



# **A Decisional Framework of Offshoring: Integrating Insights from 25 Years of Research to Provide Direction for Future\***

Mashiho Mihalache<sup>†</sup>

*Department of Strategy and Entrepreneurship, NEOMA Business School, 59 Rue Pierre  
Taittinger, 51100, Reims, France, e-mail: mashiho.mihalache@gmail.com*

Oli R. Mihalache

*Business Policy Department, Wilfrid Laurier University, 5 University Avenue West, Waterloo,  
Ontario, Canada and Management and Organization Department, VU University Amsterdam,  
De Boelelaan 1105, 1081 HV Amsterdam, Netherlands, e-mail: oli.mihalache@gmail.com*

## **ABSTRACT**

Mirroring the growing trend for firms to support their operations by locating activities abroad, research on the practice of offshoring has increased considerably in recent years. However, despite the mounting research, understanding of the key factors influencing decision-making for offshoring remains surprisingly limited due to fragmentation. In this study, we synthesize and integrate insights from different research domains in order to develop a comprehensive decisional framework for key offshoring decisions. The integrative decisional framework is based on a systematic review of offshoring research published in the most influential management and business journals in the past 25 years. In addition to providing a snapshot of the state of research on decision-making for offshoring, this study aims to stimulate future research by identifying promising research opportunities. In particular, we propose that future research should use alternative theories to incorporate overlooked aspects of decision-making, integrate different theories to account for the interdependencies between decisions, and adopt a portfolio perspective that considers each decision as part of an overall offshoring strategy. [Submitted: March 6, 2014. Revised: October 18, 2015. Accepted: November 15, 2015.]

***Subject Areas: cross-disciplinary review, decision-making, offshoring, and systematic review.***

## **INTRODUCTION**

Fueled by advances in information technology and cost differentials, the practice of relocating business activities abroad has grown at an incredible pace in the past

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<sup>†</sup>Corresponding author.

two decades (Karmarkar, 2004; Lewin & Peeters, 2006). While there is little consensus on the absolute extent of offshoring, statistics agree that there has been a tremendous increase in the practice and that this growth is expected to continue. For instance, some statistics indicate that between 1992 and 2005, the value of services relocated abroad by US firms tripled (Liu, Feils, & Scholnick, 2011). Concerning the expected increase in offshoring, studies suggest that between 10 and 21% of U.S. jobs are potential candidates for offshoring (Bardhan & Kroll, 2003; Farrell & Rosenfeld, 2005; Jensen & Kletzer, 2005; Blinder, 2006). A similar escalation in offshoring is also observed in the European Union (Karmarkar, 2004). Emulating the growth of offshoring, academic research in this field has also experienced rapid growth in the last decade and transitioned from more practitioner-oriented journals to the top tier business journals. However, despite increasing research on offshoring, the outcome of offshoring initiatives remains highly uncertain (Aron & Singh, 2005; Dibbern, Winkler, & Heinzl, 2008) due to a lack of comprehensive understanding of decision-making in offshoring. Research acknowledges this shallow understanding of the offshoring phenomenon (Mol, Van Tulder, & Beijer, 2005; Bunyaratavej, Hahn, & Doh, 2008) and specifically calls for future research to advance understanding of how firms make offshoring decisions (e.g., Srikanth & Puranam, 2011). We believe that the cause for such calls is not the lack of research on offshoring, but the fragmentation of existing research due to limited cross-fertilization between the many research fields studying the phenomenon. While these research efforts provide much-needed breadth in understanding of offshoring, the lack of *systematic* attention has prevented the accumulation of knowledge. This research fragmentation is particularly problematic for decision-making, as basing decisions on only a portion of what we know about offshoring means that we miss opportunities to improve decision-making and, potentially, the performance of offshoring initiatives.

This study advances understanding of offshoring decisional processes in two ways. First, we develop a comprehensive decisional framework by synthesizing the body of research on offshoring. To this end, we systematically review offshoring research published in top academic journals in the past 25 years. We review 173 studies and inductively develop an offshoring decision-making framework that comprises six key offshoring decisions comprising (i) making the offshoring decision, (ii) deciding what business activity to offshore, (iii) location decision, (iv) ownership decision, (v) partner choice decision, and (vi) control/coordination decision. We integrate insights into these key decisions from different research disciplines to provide comprehensive understanding of the factors that inform each decision. By integrating insights from different management research fields, we aim to overcome fragmentation and enhance scholarly exchange (Linderman & Chandrasekaran, 2010).

Second, by thoroughly analyzing what we already know about key offshoring decisions, we identify and discuss several themes that can help future research to advance knowledge on offshoring decisions. In addition to identifying future research directions for each individual decision, we put forward three integrative future research directions. We identify several overlooked aspects of decision-making and argue that future research should tackle these issues by adopting new theoretical perspectives, particularly organizational learning theories (Levitt

& March, 1988) and socio-behavioral theories (e.g., Ashforth & Mael, 1989; Simon, 1997; Uzzi, 1997). Furthermore, in developing the decisional framework, we find that, although there is considerable knowledge about what informs individual decisions, current research does not account for the interdependencies between decisions. We propose that future research should tackle this issue by combining theoretical perspectives. Additionally, we propose that future research should consider the context in which decisions are made by incorporating the fact that many firms operate a portfolio of offshoring activities.

The first step toward developing our integrative decisional framework is conceptualizing offshoring as a stand-alone theoretical concept. We define offshoring as *the assignment of business activities to locations outside a firm's national borders in order to support existing business operations* (Levy, 2005; Kenney, Massini, & Murtha, 2009; Lewin, Massini, & Peeters, 2009; Contractor, Kumar, Kundu, & Pedersen, 2010; Mihalache, Jansen, Van den Bosch, & Volberda, 2012). This definition captures two fundamental elements of offshoring that distinguish it from the related concepts of outsourcing and internationalization. First, offshoring has a geographical aspect, as it implies that a specific activity is performed in a foreign location. This geographic aspect differentiates offshoring from outsourcing because while the former is a location decision, the latter is an ownership decision (e.g., Metters, 2008; Olsson, Conchuir, Agerfalk, & Fitzgerald, 2008; Mudambi & Vezin, 2010; Robertson, Lamin, & Livanis, 2010). Although conceptually distinct, offshoring and outsourcing are related, because when firms decide to transfer certain business activities to an offshore location, they also need to decide whether to perform them in-house (captive offshoring) or outsource them to an offshore vendor (offshore outsourcing) (Beugre & Acar, 2008). As the focus of this study is offshoring, we consider both captive offshoring and offshore outsourcing.

The second fundamental element in the definition of offshoring is the idea that the ultimate goal of offshoring is to support a firm's existing business. In other words, offshoring is a method of optimizing the value chain by performing specific tasks in those locations that have comparative advantages in terms of competencies, labor availability, or cost structures. In this sense, offshoring can be considered a method of enhancing overall system efficiency (Jensen & Pedersen, 2011). This is an important aspect of offshoring, as it sets it apart from the concept of internationalization, which, while also involving entering foreign markets, is concerned primarily with capturing new sales in those markets (Buckley & Casson, 1976). In other words, while internationalization is a market-seeking mechanism, offshoring is a resource-seeking mechanism. Therefore, offshoring means that firms perform certain activities in foreign countries in order to support current business operations by taking advantage of countries' comparative advantages. A few famous examples of offshoring include IKEA sourcing its furniture from more than 50 countries (Andersen, 2006) and Walmart obtaining products from suppliers located predominantly in China (Barthelemy, 2006). Hewlett-Packard Co. also takes advantage of countries' comparative advantages as, for instance, it offshores some of its design for computer servers to Singapore and Taiwan and manufacturing to China, Singapore, India, and Australia (Amaral, Anderson, & Parker, 2011). When it comes to the offshoring of services, IBM provides an

eloquent example through the founding in India of Global Business Services—Global Delivery in order to support the provision of IT solutions to global clients.

We begin this article by describing our methodology. Following that, we present our set of articles included in the review and provide descriptive statistics. We then proceed to identify key offshoring decisions and to integrate knowledge into each one. Finally, we propose possible avenues for future research.

## METHODOLOGY

To analyze the offshoring literature, we employ the systematic review methodology, which is a type of review that uses an explicit algorithm, as opposed to a heuristic, to perform a literature search (Tranfield, Denyer, & Smart, 2003). We chose the systematic review methodology because, compared with nonsystematic reviews, it improves the quality of the review process and outcome by employing a transparent, reproducible procedure. Thus, it combines the benefits of critical review with a comprehensive search process (Grant & Booth, 2009). As even comprehensive review articles cannot avoid the risk of selection bias toward articles that are well known to the authors (Newbert, 2007), the systematic review methodology enables us to use a set of articles from a wide range of journal titles over a long period. We consider that the systematic review methodology is the most appropriate for our goal to synthesize and integrate existing knowledge on decisional factors in offshoring across research fields.

In this study, we follow Tranfield et al.'s (2003) three stages of the systematic review methodology: planning, execution and reporting. We began the *planning stage* by determining which journals to include in the systematic review. We include only peer-reviewed journals—excluding books, book chapters, conference proceedings, dissertation abstracts, and working papers—because peer-reviewed articles are considered validated knowledge and they are likely to have the highest impact on the field (Podsakoff, MacKenzie, Bachrach, & Podsakoff, 2005). We follow Armstrong and Wilkinson (2007) and use the ISI Web of Knowledge's Social Science Citation Index (SSCI) to identify journals for inclusion. We use the top 20 journals based on the ISI Citation Index 5-year Impact Factor from 2009 in Business and Management, which we expect to be those publishing offshoring research. Therefore, we excluded, for instance, marketing journals and psychology journals because offshoring falls outside the scope of topics they generally address. In addition, we consider other renowned journal lists such as the Financial Times 45 Journals and UT Dallas list. As with the ISI Citation Index, we selected those journals that are likely to publish offshoring research. Our decision to focus on leading journals, rather than to perform an exhaustive review, stems from the belief that the quality of a review study rests heavily on the quality of the articles included in the review (Lichtenstein, Yetley, & Lau, 2008). Providing methodological guidelines for systematic reviews, Tranfield et al. (2003: 216) argue that the quality rating of a particular journal provides a good indication of the quality of research published. We also follow numerous systematic review studies that include only research published in top journals (judged by the journal's impact factor) in their respective research fields (e.g., Werner & Brouthers, 2002; Nakata & Huang,

2005; Whitelock & Fastoso, 2007; Hult et al., 2008; Fastoso & Whitelock, 2010). Table 1 lists the journals included in our search.

We completed the planning stage, by determining the keywords to use for the article search. To decide which keywords to use, we checked relevant articles and discussed with top offshoring scholars. We attempted to create as broad a set of keywords as possible to capture all relevant studies. We used the following keywords to conduct our search: offshor\*, international sourcing, international outsourcing, international disaggregat\*, global sourcing, global outsourcing, global\* disaggregat\*, cross-border sourcing, cross-border outsourcing, cross-border disaggregat\*.

In the *execution stage*, we collected data by searching the list of keywords on the Social Sciences Citation Index (SSCI), which is the most comprehensive social science database and has been employed in previous systematic reviews on management topics (e.g., Crossan & Apaydin, 2010). We searched for articles published up until September 1, 2014. Our search for articles using the keywords identified in the planning stage found 213 articles. We then scanned the titles and abstracts of all the articles to determine whether they are actually relevant. We deemed an article as potentially relevant if it satisfied four conditions: (i) at least one of the variables is offshoring, (ii) it deals with the international relocation of business activities, (iii) the goal of the relocation was to support current business operations, not to gain new market share in the foreign location, and (iv) it informs on decisions made by the offshoring organization. We removed 42 articles because they did not focus on our topic—most of them discussed offshore oil production (e.g., Collinson, 1999) or offshore hedge funds (e.g., Aragon, Liang & Park, 2013). We also removed 12 articles because they did not directly discuss the offshoring firm's decisions, focusing solely on vendor-related issues such as vendors' internationalization strategies (Su, 2013). In order to ensure reliability, another researcher familiar with offshoring read the titles and abstracts of all the articles to decide which articles meet the inclusion criteria. We resolved any disagreements through discussion. Therefore, this initial search provided 159 articles for inclusion in our literature review. In addition to considering the top academic outlets, we also included offshoring articles with high citations counts because the quality of a study can also be judged by peers through citations. We performed a search with the same keywords as before, but without specifying a predetermined set of journals—just limiting the search to “Business,” “Computer Science, Information Systems,” “Computer Science, Theory & Methods”, “Management,” and “Operations Research and Management Science” categories in the ISI Web of Knowledge—and then selected the offshoring articles (i.e., those articles meeting the four criteria described in the previous paragraph) with at least 50 citations. This search added 14 articles to our sample. Therefore, our literature review covers 173 articles. Table 1 lists the distribution of these articles per academic journal and scholarly domain. Our division of journals into scholarly domain is based on the Association of Business Schools (ABS) classification<sup>1</sup>.

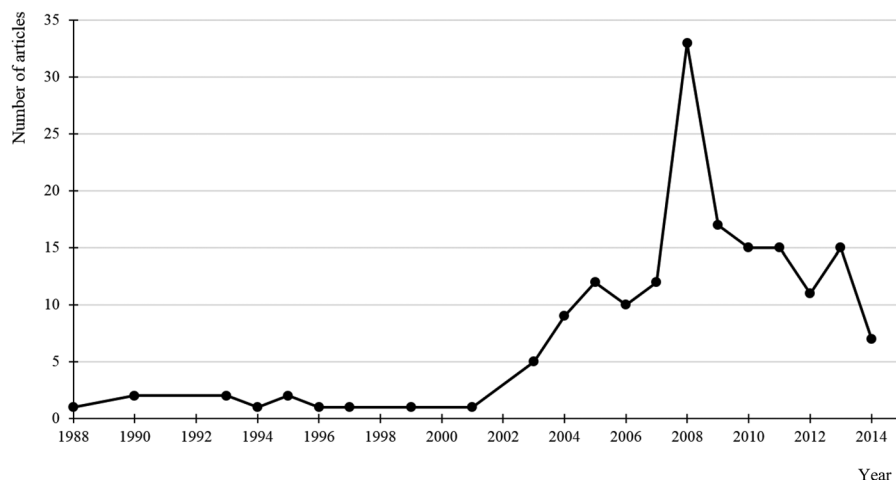
<sup>1</sup> We made three minor modifications to the ABS categories—we merged the “Operations Research and Management Science” and “Operations, Technology & Management” into an “Operations Research” category; we included Organization Studies and Organization Science in General Management instead of “Organization Studies”; and placed Research Policy in “Innovation” rather than in the more general “Social Science” category.

**Table 1:** Distribution per scholarly domain and academic journal.

Scholarly Domain	Count (%) articles	Journals (count of articles)
Operations Research	64 (37.0%)	<i>Journal of Operations Management</i> (22), <i>Supply Chain Management—An International Journal</i> (14), <i>Management Science</i> (8), <i>Decision Sciences</i> (6), <i>Production and Operations Management</i> (5), <i>Omega</i> (2), <i>International Journal of Production Economics</i> * (2), <i>International Journal of Production Research</i> * (2), <i>Manufacturing and Service Operations Management</i> (1), <i>Transportation Research Part E: Logistics and Transportation Review</i> * (1), <i>International Journal of Operations and Production Management</i> * (1), <i>Operations Research</i> (0)
General Management	34 (20%)	<i>Journal of Management Studies</i> (8), <i>MIT Sloan Management Review</i> (8), <i>Harvard Business Review</i> (6), <i>Academy of Management Perspectives</i> (4), <i>California Management Review</i> (3), <i>International Journal of Management Reviews</i> (1), <i>Organization Studies</i> (1), <i>Organization Science</i> (2), <i>Industrial Marketing Management</i> * (1) <i>Academy of Management Review</i> (0), <i>Administrative Science Quarterly</i> (0), <i>Academy of Management Journal</i> (0), <i>Journal of Management</i> (0)
International Business	27 (16%)	<i>Journal of International Business Studies</i> (23), <i>Journal of International Management</i> * (3), <i>Journal of World Business</i> * (1)
Information Management	26 (15%)	<i>MIS Quarterly</i> (13), <i>Information Systems Research</i> (6), <i>Information &amp; Management</i> (5), <i>Journal of Management Information Systems</i> * (1), <i>Journal of Strategic Information Systems</i> * (1)
Strategic Management	9 (5%)	<i>Strategic Management Journal</i> (8), <i>Long Range Planning</i> * (1)
Innovation	7 (4%)	<i>Research Policy</i> (5), <i>Journal of Product Innovation Management</i> (2)
Ethics	5 (3%)	<i>Journal of Business Ethics</i> (5)
Entrepreneurship	1 (1%)	<i>Entrepreneurship Theory and Practice</i> (1)
Total articles:	173	

*Note:* Percentages are rounded up, so the total may exceed 100%

\*Journals that were not included in the initial search, but were added to the table because they contain the articles found in the search for high citations studies.

**Figure 1:** Growth of research on offshoring business processes.

In the *reporting stage* we decided how to analyze the data and report the findings. After compiling the list of relevant articles, we coded and categorized them. In the next sections we present our descriptive analysis and integrative decisional framework.

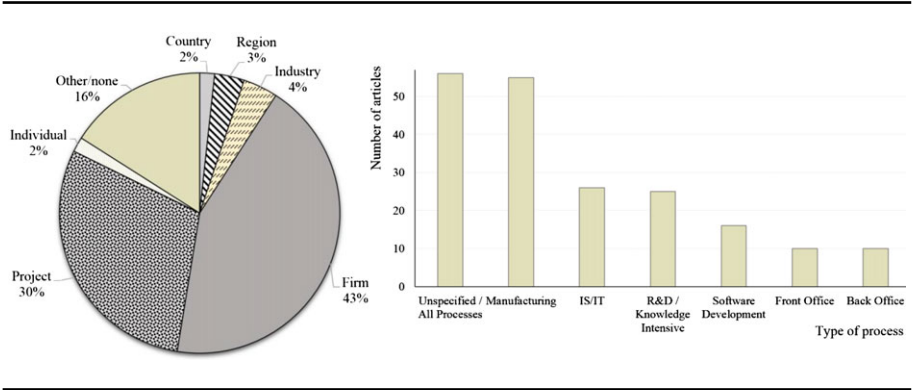
## RESULTS

We begin the analysis with a discussion of the descriptive statistics of our sample of articles. Then we inductively identify the key decisions in offshoring and integrate insights around these themes.

### Descriptive Analysis

Figure 1 presents the development of offshoring research over the past decades. It indicates that since the early 1990s, the number of publications on offshoring has grown steadily. It is important to note that the peak recorded in the year 2008 is due to two special issues on offshoring published in *Journal of Operations Management* and *MIS Quarterly*. The publication of special issues also reflects the increased interest in the topic. This growing interest in offshoring research mirrors the proliferation of offshoring in practice, as well as mounting media attention (e.g., Swann, 2004). Figure 2 shows a breakdown of offshoring research based on the *level of analysis* and the *type of activity* offshored. Most research considers offshoring at firm (43%) or project (30%) level, followed by industry (4%), region (3%), country (2%), and individual (2%) level, while 16% of the studies do not focus on a particular level of analysis as they provide general accounts of offshoring. Figure 2 also shows the breakdown of research by the *type of business activity offshored*. The offshoring of manufacturing activities has received the most

**Figure 2:** Breakdown of articles by level of analysis and type of activity offshored.



research attention, but this is because it was the earliest activity that firms started relocating abroad. More recent research has tended to focus on the offshoring of services, with a strong emphasis on IS/IT and software development as well as knowledge intensive activities such as engineering and research and development. In addition, we also considered the *type of study* and our analysis indicates that the largest proportion of studies are empirical, with 45% building theory and 38% testing theory. The remaining 17% of studies are theoretical rather than empirical.

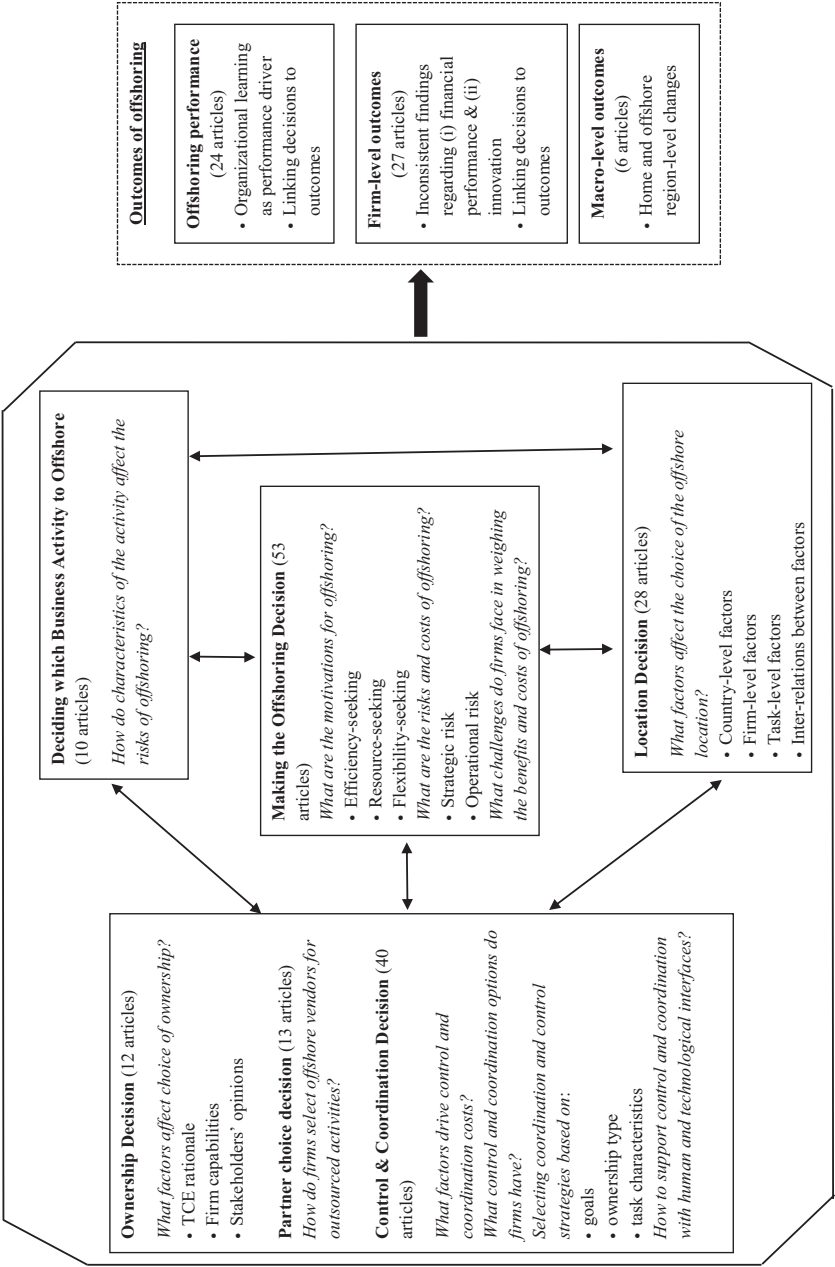
## AN INTEGRATIVE DECISIONAL FRAMEWORK OF OFFSHORING

In view of the complexity of setting up and managing offshoring activities, we aim to develop a decisional framework for offshoring that integrates existing knowledge from different research disciplines on key offshoring decisions. To define the key offshoring decisions, we took an inductive approach as different categories emerged by coding the articles in our sample. Each article could be assigned to several categories if it included information relevant for multiple decisions. For example, articles including a discussion of the benefits and costs of offshoring alongside questions about which activities to offshore inform multiple decisions, and we coded them in both offshoring and activity choice decisions. Figure 3 presents the decisional framework comprising the six key offshoring decisions we identified (i.e., making the offshoring decision, the activity choice decision, the location decision, the ownership decision, partner decision, and control/coordination decision) and a breakdown of the studies by the level at which they analyze the outcomes of offshoring: project (i.e., offshoring activity), firm, or macro (i.e., industry, region, and country) level. Figure 3 also shows how many studies consider each decision and offshoring outcome. Appendix A complements Figure 3 by listing the articles that inform a particular offshoring decision.

To explain these offshoring decisions, research draws on several *theoretical perspectives*. Table 2 provides the number of articles using a particular theoretical perspective and a description of how the basic tenets of each theory apply to offshoring. Transaction cost economics (TCE) (Williamson, 1975, 1985) is the



Figure 3: An integrative decisional framework of offshoring.



**Table 2:** Frequencies of theoretical approaches per key offshoring decisions.

	Offshoring Decision		Activity Decision		Location Decision		Ownership Decision		Partner Decision		Coordination Decision		Outcomes: Offshoring		Outcomes: Firm		Outcomes: Macro-level	
	Decision		Decision		Decision		Decision		Decision		Decision		Decision		Decision		Decision	
Transaction Cost Economics (TCE)	8		3		4		3		1		5		4		4			
Socio-cultural perspective	4				2		1		2		7		2		1			
Knowledge Based View (KBV)	2		1		1		1				1				4			
Resource Based View (RBV)	3				2						2		1		2			
Information-processing (IP)			1								4		3					
International Business (IB)	2				3										1			
Organizational Learning	2												3					
Agency Theory	2				1		1		2		1				1			
Others	11		3		5		2		1		11		4		6			1
Not explicitly stated	28		5		15		5		9		16		12		14			5

*Transaction cost economics* proposes that firms aim to minimize transaction costs associated with the planning, adapting, and monitoring required for completing a particular activity (Williamson, 1975, 1985). TCE rationales are used to explain virtually all offshoring decisions.

*Resource Based View* considers the firm as a bundle of productive resources and holds that valuable, rare, inimitable, and nonsubstitutable resources (VRIN) may provide competitive advantage (Barney, 1991; Penrose, 1959). Using an RBV perspective, offshoring firms can develop bundles of VRIN resources by sourcing resources from locations that have comparative advantages.

*Socio-cultural perspective* of offshoring draws on social embeddedness theory (Uzzi, 1997), social identity theory (Ashforth & Mael, 1989) or cultural differences theories (e.g., Hofstede, 1980, 1983) to explain the decision to offshore and control/coordination challenges and solutions.

*Information-processing* perspective suggests that firms need to match information-processing capacity to information processing needs in the environment (Galbraith, 1973; Tushman & Nadler, 1978) and primarily informs the control and coordination decision.

*International business* classical theories such as internationalization theory (Johanson & Vahlne, 1990) and Dunning's eclectic (OLI) paradigm (Dunning, 1993) are relevant primarily for the decision to offshore and the location decision.

*Knowledge Based View* sees knowledge as the central resource of firms and knowledge integration as the primary purpose of the firm (Grant, 1996). KBV explanations are primarily used to explain the link between offshoring and firm-level innovation outcomes, but their inherent ideas of knowledge access and transfer make them relevant for most offshoring decisions.

*Agency Theory* deals with issues arising from a goal mismatch between the principal who delegates work and the agent who performs it (Eisenhardt, 1989). In offshoring research, agency theory is not widely used, but it is relevant for several decisions such as location, partner, and control/coordination.

*Organizational Learning* theory suggests that firms can learn from their own experience but also from others (Levitt & March, 1988). Offshoring research suggests that learning is an important benefit of offshoring and a key driver for the success of offshoring initiatives.

theory most frequently used to explain offshoring decisions and it is used to explain all six offshoring decisions. Socio-cultural theories are also relatively frequent in current research, though they are primarily used to explain only the offshoring, location, and control/coordination decisions. In this group of theories, we included studies using social embeddedness (Uzzi, 1997), social identity (Ashforth & Mael, 1989), and cultural differences theories (e.g., Hofstede, 1980, 1983). Socio-cultural perspectives are particularly applicable to offshoring decisions as they can help explain many offshoring aspects related to operating in a foreign location and interacting with employees from different cultures. Current studies also use the knowledge based (KBV) and resource based (RBV) views to provide important insights about offshoring decisions. It is also important to note that 54% of studies do not explicitly state the underlying theoretical perspective used and that only 12% of studies discuss multiple theories. When discussing each key decision below, we draw on these theoretical perspectives to explain how different factors influence decision-making.

In addition, in Table 3 we present the dispersion of key offshoring decisions and outcomes between the different *research domains*. An important insight from this table is that there are great opportunities for cross-fertilization between research domains as the offshoring decisions are studied in multiple domains. While some decisions seem to be particularly prevalent in certain research domains (e.g., the location decision is most studied in Operations Research and control/coordination decision in the Operations Research and Information Management domains), others seem to be equally attractive to researchers from all domains (e.g., the offshoring and location decisions). In order to develop a comprehensive framework for decision-making in offshoring, in the next sections, we integrate insights into each of the main offshoring decisions and offshoring outcomes from the different research domains.

### **Making the Offshoring Decision**

The start of our decisional framework is making the offshoring decision; that is, deciding whether to perform certain business activities at home or in a foreign country. This is a fundamental question in offshoring research and has received a considerable amount of research attention (Table 3). Overall, this body of research suggests that making the offshoring decision entails weighing the potential benefits of using the foreign location against the costs and risks associated with managing across geographical and cultural boundaries.

The remarkable popularity of offshoring stems from its many potential benefits. The underlying reasoning is that offshoring allows firms to take advantage of the resources available in foreign countries by performing business activities in locations that have comparative advantages. We have grouped offshoring benefits into three main categories. The most prevalent reason for offshoring is *efficiency-seeking*. By offshoring, firms can leverage the lower resource costs, primarily labor costs, of developing nations (Lieberman, 2004; Lewin & Peeters, 2006; Youngdahl, Ramaswamy, & Verma, 2008). Based on data on more than 1,600 offshoring initiatives, Manning, Massini, and Lewin (2008) find that cost-saving is the most prevalent incentive for offshoring with managers rating cost reduction as “4” or

**Table 3:** Distribution of topics per scholarly domain.

	General Trends	Offshoring		Activity		Location		Ownership		Partner		Coordination		Outcomes: Offshoring		Outcomes: Firm		Outcomes: Macro-level
		Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	Decision	
Entrepreneurship		1														1		
Ethics		2						1		1		2						
General Management	6	12		2		7		5		1		5		7		3		2
Information Management	1	8		3		2				3		10		8				1
Innovation		1				4						1				2		2
International Business	3	8				4		2		1		2				10		1
Operations Research	3	17		5		10		3		7		18		8		8		
Strategic Management	1	4				1		1				2		1		3		
Totals per decision	14	53		10		28		12		13		40		24		27		6

“5” on a five-point scale in as much as 91% of offshoring activities surveyed. The pervasiveness of cost-saving is so entrenched in offshoring that some studies even define offshoring as a cost-reduction strategy. For example, Chua and Pan (2008: 267) define offshoring as “the trend where companies look for cheaper offshore resource options to reduce their baseline costs”. In addition to lower wages, government incentives in the form of tax advantages and financial assistance for activities such as employee training also contribute to increase firm efficiency (Metters & Verma, 2008). In the case of offshore outsourcing, the increased efficiency can also be a result of obtaining access to the vendors’ expertise and economies of scale (Cha, Pingry, & Thatcher, 2008).

Another important incentive for firms to offshore is *resource-seeking*. Through offshoring, firms can benefit from access to specialized labor and knowledge resources that are hard to obtain, too expensive, or unavailable in the home location (e.g., Ravichandran & Ahmed, 1993; Farrell, 2005; Farrell, Laboissiere, & Rosenfeld, 2006). For instance, Lewin et al. (2009) find that firms offshore in an effort to compensate for shortages of skilled labor at home as certain offshore locations (e.g., India) provide access to vast pools of skilled employees, and Manning et al. (2008) find that, after cost savings, access to quality labor is the most frequent offshoring motive. In addition, by offshoring, firms can access specialized knowledge unavailable at home (Nachum & Zaheer, 2005) because specialized partners located in foreign countries can be particularly skilled in certain activities (Jensen, 2009). Such resource-seeking offshoring opportunities can be particularly beneficial for small firms by allowing them to overcome a lack of resources relative to their larger counterparts (Dossani & Kenney, 2006; Musteen & Ahsan, 2013).

Firms also engage in offshoring for *flexibility-seeking* motives. Offshoring provides opportunities to increase flexibility in several ways. Differences in labor laws, particularly weaker labor protection in certain countries, allow firms to adapt the labor supply to demand fluctuations caused by changing circumstances (Farrell, 2005). Also, firms can enjoy the greater flexibility provided by contracting specialized offshore providers who can increase or decrease resources to match changing project needs because, unlike the contracting organization, they can shift resources between multiple clients (Doh, 2005). In addition, by locating noncore activities abroad, offshoring allows firms to focus on core activities (Schilling & Steensma, 2001; Jacobides, 2005; Aksin & Masini, 2008) and offers increased flexibility due to leaner organizing (Contractor et al., 2010). Furthermore, Di Gregorio, Musteen, and Thomas (2009) argue that by offshoring firms can respond more quickly to changing demands because offshored activities, especially when externalized to an outside provider, may be performed outside the firms’ bureaucratic structures and regular hierarchy.

These benefits notwithstanding, the offshoring decision also needs to take into account the costs and risks associated with locating activities in foreign countries. The geographical distance inherent in offshoring arrangements gives rise to two main types of risk: strategic and operational. *Strategic risk* refers to the potential weakening of firms’ ability to compete in their market because offshoring implies that some capabilities reside outside firms’ main operations. Due to difficulties of knowledge transfer from geographically distant locations, the home operations may fail to stay abreast of developments and experience diminishing capabilities in the

long term. For instance, Mihalache et al. (2012) find that firms may lose innovation capability when offshoring high levels of knowledge-intensive activities due to hollowing out of capabilities and added pressure on managerial attention. Similarly, Cha et al. (2008) find that, unless sufficient knowledge is transferred from the foreign location to the home location, offshoring firms might endure long-term cost increases due to a loss of firm knowledge. In addition, firms face additional strategic risk in offshore outsourcing due to the foreign vendors' opportunistic behavior. When not only locating activities abroad but also externalizing them, firms face the risk that foreign vendors will not exert the effort agreed and will take advantage of the firm's loss of expertise in the area to demand higher prices or, perhaps, even more threateningly, become competitors (Aron, Clemons, & Reddi, 2005). Firms might also endanger their long-term competitiveness when revealing intellectual property to opportunistic vendors, especially when outsourcing to countries with relaxed intellectual property regimes (Apte & Mason, 1995; Roy & Sivakumar, 2011; Porter & Rivkin, 2012).

In addition, offshoring firms also face a number of *operational risks*, which refer to the risks offshoring poses to the outcome or costs of performing business activities away from the home location. Operational risks, stemming from the geographical distance between onshore and offshore operations, can be direct and indirect. Direct risks are generally related to country risks such as increases in wage levels, currency fluctuations, higher personnel turnover, or political turmoil (Hahn, Doh, & Bunyaratavej, 2009; Porter & Rivkin, 2012). In addition, firms face indirect costs—also referred to as “invisible” (Stringfellow, Teagarden, & Nie, 2008) costs—due to physical, linguistic, cultural, or legislative distance between countries, which raise important communication and coordination problems (Ravichandran & Ahmed, 1993). Other “hidden costs” when deciding to offshore include travel costs or partner-selection, in the case of offshore outsourcing, (Tadelis, 2007; Larsen, Manning, & Pedersen, 2013). In addition, when deciding to locate business activities abroad, firms need to consider the costs of navigating through different and changing regulatory and policy environments (Tadelis, 2007; Metters, 2008). A further indirect cost is due to stakeholders' negative perceptions of offshoring such that, even when firms achieve high performance from offshore operations and are able to manage other indirect costs, stakeholders can still penalize them for performing activities outside the home country (Metters, 2008; Desai & Roberts, 2013). Analyzing this impact is not easy, as different stakeholders make different moral judgments on the foreign location of business activities (Robertson et al., 2010). In addition, offshoring firms also need to consider how their internal stakeholders, namely their employees, are affected by and able to deal with the risks of offshoring (den Butter & Linse, 2008).

When making the offshoring decision, firms need to assess the costs and benefits. However, this process is not straightforward and many firms make considerable errors when estimating the outcomes of offshoring (Wang, Singh, Samson, & Power, 2011). For instance, Platts and Song (2010) find that firms underestimate the total costs of offshoring by as much as 25% to 50%. Estimation errors regarding the potential cost savings from offshoring increase with the complexity of the activity (Larsen et al., 2013). Assessing the net benefits of offshoring is further complicated by the fact that offshoring firms generally aim to capture

multiple benefits simultaneously (Lewin & Peeters, 2006), especially as some of these goals, cost-cutting and innovation for example, are incompatible (Mihalache et al., 2012).

As the above discussion indicates, making the offshoring decision is not straight-forward and, despite the abundance of research, important research questions still remain unanswered. A research avenue that can make important inroads in our understanding is to move away from viewing offshoring decisions as independent events and to adopt a more dynamic perspective. Manning et al. (2008) find that offshoring experience changes firms' perception of offshoring risks with experience shifting concerns from more strategic risks such as loss of control to more operational ones such as offshore employee turnover. This finding highlights the potential learning in offshoring decision-making as firms can incorporate in their decisions insights from previous offshoring initiatives. Adopting an organizational learning perspective (Levitt & March, 1988), future research can advance the understanding of how transferable insights are across serial offshoring decisions, how firms learn from previous offshoring decisions, and how they can incorporate their experience into future offshoring decisions. The potential for using organizational learning theory in future research is also supported by the fact that it is considerably less used in previous research than other theories in explaining how firms make the offshoring decision (Table 2).

In addition, future research could integrate other firm-level factors in decision-making such as offshoring's fit with firms' overall (Porter, 1980) and global (Ghemawat, 2007) strategies. Relatedly, future research could consider to what extent decision-makers include other strategic considerations in the offshoring decision such as competitors' moves regarding offshoring or overall industry isomorphism (Hahn et al., 2009). Furthermore, future research might consider what affects decision-makers' assessments of the risks and benefits of offshoring by including factors such as decision-makers' biases, personal experiences, and social network.

If firms do decide that the benefits of offshoring outweigh the costs, they need to make a number of decisions regarding what activities to offshore, where, and how to set up and manage geographically dispersed offshore operations.

### **Deciding What Business Activities to Offshore**

The offshoring decision is intrinsically linked to the decision of which business activities to offshore, especially as firms are slicing their value chain increasingly finely (Rugman, Verbeke, & Yuan, 2011). The extent to which an activity is a good candidate for offshoring depends on the extent to which its offshoring exposes firms to the risks discussed in the previous section. Consequently, studies focusing on this decision try to understand how the characteristics of different activities affect the degree of strategic and operational risk.

A first factor on which the decision to offshore a given activity depends is the degree to which its offshoring creates strategic risk. Research indicates that, to protect a firm's ability to capture value, it is less likely to offshore core activities than noncore ones (Apte & Mason, 1995; Aron & Singh, 2005). This is because

offshoring core activities can lead to a loss of expertise or to the transfer of key knowledge to a supplier who can act opportunistically.

A second factor on which the decision to offshore a given activity depends is the degree to which it exposes firms to operational risk. A fundamental characteristic that affects offshoring potential is the need for physical presence, because offshoring entails performing an activity at a distance (Apte & Mason, 1995; Mithas & Whitaker, 2007; Ellram, Tate, & Billington, 2008). Beyond this basic requirement, research draws heavily on transaction cost economics (TCE) to argue that operational risk depends on transaction frequency, asset specificity, and uncertainty (Williamson, 1975, 1985). Firms can weigh up the benefits of offshoring different activities against the transaction costs arising from locating an activity abroad (Stratman, 2008). More routine, less interactive business activities, which require lower specific investment and whose performance can be easily assessed, have lower transaction costs, and, thus, make good candidates for offshoring (Ellram et al., 2008; Liu et al., 2011). Other activities associated with lower operating risk include those that are easier to codify and standardize (Ravichandran & Ahmed, 1993; Aron & Singh, 2005; Mithas & Whitaker, 2007; Stringfellow et al., 2008). The degree of customer contact is also related to operational risk and activities requiring less customer contact are better candidates for offshoring (Apte & Mason, 1995; Mithas & Whitaker, 2007).

While these studies provide important insights into what determines good candidates for offshoring, the increasing trend of offshoring high-value added activities and those that are more difficult to codify and measure, such as research and development and engineering (e.g., Manning et al., 2008), as shown in Figure 2, remains inadequately explained. Future research can advance understanding of this decision by considering theoretical approaches complementary to TCE. The RBV and its associated KBV stand to inform firms' decisions to offshore knowledge-intensive activities by suggesting that accessing scarce or specialized knowledge resources abroad can be important goals of offshoring firms. In line with this theoretical approach, Youngdahl and Ramaswamy (2008) propose that activities with high levels of customer contact and high levels of embedded knowledge can also be offshored when the goal is to generate new solutions and knowledge. The suggested link between making the offshoring decision and activity-choice decision requires further research attention as it can provide important nuance to our understanding of both decisions.

### **The Location Decision**

If firms decide to offshore a particular activity, they also need to decide where to offshore. Our review indicates that location decisions are influenced primarily by the characteristics of the foreign locations, firm-level factors, and task characteristics.

One stream of research proposes *country-level factors* as important determinants of location choice. These studies draw primarily on ideas from international business theories such as the OLI paradigm (Dunning, 1993) to consider the characteristics of potential offshore destinations. As the underlying logic of offshoring is to choose locations that hold particular comparative advantages, this line of



research plays a particularly important role in the location decision. A first group of country-level factors focuses on the economic and political profiles of the foreign location. These factors include labor costs, availability of skills and labor, environment, risk potential, and infrastructure (Farrell, 2006; Liu, Berger, Zeng, & Gerstenfeld, 2008). For instance, Demirbag and Glaister (2010) find that firms considering locations for offshoring R&D processes prefer locations with low wages, more developed knowledge infrastructure, and lower risk. However, due to complex offshoring motives and country profiles, these considerations are not straightforward, and decision-makers need to consider tradeoffs between factors. A fundamental tradeoff is that between cost and quality, with firms choosing locations providing higher quality even though they do not offer the lowest-possible costs (Bunyaratavej, Hahn, & Doh, 2007). In addition to these economic and political factors, research draws on sociocultural perspectives (Hofstede, 1980, 1983; Uzzi, 1997) to argue that firms also consider social traits, primarily culture and language when making location decisions. Investigating the impact of Hofstede's cultural dimensions on location choices for service projects, Hahn and Bunvaratavej (2010) find that locations characterized by greater uncertainty avoidance, individualism, and masculinity are likely to attract more offshoring projects and that the explanatory power of these factors is greater than that of macroeconomic and risk factors. Similarly, Metters and Verma (2008) argue that, especially for knowledge-intensive processes, firms tend to offshore to locations with which their home countries used to or still have colonial ties, because of the language and cultural links—British and American firms tend to offshore to India, Barbados, and the Philippines, while Spanish and Portuguese firms lean toward South American locations. In addition, Gefen and Carmel (2008) find empirical evidence from their analysis of an online programming marketplace that corroborates the importance of language similarity for location decisions.

Another important set of location determinants comprises *firm-level factors*, represented primarily by firms' offshoring experience. The literature has so far highlighted two types of offshoring experience: location-specific and general. As when operating in a specific offshore location a firm learns about the host environment, experience with offshoring to a certain location reduces the perceived risk of that location; thus, for future projects, firms tend to prefer it to new locations (Demirbag & Glaister, 2010). On the other hand, general offshoring experience increases the likelihood that firms will choose higher-risk locations as they are likely to have developed capabilities that help them reduce transaction costs and better navigate through risky new environments (Hahn et al., 2009). These findings regarding experience are very interesting, because they indicate that firms learn from offshoring and that this knowledge is transferable to new offshoring activities. It is also important to note that, in addition to the main effect of country and firm factors, the location decision depends on their interplay. For instance, Jandhyala (2013) finds that while poor property rights reduce the likelihood of firm selecting a particular country to offshore information system processes, experience in similar countries mitigates this effect.

Research also proposes that *task-level factors* affect location decisions. This line of research draws on TCE to argue that firms try to match the characteristics of the activity with those of the location in an effort to reduce transaction costs. Firms

tend to offshore nonroutine, complex, interactive processes to countries with better institutional quality and closer cultural proximity (Liu et al., 2011) and interactive, repetitive, or innovative processes to countries with advanced ICT infrastructure and a similar language (Doh, Bunyaratavej, & Hahn, 2009). In addition, Jensen and Pedersen (2011) find that the less standardized the processes, the more they are located in advanced countries.

Overall, research suggests that deciding on a location is complex, as firms need to analyze not only factors at multiple levels, but also how they interact. Further adding complexity to the location decision, some factors informing the location decision might be contradictory; thus, firms need to consider tradeoffs in location choices, such as between the level of risk and input costs. Farrell (2006) suggests that firms should rank the importance of different factors to decide on the appropriateness of alternative locations. Further adding complexity, research suggests that the location discussion needs to go beyond between-country consideration, as firms also need to make more fine-grained within-country decisions regarding the region or city in which to locate, especially for large, diverse countries such as India (Zaheer, Lamin, & Subramani, 2009; Liu & Chen, 2012). Interestingly, Allon and van Mieghem (2010), using a simulation study, suggest that when they offshore manufacturing, firms might benefit from a dual-sourcing strategy combining near- and far-shore locations, because this allows them to benefit from the quick response capabilities of near-shore locations and cost-effectiveness in far-shore locations.

Research on the location decision abounds, but there are still some important areas that need further research attention. While current research largely considers offshore location decisions from a static perspective, new findings indicate the need to incorporate the changing conditions in the foreign locations. Recent studies show that as more firms are attracted to a given offshore location, and this location interacts with firms from developed nations, environmental conditions in that location, such as wage levels and skills, change (Ethiraj, Kale, Krishnan, & Singh, 2005). This raises the question of whether firms are able to sense and respond to these changing conditions (Zhang & Huang, 2012). In addition, Table 2 also showcases two research gaps that promise to inform our understanding of location choice as it shows that the organizational learning theories and information processing theory have not been explicitly used to explain the location decision. As previous research finds offshoring experience matters in location choices, future research could adopt a learning perspective to uncover the learning mechanisms employed and the processes that allow firms to factor in insights from previous offshoring occurrences. Related, future research could investigate how a firm's other active offshoring initiatives affect new location decisions (Vestring, Rouse, & Reinert, 2005). With increasingly complex value chain designs, firms need to coordinate activities not only between the home office and the offshore operations, but also between multiple offshore activities. Information-processing theory can form the basis of this line research as it helps understand the difficulties of coordinating across different national and cultural boundaries. Together, these future research directions could help provide insights on the intricacies of location decisions.

## The Ownership Decision

Our review of research uncovers surprisingly few offshoring studies considering the ownership decision. Perhaps this is because the choice between outsourcing and captive centers is essentially a make-or-buy decision, a well-developed research stream (for a comprehensive review of make-or-buy research, see Lacity, Solomon, Yan, & Willcocks, 2011).

Although, ownership decisions can be considered on a continuum from zero to full ownership of the offshore operations, research primarily distinguishes between outsourcing (i.e., firms externalize business processes to a service provider in a foreign country) and captive offshoring (i.e., firms have some ownership of the offshore activity) (Lewin & Peeters, 2006). Mirroring general make-or-buy research (Williamson, 1975), the few offshoring studies addressing the ownership decision use arguments rooted in transaction cost theory to decide whether to conduct the offshore activity in-house or to outsource. A key decisional factor is the comparison of the captive and outsourced options with regard to their transaction costs. The primary insight of current research is that the more complex an activity, the more likely it is that the firm will conduct the activity in-house rather outsourcing it at the foreign location (Karmarkar, 2004; Youngdahl & Ramaswamy, 2008). Murray, Kotabe, and Wildt (1995) find that the performance advantage of captive offshoring over offshore outsourcing is greater when the asset specificity of the resources used is higher, because captive offshoring provides greater control over the specific resources and, thus, it is not susceptible to the risks associated with relying on an outside provider. In addition, Aron and Singh (2005) argue that the ownership decision depends on the degree of structural risk, such that activities that are likely to be affected by opportunistic behavior by the vendor, such as raising prices, using less qualified staff than agreed, or appropriating intellectual property, should be performed in captive centers. More generally, the ownership decision entails weighing the risks of lower control over outsourced operations such as losing competence in particular activities, dependence on a partner, and risks of leaks of sensitive company information, against the higher costs of setting up and managing captive offshore centers (Metters, 2008).

Interestingly, some explanations go further than merely transaction cost. Mudambi and Venzin (2010) argue that ownership depends on whether firms have the capabilities to support vertical integration (such as linking standardized service delivery with knowledge-intensive activities) or the capabilities to support specialization (such as orchestrating internal knowledge-intensive capabilities with external standardized processes). Tadelis (2007) provides a different perspective by arguing that, besides cost considerations, offshore outsourcing allows firms to focus attention on their core activities. Taking yet another direction, Robertson et al. (2010) draw on stakeholder theory to argue that stakeholders' opinions also affect ownership decisions, and that both investors and customers perceive offshore outsourcing less favorably than offshoring through captive centers.

Although there is a rich understanding of the factors affecting ownership decisions, future research can advance this understanding in several ways. The most fruitful area for future research is the incorporation of location factors in the ownership decision as, so far, research largely overlooks this crucial aspect

influencing ownership (Mudambi & Venzin, 2010). Future research could consider how different characteristics of the foreign environment, such as institutional or legal factors, complement the above insights regarding the role of task characteristics in determining ownership type. In other words, future research needs to explicitly consider the link between ownership and location decisions.

### **Partner Choice Decision**

If the outcome of the ownership decision is that the activity is going to be externalized, then firms need to choose an offshore vendor to perform the activity. Selecting offshore suppliers requires firms to understand their own needs and match these with the suppliers' competencies, which can consist of delivery, relationship, and transformational competencies (Feeny, Lacity, & Willcocks, 2005). At the same time, the partner choice decision considers the risks associated with different partners, such as that of the partner going bankrupt (Olson & Wu, 2011). In addition, the relative bid price and the previous experience with a particular supplier are also factors in supplier choice (Gefen & Carmel, 2008). In order to reduce the potential problems with individual partners, research suggests that firms can multi-source, in other words contract with multiple vendors working together to deliver a particular service. This can provide various benefits such as access to diverse sources of knowledge and reduced commitment to a particular supplier; however, these benefits need to be weighed against costs of more difficult coordination and perhaps reduced trust from the suppliers (Levina & Su, 2008; Bapna, Barua, Mani, & Mehra, 2010). In addition, Steven, Dong, and Corsi (2014) find that outsourcing manufacturing to a smaller supplier base could lead to fewer recalls, but only at low levels of outsourcing.

An important insight of this body of research is that choosing partners at offshore locations is considerably more challenging than choosing partners at home. This means that future research might need to relax rationality assumptions. Liang and Parkhe (1997) propose that firms do not follow a rational approach when selecting offshore partners as they do for selecting partners at home, because the complexity of the task exceeds the bounds of human rationality. However, so far, research has largely overlooked the behavioral aspect of choosing offshore partners and future research could try to understand how firms overcome the high information processing requirements when choosing foreign partners. Adopting alternative theory lenses such as socio-cultural perspective might provide insights into the heuristics used by decision-makers to select foreign partners.

### **The Control/Coordination Decision**

Our review reveals that about 23% of offshoring studies consider control and coordination. The centrality of coordination and control research is not particularly surprising, because the geographical dispersion inherent in offshoring needs to be bridged for firms to deliver products or services. Offshoring adds to traditional work-design considerations (Thompson, 1967) the need to understand the implications of coordinating across geographical and, in many instances, firm boundaries. Geographical separation creates considerable costs in terms of control and coordination, as firms need to overcome not only physical separation but also

cultural differences that affect communication and behavior. Drawing on socio-cultural perspectives (Ashford & Mael, 1989; Hofstede, 1980, 1983; Uzzi, 1997), research argues that cultural differences are a key contributor to the difficulties of controlling and coordinating offshore operations because they are associated with behavioral differences such as different ways of communicating (Beugre & Acar, 2008), of approaching corporate social responsibility (Andersen & Skjoett-Larsen, 2009) or of voicing concerns (Tavakoli, Keenan, & Crnjak-Karanovic, 2003). For instance, Gray and Massimino (2014) find that language similarity is associated with the level of compliance at offshore sites. Furthermore, coordinating offshoring arrangements is difficult because different cultures are associated with different predispositions toward tacit and explicit knowledge (Lehrer & Asakawa, 2003). The challenges of coordinating offshore and home operations are further aggravated by between-country status differences such as differences in competencies, economic resources, interpersonal connections, and social differences (Levina & Vaast, 2008). Research indicates that the challenges and costs of control and coordination increase with the scale of the offshore processes and the geographic distance between home and offshore location, due to increased transaction costs (Handley & Benton, 2013).

Research on coordination and control decisions largely builds on information processing theory to suggest that firms need to match information processing requirements with information processing capacity (Galbraith, 1973; Tushman & Nadler, 1978). To achieve this match, firms can either increase communication to match the greater need for coordination and control of offshore operations, or reduce those needs by modularizing tasks (Mirani, 2007; Srikanth & Puranam, 2011). Coordination and control decisions fall into one of two main categories: organic and mechanistic strategies. While the former are characterized by social control, are informal, cooperative, and decentralized, the latter are formal controls characterized by controlling and centralized approaches (Mirani, 2007; Li, Liu, Li, & Wu, 2008; Mason & Leek, 2008;). In addition to deciding between different control types, firms need to make decisions regarding the degree of control (how firmly control is exercised) and control style (whether control is unilateral or bilateral between the offshoring firm and the offshoring operations) (Gregory, Beck, & Keil, 2013).

However, what factors affect firms' decisions concerning different control/coordination strategies? Research indicates that there are several. First, the *goals of the offshoring initiative* play an important role. Li et al. (2008) argue that while formal control is primarily useful for dealing with opportunism, because detailed contracts contain explicit deterrents to guarantee that codifiable knowledge is transferred efficiently, social control is particularly appropriate to stimulate radical innovation when firms are trying to acquire tacit knowledge. Similarly, Roy and Sivakumar (2012) argue that organic control is most appropriate when firms aim to enhance radical innovation, and mechanistic control is suitable when they want to stimulate incremental innovation.

Second, research indicates that the *ownership of the offshore operations* also influences control and coordination decisions. While captive offshoring requires only procedural coordination (i.e., a psychological contract that guides the mutual exchange of information required for completing ongoing work), outsourcing

arrangements also require contractual coordination (i.e., a contract-based arrangement specifying the rights of parties involved regarding issues of setup and outcome measurement) (Mirani, 2007). Interestingly, Srikanth and Puranam (2011) propose that in addition to these classic solutions resulting from an information processing perspective of organizational design (Galbraith, 1973; Tushman & Nadler, 1978), firms can also use and develop existing common ground between home and offshore operations, especially when engaged in captive offshoring. While shared understanding develops over time, and as onshore-offshore teams mature they can rely more on loose-coupling (Olsson et al., 2008), their development can also be encouraged through socialization activities (Gregory et al., 2013). In line with these ideas, Lehrer and Asakawa (2003) argue that for effective knowledge transfer, firms need to ensure a common standard of explicit knowledge that will support tacit knowledge flows between home and offshore operations.

To coordinate offshore operations that are outsourced to third-party vendors, firms rely on different types of contracts, particularly choosing between fixed price contracts and time and materials contracts. This decision entails shifting the risk between the vendor and client; while for fixed price contracts the vendor is the primary risk holder, for time and materials the client is the primary risk holder (Gopal, Sivaramakrishnan, Krishnan, & Mukhopadhyay, 2003). Gopal et al. (2003) show that project and client characteristics influence the contract choice in offshore outsourcing such that more important and uncertain projects tend to be conducted under time and material contracts, while fixed price contracts were more likely for larger clients or those with greater experience with offshore outsourcing. Vendors' preference is also a factor in contract choice, as Gopal and Sivaramakrishnan (2008) find that vendors prefer fixed price contracts for larger and longer projects in order to secure larger rents from their knowledge asymmetry but prefer time and material contracts when facing high risks of employee attrition in the project teams. The choice of contract is important, because it affects the vendors' performance. They act more efficiently and provide better quality under fixed price contracts, because they try to reduce the greater risk they run with these projects by staffing them with better-trained employees (Gopal & Koka, 2010).

Third, control and coordination decisions are influenced by the *characteristics of the tasks offshored*. This body of research draws on TCE to consider the coordination implications of different task characteristics. For instance, Jayaraman, Narayanan, Luo, and Swaminathan (2013) find that higher task interdependence and security increase the need for structural control mechanisms (e.g., economic incentives) and administrative control mechanisms (e.g., rules that guide behavior), but are unrelated to relational mechanisms (e.g., integration through team spirit and mutual support). Also, task complexity (Handley & Benton, 2013; Narayanan, Jayaraman, Luo, & Swaminathan, 2011), security, connectivity, stickiness, and dependence (Luo, Wang, Zheng, & Jayaraman, 2012) are positively related to the level of vendor–client integration.

Coordination and control are supported by the use of *human and technological interfaces* and firms have several choices in terms of personnel and communication technologies. Strategies such as placing a home office employee as liaison in the offshore operation or organizing staff exchanges between home and offshore locations can increase communication and information exchange (Rai, Maruping, &

Venkatesh, 2009). Program managers can also act as liaison staff because they have the authority, resources, and network connections to promote cooperation by reducing perceived status differences between home and offshore operations (Levina & Vaast, 2008). Importantly, Amaral et al. (2011) argue that successful integrators need to be able to clarify ambiguous specification, and have authority, freedom to act, and strong persuasion skills. Research also indicates that coordination and control efforts need to be supported by information technology. Ravichandran and Ahmed (1993) provide a categorization of different technologies such as satellite links, video conferencing, or remote diagnostics and argue that the extent to which communication technologies should be used in offshore software development depends on the stage of the project. Enterprise technologies are crucial for offshoring success, because they help transfer knowledge between onshore and offshore sites (Stratman, 2008). Also, enterprise resource planning (ERP) systems, which integrate information across business processes, are an all-encompassing way of providing relevant information across geographically widespread operations and can reduce transaction costs by reducing operational uncertainty (Stratman, 2008). Research also shows that, in addition to communication control mechanisms (e.g., phones, email, chat) and storage control mechanisms (e.g., knowledge management systems), transformational technologies (e.g., spreadsheet and word-processing applications, computer-aided engineering) are important in driving successful offshoring, but these might require new work practices to help offshore employees interpret implicit knowledge (Leonardi & Bailey, 2008).

While research acknowledges the importance of control and coordination and provides ample insights about how firms make control/coordination decisions, there are important aspects that require the attention of future research. A first gap that future research could try to address is the lack of understanding of how control and coordination depend on other offshoring decisions. As the beginning of this section points out, ownership of the offshore activities plays a central role in selecting coordination mechanisms. Similarly, the location and control/coordination decisions are linked as the cultural differences between different locations can affect the effectiveness of different coordination methods even for tasks with similar characteristics (Mudambi & Venzin, 2010: 1511). A second aspect requiring future research is the fact that coordination and control require constant decision-making as firms need to adapt their control mechanisms over the life of an offshore project (Gregory et al., 2013). A third shortcoming of current research is its focus on control and coordination primarily at the dyad level, between the home operations and a particular offshore activity rather than considering the wider portfolio of offshoring activities firms generally manage. By addressing these shortcomings, future research can shed more light on the coordination/control decision.

### **Offshoring Decisions and Offshoring Outcomes**

In order to complete the decisional framework for offshoring, it is important to understand the consequences of these key decisions. Research on the outcomes of offshoring is divided into three categories: research on what affects the performance of offshoring initiatives, research on the firm-level consequences of offshoring, and research on the macro-level consequences of offshoring.

A central research theme is the drivers of offshoring performance. This line of research is somewhat scattered, with studies proposing a wide array of factors that affect the performance of offshoring initiatives. An important insight, which perhaps transcends individual decisions, is that in order to enhance the performance of offshoring operations, firms need to pay attention to knowledge accumulation and knowledge transfer between the home and offshore sites (Cha et al., 2008; Chua & Pan, 2008; Ramasubbu, Mithas, Krishnan, & Kemerer, 2008). Interestingly, several studies attempt to link offshoring decisions directly to outcomes. With regard to the performance outcomes of control and coordination decisions, Srikanth and Puranam (2011) show that different coordination mechanisms (i.e., modularization, ongoing communication, and tacit coordination mechanisms) can reduce the negative influence on process performance of task interdependence between home and offshore operations. In addition, research shows that human interfaces such as client representative offshore and employee exchange (Rai et al., 2009) and technological interfaces such as the use of enterprise technologies (Stratman, 2008) are directly related to enhanced performance in offshoring operations. In addition, Vestring et al. (2005) connect the location decision to performance outcomes by proposing that a mix of offshore locations is beneficial for offshoring organizations.

Regarding firm-level outcomes, research focuses primarily on financial performance and innovation. Findings regarding the influence of offshoring on firms' financial performance are quite inconsistent, ranging from no relationship (Bhalla, Sodhi, & Son, 2008), to positive (Kotabe & Swan, 1994; Coucke & Sleuwaegen, 2008; Di Gregorio et al., 2009; Bertrand, 2011), to negative (Markides & Berg, 1988; Murray & Kotabe, 1999). Others find that the outcome depends on whether firms offshore core or noncore activities (Jiang, Belohlav, & Young, 2007). Research is similarly inconsistent regarding the relationship between offshoring and innovation as some studies find a negative relationship (Fifarek, Veloso, & Davidson, 2008), others a positive one (Li et al., 2008; Nieto & Rodriguez, 2011; Bertrand & Mol, 2013), and yet others propose nonlinear relationships (Kotabe, Dunlap-Hinkler, Parente, & Mishra, 2007; Mihalache et al., 2012), or suggest that the relationship depends on the industry (Andersen, 2006). As with research on the success of offshoring initiatives, only few studies actually link key offshoring decisions to firm-level outcomes of offshoring. Most notably, regarding the link between control/coordination decisions and firm outcomes, Roy and Sivakumar (2011) argue that the greater the formal control the lower the firms' ability to access intellectual property from the offshore vendor, while Li et al. (2008) link the use of formal controls to incremental innovation and social controls to radical innovation. In addition, Nieto and Rodriguez (2011) highlight the importance of connecting ownership decisions and firm outcomes, finding that captive ownership leads to higher innovation outcomes than offshore outsourcing.

A few studies also address the macro-level outcomes of offshoring, providing some interesting insights. These studies indicate that offshoring affects the productivity of the home region (Castellani & Pieri, 2013), knowledge at the offshore location (Manning et al., 2008), and home labor demand (Harrison & McMillan, 2006; Mithas & Whitaker, 2007; Tambe & Hitt, 2012).



Together, these studies on offshoring outcomes highlight the fact that offshoring has importance consequences at multiple levels of analysis. However, understanding of what drives the success of offshoring initiatives, or how firms can use offshoring to increase their overall performance, is limited by contradictory findings. An important way in which future research could advance this line of research is to acknowledge that each offshoring initiative is affected by the firm's other offshoring activities. Explicitly factoring this into decision-making could lead to better understanding of when an offshoring initiative can be successful and establish a link between a firm's entire portfolio of offshoring activities and its performance.

## **FUTURE RESEARCH: INTEGRATIVE DIRECTIONS**

To advance understanding of decision-making in offshoring, we build on the insights from our systematic literature review to propose several directions for future research. Our review shows that while ample research exists about the factors informing each offshoring decision, there are still important gaps in our understanding regarding each decision and the link between decisions. Table 4 provides an overview of the directions for future research discussed above for each of the six decisions and also lists three integrative research directions, which we discuss below. To develop the integrated future research directions, we draw on the literature gaps we previously identified when discussing each of the six offshoring decisions. Future research can advance understanding most by using alternative theories to incorporate overlooked aspects of decision-making, integrating different theories to account for the interdependencies between decisions, and adopting a portfolio perspective that consider each decision as part of an overall offshoring strategy.

### **Adopting Complementary Theoretical Explanations for Decision-Making in Offshoring**

Considering the research questions put forward for each of the decisions, it becomes clear that many questions still remain unanswered regarding decision-making in offshoring. A starting point in this direction is a more robust theoretical grounding of offshoring research in existing theoretical lenses because, as it can be clearly seen from our descriptive statistics (Table 3), only few studies identify their theoretical lens employed. More explicit theorizing allows for the identification of lacunas in our understanding as it can highlight the need to approach new research questions or to approach existing questions from new angles. A clear revelation from the descriptive statistics (Table 3) is the overwhelming use of TCE (Williamson, 1975, 1985) to explain decision-making in offshoring. Furthermore, our review indicates that the use of TCE is pervasive across research disciplines and across decisional areas. While TCE provides great insights about how firms make decisions in offshoring, alternative theoretical explanations can allow previously overlooked aspects of offshoring to be considered.

We propose that future studies advance understanding of decision-making in offshoring by adopting an *organizational learning theoretical perspective* (Levitt & March, 1988). Organizational learning theory came up in several of the

**Table 4:** Future research directions.

<b>Decision</b>	<b>Future research directions</b>
Making the offshoring decision	<ul style="list-style-type: none"> <li>– Incorporate dynamic aspects in decision making to account for the serial nature of the offshoring decision.</li> <li>– Consider the influence of firm-level factors such as firms' overall and global strategy.</li> <li>– Advance knowledge on the factors that influence decision-makers' assessments of offshoring's benefits and risks such as offshoring experience.</li> </ul>
Deciding what business activity to offshore	<ul style="list-style-type: none"> <li>– New theoretical approaches to explain the rise in offshoring high-value added and difficult to codify activities.</li> <li>– The interconnectedness between the underlying drivers of the offshoring decision and type of activity offshored.</li> </ul>
Location decision	<ul style="list-style-type: none"> <li>– Adopt a dynamic perspective of location choice to account for the changing conditions in the offshore location and alternative locations.</li> <li>– Uncover the processes that allow firms to factor in offshoring experience in future location choices.</li> <li>– Consider the influence of the existing offshoring activities' locations on the location choice of a new offshoring initiative.</li> </ul>
Ownership decision	<ul style="list-style-type: none"> <li>– Incorporate location characteristics in the ownership decision</li> <li>– Explicitly consider the link between ownership and location decisions.</li> </ul>
Partner choice decision	<ul style="list-style-type: none"> <li>– Relaxing rationality assumptions to account for the high complexity of foreign partners selection</li> <li>– Adopting complementary theoretical perspective to provide insights into the heuristics used in foreign partner selection.</li> </ul>
Control and coordination decision	<ul style="list-style-type: none"> <li>– Study the link between control/coordination and other offshoring decisions, especially ownership and location.</li> <li>– Study the coordination/control decision as a reoccurring event due to the need to adapt control mechanisms over the life of an offshore project.</li> <li>– Consider control/coordination beyond the dyad level (i.e., home-offshore location) to include the wider portfolio of offshoring activities firms generally manage.</li> </ul>

**Integrative research directions**

- Adopting complementary theoretical explanations for decision-making in offshoring
- Using multiple theories to incorporate the interrelatedness of offshoring decisions
- Adopting a portfolio perspective of offshoring

independent research directions including whether to offshore and location choice. For instance, Westner and Strahringer (2010) find that experience boosts the cost savings from offshoring. The learning process in offshoring has important implications for decision-making, as experience and firms' ability to learn from experience can influence future decisions. In other words, organizational theory can be used to develop understanding of a feedback loop in offshoring decision-making.

Organizational learning theory can provide important insights for all offshoring decisions, as shown by the few studies that already, explicitly or implicitly, employ this theoretical perspective. For instance, Vivek, Banwet, and Shankar (2008) argue that investments in the initial stages of offshoring are based on TCE considerations, while later-stage investments such as those in relationship-building are based on RBV considerations. Regarding the decision of which activities to offshore, Lewin and Peeters (2006: 230) argue that firms' decisions to offshore knowledge-intensive processes might come only after they build trust in their ability to manage less-knowledge intensive offshore operations. Organizational learning theory can also inform other offshoring decisions, such as location choice, partner selection, and coordination, because experience can play a central role in deciding these aspects of offshoring. Future research using organizational theory can also ask other general research questions. For instance, what are the mechanisms through which firms learn from experience and how do firms incorporate insights from current and past offshore operations into their future decisions? How is knowledge about offshoring spread to the appropriate decision-makers? In addition to directly informing offshoring decisions, experience can alter the weight firms give to other decisional factors. For instance, to what extent can experience in a country reduce the transaction costs of operating there?

Related to these ideas, future research can try to develop a *capability perspective of offshoring*. If firms can learn about operating offshoring activities and incorporate these insights into future decision-making, then it is important to understand how firms can actively pursue this type of learning. Research argues that "leading offshoring companies are expected to develop dynamic capabilities necessary for exploring and exploiting higher value-adding offshoring practices" (Lewin & Peeters, 2006:221); that offshoring is "related to the development of firm-level organizational and managerial capabilities to coordinate geographically dispersed networks of tasks and productive activities" (Levy, 2005: 686); and that "offshoring potentially constitutes a firm-level capability and a resource to be developed and deployed" (Doh, 2005: 699). However, despite the numerous mentions of the importance of offshoring capability, understanding of what this ability comprises and, especially, what firms can do to develop it, remains limited. Some of the studies included in this review indicate several capabilities that might help to drive offshoring performance such as the cultural intelligence of managers (Ang & Inkpen, 2008), integration capability (Anderson & Parker, 2013; Chen, 2004), internal monitoring capability (Aron et al., 2005), or vendor management capability (King & Torkzadeh, 2008). Future research could investigate whether there is an offshoring meta-capability and what exactly it comprises, as some of the capabilities mentioned merit further consideration, and new ones might appear. Furthermore, future studies could try to understand what decisions drive the development of offshoring capabilities. Ramasubbu et al. (2008) make an

interesting first step in this direction by suggesting that firms that invest in structured processes and process-based learning activities stand to improve offshore project performance. Future research can advance this line of research by investigating the mechanisms that help firms accumulate knowledge about how to decide what tasks are good candidates for offshoring, how to select offshoring locations, how to set up offshoring arrangements, and how to manage a portfolio of offshoring activities and, ultimately, develop an offshoring capability. A capability perspective is particularly important for understanding offshoring as a strategic rather than as a purely operational practice and for providing a long-term rather than a short-term orientation to decision-making.

In addition, future research could increase understanding of decision-making in offshoring by incorporating explanations based on *socio-behavioral theories*. Several studies identified in our literature review provide justification for relaxing rationality assumptions (Simon, 1997) and expanding the use of behavioral elements in decision-making. While we previously suggested that future research on partner selection should relax rationality assumptions, the opportunities to use socio-behavioral theories extend to other offshoring decisions. Regarding location choice, Zaheer et al. (2009) find that location decisions are influenced by ethnic networks more than by the cluster capabilities of the offshore locations and Stafford (2011) observes that decision-makers' preconceptions of different countries influence the choice of an offshore location. These interesting findings highlight the need to go beyond rational considerations (Liang & Parkhe, 1997) to analyze how different psychological factors affect managers' choices by biasing their decision-making. Future research can employ a socio-behavioral perspective to understand how the offshoring decision affects the motivation and performance of onshore employees and how this consideration affects decision-making. As existing studies indicate that offshoring affects the demand for labor and particular skills (Tambe & Hitt, 2012), employees of offshoring companies might feel threatened by offshoring initiatives and act in ways that are potentially harmful for the outcomes of offshoring and the entire firm. In addition, future research can draw on social identity perspective (Ashforth & Mael, 1989) to study how firms can create organizational identities that transcend national borders; how to improve onshore-employees' attitudes toward their offshore counterparts; and, ultimately, how to improve knowledge transfer and coordination.

### **Using Multiple Theories to Incorporate the Interrelatedness of Offshoring Decisions**

An important, and largely overlooked, aspect of offshoring decision-making is that decisions are interdependent. This insight formed the basis for our proposed future research directions on several offshoring decisions such as activity, ownership, and control/coordination decisions. The interrelatedness of decisions points to the greater insight that, for offshoring initiatives to have the desired outcomes, firms need to ensure that their decisions are congruent. However, how can these interdependencies be factored in decision-making to ensure consistency?

To account for the links between decisions, future research needs to integrate multiple theories in order to incorporate the high complexity of offshoring. For

instance, to account for the interdependence of the ownership and location decisions, future studies can consider extending transaction cost rationales for the ownership decision using the resourced based view, or the institutional perspective associated with location choice. In addition, for the interdependence between the location and control and coordination decisions, future research could consider socio-cultural theories in combination with TCE or the information processing perspective to understand firms' choices of controlling and coordinating business operations from disparate offshore locations. More generally, future research could try to understand how firms can make congruent decisions. This is important, because it can improve understanding of how firms develop unique offshoring strategies that competitors cannot easily reproduce.

### **Toward a Portfolio Perspective of Offshoring**

An important limitation of previous research is that it largely overlooks the fact that most companies operate more than one offshoring initiative and consider decisions for each offshoring initiative as independent of the rest of the offshoring portfolio. Previous studies indicate the need to adopt a portfolio perspective of offshoring as they find that the overall extent of offshoring affects firm performance (e.g., Mihalache et al., 2012) and suggest that, when choosing a new offshore location, firms should consider where they already offshore because diversification of geographic locations can improve the performance of firms' overall offshoring activities (Vestring et al., 2005). Future research could, for instance, consider how different characteristics of the current portfolio, such as diversity of locations, activities performed offshore, and ownership, or existing coordination mechanisms employed, affect decisions about new offshoring activities, by drawing on information processing theory, socio-cultural theories, or economic geography theory. Furthermore, research increasingly explores the connection between offshoring and firm strategy (Doh, 2005; den Butter & Linse, 2008; Contractor et al., 2010). Arguing that offshoring is intertwined with strategy, Karmarkar (2004: 107) states that "instead of competing over links in the chain, service companies should compete for the chain itself." To understand how firms make decisions that can lead to such strategic advantage, future research needs to consider the entire portfolio of offshoring activities. That is, future research should try to uncover how firms can engage in strategic offshoring in which they develop geographically dispersed value chains that leverage not only location advantages but also the firm's own experience and ability to manage particular types of foreign operations. Furthermore, in an effort to engage in strategic offshoring, firms might also contemplate portfolio-level decisions such as how to ensure coordination not only between offshore-home dyads, but also between the offshore operations themselves, or even more fundamental questions such as who in the organization should make offshoring decisions. As initial steps in this direction, Trent and Monczka (2005: 27) already highlight the importance of a "sourcing czar" and Lewin and Peeters (2006) argue that offshoring decisions should be made by top management.

Research questions at portfolio level could be addressed using both qualitative and quantitative approaches. For instance, qualitative research could try to uncover how managers include existing operations in their decision-making

about additional offshoring initiatives and quantitative approaches could consider the influence of experience or different configurations of the current portfolio of offshoring activities on new offshoring decisions. Such quantitative efforts could make use of data collected in partnerships by different universities, to reduce the difficulty of collecting information about the offshoring history of multiple firms (e.g., the Offshoring Research Network dataset used in several studies included in this review, such as Lewin & Peeters, 2006; Manning et al., 2008; Lewin et al., 2009).

## CONCLUSION

The practice of offshoring has developed considerably in the last two decades, and so has academic research on the subject. However, despite all this academic interest in offshoring, understanding of what informs decision-making in offshoring has remained limited, due to fragmentation of research between different research fields. This study conducts a systematic review of offshoring research to develop a decisional framework that integrates insights from multiple research disciplines regarding the factors that inform key offshoring decisions. Furthermore, to advance understanding of decision-making in offshoring, we have suggested future research directions for individual decisions and three integrative research avenues. In view of the expansion of offshoring, understanding the complexities of decision-making in offshoring will be extremely beneficial for firms.

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## **APPENDIX: LIST OF STUDIES INFORMING THE KEY OFFSHORING DECISIONS**

### **Making the Offshoring Decision (53):**

Apte and Mason (1995); Aron & Singh (2005); Aron et al. (2005); Bertrand and Mol (2013); Cha et al. (2008); Chen (2004, 2009); Christopher, Mena, Khan, and Yurt (2011); Craighead, Blackhurst, Rungtusanatham, and Handfield (2007); den Butter and Linse (2008); Desai and Roberts (2013); Dossani and Kenney (2006); Farrell (2005); Farrell (2004); Farrell et al. (2006); Gefen and Carmel (2008); Gray, Roth, and Leiblein (2011); Hahn et al. (2009); Jain, Girotra & Netessine (2014); Karmarkar (2004); Kedia and Lahiri (2007); Kedia and Mukherjee (2009); Kenney, Massini & Murtha (2009); Kouvelis and Li (2013); Lacity, Khan, and Willcocks (2009); Larsen et al. (2013); Levy (1995); Lewin and Peeters (2006); Lewin et al. (2009); Liang and Parkhe (1997); Liu and Nagurney (2011); Lu and Van Mieghem (2009); Manning et al. (2008); Metters (2008); Morris, Donnelly, and Donnelly (2004); Musteen and Ahsan (2013); Nachum and Zaheer (2005); Nakatsu and Iacovou (2009); Platts and Song (2010); Porter and Rivkin (2012); Ravichandran and Ahmed (1993); Rilla and Squicciarini (2011); Robertson et al. (2010); Steven et al. (2014); Stringfellow et al. (2008); Swamidass & Kotabe (1993); Tadelis (2007); Tanriverdi, Konana, and Ge (2007); Venkatraman (2004); Vivek et al. (2008); Wang et al. (2011); Wu and Zhang (2014); Youngdahl and Ramaswamy (2008)

### **Deciding what Business Processes to Offshore (10):**

Apte and Mason (1995); Aron and Singh (2005); Contractor et al. (2010); Ellram et al. (2008); Handley and Benton (2013); Lacity et al. (2009); Mithas and Whitaker (2007); Ravichandran and Ahmed (1993); Stratman (2008); Youngdahl & Ramaswamy (2008)

### **Location Decision (28):**

Allon and van Mieghem (2010); Bunyaratavej et al. (2007); Chen (2004); Demirbag and Glaister (2010); Doh et al. (2009); Farrell (2006); Farrell et al. (2006); Fuchs and Kirchain (2010); Galbreth and Blackburn (2010); Gefen and Carmel (2008); Hahn and Bunyaratavej (2010); Jandhyala (2013); Jensen and Pedersen (2011); Kumar, Medina, and Nelson (2009); Lee and Chen (2012); Liu and Chen (2012); Liu et al. (2008); Liu et al. (2011); Lu and van Mieghem (2009); Manning (2013); Meixell and Gargeya (2005); Mudambi and Venzin (2010); Rilla and Squicciarini (2011); Smith, Mitra, and Narasimhan (1996); Thomson (2013); Vestring et al. (2005); Zaheer et al. (2009); Zhang and Huang (2012)

### **Ownership Decision (12):**

Aron and Singh (2005); Contractor et al. (2010); Karmarkar (2004); Liu and Nagurney (2011); Metters (2008); Mudambi and Venzin (2010); Murray and Kotabe (1999); Murray et al. (1995); Nieto and Rodriguez (2011); Robertson et al. (2010); Steven et al. (2014); Tadelis (2007)

**Partner choice (13):**

Agerfalk and Fitzgerald (2008); Bapna et al. (2010); Belavina and Girotra (2012); Chan, Kumar, Tiwari, Lau, and Choy (2008); Creazza, Dallari, and Melacini (2010); Ehr Gott, Reimann, Kaufmann, and Carter (2011); Feeny et al. (2005); Gefen and Carmel (2008); Levina and Su (2008); Liang and Parkhe (1997); Meixell and Gargeya (2005); Olson and Wu (2011); Steven et al. (2014)

**Control & Coordination Decision (40):**

Amaral et al. (2011); Anderson and Parker (2013); Bapna et al. (2010); Beugre and Acar (2008); Blackburn (2012); Blackhurst, Craighead, Elkins, and Handfield (2005); Bruce, Daly, and Towers (2004); Chung, Yam, and Chan (2004); Egels-Zanden & Hyllman (2007); Gopal and Koka (2010); Gopal and Sivaramakrishnan (2008); Gopal et al. (2003); Gray and Massimino (2014); Gregory et al. (2013); Handley & Benton (2013); Jayaraman et al. (2013); Jun, Cai, and Shin (2006); Kumar, van Fenema, and von Glinow (2009); Lehrer & Asakawa (2003); Leonardi and Bailey (2008); Levina and Vaast (2008); Li et al. (2008); Luo et al. (2012); Mason and Leek (2008); Medcof (2001); Metters, Zhao, Bendoly, Jiang, and Young (2010); Mirani (2007); Narayanan et al. (2011); Olsson et al. (2008); Rai et al. (2009); Ravichandran and Ahmed (1993); Rilla and Squicciarini (2011); Roy and Sivakumar (2012); Srikanth and Puranam (2011); Srikanth and Puranam (2014); Stratman (2008); Tavakoli et al. (2003); Vedel and Ellegaard (2013); Vlaar, van Fenema, and Tiwari (2008); Zeng (2003)

**Performance of offshoring (24):**

Aksin and Masini (2008); Allon and van Mieghem (2010); Amaral et al. (2011); Andersen and Skjoett-Larsen (2009); Ang and Inkpen (2008); Aron and Singh (2005); Cha et al. (2008); Chua & Pan (2008); Dibbern et al. (2008); Kaufmann and Carter (2006); Kotabe and Murray (2004); Lacity et al. (2009); Langer, Slaughter, and Mukhopadhyay (2014); Rai et al. (2009); Ramasubbu et al. (2008); Rottman & Lacity (2006); Sarker and Sarker (2009); Srikanth and Puranam (2011); Stratman (2008); Tadelis (2007); Trent and Monczka (2005); Tripathy and Eppinger (2013); Vestring et al. (2005); Westner and Strahringer (2010)

**Firm-level outcomes (27):**

Barthelemy (2006); Bertrand and Mol (2013); Bhalla et al. (2008); Coucke and Sleuwaegen (2008); Di Gregorio et al. (2009); Fifarek et al. (2008); Fuchs and Kirchain (2010); Funk, Arthurs, Trevino & Joireman (2010); Gualandris, Golini, and Kalchschmidt (2014); Jiang et al. (2007); Kotabe and Murray (1990); Kotabe and Swan (1994); Kotabe et al. (2007); Kotabe, Parente, and Murray (2007); Lamin and Zaheer (2012); Li et al. (2008); Markides and Berg (1988); Mihalache et al. (2012); Murray and Kotabe (1999); Murray et al. (1995); Musteen and Ahsan (2013); Nieto and Rodriguez (2011); Roy & Sivakumar (2011); Roy and Sivakumar (2012); Steven et al. (2014); Tambe and Hitt (2012)

**Macro-level outcomes (6):**

Andersen (2006); Castellani and Pieri (2013); Harrison and McMillan (2006); Kotabe (1990); Manning (2013); Mithas and Whitaker (2007)

**Mashiho Mihalache** is an Assistant Professor of International Strategic Management at NEOMA Business School, France. She obtained her PhD from the Rotterdam School of Management, Erasmus University, Netherlands. Her research on international strategy received the Gustavson School of Business Award for the Best Qualitative Paper in International Business Award at the Academy of Management Conference 2015.

**Oli Mihalache** is an Assistant Professor of Strategic Management at the Wilfrid Laurier University, Canada and VU University Amsterdam, Netherlands. He received his PhD from the Rotterdam School of Management, Erasmus University, Netherlands and was awarded with the ERIM Best PhD Award. His research on how firms stimulate innovation is published in, among others, *Strategic Management Journal*, *Strategic Entrepreneurship Journal*, *Organization Studies*, and *Journal of Management Studies*.