowledge and large pools of talent are emerging beyond firm boundaries and in new locations.

7. STUDY LIMITATIONS

Although our findings deviate from mainstream offshoring literature and therefore raise new questions for future research, we have been unable to investigate all aspects related to offshoring advanced tasks. Like any study, ours faces a number of limitations. These limitations offer some suggestions for future studies on the subject.

First, we have defined the dependent variable very broadly, categorizing offshored tasks under only two headings, “less advanced” and “more advanced”. Beyond the different types of activities (Table 1), the data reveal little about the exact tasks undertaken by the firms in the survey. Moreover, the distinction between “less advanced” and “more advanced” is founded not on objective criteria for task categorization, but on the subjective assessment of the managers responding to the question. This means that a task which is “more advanced” in one firm could be “less advanced” in others. Future studies would therefore benefit from disaggregating value chain activities, a division that would enable a greater level of detail and clarify transparent criteria for characterizing advanced tasks.

Second, because offshoring experience matters and as offshoring seems to be a learning-by-doing process (Maskell et al, 2007), analyses of firms at various stages of the experience curve (e.g. “newcomers” versus “mature offshorers”) would be expected to show different elements depending on the firms’ positions on the curve.

Third, while our findings show that knowledge-seeking strategies drive the offshoring of advanced tasks, the finer details of firms’ strategies for advanced offshoring to different destination countries (e.g. developed versus developing countries) remain unexplored.

The above limitations suggest that the offshoring of advanced tasks has many facets, and we have seen only a few. We can contrast our findings with the fact that most studies and theoretical contributions

focus on the initial offshoring stage and related decisions, while they only rarely address issues related to offshoring advanced tasks.

8. CONCLUSIONS

The offshoring of elements of R&D, knowledge, innovation and other advanced tasks differs greatly from the better-known offshoring of simple, standardized tasks, and challenges the existing theoretical “tool-box” in international business and strategic management, which needs to be re-formulated in light of the offshoring phenomenon (see also Doh (2005), who argues this point in more depth). In this article we take steps to fill the gap by enhancing understanding of why firms offshore more advanced tasks. In addition to revealing some unexpected results, our findings also raise several questions for future studies.

Using a modified view of the firm’s value chain – a view that distinguishes between activities and tasks – we have identified some characteristics of advanced task offshoring. Our results show that the offshoring of advanced tasks entails a set of characteristics different from those determining whether firms decide to offshore tasks. Moreover, offshoring advanced tasks is an internationalization strategy that clearly departs from a classic, market-seeking internationalization strategy. We find that the offshoring of advanced tasks should be seen through a different lens from mainstream offshoring. Our findings support the parity perspective presented by Bunyaratavej et al. (2007), as we confirm the hypothesis that the search for highly skilled partners and new knowledge abroad drives firms with a high share of knowledge workers to offshore advanced tasks.

In our view, the findings indicate the inability of extant theory to explain new trends in offshoring. In the mainstream literature, offshoring is usually analyzed at the initial stage of the offshoring process, and many other aspects are ignored. Our findings contribute to debates about new trends in offshoring (e.g. of advanced services, R&D, and innovation). Although some limitations constrain the study, they could help shape the future agenda in offshoring research. This includes the possibility for offshoring

studies entailing a more minute level of detail with regard to the activities and tasks involved, analyses of the implications of advanced offshoring for firms and countries based on longitudinal studies, and more research on the processes and dynamics connected to offshoring advanced tasks.

Anecdotal evidence indicates that offshoring advanced tasks is a relatively new strategy for most firms (Pyndt & Pedersen, 2006). Despite the novelty of advanced task offshoring, this type of offshoring will continue to grow and looks set to become the name of the offshoring game in future. The shortage of qualified staff in Europe and the US, along with the maturation of markets, will intensify the global search for talent and new knowledge.

END NOTES

¹ “Knowledge workers,” a term originally coined by Peter Drucker (1959), is defined as encompassing scientific and engineering personnel, including managers and specialized professionals, in such areas as marketing, legal services, and industrial design. They provide essential support services to research, development and engineering. Reich (1991) suggested a similar categorization of what he called “symbolic analysts”.

² In line with Drucker (1959) and Reich (1991), we underscore that “advanced tasks” are mainly conducted by knowledge workers, i.e. staff with a higher education.

³ The firm is one of the major professional providers of large-scale market surveys in Scandinavia. The survey was undertaken under the day-to-day management and supervision of one of the authors, who was a full-time employee of the firm at the time.

⁴ Data from the national Danish statistical agency at www.dst.dk, accessed on May 21, 2007.

⁵ Based on the NACE nomenclature: manufacturing: 15000-36999, utilities - electricity, gas and oil: 40000-40999, transportation: 60000-64999, financial– banking and insurance: 65000-67999, business services: 71000-74999.

⁶ The variable international experience is not included as, by definition, firms involved in offshoring all have international experience of some kind.

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Table 1: From less to more advanced tasks

Activities included in the survey	Less advanced tasks (examples)	More advanced tasks (examples)
<i>Manufacturing</i>	Volume production-----	Prototype or niche production
<i>IT operations</i>	Service operations-----	Systems integration and troubleshooting
<i>IT programming</i>	Testing; simple coding-----	Program and test design
<i>IT development</i>	Prototypes----- (e.g. user interface)	Functional and non-functional needs; ensure consistency with IT strategy
<i>Customer service</i>	Call centre-----	Contact centre (1 st contact resolution)
<i>Finance & accounting</i>	Bookkeeping-----	Financial management
<i>Payroll & HRM</i>	Payroll-----	Recruitment; training
<i>Logistics & procurement</i>	Purchasing-----	Supply chain management
<i>Sales & marketing</i>	Canvas and telesales-----	Advertisement
<i>Knowledge management</i>	Business intelligence----- Management information	Content design, production and management
<i>Research</i>	Patenting-----	Basic research; new inventions
<i>Product development</i>	Testing-----	User needs assessment

Table 2: Operationalization of independent and control variables

Variable	Operationalization	Data source
Developed countries	Dummy for whether offshoring is taking place in Europe or North America (value = 1)	Own survey
Knowledge seeking	The variable is a composite of three items measuring the motives for offshoring on a five-point scale (1= no importance and 5=extremely important). The three items are: access to best-practice, access to new technology, and access to new competences. Cronbach Alpha = 0.85	Own survey
Capital investment	Logarithm of assets per employees in 2000 (million DKK/employee) i.e. the capital-labor ratio	Firm data Statistics Denmark
Experience with offshoring	A count measure of how many of the 12 activities a firm has offshored	Own survey
Share of knowledge workers	The share of employees in Denmark with a higher education compared to total employment in Denmark	Own survey
Captive offshoring	Dummy indicating whether the tasks are offshored to own subsidiary (value = 1)	Own survey
Firm size	Logarithm of the number of employees in Denmark in 2000 (i.e. the size before eventual offshoring)	Firm data Statistics Denmark
Multinational company	Dummy indicating whether the firm is owned by another Danish or foreign firm (value =1)	Own survey
International experience	Dummy indicating whether the firm has any international activities at all (value = 1)	Own survey
Activities outside Europe	Dummy indicating whether the firm conduct activities outside Europe (value = 1)	Own survey
Financial performance	Return on equity (ROE) in 2000 (i.e. prior to eventual offshoring)	Firm data Statistics Denmark
Industry sector	Six dummies for metal industry, electronics industry, other industry, financial services, IT and telecom and other services. Other services are used as a baseline in the selection equation, while IT and telecom are used as a baseline in the outcome equation	Firm data Statistics Denmark
Share of unskilled workers	The share of unskilled workers in Denmark relative to the total number of workers in Denmark	Own survey
Seeking cost advantages	A composite of two items measuring the motives for offshoring on a five-point scale (1= no importance and 5= extremely important). The two items are lower labor costs and lower costs (other than salaries). Cronbach Alpha = 0.77	Own survey
Market seeking	The variable is a composite of three items measuring the motives for offshoring on a five-point scale (1= no importance and 5= extremely important). The three items are: improved market position, increased flexibility, and closeness to local market. Cronbach Alpha = 0.71	Own survey

Table 3: Correlation matrix for the independent variables (except for the SIC industry dummies) in the two equations (the upper values are for the outcome equation (obs.= 332) and the lower values for the selection equation (obs.=1,504))

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1) Developed countries	1.00													
2) Knowledge seeking	0.28***	1.00												
3) Capital investment	0.03	0.10*	1.00											
4) Number of offshored tasks	0.19***	0.28***	0.03	1.00										
5) Share of knowledge workers	0.14**	0.13**	-0.01	0.11*	1.00									
6) Captive offshoring	0.18***	0.11*	0.18***	0.26***	0.10*	1.00								
7) Firm size	-0.02	-0.05	0.29*** 0.25***	0.09	-0.12** -0.05**	0.21***	1.00							
8) Multinational company	0.20***	0.15***	0.22*** 0.15***	0.26***	0.13** 0.10***	0.44***	0.26*** 0.29***	1.00						
9) International experience			0.11***		0.12***		0.19***	0.28***	1.00					
10) Activities outside Europe	-0.08	0.09	0.08 0.11***	0.05	-0.02 -0.01	0.07	0.20*** 0.19***	0.05 0.25***	0.41***	1.00				
11) Financial performance			-0.02		-0.01		-0.12***	-0.02	-0.02	-0.01	1.00			
12) Share of unskilled workers	-0.14*	-0.05	-0.05 -0.07**	-0.07	-0.46*** -0.43***	-0.03	0.13** 0.05**	-0.06 0.04	-0.04*	0.08 -0.01	-0.02	1.00		
13) Seeking for cost advantages	-0.33***	-0.16***	-0.02	0.03	-0.22***	0.02	0.23***	0.01		0.08		0.15***	1.00	
14) Market seeking	0.04	0.49***	0.07	0.19***	0.01	0.11**	-0.06	0.07		0.11**		0.04	-0.06	1.00
Mean	0.50	1.93	6.87	1.59	35.8	0.36	3.88	0.49		0.66		17.9	3.62	2.44
Std. dev.	0.50	1.11	6.70 1.31 1.26	1.37	33.6 35.4 33.7	0.48	3.35 1.51 1.25	0.25 0.50 0.43	1.63	0.39 0.47 0.49	0.21	17.4 26.5 27.8	1.35	1.21

*, ** and *** indicate significance levels of 10%, 5% and 1%, respectively.

Table 4: Probit - Heckman sample selection models

(values in italics refer to the model with the count variable as dependent variable)

	Offshoring or not (1,504 obs.) Selection equation	Advanced task offshoring (332 obs.) Outcome equation Binary variable	Advanced task offshoring (332 obs.) Outcome equation Count variable
Hypothesized variables			
Developed countries (H1)		-0.07 (0.16)	<i>-0.12 (0.16)</i>
Knowledge seeking (H2)		0.19 (0.08)**	0.20 (0.07)***
Capital investment (H3)	0.01 (0.04) <i>0.01 (0.04)</i>	0.01 (0.06)	<i>-0.01 (0.06)</i>
Number of offshored tasks (H4)		0.15 (0.06)**	0.32 (0.06)***
Share of knowledge workers (H5)	0.001 (0.001) <i>0.001 (0.001)</i>	0.005 (0.002)**	0.004 (0.002)*
Captive offshoring (H6)		-0.01 (0.22)	<i>0.04 (0.21)</i>
Control variables			
Firm size	0.12 (0.03)*** <i>0.13 (0.03)***</i>	0.04 (0.06)	<i>0.02 (0.06)</i>
Multinational company	0.59 (0.09)*** <i>0.59 (0.09)***</i>	0.26 (0.27)	<i>0.23 (0.25)</i>
International experience	0.76 (0.12)*** <i>0.76 (0.12)***</i>		
Activities outside Europe	0.31 (0.09)*** <i>0.31 (0.09)***</i>	0.38 (0.19)**	<i>0.31 (0.19)*</i>
Financial performance	-0.03 (0.03) <i>-0.04 (0.03)</i>		
Metal industry	0.38 (0.13)*** <i>0.39 (0.13)***</i>	-0.56 (0.30)*	<i>-0.62 (0.28)**</i>
Electronics industry	0.46 (0.16)*** <i>0.45 (0.16)***</i>	-0.35 (0.30)	<i>-0.44 (0.28)</i>
Other industry	0.16 (0.12) <i>0.16 (0.12)</i>	-0.68 (0.28)**	<i>-0.59 (0.25)**</i>
Finance sector	-0.23 (0.17) <i>-0.23 (0.16)</i>	-0.33 (0.34)	<i>-0.43 (0.32)</i>
IT and telecommunications	0.22 (0.13)* <i>0.22 (0.13)*</i>	-	-
Other service	-	-0.36 (0.22)	<i>-0.32 (0.20)</i>
Share of unskilled workers	0.0004 (0.002) <i>0.0004 (0.002)</i>	-0.003 (0.004)	<i>-0.004 (0.004)</i>
Seeking cost advantages		-0.12 (0.06)**	<i>-0.11 (0.06)*</i>
Market seeking		0.07 (0.07)	<i>0.04 (0.06)</i>
Intercept	-3.13 (0.31)*** <i>-3.12 (0.31)***</i>	-1.64 (0.71)**	<i>-1.38 (0.69)**</i>
Log likelihood	-820.5 (null model: -1007)		<i>-921.0</i>
McFadden's R-square	18.5%		<i>8.5%</i>
AIC	1707		<i>1918</i>
Rho	0.51 (0.33)		<i>0.34 (0.30)</i>
LR test of Rho=0	Chi ² = 1.53 (Prob > Chi ² = 0.22)		

*, ** and *** indicate significance levels of 10%, 5% and 1%, respectively.

PART FOUR

***A PASSAGE TO INDIA: PROCESS MODELS
AND ADVANCED SERVICES OFFSHORING TO INDIA.***

Authored by

Peter D. Ørberg Jensen

Copenhagen Business School

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***A PASSAGE TO INDIA: PROCESS MODELS
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Abstract

This paper addresses a recent strand of offshoring research that concerns the processes of evolution and change that appear in offshoring partnerships after the launch of offshoring operations. Based on longitudinal case studies of offshoring of advanced IT and engineering services from Danish firms to Indian firms, I identify a process model with three stages that captures the evolution of the initial 1-2 years of the offshoring partnership. Overall, the data portray a rapid development of the Danish-Indian offshoring partnerships which show that once trust is established and offshoring firms gain experience, the offshoring firms will increase the sophistication as well as expand the range and volume of advanced work done offshore. The dynamics of the process therefore suggest that at a broader scale, advanced services offshoring will increase in the coming years.

Keywords: Business linkages; business strategy; organizational learning; process dynamics; services offshoring.

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1. INTRODUCTION

Offshoring (i.e. the transfer of a business process to a different country) from developed countries to destinations in the developing world has become a much debated topic both in the public policy debate, in the business press, and increasingly also in the academic literature, yet in the field of advanced services offshoring we have so far seen merely the tip of the iceberg. While the offshoring of advanced, high-end services to developing countries is still relatively limited, it will grow significantly over the coming decade and become one of the key strategic issues on the agendas of not merely MNCs but all firms with international activities. Time series data from the Offshoring Research Network (an international research project that tracks over time the offshoring of administrative and technical work from US and a range of European countries to low-cost destinations) support the view that services offshoring is still in an early stage but seems to be rapidly evolving (Lewin and Peeters, 2006). In addition, the recent data from this international study point out that there is a trend towards offshoring more advanced activities in the value chain (Lewin and Couto, 2007).

The paper contributes to the emergent strand of research in the international business literature on services offshoring, in particular the research on the process dynamics and resulting firm-level impact of advanced services offshoring. The study addresses the question of how the process of advanced services offshoring evolves in the business linkage between home and host firms. I use the process dynamics of the offshoring partnerships as one measure of the impact of advanced services offshoring on firms (here Danish and Indian firms) that engage in it. The trend in the partnerships' evolutionary path is used as an indication of the direction of advanced services offshoring and the direction of the firms involved.

Through case-studies of advanced services offshoring partnerships between Danish and Indian firms, I propose a three-stage model that describes the evolution of offshoring partnerships in their initial phase. In addition, the study shows a rapid evolution where the change that occurs in the offshoring

partnerships over a relatively short period is significant. This indicates that once firms engage in advanced services offshoring, the scale of the operations will grow.

The paper is structured as follows: section two and three present some contributions from the extant literature and comment on the present status of this strand of research. Section three focuses specifically on previous contributions in the field that address offshoring processes and process dynamics in firms. The research design and methodology is outlined in section four. Section five presents the analysis of the evolution of advanced services offshoring processes in the three Danish-Indian partnerships. Some limitations of the study are noted before the discussion section and the final conclusion section.

2. OFFSHORING OF ADVANCED SERVICES

Offshoring per se is not a new phenomenon (Lewin and Peeters, 2006; Maskell et al, 2007) and is addressed throughout the international business literature in the seminal works of Buckley and Casson (1976), Dunning (1998), Hennart (1982) and Vernon (1966). Despite the classic roots, recent authors have pointed out that there seems to be a shortage of research that seeks to contribute to the development of a coherent theory able to capture recent years' evolution in offshoring of business activities (Mol et al., 2005), that there is a need to revisit existing theories of the international business in view of offshoring (Doh, 2005), and that a framework drawing on many theoretical perspectives is needed to understand offshoring (Kedia and Lahiri, 2007; Niederman et al, 2006; Hansen et al, 2007).

In this respect services offshoring, in particular the offshoring of high-value, advanced services, is a relatively new phenomenon of a somewhat different nature than "classic" manufacturing offshoring and, as a consequence, the offshoring process is different.

First, the offshoring of manufacturing includes often significant investments in manufacturing facilities in a foreign subsidiary or in a supplier. In comparison, offshoring of services mainly involves investments in people, office space and an infrastructure for communications and data. These investments may also be significant but they are in comparison less heavy and therefore allow firms a much higher degree of agility and flexibility in finding the right offshoring business model (they are “footloose” as noted by UNCTAD, 2004, p. 153). This means that services offshoring processes to a lesser degree are prone to path dependency than manufacturing offshoring processes.

Second, offshoring of manufacturing usually involves rather simple tasks and production processes (Andersen, 2006; Ernst, 2002). In comparison, the tasks involved in advanced services offshoring are of a different nature, since they require a high skill level to execute, they necessitate independent judgment on the part of the implementing person or team, they are often connected with problems of “sticky” knowledge (see Szulanski, 1996, for a discussion on stickiness), and they are codified to a much lesser degree, although some level of codification is likely to exist (Cowan and Foray, 1997; Bryson, 2007). Very little of this type of offshoring will therefore be subject to the commoditization and standardization in the “industrialized information chain”, described by Karmarkar (2004).

Third, the advanced nature of the tasks creates a process of knowledge transfer from home to host firm and vice versa which is fundamentally different from offshoring of manufacturing. The fundamental work process that underpins this type of services is described by Stabell and Fjeldstad (1998) as the “value shop” model, which is based on Thompson’s (1967) notion of “intensive technology” and is a theoretical expansion of Porter’s (1985) value chain theory. Intensive technology is characterized by a high level of uncertainty about how best to produce intended outcomes and a high interdependence among members of the workforce. The problem-solving process in value shops is iterative and cyclical with a high degree of reciprocal interdependence between activities, since the perception of the problem and adequate solutions may well change along the way. Examples include work done in hospitals, educational institutions and professional services firms in medicine, law, IT, architecture, and engineering. From an offshoring perspective, this means that the creation, transfer and sharing of

knowledge is a complicated and dynamic process with many feedback-loops. Offshoring in this type of firm/project must therefore be carefully managed and the workflow coordinated and integrated between the locations in order to be effective.

Advanced services offshoring is presently not well understood, yet it will evolve and deepen during the coming decade. The question about the impact of offshoring is a highly contentious issue. This is particularly the case for advanced services offshoring which, in the eyes of those focusing on the potential dangers of offshoring to high-cost countries and their firms, would come close to selling the “family jewels”. At the same time it is *the* key question for offshoring research in general and research on advanced services offshoring in particular.

At present, that there is disagreement as to what the impact of offshoring are at different levels, i.e. national, industry sectors and firms in both developed countries and developing countries (see e.g. Doh, 2005; Farrell, 2005; Levy, 2005). Some concerns concerning the impact on developed countries are evident in the recent offshoring literature. They range from the possibility of rising and widespread unemployment, even among knowledge workers, as noted by Levy (2005), to the danger of the “hollowing out” of the competitiveness of firms and nations. This danger is addressed in academic work (e.g. Blinder, 2006; Sturgeon, 2006; Trefler, 2005) and in the business press (see Economist, 2004), but the long-term dynamics and implications of the trend do not seem clear. Overall, the lack of agreement concerns both offshoring at large across industry sectors and types of activities offshored, and advanced services offshoring in particular.

3. THE OFFSHORING PROCESS AND PROCESS MODELS

From a research perspective, measuring the impacts of offshoring is a complicated question, both regarding *what* to measure (the selection of the parameters of impact) and *how* to measure (the methodology). The impact of offshoring on employment and financial performance are two frequently

cited and important parameters of impact. However, in my view there are also other relevant dimensions of the impact of advanced offshoring. Here, the evolution of the partnerships between the Danish and Indian firms is used as one measure of the firm impact. The manner in which firms use and engage themselves in the partnerships over time may indicate how advanced services offshoring influences the Danish firms as they grasp strategic opportunities that appear during the offshoring process. For the Indian firms the evolution of the dyadic relation between the firms may show how the roles and responsibilities of the Indian firms and employees change over time. The evolution of the partnership therefore has the potential to enhance our understanding of the impacts of advanced services offshoring on developing country (here Indian) firms, which is an important but largely uncovered research theme. At a broader scale, the offshoring process in the case studies indicates how advanced services offshoring may evolve in business sectors where this type of offshoring occurs.

Previous attempts to build process models of the firm internationalization process, notably Vernon's (1966) product life cycle model and Johansson and Vahlne's (1977) internationalization process model have been criticized e.g. for being too deterministic, for excluding options of strategic choice, for lack of explanatory power in modern organizational models of MNCs, for lack of clarity and measurement of critical concepts such as Johansson and Vahlne's (1977) "psychic distance" (for a discussion and critique see Andersen, 1993; Björkman and Forsgren, 1997; Melin, 1992). However, despite the critique, internationalization process models have been very influential in international business research (Hutzschenreuter et al, 2007; Melin, 1992) and reflect an interest in a deeper understanding of what happens in processes of downstream and upstream internationalization. A number of contributions in recent offshoring research have investigated the dynamics of the offshoring process.

Maskell et al (2007) show that experience is a key determinant in firms' decisions and behavior regarding offshoring and that offshoring to low-cost countries is best described as a learning-by-doing process in which the offshoring of a firm goes through a sequence of stages towards sourcing for innovation. The authors find that over time the offshoring experience reduces the cognitive limitations

of strategic decision-makers in offshoring firms and the advantages of offshoring to low-cost destinations become increasingly clear.

Although Lewin and Peeters (2006) do not exclusively discuss the offshoring process, their article describes some notable characteristics as regards strategy and learning processes in US firms (MNCs) that offshore services to low-cost destinations. They point out that services offshoring emerge in the firms “as a result of opportunistic bottom-up random experiments that evolve following trial and error and learning-by-doing processes” (Lewin and Peeters, 2006, p. 225). Firms move from offshoring a few specific and simple experimental implementations, most often repetitive, standardized and low knowledge-based processes that are already in digital form, to more diversified and complex business processes. Notably, the authors find that there appears to be an absence of top-down corporate strategies that guide the implementation of offshoring practices at the bottom-up level.

While the above authors identify characteristics of the offshoring process, Carmel and Schumacher (2005; adapted from Carmel and Agarwal, 2002) define an *offshore stage model* for IT offshoring (“SITO – Sourcing IT Offshore”) with four stages that each represent different levels of maturation of offshoring firms: At Stage 1 is the “Offshore Bystander”, a firm that so far has only done domestic outsourcing but may consider offshoring. Stage 2 is the “Experimental” stage where firms offshore some functions in a learning-by-doing process which may last one or more years. Stage 3 is the “Cost Strategy” stage where firms have established offshore projects and processes and where the dominant strategic motive is cost savings. The final Stage 4, “Leveraging Offshoring”, is the most advanced stage where firms go beyond the cost savings motive and pursue other strategic objectives e.g. speed and flexibility in implementation and access to local expertise.

Overall, these contributions (Carmel and Schumacher, 2005; Lewin and Peeters, 2006; Maskell et al, 2007) shed new light on the dynamics of the offshoring process. A general point highlighted in all contributions is the important role of experiential learning in the offshoring firms, which links offshoring to the organizational learning perspective. Hence the definition of organizational learning

presented by Fiol and Lyles (1985): “The development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions” (Fiol and Lyles, 1985, p. 811). Interestingly, all three articles all point out that the move from offshoring less advanced functions to more advanced functions is a dominant feature of the offshoring process.

However, several questions on the services offshoring process remain. First, the articles focus exclusively on the offshoring firms and do not address the dyadic relation between two firms or other aspects of the offshoring process that relate to the providers of services. Second, the articles cover the services offshoring process from the early stage with little/no offshoring or offshoring of basic, standardized services to a stage with strategic or more advanced services offshoring. The move from less advanced to more advanced offshored services is not a process model that universally describes all situations: The Danish firms in this study (which prior to their current Indian operations had no or only very limited offshoring experience) all launch their offshoring to India in 2006 with fairly advanced project work involved. This suggests that firms in the future might leapfrog the basic-to-advanced offshoring learning process and go directly to the advanced services offshoring. More importantly, there is still only limited knowledge about the offshoring process in situations where firms start with the offshoring of advanced services and evolve from this stage and onwards. This question, which is the subject of this paper, is important because it can contribute to a better understanding of the dynamics and the outcomes of business linkages founded on the exchange of advanced services.

The methodology of the study is described in greater detail below, but by way of introducing the proposed process model for advanced services offshoring, it is relevant to note that the study follows an inductive research strategy but from the outset the strategy is designed to capture the evolution of the process. Here, the inductive methodology means that I identified and extracted the stages of the model after coding and analyzing the longitudinal interview data from the three case studies. The process model suggests that there are three main stages in the initial phase of advanced offshoring. These stages may be described as follows:

First, the *exploration stage*, where offshoring firms are testing the waters with the new partners. This is the first stage of offshoring operations in India. The first projects are launched in the spirit of pilot projects, where firms try out different models of implementation, including experimenting with the balance and interface of offshore and onshore work.

Second, the *trust-building stage*, where a building of mutual trust between the two firms and between involved staff from both sides takes place as the Indian partners show they can deliver to their promises. At this stage, the first projects are either partly or fully implemented but have gone sufficiently deep into the project cycle to establish a view in the offshoring firms of positive overall outcome. Experiences from the interaction with the partnering firm are gained at various levels of the organization, from senior management to project managers and project staff.

Third, the *expansion stage*, during which period the offshoring firms increase the scale of their offshoring operations. While the trust-building stage may be seen as an ongoing process that does not have a distinct end, all cases share the feature that (at some point during the initial 17 months period covered in the study) a combination of decisions, specific events and driving forces that over time gain sufficient momentum triggers a shift in the offshoring process and it enters this third and (in this study) final stage.

While the definition of the three stages is founded on the empirical data, the stages do share some similarities with well-established theoretical concepts. The stages 1 and 3 of “exploration” and “expansion” relate to March’s (1991) distinction between *exploration* and *exploitation* in organizational learning. As March (1991) notes, it is necessary to have an appropriate balance between these two elements in organizational learning processes: Too much exploration without exploitation leads to high costs of experimentation without reaping the subsequent benefits; conversely, exploitation without exploration leads the organization to a suboptimal stable equilibrium (March, 1991, p. 71). The bridge between these two stages is the trust-building process, a central theme in the

strategic alliance literature (Casson and Mol, 2006; Zaheer and Harris, 2006). The analysis of the cases shows that the three stages to some extent emerge and evolve in parallel. They are not distinct, sequential stages. A new stage starts when a qualitatively new dimension is inserted into the partnership. For example, Stage 2 – Trust-building – starts when the first significant sign of trust vis-à-vis the Indian partner firm is registered on the part of the offshoring firms, but it is not finalized when the next stage starts. This is quite natural, since trust by nature is not given by humans (or firms) to other humans (or firms) once and for all but must be earned and nurtured constantly through actions, decisions and attitudes.

4. METHODOLOGY

4.1 The case approach

The research approach chosen is qualitative and interpretive. The study follows the general approach mentioned by Eisenhardt (1989) and Yin (2003) whereby case studies can involve either single or multiple cases and numerous levels of analysis. The study includes three case studies, and each case study includes one Danish firm and its Indian offshoring business partner, for a total of six firms. The nucleus of each of the three case studies is the interaction and exchange of services (which in all three cases are organized in projects) between the units located in Denmark and India respectively and the evolution of the business linkage between the firms that occurs over time.

4.2 The longitudinal perspective

The ability to trace changes over time is a significant strength of case studies (Pettigrew, 1990; Yin, 2003) and the longitudinal perspective is at the core of this study. The Danish-Indian offshoring collaborations were launched in their operational phase during the spring and summer of 2006. The first round of research interviews were implemented in the period between late October 2006 and January 2007. The second, and final, round of research interviews were conducted in August and

September 2007. The case studies cover a period between approximately 1 year and up to 17 months in the longest running case study.

4.3 Case selection strategy and theory-building

The strategy for the selection of the cases is a crucial part of the research strategy (Flyvbjerg, 2007). It sets the stage for the generalized use of the findings, and theory-building from case studies, since this is determined by the position of the cases relative to the distribution in the entire population (Eisenhardt, 1989; Flyvbjerg, 2007; Pettigrew, 1990; Yin, 2003). Flyvbjerg (2007) presents a model with different strategies for the selection of cases. Among these, one is central in this study: The “maximum variation” selection strategy. Here, this means that the study is not confined to one industry sector but analyses advanced services offshoring across different professional service firms and sectors. The shared feature between them is that the offshored services are *advanced*, similar to what UNCTAD (2004) categorizes as “high-skill services” which is “the most creative and skill-intensive end of offshored services” (UNCTAD, 2004, p. 151).

Another important selection criterion concerns the nature of the work process of Stabell and Fjeldstad’s (1998) value shop model, as described earlier, which is a defining feature of all the cases. Finally, all Danish and Indian firms are large firms, each with several thousand employees, and they are therefore able to respond to process evolution and problems in many different ways.

4.4 Data

The study is primarily based on interviews with key personnel in the six firms. In total, 46 interviews were carried out in two rounds starting October 2006 and ending September 2007. The average duration of each is approximately 1 hour, ranging from 45 minutes to 2½ hours. All interviews are recorded and transcribed. In addition, background information about the firms, press clips, and selected memoranda and strategy documents made available by the firms were used. Where possible, informants were interviewed twice. The interviews are based on a semi-structured guide and are all conducted by the author. The 2nd round of interviews included a question on the evolution on the

stages of the process where I asked interviewees whether they retrospectively saw different stages in the collaboration process (i.e. periods of time where the collaboration with their Danish/Indian partner was qualitatively different than before). I condense the responses to this question into the three stages in the model. The interviews included two main groups of personnel in home and host firms, respectively interviewees with overall management responsibility and interviewees involved in the operational management of the projects. It was agreed between the author and the firms that the identities of the firms and individual informants should not be revealed. The firms are therefore referred to by pseudonyms and informants by the role in the firm.

5. EMPIRICAL RESULTS

This section introduces the three case studies and presents the findings from the analysis. For each case study, the analysis identifies the factors that create the dynamics of the partnerships and instigate the shift from one stage to the next. These factors consist of a mixture of both distinct incidents (actions, decisions, etc.) and underlying drivers that emerge and mature over a longer period. The causal links and sequence of the influential factors are illustrated for each of the case studies in Figures 1, 2 and 3, respectively.

5.1 Case-study 1

Stage 1: Exploration

The first case study consists of one of the largest Danish (and Scandinavian) banks (“DK-1”) and its offshoring of IT services to an Indian IT services firm (“India-1”). Prior to the offshoring parts of IT development to India, the bank was under pressure from a domestic labour market where demand for qualified IT staff had surged. As a consequence it was increasingly difficult to recruit sufficient qualified staff domestically to ensure the integration of new acquisitions made by the bank. Given the bank’s strategic ambitions for international expansion, a realistic future scenario at the time seemed

one where lack of qualified labour would impede the desired scale and pace of international expansion. As a result offshoring operations are launched in July 2006 in collaboration with India-1.

Prior to the launch of operations, DK-1 changes its internal organization and establishes a consulting unit where Danish and Indian resources are pooled and assigned to specific projects. Shortly after the launch, the first IT experts from India-1 arrive in Denmark to start work on the pilot projects that are initiated simultaneously. In addition to the pilot projects other activities are initiated, including training programmes in cultural awareness and work culture for both Indian and Danish staff (the two firms have not previously worked in the country of their counterpart), and India-1 staff is assigned to work on a *Services Manual* that outlines procedures and work processes in order to make use of their extensive knowledge of IT processes. While all this takes place onsite in Denmark, operations in India start with the stationing of two expatriate staff from DK-1 to India in October 2006. Their first major task is to oversee the establishment of a separate building on the premises of India-1 that will serve as the Danish firm's offshore IT development centre. By the middle of November 2006 the centre is operational after an intensive work process. However, although secure data transmission and communication lines between Denmark and India are established, technical communication problems continue to mar the dialogue and information exchange between the units in the two countries over the first months. While this may seem like a trivial problem, the implications are not, as described by one of the Danish expatriate managers: *"The technical infrastructure is a very basic thing, but it is this kind of trouble that deters staff in Denmark from supporting the offshoring initiative in India. It is not the fault of the Indian firm or its staff, but it influences in a negative way the Danish organization's perception of success or failure of offshoring to India."*

Stage 2: Trust-building

After positive experiences with the pilot activities, the project work in which India-1 staff get involved is now of an increasingly advanced nature. One of the DK-1 managers describes the projects in the following way: *"The offshore work is not a playground where we can try things out and see how it works. The projects are important projects and it will cause serious problems if they are not*

implemented with a high quality". Nevertheless, the India-1 experts appear to be up to the tasks. DK-1 managers generally express high regard for the expertise which the Indian consultants bring to the table. One of them illustrates this point with an example: "We had four people from India-1 stationed in Denmark for a while. And after two weeks our project manager said that they now knew more about the system than he did". In view of the organizational context in the Danish client organization, where a large share of the IT systems are products of DK-1's own development and many Danish IT staff members have 20+ years experience in the firm, such contributions are not trivial and they are crucial for the mutual building of trust that takes place in this stage. At the managerial level, much is done by India-1 account managers to accommodate the needs of the client in a fast and flexible way, which is noted and appreciated by the Danes.

Despite the positive relations between the two firms there are occasional outbursts of scepticism on the part of the Danish staff. From time to time rumours about the alleged lack of competences of the Indian staff appear and circulate in the Danish organization. To counter such rumours and their negative influence on the partnership, DK-1 managers respond by launching surveys at regular intervals among involved DK-1 employees that measure the satisfaction with their Indian counterparts. The surveys show a positive response across the board in the Danish firm.

Stage 3: Expansion

The *Expansion* stage in this case study is triggered by DK-1's acquisition of a large European bank and the resulting challenge of integrating the IT systems of the two firms in a speedy and efficient manner. Over a period of five months, starting in March 2007 and coinciding with the arrival of a new DK-1 offshore manager in India, DK-1 recruits more than 200 IT consultants from India-1 into its projects. With the 50 Indian IT consultants already engaged in Danish project, this makes the total number of 250 consultants from India-1.

The rapid ramp-up of the scale of the partnership, a hitherto unprecedented experience for India-1, has a range of implications for the organization of the offshoring partnership. First, the number of DK-1

projects with Indian staff increases. However, the majority of India-1 staff does not work offshore but are stationed in Denmark on shorter or longer project assignments. The rationale being that the integration of the Indian consultants into the projects (which are all technologically advanced, and the majority consist of IT systems developed by the Danish bank, most often with a lack of written documentation and consequently with significant portions of tacit knowledge) is more easily done with the Indian consultants working onsite in Denmark, in close interaction with Danish project team members. Second, the rapid ramp-up of Indian consultants is followed by an intensification of the efforts to integrate the new staff which is needed to make efficient and effective use of the Indian consultants over a short period of time. Third, the expansion causes India-1 to change and develop its recruitment procedures to make these more efficient and capable of managing a larger volume of potential candidates during the recruitment process. Fourth, the expansion creates a need to develop new routines regarding human resource management and information flows. While the Indian consultants remain India-1 employees, they are closely integrated in the DK-1 organization, and DK-1 managers see these aspects of the interaction with the Indian consultants as an important measure that may nurture the motivation of the Indian staff and prevent attrition. At the study's cut-off date, the rapid ramp-up has given the two partnering firms a long list of experiences with the exchange of advanced knowledge and tasks. While the overall contribution is considered positive, it is also clear that the high levels of firm-specific knowledge in many DK-1 projects cause problems and impede the efficiency and effectiveness of the Indian staff. Mitigating these problems therefore remains a priority for DK-1 and India-1 managers. With the ramp-up already implemented, DK-1 managers now increasingly focus on the consolidation of the collaboration and on the deepening of the integration of the Indian consultants into the Danish organization.

INSERT FIGURE 1 ABOUT HERE

5.2 Case-study 2

Stage 1: Exploration

The second case includes one of the largest Danish engineering groups (“DK-2”) and its offshoring of engineering services to a joint venture in India. The Danish firm has a 50/50 joint ownership with its Indian partner, a large Indian engineering and construction firm (“India-2”). Similar to the bank, DK-2 is also engaged in a very expansive strategy of internationalization and growth in several European countries, and the Danish part of the group especially experiences a shortage of engineers. While shortage of qualified staff and access to skilled resources in India is the main motive, DK-2 faces an offshoring trend in the international market where competitors start offshoring work to low-cost countries. DK-2 wishes to remain competitive vis-à-vis these competitors, and the cost advantage of offshoring to India-2 thus has some significance as a strategic driver. The offshored projects are infrastructure projects (bridges, roads) where Indian engineers are charged with design work and detailed engineering processes, while project management, client contact, project completion and other activities remain in Denmark. Offshore operations are launched in August 2006 where an expatriate offshore manager from DK-2 is stationed in India and charged with the management responsibility for a new *International Operations* unit. This unit is established as a separate entity of the joint venture firm and located in the western part of India, as the sole unit in the firm. Upon the arrival of the Danish manager in India, the pilot projects with Indian engineers are launched. The main purpose of these projects is to test the offshoring model. One of the department heads in DK-2 explains: “*The pilot projects are low-risk projects because we can take over if they go off the wrong track. The key question is to find out how well does this work, and how quickly can we ramp-up operations.*”

Stage 2: Trust-building

The success of the implementation of the pilot projects is acknowledged at a board meeting in the international joint venture in December 2006. This acknowledgement turns out to be a milestone in the trust-building process and it paves the way for additional offshoring projects. Good results combined with documented cost savings between 20%-50% in the pilot projects and the acknowledgement of the board help overcome initial scepticism across the Danish organization where formerly reluctant

strategic business unit (SBU) heads now show increased interest in the possibilities in India. A major part of the business development and sales in DK-2 is decentralized and driven by SBUs and convincing the SBU heads about the viability of offshoring to India is critical for the long-term success. Another crucial factor during this stage is the rescue of a project, struck by crisis, in Ireland: A Swedish engineer, posted in the international operations unit in India, is dispatched to Ireland together with a Danish engineer and they manage to steer the project clear and ensure fast implementation in collaboration with a team of Indian engineers located in India. By the fall of 2007, the story about the successful project is already an anecdote within DK-2 that plays a pivotal role in the trust-building process and serves to illustrate the possibilities in using the capacities in India as well as in cross-border teams.

Stage 3: Expansion

A decision, in March 2007, to move to a new and larger office marks the launch of this third stage in the offshoring process. This is the first in a series of decisions and action that together expand the collaboration significantly: These actions also have organizational implications: The number of Scandinavian expatriate staff is expanded from one to five, while the number of Indian engineers is increased from the initial four to twenty-seven. In addition, a new training program for newly recruited engineers is developed and implemented in the joint venture firm with the purpose to gear the organization better to accommodate an increase in the number of newly recruited engineers. Less than a year after the launch of the new offshore unit in India, the experiences gained is the background for a strategy discussion, initiated by the firm's top-management, about how DK-2 might better explore and exploit the benefits of both offshoring to India and improve the market position on the Indian market. Several SBUs in DK-2 have initiatives in India, including offshoring, in various engineering fields that are organized in different ways and with different partners. The strategic considerations, on how to expand and whether and how to connect the various initiatives differently, are still ongoing at the study's cut-off date, but it is clear that offshoring to India is now on the firm's strategic agenda in a fundamental way. By the end of the study DK-2 employs 27 Indian engineers in the offshore unit in India and continues the recruitment of new staff.

INSERT FIGURE 2 ABOUT HERE

5.3 Case-study 3

Stage 1: Exploration

The third case consists of a large Danish IT firm (“DK-3”) and its offshoring of IT development project activities to its Indian partner, one of the top-tier Indian IT services firms (“India-3”). DK-3 serves a wide range of clients in the Danish market and is specialized in the development of IT solutions for the public sector and it is this portfolio India-3 is involved in. Prior to the offshoring collaboration with India-3, DK-3 embarked on a new strategy which meant that all existing solutions and new solutions should migrate respectively be developed using SAP technology (enterprise software applications). Due to a lack of experts in the firm as well as in the Danish labour market, DK-3 engaged itself into collaboration with India-3 which had experts available. India-3 is contracted as an external services provider, but the firms jointly present the collaboration as a “strategic partnership” in a press release in early 2006, which indicates the importance of the collaboration. After contract signature in January 2006 operations start in March 2006 with a few selected pilot activities and mainly with Indian experts working onsite in Denmark, but gradually work is transferred to India. Upon completion of the pilot work, an evaluation concludes that the implementation and the results are positive, and this also marks the conclusion of Stage 1.

Stage 2: Trust-building

The positive results of the pilot activities lead to the initiation of several large projects in August 2006. The projects continue to experiment with various constellations of onsite and offshore project work with the overall intention to ensure the closest possible interaction between the Danish and Indian team members. A defining feature of this stage is the delegation of more discretionary power to the Indian teams, which happens as an outcome of the positive experiences so far and the ongoing building of confidence and trust on both sides. Interviews with DK-3 managers and project managers show recognition of the contribution and technical expertise of the Indian IT experts. However, despite

the positive results it is also increasingly clear to DK-3 that a problem of attrition among the Indian staff exists and must be addressed. This leads to the idea of establishing a “core team”, i.e. a group of experts fully assigned to work on various DK-3 projects, and this triggers the start of Stage 3, *Expansion*.

Stage 3: Expansion

The establishment of an offshore centre in India in March 2007 functions as the physical framework for the ramp-up of Indian staff assigned to the core team. The intention is to build up a team that possesses not merely the technical expertise but also has a deeper understanding of the business domain (public sector organization and regulation) of DK-3. Offshoring to India now involves several SBUs, covers different business domains and is widened to include several types of assignments and not exclusively project work. The posting of a Danish offshore manager at the centre in India completes the institutional infrastructure for the offshoring partnership. The expansion of the collaboration creates a need for clarification of internal work processes and a specification of the routines and conditions for the use of Indian staff in projects. As a DK-3 manager notes: *“It has proven more difficult for us to specify in advance the work we want the core team in India to do. Our project managers like to just call somebody and assign them to a task when the need arises, but you have to be more precise and plan better when you’re dealing with an external partner”*. Overall, the expansion of the collaboration sets in motion a strategy process in DK-3. The offshoring to India was launched primarily in order to get access to a greater number of IT experts for project work, but the mushrooming of different types of business activities involving India-3 staff paves the way for recognition in DK-3 of the need for a more detailed and coherent offshoring strategy. The strategy work is launched shortly before the study’s cut off date, but it is clear that the offshoring strategy will become an integral part of the firm’s future international strategy. An international strategy is in itself a new venture for DK-3 since the firm historically concentrated exclusively on the domestic market. By the end of the study, DK- 3 employed around 70 consultants from India-3, including the core team (26 consultants) and is set to further expand the Indian workforce.

INSERT FIGURE 3 ABOUT HERE

6. DISCUSSION

6.1 Advanced services offshoring, process dynamics and future development

Across the three case studies, one of the striking findings is how quickly the Danish-Indian partnerships have evolved. In all three cases the scale and nature of the offshoring operations accelerate from the start in 2006 to operations with a significant number of offshore staff, with several departments and divisions in the offshoring firms involved and with increasingly sophisticated work done by offshore staff in India.

For the future, it is still an open question how the offshoring partnerships will evolve (as symbolized with the question mark in the three figures). Anecdotal evidence suggests that offshoring partnerships between Western firms and Indian firms continue to evolve over a long period. For example, at the 3rd Annual Conference on the Globalization of Services at Stanford University, CA, in December 2007, Mr. Vasu Sarangapani, Vice President at Wipro (one of the large Indian providers of IT, engineering and other services) described the firm's partnership with a US MNC and how this partnership had evolved over a period of 15 years from a modest start with very basic work done offshore in India to the present stage where Wipro undertakes advanced R&D work for the US client.

Against this backdrop the findings from the Danish case studies suggest that the Danish-Indian offshoring partnerships could evolve to a mature stage at a much faster pace. Part of reason is that the Danish-Indian partnerships benefit from the significant maturation in the Indian market of services providers that occurred since the pioneering era of IT offshoring in the late 1980s and early 1990s, and in this sense the context has changed since the launch of operations in the Wipro example above. The initial period covered in the study (lasting between 1 – 1½ year in the three case studies) shows a fast

acceleration of the partnerships. The *Exploration* stage lasts between 4 to 7 months in the three case studies. The *Trust-building* stage characterizes the partnership for 4 to 7 months. While trust-building continues to be an important element between the partners, as mentioned earlier, this second stage is complemented by the third stage – *Expansion* – which then becomes the dominant feature of the offshoring partnerships. At the study's cut off date the *Expansion* stage had been going on for approximately 6 months in the three partnerships. In two of the three case studies (2 and 3) the offshoring firms are consumed with ideas and discussion on how to expand the offshoring to India even more. In these firms, a likely scenario for the next 2-3 years is *diversification*, where not only the scale of the offshored services is increased but also the scope with more SBUs involved in offshoring to India, as well as and a wider range of offshored projects and tasks. In case study 1, the significant ramp-up of the offshoring operations from March through July 2007 took place at an almost frantic pace and to some extent this offshoring partnership has therefore matured faster. In this case the expansion stage is already implemented, and a scenario of *consolidation* is likely to play out over the coming year. However, the Danish firm is set on a course of international growth and additional acquisitions in the European financial market could necessitate a continuation of the expansion stage.

As noted previously, previous contributions in the literature on offshoring processes and process models may be seen as theoretically related to organizational learning theory and this paper is no exception to this. Fiol and Lyles (1985) note that organizational learning is a process not an event, and theorists in the field describe three main stages in this process: Understanding new external knowledge, assimilating it, and applying it to commercial ends (Cohen and Levinthal, 1990; Lyles, 1998). These stages relate to learning processes more generally, but the similarities between them and the process model suggested in this paper is evident. However, according to Lyles et al (2003), "little is known about the details associated with each stage, the transitions between the stages, or the impact on performance and survival" (Lyles et al, 2003, p 191). The process model for advanced services offshoring outlined in this paper may contribute to filling this gap.

6.2 Managerial challenges in offshoring firms

The three stages of the offshoring process pose different management challenges for the offshoring firms. First, in all three cases initial scepticism exists in particular among internal stakeholders in the firms (staff, managers, unions), but also occasionally among the clients (case study 2), and later in the process rumours and myths may appear with potential negative influence on the success of the offshoring to India. As coined by one Danish manager: *“If the offshored projects fail, then we will face a lot of harsh critics at home”*. In order to overcome and defuse such scepticism it is essential to have a clear and transparent communication practice from the beginning of Stage 1 vis-à-vis the employees. It is necessary to have a frank communication flow on the objectives, content and implications of offshoring as well as on the successes and barriers that occur along the way. In the “value shop” type of firm and projects, human resources is everything, and ensuring a constructive attitude among home firm staff is fundamental for the success of advanced services offshoring.

Second, due to the advanced nature of the work and due to the work process in “value shop” projects, it is important to create a relatively high level of integration between the project team members from the two firms, at least the central team members. This is necessary for an efficient and effective knowledge exchange and to create an experience of shared objective and success. Two of the firms in the study successfully change between onsite and offshore work, where Indian team members for shorter or longer durations work in Denmark and obtain a deeper understanding of project content and context and communicate directly with Danish project team members instead of using hierarchical lines of communication all the time. In addition, as onsite exposure is often considered attractive by Indian professionals, some Danish managers note this might work as a management tool that can meet career aspirations of the Indian staff and thus prevent and reduce attrition.

Third, managing advanced services offshoring is a constantly evolving task. When the business linkage evolves and matures, inter-firm learning increases. As a result of this maturation process, the services provider understands better the client firm and its business context and may be more deeply engaged in the work processes in the client firms. The management implication is that the interface

between the offshoring firm and the services provider must be subject to continuous assessment in order to strike the right balance and apply the resources in an optimal way. In other words, it is not possible, as in classic manufacturing offshoring, to make a set of specifications that remain fairly stable during the production process. As a consequence, the complexity of managing advanced services offshoring increases and necessitates that senior managers continuously monitor the process relatively close and that there are communication and feedback channels that ensure a flow of information from the operational level (project managers) to the responsible senior managers.

7. LIMITATIONS OF THE STUDY

Some limitations of the study relate to the general features of qualitative methods while others are specific for this study. The former include a potential cognitive bias due to an observer-expectancy effect that might over-emphasize the similarities between the offshoring processes in the case studies. However, this bias is countered by giving the six case companies the opportunity to comment on drafts of the manuscript. The general limitations of small sample studies also prevail here, although the strategy for case selection is intended to address this limitation.

Moreover, some limitations pertaining to the specific research design should be noted. First, the micro-level study design of selected services within large firms means that a range of aspects regarding the entire firm level, and the influence of industry sector and country context on the offshoring process dynamics are not included. Second, although the study is based on longitudinal data, these only allow for a process model that covers the initial implementation phase. The Danish-Indian partnerships are still evolving, and much may happen over the coming years. Third, the study is conducted during a growing business cycle which has reinforced the labour shortages caused by a diminishing workforce in Denmark. It remains to be seen how the offshoring strategies of the firms, and hence also the offshoring process, would evolve during a business cycle with slow or no growth.

8. CONCLUSION

This study contributes to the emerging literature on offshoring of advanced services by enhancing the understanding of the evolution of business linkages between developed country firms and developing country firms. Based on three cases of advanced services offshoring from Danish firms to Indian firms, I suggest a process model with three stages that captures the dynamics of the early phase (1 – 1½ year) of the offshoring partnerships. Although each of the three partnerships stands out with a set of specific characteristics, there are similarities in the way in which the partnerships evolve from the launch of the collaboration and during the first 1-2 years of offshoring operations. The similarities between the cases provide empirical support to the proposal that the process model is of general value. The findings may enhance our understanding of the evolution of business linkages founded on advanced services offshoring; an area which several recent authors see as the next wave of offshoring and globalization (Manning et al, 2008). The findings are consistent with the overall idea that advanced services offshoring should not be considered as a static situation, but rather as a dynamic process that evolves over time. However, the incorporation of a dynamic perspective has been rare in previous contributions in services offshoring research.

Moreover, the study shows that the evolution and change that occur in the offshoring partnerships over a relatively short period is significant. This gives an indication of the firm-level impact of advanced services offshoring: While other recent research contributions have pointed out that offshoring of advanced services and other innovation related activities will grow (Dossani and Kenney, 2007; Lewin and Couto, 2007), this study shows that once firms do engage in this type of offshoring, it will evolve rapidly and it will have deep implications for the management, organization and implementation of work at both ends of the business partnership due to the iterative and cyclical nature connected to the problem-solving processes of advanced service work.

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Figure 1: Evolution of DK-1 & India-1 offshoring partnership (Jul 2006 - Sep 2007)

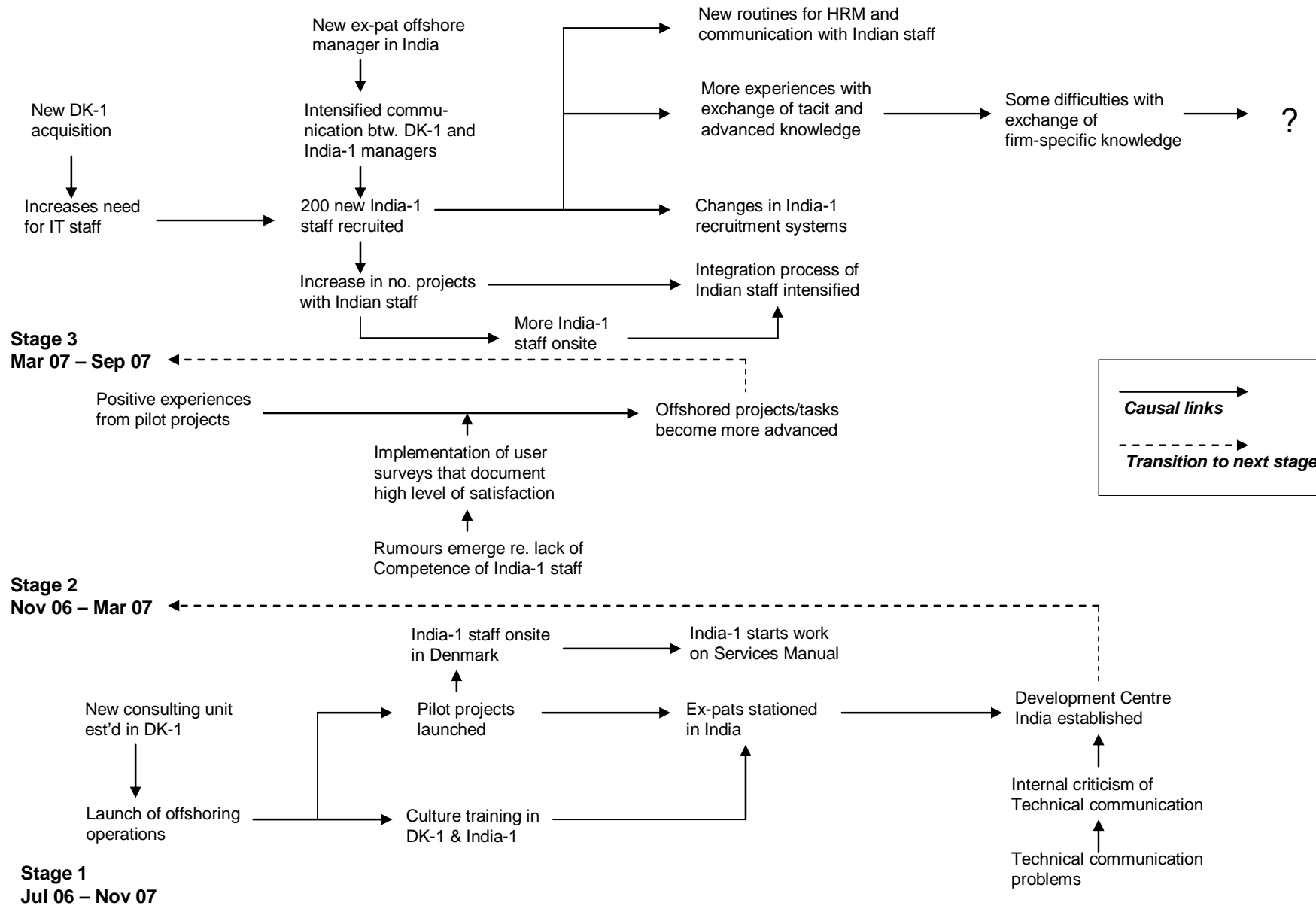


Figure 2: Evolution of DK-2 & India-2 offshoring partnership (Aug 2006 – Sep 2007)

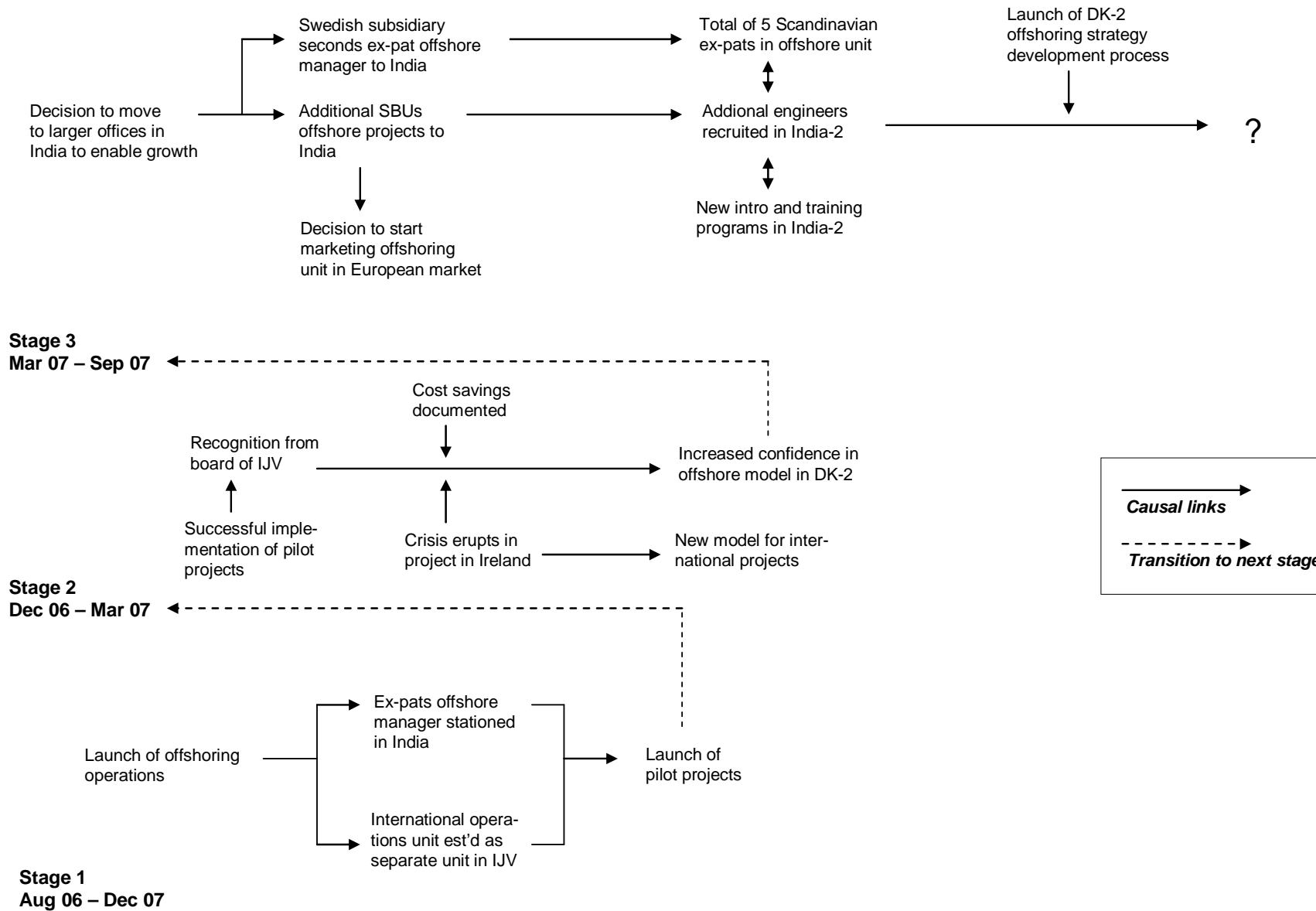
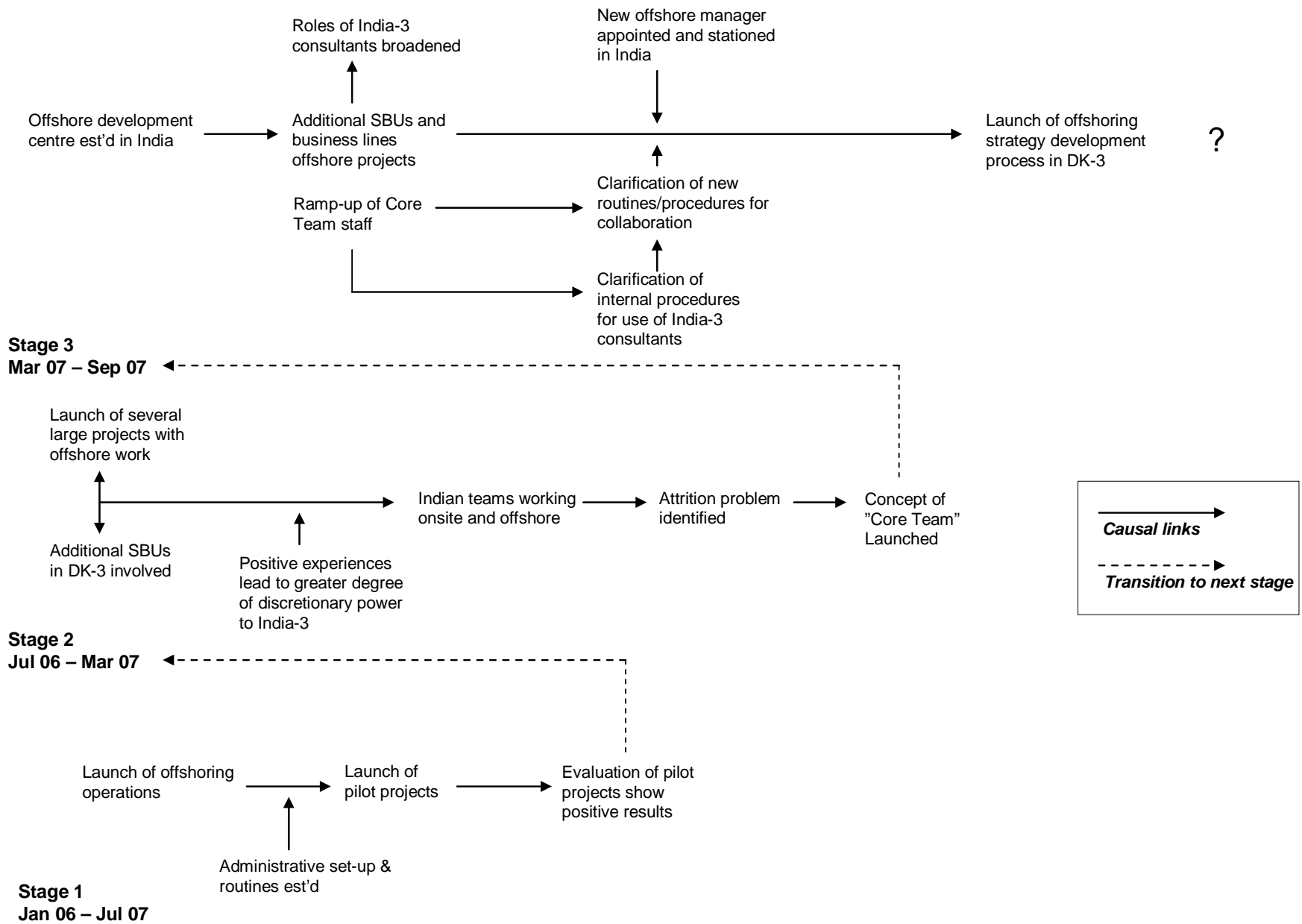


Figure 3: Evolution of DK-3 & India-3 offshoring partnership (Jan 2006 – Sep 2007)



PART FIVE

***A LEARNING PERSPECTIVE ON THE
OFFSHORING OF ADVANCED SERVICES***

Authored by

Peter D. Ørberg Jensen

Copenhagen Business School

The paper is forthcoming in the *Journal of International Management*. Earlier versions of the paper was presented at the 9th Annual International Business Research Forum & 2nd Annual Conference and Workshop on Offshoring, Temple University, Philadelphia, April 2008; the Conference on Offshoring and Global Sourcing of High-Value Company Functions, Bocconi University, Milan, April 2008; the Annual Meeting of the Academy of International Business, Milan, June/July 2008.

***A LEARNING PERSPECTIVE ON THE
OFFSHORING OF ADVANCED SERVICES***

Abstract

Based on longitudinal case studies of offshoring of advanced IT and engineering services from Danish firms to Indian firms, this paper explores organizational learning that occurs over time in both home and host firms and uses learning as a measure of the firm impact of advanced services offshoring. The findings are consistent with the theoretical view that advanced services offshoring must be understood as an antecedent for strategic business development and organizational change in both home and host firms. The study shows that when offshoring partnerships mature and firms gain experience, the learning in both home and host firms evolve over time and differ in many cases from their initial objectives and expectations. In some of the Danish firms engaging in offshoring even ignites a process of strategic transformation. Both Danish and Indian firms use the input from their offshoring partnership to upgrade their organizations and business processes.

Keywords: Services offshoring, global integration, organizational learning, knowledge transfer, business strategy

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1. INTRODUCTION

Firms' relocation of activities in their value chain across national borders ("offshoring") and especially to emerging economies and developing countries is a marked trend of international business over the past decade⁷, perhaps even to the extent that offshoring becomes the defining feature of the global business opportunities in the new millennium. More advanced services, including various administrative and technical tasks such as engineering, IT, R&D and finance, are of particular interest in this regard because they are of a fundamentally different nature than the simple and standardized tasks that are usually performed by low-skilled workers in manufacturing and which are the type of tasks that have been subjected to offshoring for several decades (Andersen, 2006; Maskell et al, 2007).

This article addresses the topic of what impact advanced services offshoring has on the firms that engage in it. Based on longitudinal case studies of offshoring of advanced IT and engineering services from Danish firms to Indian firms, it explores strategic and systemic learning that occurs over time in both the home firms and in the host firms. The resulting learning in the home and host firms is therefore used as a measure of the firm impact of advanced services offshoring.

The article contributes to the emergent strand of research in the international business literature on advanced services offshoring and it presents some findings of general value regarding the learning in home and host firms from advanced services offshoring. The overall intention is to contribute to theory-building on the impacts of the offshoring of advanced services.

Based on the findings of the study, I argue that advanced services offshoring must be understood as an antecedent for strategic business development and organizational change in both home and host firms. The study shows that as offshoring partnerships mature and firms gain experience, the learning in firms evolve over time and differ in many cases from the initial objectives and expectations. The Indian firms use their Danish partners as bridgeheads in new markets while offshoring even ignites a

process of strategic transformation in some of the Danish firms. Both Danish and Indian firms use the input from their offshoring partnership to upgrade their organizations and business processes.

The article is structured as follows: section two and three present the two strands of literature that form the theoretical base of the study, namely the literature on offshoring and selected works from the organizational learning and knowledge literature, including the research design for, first, within-case analysis and, second, between-case analysis. The methodology is outlined in section four. Section five presents the findings of the case studies using the concepts of, respectively, strategic learning and systemic learning (Child et al, 2005) as the structuring tool. Some limitations of the study are described before the between-case analysis in the discussion section and the final conclusion section.

2. OFFSHORING OF ADVANCED SERVICES

While offshoring of manufacturing from developed (high-cost) countries to developing (low-cost) countries has been addressed in the international business literature for several decades (Buckley and Pearce, 1979; Moxon, 1975; Stopford and Wells, 1972), a number of enabling factors, especially over the past decade, have driven the trend towards the offshoring, or “globalization”, of services: These factors include a mix of trade liberalization, economic and regulatory reform in emerging economies, advances in communication technology, digitization and “tradability” of services, reductions in communication costs, and the availability of a skilled labour reserve in emerging economies has proven to be very powerful one (Karmarkar, 2004; UNCTAD 2004, 2005; OECD, 2004). In particular, two additional factors have had a catalytic effect on the increase in IT-enabled services offshoring. First, while IT software offshoring dates back to the 1970s (Dossani and Kenney, 2007), the need to fix the “millennium bug” in the late 1990s caused the first big wave of IT services offshoring. Second, the current shortage of skilled labour, particularly a shortage of science and engineering graduates, is driving the current wave of services offshoring (Lewin et al, 2007), combined with the fact that some emerging nations have a large pool of highly skilled workers (Sen and Shiel, 2006; Yifei et al, 2007).

Estimates from the United Nations Conference on Trade and Development (UNCTAD, 2004) show that services offshoring of a value of approximately \$32 billion took place in 2001. IT-enabled offshoring alone is expected to reach \$24 billion in 2007, a significant increase from \$1.3 billion in 2002.

From the range of recent scholarly publications it is clear that there is little consensus as to what the impacts of offshoring are at different levels, i.e. national, industry sector, firm (Doh, 2005). Farrell (2005) mainly stresses the economic benefits for companies of offshoring to low-cost destinations, but also notes that cost savings are only the beginning. Farrell argues that “what is needed is a total transformation of business processes to harness the new environment’s potential” (Farrell, 2005, p. 679). In the same issue of the *Journal of Management Studies*, Levy (2005), in contrast, stresses the potential negative consequences of services offshoring for highly-skilled workers. In this respect, a number of concerns are evident in the recent offshoring literature, ranging from the possibility of rising and widespread unemployment, even among knowledge workers, as noted by Levy (2005), to the danger of the “hollowing out” of the competitiveness of firms and nations. This danger is addressed in academic work (e.g. Blinder, 2006; Kotabe, 1989; Sturgeon, 2006; Trefler, 2005) and in the business press (see *Economist*, 2004), but without clear conclusions as to the long-term dynamics and implications of the trend. Overall, the lack of agreement concerns both offshoring at large across industry sectors and types of activities offshored, and advanced services offshoring in particular. Moreover, offshoring is evolving to become a very complex and variegated phenomenon with broad implications for economic and management theory and practice (Doh et al, 2007) and this certainly applies to offshoring of more advanced services which to some extent may build on the insights from research on offshoring of manufacturing functions but also must be approached as a distinct and new phenomenon (Bunyaratavej et al, 2007).

Some works on the impact of offshoring exist (including services offshoring), notably on the job impact in developed countries (Amiti and Wei, 2005; Farrell et al, 2006; Farrell, 2005; Gereffi, 2006; Jensen et al, 2006; Sturgeon, 2006). There has also been some work on the correlation between

services offshoring and financial performance (Kotabe and Murrey, 2004) and the impact of offshoring on developing countries (Ernst, 2002; Patibandla and Petersen, 2002), as well as recently work on the dynamics of the offshoring process (Lewin and Peeters, 2006; Maskell et al, 2007). Nevertheless, the question of impacts remains a major question in offshoring research and it not easily uncovered, due to its many facets.

In a number of recent publications some authors have addressed the need to note that something “new” is happening, that offshoring is going into its “next” phase (Dossani and Kenney, 2007; Lewin and Peeters, 2006; Manning et al, 2008), and that offshoring now also encompasses innovation or similar types of advanced business activities (Lewin and Couto, 2007). This article explores this trend further as it addresses the lack of knowledge on impact in the academic literature. Impact is here measured as organizational learning in firms which result from the offshoring of advanced IT and engineering services from Denmark to India. The hypothesis of this article is contrary to the view that advanced services offshoring hollows out offshoring firms. Instead, advanced services offshoring must be understood as a complex phenomenon that over time influences strategic business development and organizational change in both home and host firms.

3. OFFSHORING AND ORGANIZATIONAL LEARNING

Several authors suggest that a framework drawing on many theoretical perspectives is needed to understand offshoring (Kedia and Lahiri, 2007; Niederman et al, 2006; Hansen et al, 2007).

Nevertheless, a single theoretical lens may be useful as a means to shed light on certain aspects of the offshoring phenomenon. Selected works from the organizational learning literature are used here for two reasons. First, offshoring may be seen as a continuous learning process (Manning et al, 2008), and a learning perspective may therefore serve as a measure of the effects that occur in home and host firms involved in offshoring. Second, organizational learning is a dynamic concept as learning by nature takes place in a process over time (Dodgson, 1993; Fiol and Lyles, 1985). Hence the definition

of organizational learning presented by Fiol and Lyles (1985): “The development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions” (Fiol and Lyles, 1985, p. 811).

The overall research question in the organizational learning literature is *how* organizations learn (Argyris and Schön, 1978; Dodgson, 1993; Feldman, 2000; Levitt and March, 1988). However, in my view other details are also relevant and the overall question may be paraphrased to include these details: organizational learning is about *who learns what*, and *how*. The “who” question generally addresses the role of different types of firms and characteristics of firms in organizational learning. In this study it more specifically concerns the between-group variation for home firms on one side and host firms on the other, and the degree of uniformity in the learning effects within the two groups. The “how” describes the process and the process dynamics which firms go through when they acquire and apply new learning. The “what” concerns the outcomes of the learning process (i.e. what firms learn). In this paper, the “what” question is the central research question that seeks to identify the *learning outcomes* in, respectively, home and host firms. The study’s longitudinal perspective is applied to understand how these outcomes emerge in the home and host firms, but for the sake of focus this paper concentrates on the outcomes and less on the dynamics of the process. According to Dodgson (1991), this focus on the outcomes is a typical approach to organizational learning in the business and management literature, although Bingham and Eisenhardt (2006) have a different view and argue that there is too little focus on the outcomes and note that the vast empirical literature on learning ignores the content of what is actually learned. Either way, these previous contributions in the organizational learning literature agree on the relevance of the focus on learning outcomes. In the remainder of the paper, I refer to these outcomes as *learning effects*.

Within the organizational learning literature, one contribution especially is used here as the operational tool in the analysis of learning effects in the case studies, namely the model of Child et al (2005) with different levels of organizational learning. According to Child et al (2005), organizational learning takes place at three different levels, respectively the *strategic*, *systemic* and *technical* levels of

organizational learning. Although the exchange of technical tasks and services are the foundation of advanced services offshoring, this study concentrates on the learning effects at the strategic and the systemic levels and leaves out the technical level because the two former levels of learning stand out as the most significant after the coding of interview data. Child et al (2005) define strategic and systemic learning as follows: *Strategic level learning* consists of “changes in management mindsets, especially in understanding the criteria and conditions for organizational success” (Child et al, 2005, p. 271). This construct may be further operationalized for this study so that strategic learning here means whether and how the offshoring partnership with, respectively, an Indian and a Danish firm influences choices, considerations and discussions at the strategic level of the home/host firm concerning e.g. new business opportunities, the strategic value and use of the offshoring partnership or even the overall firm strategy. In addition, the notion of *emergent strategy* (Mintzberg and Waters, 1985) may, in my view, serve to clarify the assumptions about firm management that are embedded in the strategic level learning construct. According to Mintzberg and Waters (1985), emergent strategy (as contrary to deliberate, planned strategy) means that the management of a firm is open, flexible, responsive, willing to learn and able to make strategic decisions and changes as a result of learning. The construct of strategic level learning implies that the management of a firm possesses these qualities so that the experiences from the offshoring partnership generate inspiration and influence the strategy process of the firm. *Systemic level learning* consists of “changes in organizational systems, with an emphasis on learning how to achieve better integration of organizational activities” according to Child et al (2005, p. 271). In operational terms, this means here whether and how the experiences from the offshoring partnership lead to new or changed routines, workflow or division of labour in the organizations of the home/host firms.

Previous authors have made similar distinctions between different types and levels of learning. Fiol and Lyles (1985) and Mayer (1982) distinguish between “lower level” and “higher level” learning; Senge (1990) differentiates between “adaptive learning” and “generative learning” and Dodgson (1991) separates “tactical” from “strategic” learning. In particular Argyris and Schön’s, (1978) distinction between “single loop”, “double loop” and “deutero learning” deserves mentioning since

their work is the foundation for the levels of organizational learning defined by Child et al (2005). Compared to these contributions, I see the learning constructs of Child et al (2005) as related constructs since *strategic level learning* bears many similarities with the more advanced and important learning highlighted by others (higher/generative/strategic), whereas *systemic level learning* is closer to the operational and structural aspects of firm organization (lower/adaptive/tactical).

Learning effects do not evidently give the full picture of the broader range of firm level impacts of advanced services offshoring. For example, the impact on financial performance, employment and job content are alternative and clearly important measurements of offshoring. I argue, however, that the learning effects are important because they show *what* firms learn from advanced services offshoring and whether and how these learning effects are linked to the strategic business development and organizational change of home and host firms. In other words, learning is linked to the competitiveness of the firm (Dodgson, 1993).

4. METHODOLOGY

4.1 The case approach and level of analysis

The research approach chosen is qualitative and interpretive. The study follows the general approach mentioned by Eisenhardt (1989) and Yin (2003) whereby case studies can involve either single or multiple cases and numerous levels of analysis. The study includes three case studies, and each case study includes one Danish firm and its Indian offshoring business partner, for a total of six firms. The nucleus of each of the three case studies is the interaction and exchange of services between the units located in Denmark and India respectively and the learning that occurs over time at both ends.

In all three cases, these services are organized in projects, and the project level thus functions as the primary level of analysis. Since all Danish and Indian firms are large firms, each with several thousand employees, the project level was originally expected to be the sole level of analysis. Given the large

size of the firms and the comparatively limited size of the offshoring projects, the initial expectation was that the learning effects would be too minute to permeate beyond the project level and the units directly involved. It turns out, however, that the learning effects in several cases go further and occur also at the firm level which therefore functions as the study's second level of analysis.

4.2 The longitudinal perspective

The ability to trace changes over time is a major strength of case studies (Pettigrew, 1990; Yin, 2003). The Danish-Indian offshoring collaborations were launched in their operational phase during the spring and summer of 2006. The first round of research interviews were implemented in the period between late October 2006 and January 2007. The second, and final, round of research interviews were conducted in August and September 2007. The case studies cover a period between approximately 1 year and up to 17 months in the longest running case study.

4.3 Case selection strategy and theory-building

The strategy for the selection of the cases is a crucial part of the research strategy (Flyvbjerg, 2007). It sets the stage for the generalized use of the findings, and theory-building from case studies, since this is determined by the position of the cases relative to the distribution in the entire population (Eisenhardt, 1989; Flyvbjerg, 2007; Pettigrew, 1990; Yin, 2003). Flyvbjerg (2007) presents a model with different strategies for the selection of cases. Among these, one is central in this study: The "maximum variation" selection strategy. Here, this means that the study is not confined to one industry sector but analyses advanced services offshoring across different professional service firms and sectors. The shared feature between them is that the offshored services are *advanced*, similar to what UNCTAD (2004) categorizes as "high-skill services" which is "the most creative and skill-intensive end of offshored services" (UNCTAD, 2004, p. 151). By way of illustration, the offshore director in one of the Danish firms in the study describes the nature of the services in the following way: "It seems to me that a lot of the IT offshoring that has taken place in the market mainly consists of standardized, routine work, but we offshore only project work that has an innovative and creative nature. This also means that the input we get from the Indian staff is innovative and creative".

Additional selection criteria are applied, but one criterion in particular is essential for the discussion of advanced services because it captures the work process that underpins this type of services: all projects fall in the category described by Stabell and Fjeldstad (1998) as the “value shop” model. The problem-solving process in value shops is iterative and cyclical with a high degree of reciprocal interdependence between activities, since the perception of the problem and adequate solutions may well change along the way. Examples include work done in hospitals, educational institutions and professional services firms in medicine, law, architecture, and engineering. A classic approach to offshoring would not see these types of projects as candidates for offshoring because the degrees of codification and standardization are too low, there is too much tacit knowledge involved on the part of the offshoring firm, and it requires too much coordination to make it work. Nevertheless, firms do offshore such projects, despite the challenges involved, and the trend is growing. Yet the knowledge about the dynamics and outcomes of these projects for the home and host firms involved is very sparse.

Table I summarizes the set of criteria used for establishing the sample of cases.

INSERT TABLE I ABOUT HERE

4.4 Data

The study is primarily based on interviews with key personnel in the six firms. In total, 46 interviews were carried out in two stages starting October 2006 and ending September 2007. The average duration of each is approximately 1 hour, ranging from 45 minutes to 2½ hours. All interviews are recorded and transcribed. In addition, background information about the firms, press clips, and selected memoranda and strategy documents made available by the firms were used. Where possible, informants were interviewed twice. The interviews included two main groups of personnel in home

and host firms, respectively interviewees with overall management responsibility and interviewees involved in the operational management of the projects. The interviews are based on a semi-structured guide and are all conducted by the author. In particular the 2nd round of interviews included questions on the learning effects. As part of the interviews I explained the constructs of strategic and systemic level learning to the interviewees and asked whether and how the learning and experiences from more than one year of offshoring operations had influenced changes or new initiatives at the strategic and systemic levels. The interviewed managers shared their views on these matters, which form the basis for the analysis. But as in any analysis the qualitative data are subject to the social construction and interpretation of the author (see also the limitations section).

It was agreed between the author and the firms that the identities of the firms and individual informants should not be revealed. The firms are therefore referred to by pseudonyms and informants by the role in the firm.

5. EMPIRICAL RESULTS

5.1 Initial Offshoring Strategies and Contents of Offshoring Projects

The *first case study* includes one of the largest Danish (and Scandinavian) banks (“DK-1”) and its offshoring of IT services to an Indian IT services firm (“India-1”). It is no exaggeration to label the bank’s IT system as a key strategic asset. It is therefore all the more interesting that some IT development is now partly offshored to India. Prior to this, the bank found itself situated in a domestic labour market where demand for qualified IT staff had been glowing red for some years and it was increasingly difficult to recruit sufficient qualified staff domestically to ensure the integration of new acquisitions made by the bank. Given the bank’s strategic ambitions for international expansion, a realistic future scenario was one where lack of qualified labour would impede the desired scale and pace of international expansion. As a result offshoring operations were launched in August 2006 in collaboration with India-1.

The *second case study* includes one of the largest Danish engineering groups (“DK-2”) and its offshoring of engineering services to a joint venture in India. The Danish firm has a 50/50 joint ownership with its Indian partner, a large Indian engineering and construction firm (“India-2”). The joint venture was established in 1998 with a main focus on the Indian market, but also with intentions of offshoring work from Denmark to India. Some work was occasionally done offshore in India, but a comprehensive offshoring strategy was not implemented until August 2006 when a separate international operations unit was established and staffed with Indian engineers and Danish management. Similar to the bank, DK-2 is also engaged in a very expansive strategy of internationalization and growth in several European countries, and the Danish part of the group especially experiences a shortage of engineers. While shortage of qualified staff and access to skilled resources in India is the main motive, DK-2 faces an offshoring trend in the international market where competitors start offshoring work to low-cost countries. DK-2 wishes to remain competitive vis-à-vis these competitors, and the cost advantage of offshoring to India-2 thus has some significance as a strategic driver. The offshored projects are infrastructure projects (bridges, roads) where Indian engineers are charged with design work and detailed engineering processes, while project management, client contact, project completion and other activities remain in Denmark.

The *third case study* consists of a large Danish IT firm (“DK-3”) and its offshoring of IT development project activities to its Indian partner, one of the top-tier Indian IT services firms (“India-3”). DK-3 serves a wide range of clients in the Danish market and is specialized in the development of IT solutions for the public sector and it is this portfolio India-3 is involved in. Operations started in March 2006 mainly with Indian experts working onsite in Denmark, but gradually work was transferred to India. In March 2007 a development centre, located on the premises of India-3, opened with a Danish offshore manager present from July 2007. Prior to the offshoring collaboration with India-3, DK-3 embarked on a new strategy which meant that all existing solutions and new solutions should migrate respectively be developed using SAP technology (enterprise software applications). There were not, however, sufficient experts available in either the firm or the Danish marketplace, and

DK-3 therefore entered into collaboration with India-3 which had experts available. India-3 is contracted as an external services provider, but the firms jointly presented the collaboration as a “strategic partnership” in a press release in early 2006, which indicates the importance of the collaboration.

For all the Danish firms the resource-seeking motive is the primary strategic driver behind their offshoring to India. The cost advantage is generally seen as *the* reason why offshoring to India and other low-cost countries has increased (e.g. Farrell, 2005; UNCTAD 2004), but for the three Danish firms it is notable that the lowering of labour costs is not a primary motive in the initial offshoring strategies. The offshore director of DK-3 even points out: “We have never made one single calculation in order to estimate the cost savings involved in offshoring to India. We just think that since the differences in wages are quite large it appears to be financially viable”. The fact that more work can be accomplished for the same expense is welcomed, but had it not been for the pressing need for qualified staff, two of the Danish firms (DK-1 and DK-2) would not have embarked on offshoring in 2006 but later and not at the scale that has occurred since 2006.

5.2 Strategic Learning Effects (within-case analysis)

5.2.1 Case: DK-1 and India-1

Shortly after the establishment of a development centre in India, DK-1 made an acquisition of a large European bank. The quest to meet the deadline for the integration of the acquired bank becomes a real test of the offshoring model. Over a period of 4-5 months more than 200 Indian IT specialists (some new recruits, some transferred from other accounts) get involved in DK-1 projects. While DK-1 also hires new staff in Denmark, it becomes clear to the managers in DK-1 how the offshoring collaboration with India-1 might be used in a way that differs from the initial expectations. First, the resources involved in India could quickly be scaled up and down to meet the demands of the home firm. This level of flexibility in the application of resources would for various reasons not be possible in Denmark. Second, the lead time required to get project work started was shortened considerably in projects where India-1 staff could be assigned. In this way, the access to the experts at India-1 widens

from an initiative made necessary by shortage of specialized skills to a strategic tool that can be applied as a means to scale up and accelerate the internationalization process of the bank.

Since the start of the offshore operations in August 2006, the rapid progress of the partnership with DK-1 turns it into a very important account for India-1. At the strategic level, India-1 managers describe two important learning effects. First, the collaboration with DK-1 functions as a bridgehead to the Scandinavian region; a region to which India-1 wishes to get more access due to the region's reputation for development and uptake of advanced IT solutions. Following the launch of the collaboration with the Danish client (by far its largest account in Scandinavia), India-1 has established a permanent office in Denmark and has managed to get additional clients here. Second, the general approach of India-1 is to use the collaboration with its clients as a means to develop the firm's own capabilities. While this is a classic strategy in consulting, the project work on IBM mainframe systems assigned by DK-1 has enhanced the capabilities of India-1 in this area significantly. Although this is evidently a technical learning effect, it also has a strategic aspect since India-1 is now able to market itself with more credibility. An India-1 director explains: "The work we have done for DK-1 has significantly helped us build our capabilities on IBM mainframe systems. We have used our knowledge management system to disseminate the knowledge we have gained and as a result we have been able to win new clients and we can now deliver a wider range of services."

5.2.2 Case: DK-2 and India-2

The assessment of the experiences of the first year with offshoring of engineering projects is well summarized by the CEO of DK-2 who sees the past year as a "very positive development, indeed, and it really encourages us to continue with offshoring to India", because "we can now document to our clients and in our own organization that we can deliver in a cost-effective way, on time and with the same quality standards as in projects fully executed in Denmark". This statement captures the mood across the board in DK-2, India-2 and in their joint venture firm in India and it is crucial for two reasons. First, while client acceptance is clearly important as they are the end users of the customized projects, acceptance across DK-2's own organization is even more important, at least in the short term.

A major part of the business development and sales is decentralized and driven by strategic business units (SBU) one or two steps below top-management. SBUs throughout the engineering group were hesitant prior to August 2006 and for this reason only small chunks of project work were offshored from time to time. But in the wake of the good results, the portfolio of the international operations unit in India attracts project work from SBUs in two additional European countries besides projects from Denmark, as well as additional expatriate staff in India. A DK-2 director states: "We cannot force our managers and staff to engage in offshoring to India. They must have a real incentive to do it, and it is therefore crucial that we are able to show good examples and positive results from offshoring that can create this kind of incentive across the organization". And the results are positive. The DK-2 director continues: "I can't say that I am surprised with the high quality of the work we get from the team in India. But I am impressed". Documented cost savings around 40% - 50% in some types of projects and between 20% - 30% in others also help attract attention across the engineering group concerning the possibilities in India. Second, the positive results disseminate across the various managerial levels and catalyze an internal strategy development process about how DK-2 might better explore and exploit the benefits of offshoring to India, and it is clear that offshoring to India is now on the firm's agenda in a fundamental way. By the study's cut-off date this process is still ongoing, but a small strategy task force, established in the spring of 2007 by the CEO of DK-2, had developed an analysis and discussion paper which was presented at an August 2007 seminar for the firm's Top 300 managers.

Overall, DK-2 managers see the strategic learning effect as a change in mindset within the organization during the first year of offshoring operations. Previously, staff and some SBU managers to some extent saw offshoring to India as taking jobs away from the Danish organization. But the emerging mindset sees offshoring to India as a means for expansion and growth. The Danish CEO explains: "We now dare to talk about offshoring as a means to win market share. It is a decisive turning point for us that we can show that it is not about moving jobs away from Denmark". Due to the increased capacity provided by offshoring, DK-2 is now able to take on more client projects and thus alleviate bottlenecks caused by the shortage of skilled engineers in the home firm.

The managers of India-2 describe the main strategic learning as the acknowledgement that the model with the international operations unit actually works as an effective way of delivering services on time and with the desired quality. The realization across the organization that the unit is a viable model overcomes the widespread initial scepticism concerning the model. Moreover, two additional factors underpin the positive results, which the India-2 senior management sees as “better than expected.” With increased confidence in the client organization comes a much faster ramp-up than expected, with addition of a second sector (road engineering), increase in the number of client countries from one (Denmark) to four (with the addition of Norway, Sweden and Ireland), and consequently more engineers recruited. In addition, the unit contributes to the earnings of India-2 already from the first phase, even though there is still room for making work processes more efficient. In the wake of the positive experience, India-2 now sees new possibilities for attracting new offshore clients in the European market. While DK-2 will remain the sole client in the short term (coming 1-2 years), and the continuation of the expansion of the number of DK-2 offshore projects will require the firm’s full attention in the near future, India-2 defines the attraction of new European clients as a strategic objective for the future.

5.2.3 Case: DK-3 and India-3

Based on the experiences from 1½ years collaboration with India-3 on the development of IT solutions for public sector clients, DK-3 launches an internal strategy process to refine the firm’s offshoring strategy. The offshoring to India was initially started in order to get access to IT experts, but in the fall of 2007, DK-3 is expanding the commitment in different ways. This concerns the business areas involved, the type of projects and the nature of the project work assigned to the Indian IT specialists. The reason is the generally positive results achieved during the first 1½ year of offshoring operations, which include several large and complex projects and Danish and Indian staff working both onshore and offshore. In addition to a revision and deepening of the offshoring strategy, the strategy process in DK-3 also includes considerations about the future downstream internationalization process of the firm. While the firm’s downstream internationalization process is still at an early stage, the intention is

to explore opportunities for downstream sales on the international market of the IT solutions and systems developed for public institutions in Denmark. Since DK-3 historically has focused almost exclusively on the Danish market, it lacks both the infrastructure and the experience in international sales. But since India-3 has a widespread network of offices in the US, Europe and Asia, the two firms consider how these might be used as sales channels for DK-3's products. As shown by the events and achievements since March 2006, the offshoring collaboration between DK-3 and India-3 is constantly evolving and it is too early to tell when and how this "strategic partnership" will reach a mature and stable stage. It is, however, evident that DK-3 is undergoing a marked change where the gradual expansion of the offshoring collaboration and the experiences gained stimulates not only a change in the offshoring strategy but also stimulates the firm's internationalization process in a significant way. While the launch of the offshoring to India was already a radical change in the hitherto all-Danish firm DK-3, the firm is now set on a course for an internationalization process that will influence SBUs across the firm in a fundamental way, and the India experience has played a catalytic role in this respect.

For any service provider, the basic rationale for the collaboration with a client is to contribute to the financial performance of the firm. For India-3, however, the account with DK-3 is relatively small compared to the many other large contracts which India-3 has with large MNCs, including many Fortune 500 firms. The most important input which India-3 gets from the collaboration with DK-3 is therefore not the financial remuneration. Rather, they are of a different and more strategic kind. First, the knowledge about IT solutions and systems in the public sector domain is very limited in India-3, mainly due to limited demand in the home market. Since this market segment is important in the international market, especially in Europe, it is very attractive for India-3 to get access to DK-3's domain knowledge. An India-3 senior vice president explains: "Definitely, the public sector is very interesting for us. We see it as the market segment which is going to grow both in Europe and in the US. Having DK-3 as a partner is unique because we don't see any other firms in the market that understand the public sector as well as DK-3". Second, the Danish client serves as an entry point to Scandinavia for India-3, and the firm has subsequently established permanent offices in Denmark and

Scandinavia. Both types of input are important elements in India-3's overall strategy of climbing into the Top-5 of global IT services firms.

5.3 Systemic Learning Effects (within-case analysis)

5.3.1 Case: DK-1 and India-1

In DK-1 the offshoring strategy sets in motion a process which includes systemic learning in various ways, both at the project level and at the broader organizational level. The inclusion of Indian experts enables a shortened implementation period for projects. As said by a Danish project manager:

“Usually we would use four IT development experts in six months to get the job done. Instead, we now use eight experts over an implementation period of three months”.

Project management responsibility rests with Danish staff, as usual. Still, the projects are most often very complex, existing systems documentation sparse and non-existent in English, and as a consequence the level of tacit knowledge high. All this adds to the challenges involved in managing a geographically dispersed team and in several cases this complicates the inclusion of India-1 staff located offshore. A Danish project manager stresses the value of close interaction in the project teams and the difficulties involved in managing a team located both in Denmark and in India in his comment: “When it comes to the sharing of knowledge and joint development work it is sometimes too far a distance when team members are working at desks that are ten metres apart”. The lack of documentation in English language entails major translation jobs, which are necessary to get Indian staff involved in more advanced project work. In view of these challenges, most of the 200 India-1 staff recruited over a short period in 2007 do not work offshore, but onshore in Denmark. The rationale of DK-1 is to minimize these challenges in order to meet the deadline for the integration of its new acquisition. One way of doing this is to locate India-1 staff with the project teams in Denmark, despite the additional costs incurred, since offshore work processes are still going through an experiential learning process, which occasionally creates some delays. A Danish manager notes that: “For us, stationing Indian staff onshore in Denmark is a way of reducing the risks of delay and misunderstanding in the project teams”.

While describing the inclusion of Indian staff onshore and offshore as generally successful, and with India-1 staff gradually going into more and more advanced project work, DK-1 managers also note that the rapid ramp-up of the offshoring operations during the first half of 2007 places a significant pressure on the absorptive capacity of DK-1 to use the Indian staff in an efficient and effective manner. DK-1 offshoring managers see this as a general challenge across the Danish units using resources from India-1, and they experience that the work involved in defining tasks for the new Indian staff becomes a bottleneck for efficient and effective use of the new resources in the ramp-up period.

The rapid scaling-up of the number of India-1 staff involved in the projects is a test for the managers of the Indian firm. The firm had not previously experienced an expansion of client operations at such a pace within a period of a few months. India-1 managers must therefore find new ways to organize certain internal procedures, notably the recruitment of new staff, reallocation of staff from other accounts, the screening of candidates for the client, and the procedures for dispatching staff to Denmark.

5.3.2 Case: DK-2 and India-2

While offshoring of infrastructure project work to India spurs DK-2 to streamline internal work procedures and documentation, it incidentally also works as an eye-opener for DK-2 as regards the staffing and execution of projects across national borders. Despite the firm's presence in several countries, projects are predominantly staffed with national staff and thus with little cross-border integration. However, a crisis erupts in a project in Ireland during the summer of 2007 which causes a rethink of this model. A Swedish engineer, stationed in India, is dispatched to Ireland together with a Danish engineer and manages to steer the project clear and ensure implementation in collaboration with a team of offshore Indian engineers. By the fall of 2007, the story about the successful project is already an anecdote within DK-2 that serves to illustrate the possibilities in using the capacities in India as well as in cross-border teams. More generally, it also serves to make the value of the Indian

contribution clear for the Danish managers. The department head in DK-2 states that: “We really depend on the Indian staff. We had not had a chance to do the Irish project before the deadline without them”.

The recognition in India-2 that offshored projects is an avenue for future growth creates pressure for more efficient and effective recruitment processes in the firm. As noted by the CEO of the joint venture firm: “There are a lot of exciting opportunities now, but the big challenge is to find good people to do the job. The firms that are capable of this will be the winners in India”. In view of the need to quickly ramp-up the capacity for offshored projects, India-2 has reorganized its recruitment processes and introduced a mandatory six-week training programme for new engineers in order to gear the organization better for faster growth in manpower and use training and coaching as a means to retain staff.

India-2 managers see the model applied by the international operations unit as a way to improve project planning and implementation across the entire joint venture firm. This includes in particular scheduling of time resources and capacity of staff and detailing of project activities and workflow, which is done in collaboration with the client in order to ensure a realistic time frame for the project. However, India-2 managers still consider this as the early stage of the learning process in the international market. So far, the only international client is DK-2, which India-2 managers see as an “educated client”, while catering to new, external clients in the European market, the new medium-term goal of the firm, is expected to be a different and more difficult matter.

5.3.3 Case: DK-3 and India-3

Since DK-3 historically is an all-Danish firm, in terms of staff, clients, corporate language etc., the offshoring collaboration necessitates a number of changes in the project model. Work processes are streamlined, and the division of labour and integration of the Indian team members, whether onshore or offshore, need to be more specific and detailed compared to a typical Danish project. The Danish offshore director recalls: “In the first project in the spring of 2006 we had no experience with doing

project work offshore and as a result we didn't manage to finalize the task specifications until the day after they made the delivery to us! So this was the first significant learning for us, we must be clear and specific about what we want the Indian staff to do before they actually start the work". In addition, the migration to English language and the translation of project documentation is laborious. Due to the high level of sophistication in the projects, the high levels of tacit knowledge on the part of the Danish team, the sparse documentation, and India-3's limited experience with IT projects in the public sector domain, the exchange of knowledge in the Danish-Indian teams is at times complicated. DK-3 managers without exception see India-3's contribution in the projects as very valuable, even indispensable. A Danish manager comments: "The people who work for us in India are really very good. Most of them are university-trained in IT, they are very intelligent, they understand what we say and they absorb knowledge very quickly". Nevertheless, the high level of complexity in the projects turns the configuration of the project model and workflow into an ongoing process of experimentation and experiential learning over the first 1½ years of operations. To DK-3, the importance of building up institutional knowledge within a "core team" of India-3 experts is increasingly clear.

Being one of India's top-tier IT services firms, India-3 has extensive experience with offshore services provision. Against this backdrop there would seem to be little chance of seeing learning at the systemic level in India-3 as a result of the collaboration with DK-3. Nevertheless, India-3 from the beginning of the collaboration entered in the spirit of the "strategic partnership" also on matters concerning organization and workflow. The management of India-3 responded favourably to DK-3's proposal for establishing a "core team" of India-3 experts, which they see as a new way of collaborating with a client and an opportunity to build capacity in a new field. The idea emerges after 9 months of experimenting with different constellations of onshore and offshore project groups. The basic idea is to build up a team that possesses not merely the technical expertise but also understands the business domain (public sector organization and regulation) of DK-3 since the first projects indicated that India-3 staffs have some difficulties with the latter aspects. Moreover, the existence of a core team is intended to ease the transfer of India-3 staff and knowledge between the projects. The organizational set-up includes a DK-3 offshore station manager in India and around 30 India-3 experts

that are assigned to work full-time on DK-3 projects, and who may move between different projects, depending on the needs of DK-3 and the projects. According to India-3 managers, the deep and long-term involvement of the client in projects and work processes is very effective. In fact, it inspires India-3 to recommend this organizational model to other clients. The majority of India-3's client accounts are organized with a higher degree of arm's length between the client firm (onshore) and India-3 staff (offshore), but based on the experiences from the close collaboration with DK-3, the management of India-3 sees a potential for improving the efficiency and effectiveness of other client accounts.

This long-term process is, however, somewhat slowed down by the attrition rate among India-3 staff who pursue career objectives at other accounts or outside India-3. At the study's cut-off date it remains an open question whether the core team can be sustained with staff with 9+ months of work experience on DK-3 projects.

6. DISCUSSION

While the previous section presented the learning effects within the firms in the three case studies, this section follows the logic of Eisenhardt (1989) and moves from *within case* analysis to *between case* analysis in order to derive some points of general value for offshoring research. Based on empirical findings described in the previous section, Table II summarizes the most important observed learning effects in the six firms.

INSERT TABLE II ABOUT HERE

Overall, the summary of learning effects displayed in Table II shows that advanced services offshoring is used as an opportunity for strategic business development and organizational change in both home and host firms.

6.1 Strategic Learning and Business Development

In the three Danish firms, the strategic and systemic learning potentials do not merely concern the offshoring strategy and the organization of the offshoring projects but have wider implications for firm strategies and the organization of projects and workflow. The Danish firms are initially driven primarily by a search for human resources that can satisfy the need for skilled IT and engineering staff. However, as they gain experience, inspiration and more motives emerge and their offshoring strategies expand to include a broader range of objectives.

Whereas the resource-seeking motive prevails, the strategic agendas of the offshoring firms become increasingly focused on using offshoring as a means to enhance firm competitiveness. First, offshoring evolves into an instrument for domestic and international expansion. From the start of the operational phase in 2006 to the fall of 2007, DK-1 increases the number of India-1 staff from zero to 250, DK-2 employs 27 engineers offshore, and DK-3 employs 70 India-3 staff. Both DK-2 and DK-3 continue the recruitment of offshore staff. For all firms, in particular DK-1, this is a rapid ramp-up of operation. Second, two of the Danish firms (DK-2 and DK-3) incorporate offshoring in a transformation process aimed at gearing the firms to match offshoring trends among competitors and offer services at high quality levels but at lower price levels.

Dossani and Kenney (2003) have previously described how U.S. IT firms “went for cost” but “stayed for quality” when they offshore back-office services to India. To paraphrase that strategic change process, the Danish firms went for human resources, but stayed to expand their international operations and to use offshoring as a tool for strategic transformation. The experiences from the offshoring process have a catalytic effect on the strategic learning of the Danish firms that eye new business opportunities as offshoring evolves. This strategic change in Danish firms follows the pattern

of an emergent strategy described by Mintzberg and Waters (1985) where firms embark on the offshoring collaboration with one set of strategic intentions, but these intentions are sufficiently flexible to adapt to the learning that occurs along the way and new strategic motives are added.

In comparison with the significant strategic change observed in the Danish firms, the objectives of the Indian firms vis-à-vis the business linkage with their Danish partners are more stable during the observed period. While the Danish firms embark on a process of upstream internationalization of value chain activities, the Indian firms use the partnerships in a more classic downstream internationalization process, to get access to foreign markets and build a position there. The three Indian firms are at various stages of this process, and the study shows that part of the challenge for the firms is to overcome barriers related to the concepts of psychic distance (Johansson and Vahlne, 1977) and the liability of foreignness (Petersen and Pedersen, 2002; Zaheer, 1995) that are well established in the international business literature as barriers which firms encounter in foreign markets. For all three Indian firms their knowledge about the Danish/Scandinavian market (India-1, India-3) and the European market (India-2) is limited, but through collaboration they establish bridgeheads in the region and start to build this knowledge (establishment of permanent offices in Denmark, engaging with new clients in Denmark and the wider Scandinavian region).

Moreover, the three case studies show that the nature of advanced technical services paves the way for business linkages between the home and the host firms that are different compared to classic manufacturing offshoring of standardized goods. The characteristics of the services exchanged (low degree of codification, high degree of tacit knowledge) and the work process embedded in value shop firms/projects increase the complexity of managing the process. As a consequence the power distribution and the governance of the business linkage between the home and host units differ from offshoring in manufacturing contexts. In classic manufacturing offshoring, the offshoring firm is most often the dominant lead firm, with an arms-length arrangement as a typical governance model of the business linkage. In contrast, the governance model tends to be *relational* in cases of advanced services offshoring: The relational model has a more equal distribution of power, has complex

interactions between buyers and sellers, and is open to bargaining since the offshoring firm's critical resources increasingly span firm boundaries and becomes embedded in inter-firm resources and routines (for a discussion on the relational governance model see Dyer and Singh, 1998; for a typology on governance models in global value chains see Gereffi et al, 2005).

6.2 Systemic Learning and Organizational Change

Aron and Singh (2005) introduce the notion of the “extended organization” which involves the need for offshoring firms to work alongside the providers in order to reach the desired quality. Danish firms are working towards the creation of this type of extended organization. As part of this process they are changing workflow and routines in order to facilitate the emergence of the extended organization. This includes more structured and transparent project workflows e.g. with more and better project documentation, adaptation of English as a working language, and replacement of ad-hoc communication with new communication routines that are more organized and scheduled.

For knowledge integration Grant (1996) notes that the greater the degree of commonly shared knowledge, the easier knowledge integration becomes. Together the measures initiated by Danish firms aim at making knowledge, and knowledge flows, more explicit and accessible for the Indian members of the team; a process which Nonaka (1994) describes as the “externalization” of tacit knowledge. In fact, the decision of DK-1 to station a large number of India-1 staff onshore instead of offshore seeks to overcome the barriers of tacit and sticky knowledge while ensuring management control and timely implementation.

The collaboration with Danish firms spurs systemic learning effects in the Indian firms that in some areas have firm-wide implications. This applies to the changes in recruitment systems in India-1 and India-2, and for the building of a core team in the DK-3/India-3 collaboration as a model concept for collaboration in client accounts.

6.3 Managerial Implications

The most important managerial implication from the study is that offshoring of advanced services to India and similar destinations should not merely be seen by offshoring firms as a response to shortage of qualified labour in the domestic market but as an opportunity for strategic and organizational transformation. The experience of the Danish firms shows that a willingness to learn and an open, flexible and responsive attitude, as noted by Mintzberg and Waters (1985), may lead to a broader set of strategic and systemic learning effects than merely the fulfilment of the initial objective of access to more qualified personnel.

Another important point concerns the organization of onshore and offshore teams and workflow. The exchange of tasks and knowledge in the projects portrays a workflow quite different from the earlier offshoring wave in manufacturing. Offshoring of advanced services is not about transferring highly codified tasks from A to B with a set of specifications and back again. It is a far more complex undertaking. Consequently, the managerial and organizational challenges for both home and host firms are quite different. Due to the sticky knowledge in the workflow of home firms (see Jensen and Szulanski, 2004, Szulanski, 1996 for a discussion), and the iterative and cyclical problem solving process in value-shop firms (Stabell and Fjeldstad, 1998), close interaction between onshore and offshore units is required. Because the creation, distribution and sharing of knowledge is a dynamic process with many feedback-loops, the offshore teams must be included at the highest extent possible in the day-to-day workflow as well as in the ongoing informal conversation within the project.

Offshore managers in home and host firms need to jointly design an organizational framework and workflow that ensures the expansion of project work across borders and time zones. The challenge is not to establish a distinct division of labour between home and host firm. It is instead to reintegrate flows of knowledge, communication, and the evolving interpretation of problems and solutions between onshore and offshore units.

7. LIMITATIONS OF THE STUDY

Some limitations of the study relate to the general features of qualitative methods while others are specific for this study. The former include a potential cognitive bias due to an observer-expectancy effect that might over-emphasize the learning effects in the case studies. However, this bias is countered by giving the six case companies the opportunity to comment on drafts of the manuscript. The general limitations of small sample studies also prevail here, although the strategy for case selection is intended to address this limitation.

Moreover, some limitations pertaining to the specific research design should be noted. First, the micro-level study design of selected services within large firms means that a range of aspects regarding the entire firm level, industry sector and country context are not included. Second, although the study is based on longitudinal data, these only cover the initial implementation phase. The Danish-Indian partnerships are still evolving, and much may happen over the coming years. Third, the study is conducted in a growing business cycle which has reinforced the labour shortages caused by a diminishing workforce in Denmark. It remains to be seen whether and how the offshoring strategies of the firms would evolve during a business cycle with slow or no growth.

8. CONCLUSION

This study contributes to the emerging literature on offshoring of advanced services by enhancing the understanding of the learning effects in developed country firms and developing country firms. The findings of the study are consistent with the view expressed in the hypothesis that advanced services offshoring is not hollowing-out offshoring firms but instead an opportunity for strategic business development and organizational change: When offshoring partnerships mature and firms gain experience, the learning effects in both home and host firms evolve over time and differ in many cases from their initial objectives and expectations. The Danish firms all launch offshoring operations to

India primarily to get access to qualified staff. During the first year of offshoring operations, however, significant learning and change occur in the Danish firms' approach to offshoring and the strategic motives are expanded and include now other motives than merely the resource-seeking motive. In two Danish firms the experience even ignites a process of strategic transformation in the firms. Moreover, the experience gained sets in motion a range of changes at the systemic level as firms change and adapt their organizations to better exploit the advantages of offshoring. These incidents of strategic and systemic learning indicate that the Danish firm match the type of "fundamental transformation" offered by Lewin and Peeters (2006), where firms discover "that offshoring is not so much about taking out costs as it is about enabling them to experiment with radically new ways of doing business" (Lewin and Peeters, 2006, p. 235).

For the Indian firms, the change over time is less dramatic but the partnerships with Danish firms still entail a considerable amount of strategic learning effects that influence the business development of the firms. The Indian firms use their Danish clients to establish bridgeheads in new markets (Denmark, Scandinavia, Europe) and to enhance their capabilities in various technology and business domains. Also at the systemic level, a number of learning effects and organizational changes occur in the Indian firms. The study shows that even large Indian firms can learn from partnerships with the comparatively small Danish firms. At a general level, this indicates the potentials for upgrading effects in developing country firms from collaboration with developed country firms.

For managers it is important to note that advanced services offshoring is not just about an exchange of services. Rather, for both home and host firms it is about exploring the learning potentials and use these for business and organizational development.

NOTES

¹ The academic literature – as well as the broader debate on offshoring – uses different terms when describing and analyzing the offshoring phenomenon. In accordance with UNCTAD (2004), I use the term “offshoring” to denote both firm-internal (“captive offshoring) and firm-external (“offshore outsourcing) relocation of activities to a foreign country. This terminology seems to be the reference point for recent academic contributions (e.g. Lewin and Peeters, 2006; Maskell et al, 2007).

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63.

Table I: Applied Strategy for Selection of Cases

Dimensions	Criteria	Rationale
<i>Firm size</i>	Large firms	Vast resources; able to respond to process evolution and problems in many different ways.
<i>Business sector</i>	Several services sectors	Maximum variation; not confined to one business sector.
<i>Type of projects</i>	Intensive technology, “value shop” projects.	Problem solving processes with tacit knowledge, ongoing coordination, low degrees of standardization and routines.
<i>Home country of offshoring firm</i>	Denmark	Small, open economy w/ highly flexible labour market. Consistent strong economic performance.
<i>Offshore destination</i>	India	Largest and leading services offshore destination among developing countries.

Table II Summary of Identified Learning Effects

	Strategic Learning	Systemic Learning
DK-1	<ul style="list-style-type: none"> - Use of offshoring as a means to rapid expansion and flexibility in the firm internationalization process 	<ul style="list-style-type: none"> - Changes in project implementation model - Streamlining of internal work procedures and documentation - Absorptive capacity of the firm challenged
India-1	<ul style="list-style-type: none"> - Bridgehead to Denmark/Scandinavian market - Improved competitiveness though enhanced capabilities 	<ul style="list-style-type: none"> - Gained experience in quick ramp-up of operations in client account - Changes in recruitment systems
DK-2	<ul style="list-style-type: none"> - Use of positive results to build trust vis-à-vis internal and external stakeholders - Offshoring inspires firm strategy process and sets agenda for firm internationalization - Change of mindset re. offshoring 	<ul style="list-style-type: none"> - Changes in project implementation model - Streamlining of internal work procedures and documentation - Enhanced experience with international project teams
India-2	<ul style="list-style-type: none"> - Use of positive results to build confidence internally re. the offshoring model - Quick ramp-up of international operations - Bridgehead to European market 	<ul style="list-style-type: none"> - Changes in recruitment systems - Mandatory training for new staff introduced - Changes in project planning and implementation model
DK-3	<ul style="list-style-type: none"> - Offshoring integrated in firm strategy process and sets agenda for firm internationalization 	<ul style="list-style-type: none"> - Changes in project implementation model - Streamlining of internal work procedures and documentation
India-3	<ul style="list-style-type: none"> - Input to business development in domain of public sector IT - Bridgehead to Denmark/Scandinavian market 	<ul style="list-style-type: none"> - New model for client collaboration

Appendix: Interview Questions on Organizational Learning (from 2nd round interviews)

Selected interview questions on organizational learning included in interviews with Danish managers assigned with overall management responsibilities for the offshoring collaboration:

- Please describe the firm's current strategy for offshoring to the Indian firm. Are there any changes in this strategy since the first interview?
- Has your firm's overall strategy changed since the beginning of the offshoring partnership with the Indian firm?
- Has the collaboration with the Indian firm in any way influenced these changes?
- Has the collaboration with the Indian firm instigated or inspired any changes in the manner in which your firm organizes and implements projects?
- Has the collaboration with the Indian firm instigated or inspired other organizational changes in the firm?
- Has your firm gained technological knowledge through the offshore projects from the Indian firm?
- In your view, do some of the experiences from the offshoring partnership have general value for your firm? With regard to, respectively:
 - Business strategy and business development?
 - Organization and implementation of offshore projects and collaboration with offshore clients?
 - Technical knowledge?
- In your view, what are the most important experiences from your collaboration with the Indian partner? From a firm perspective and on a personal level?

Selected interview questions on organizational learning included in interviews with Indian managers assigned with overall management responsibilities for the offshoring collaboration:

- Please describe the firm's current strategy for the collaboration with the Danish firm. Are there any changes in this strategy since the first interview?
- Has your firm's overall strategy changed since the beginning of the offshoring partnership with the Danish firm?
- Has the collaboration with the Danish firm in any way influenced these changes?
- Has the collaboration with the Danish firm instigated or inspired any changes in the manner in which your firm organizes and implements projects?
- Has the collaboration with the Danish firm instigated or inspired other organizational changes in the firm?
- Has your firm gained technological knowledge through the offshore projects from the Danish firm?
- In your view, do some of the experiences from the offshoring partnership have general value for your firm? With regard to, respectively:
 - Business strategy and business development?
 - Organization and implementation of offshore projects and collaboration with offshore clients?
 - Technical knowledge?
- In your view, what are the most important experiences from your collaboration with the Danish partner? From a firm perspective and on a personal level?
