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INTERNATIONALIZATION STRATEGIES OF IT VENDORS FROM EMERGING ECONOMIES: THE CASE OF CHINA

Les stratégies d’internationalisation des vendeurs de Technologies de l’Information des pays émergents: Le cas de la Chine

Research-in-Progress

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Abstract

As China rapidly emerges as the new frontier of IT offshoring, the country’s IT outsourcing industry undergoes a profound change: many vendors are strategically shifting their client bases from Japan to the U.S. and Europe. This trend provides us with a good opportunity to investigate an understudied topic in the IS literature: the internationalization strategies of IT service vendors from emerging economies. Specifically, this study explores how China-based IT vendors transform their capabilities acquired in domestic and Japanese markets to expand into the Western market. Through qualitative case studies of six major IT service firms in China, this paper develops a theoretical model for conceptualizing the internationalization strategies of IT vendors based in emerging economies. This model consists of three unique key processes: i) an internationalization process; ii) a strategic decision-making process; iii) a capability-building process. These three processes continuously interact with one another to shape firms’ internationalization practices.

Keywords: Internationalization, China, IT outsourcing, vendor perspective, strategy process
Résumé

Alors que la Chine émerge comme une nouvelle frontière de l’externalisation, son industrie d’externalisation des TI connaît un profond changement : de nombreux vendeurs changent leur clientèle du Japon vers les États-Unis et l’Europe. Six études de cas aident à comprendre comment les vendeurs chinois transforment leurs capacités acquises localement et sur les marchés japonais pour s’installer sur des marchés européens.

Abstract in Native language

Introduction

China is rapidly emerging as the new frontier of global IT service outsourcing. In 2007, China’s software and information service outsourcing market reached 15.2 billion USD, 15% of which came from offshore (China Market Intelligence Center 2008). Recent studies predict that by 2011 Chinese cities may overtake their Indian counterparts and become the most competitive global offshore delivery centers (IDC 2007). While the perception of China as a major IT outsourcing destination is still new to many Western firms, the country is far from a newcomer to IT outsourcing and offshoring. In fact, many Chinese vendors have been providing IT services to Japanese and Korean companies as well as China’s vast domestic market for nearly two decades. Today, China is Japan’s biggest IT outsourcing base; meanwhile, Japan represents China’s leading offshore IT service client (e.g., Xinhua 2007).

An important emerging phenomenon in China’s offshore IT service industry is many vendors’ recent strategic shift from Japanese and Korean clients to the U.S. and European markets (e.g., China Business News 2007). This trend is driven by the larger size, higher profit margin, more advanced technological requirements of the Western market, as well as strong government support (e.g., China Securities Journal 2006). This trend provides a good opportunity to explore an understudied topic in the Information Systems (IS) literature: the internationalization strategies of IT service vendors from emerging economies. Specifically, this paper investigates how China-based IT service vendors are transforming their capabilities acquired in Japanese and domestic markets to expand into Western markets. The existing IS literature provides very limited answers to this question.

To obtain insights into this question, we conducted qualitative case studies of six major IT service firms in China. These firms are headquartered in five different service outsourcing “base” cities across China. Collectively these five cities cover all three major geographic drivers of China’s IT outsourcing industry: North China, Northeast China, and East China (Analysys International, 2005). Specifically, we conducted onsite face-to-face interviews with top- and middle-level managers of these firms, examined company archives and press releases, and theorized about the strategies and practices adopted by these vendors in entering Western markets. Drawing upon existing work in IS and International Business (IB), this study contributes to the IS literature by developing a theoretical model for conceptualizing emerging market-based IT service vendors’ internationalization strategies. Additionally, the study sheds light on the profound transformation of the understudied China’s rising offshore IT services industry at a critical crossroad in its history.

The rest of the paper is organized as follows. In the next section, we review related research in IS and IB on vendor capability and internationalization process. We then introduce the research methods, and present case analysis together with theoretical development. Finally, we discuss expected contributions and future research.
Literature Review

We first review major studies in IS that focus on the vendor’s perspective. Among this set of papers, however, there is little work on IT service vendors’ internationalization. Therefore, we turn to the IB literature to inform our study.

Vendor Perspective

As global IT and service outsourcing and offshoring become increasingly prevalent, a rich collection of studies has emerged to explore this rapidly-evolving phenomenon (Dibbern et al. 2004). The main themes addressed by this stream of literature can be broadly categorized into why to outsource (e.g., Loh and Venkatraman 1992), what to outsource (e.g., Lacity et al. 1996), which decision process to utilize (e.g., Hirschheim and Lacity 2000), how to implement an outsourcing arrangement (e.g., Willcocks and Kern 1998), what is the outcome of outsourcing (e.g., Ang and Slaughter 1998) (Dibbern et al. 2004). As can be seen from these questions, the literature predominantly approaches outsourcing from the standpoint of clients. Only a small number of papers examine outsourcing from the perspective of IT vendors (e.g., Levina and Ross 2003; Feeny et al. 2005; Garud et al. 2006; Oshri et al. 2007).

Among the limited work on the vendor’s perspective, Levina and Ross (2003) find that vendors’ value proposition originates from a complementary set of core capabilities: IT personnel development, methodology development and dissemination, and customer relationship management; Similarly, Ethiraj et al. (2005) investigate software service vendors’ capabilities; Feeny et al. (2005) and Borman (2006) identify Business Process Outsourcing suppliers’ core competencies. Garud et al. (2006) and Oshri et al. (2007) analyze specific vendors’ organizational capabilities, while Jarvenpaa and Mao (2008) explore vendors’ capability-building in the mediated offshore service models. Although these studies have made significant progress in elaborating vendor capability development, little is known about vendors’ choice of their clients’ geographic locations, and the role of vendor capabilities in these decisions.

Another limitation of the literature is that researchers focused on U.S., European, and Indian vendors, as well as multinational corporation (MNC), leaving vendors from other important regions with little attention (Jarvenpaa and Mao 2008). Among the studies on vendors in other regions, Jarvenpaa and Mao (2008) explore operational models of vendors in China. Other regions such as Vietnam (Gallaugher and Stoller 2003), Taiwan (Wu 2006), Russia (Pries-Heje 2005), and Eastern Europe (Levina and Vaast 2008; Levina and Su 2008) are also discussed, sometimes as part of studies that do not specifically focus on the vendor’s perspective. There is a growing need to understand vendors from a diverse set of countries, especially given the rapid rise of new offshore destinations.

Internationalization Process

As reported in practitioner press, many offshore IT service vendors are entering new foreign markets and gradually increasing their international involvement. This process is termed “internationalization” in the IB literature. In IB, several “stage models” have been proposed to describe firm’s internationalization behavior. The most prominent models include the Product Life Cycle (PLC) model (Vernon 1966) and the internationalization process model, or the “Uppsala Model (U-M)” (Johanson and Wiedersheim-Paul 1975; Johanson and Vahlne 1977; 1990). Other behavioral process models include the Innovation-Related Internationalization Models (I-M) (e.g., Bilkey and Tesar 1977; Cavusgil 1980). In general, these models posit that internationalization is a gradual process, and firms tend to successively enter increasingly psychically-distant countries through incremental steps (Johanson and Vahlne 1977). For example, firms may start exporting through independent representatives, then create overseas sales subsidiaries, and finally establish foreign production units (Johanson and Wiedersheim-Paul 1975).

Today, the traditional internationalization process models still serve as fundamental frameworks for conceptualizing latest development in internationalization business (Hadjikhani and Johanson 2002). However, several recent trends offer opportunities to extend extant theorizing of internationalization. These trends include: the emergence of “Born Globals”, which refer to firms that serve international markets right from their inception or very shortly thereafter (Madsen and Servais 1997), the adoption of Information Technology to overcome barriers to international markets (e.g., Moen et al. 2004), the rise of service economy and small-and medium-sized enterprises (SMEs) that actively pursue international business (e.g., Coviello and Martin 1998), and increasing internationalization of firms from developing economies (e.g., Child and Rodrigues 2005). These trends have inspired introduction of new theoretical perspectives in IB, such as industrial networks and evolutionary approaches, which suggest that internationalization is a complex, unstructured, and path-dependent process (Coviello and Munro 1997; Madsen and Servais 1997).
Among the work on internationalization process, a small number of papers are dedicated to IT outsourcing vendors, including Bell (1995), Browning et al. (1997) and Coviello and Munro’s (1997) studies of small software firms, Coviello and Martin’s (1998) research on engineering consulting SMEs, and Forsgren and Hagström’s (2007) examination of Internet-related firms. These papers highlight new patterns of internationalization in software and service vendors, with the focus on the “macro” processes of internationalization. For example, Moen et al. (2004) shows firms’ network relationships may determine firms’ choice of entry mode and decision on which markets to enter. However, as pointed out by Melin (1992) in the Strategy literature and by Forsgren (2002) in IB, the dynamic and complex micro-level processes by which internationalization strategies and practices arise are still insufficiently understood. It is worth mentioning that the Strategy literature provides some insights on such micro-level strategy and complex micro-level processes by which internationalization strategies and practices arise are still insufficiently understood. Our literature review suggests that there is need for further studying IT outsourcing from the perspective of vendors, especially vendors from emerging countries other than India, and that the internationalization aspects of IT service vendors have not been explored. We believe that examining the formation of internationalization strategies in China-based IT service vendors offers the opportunity to bridge these gaps in the literature.

Research Methods

The case study methodology is selected because it is suitable for answering “how”, “why” or exploratory “what” questions (Yin 2003). To provide a broad view of China’s IT service industry, we chose six vendors of varied sizes and backgrounds, and headquartered in five service outsourcing “base cities” officially authorized by the China Ministry of Commerce; collectively the five cities cover all three major geographic drivers of China’s IT service outsourcing industry: North, Northeast, and East China. Since we are especially interested in Chinese vendors’ expansion into the Western market, we selected firms that already had experience entering the Western market. Data collection started in summer 2006, when the field researcher visited each firm and interviewed one or several top-level executives, as well as middle-level managers in some cases. Altogether 12 in-depth, semi-structured interviews were conducted and recorded, each lasting from 1 to 3 hours, with the average length of 2 hours. The researcher also gathered firms’ internal archives, tracked press releases, and conducted follow-up, ongoing communication through emails. Guidelines suggested by grounded theory (Glaser and Strauss 1967) were followed in data analysis. More details of the method are given in Table 1. The findings were compared with extant literature in IS, IB and Strategy to identify disparities and connections.

<table>
<thead>
<tr>
<th>Grounded Theory Method Guidelines</th>
<th>Implementation in the Study</th>
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<tr>
<td>Theoretical sampling; intertwining data collection and analysis (Glaser &amp; Strauss, 1967, pp. 45–60)</td>
<td>Informants were initially selected opportunistically. After each interview, the field researcher used analytical notes and open coding to identify conceptual themes, such as “internationalization move”, i.e., entry into a new geographic market (Domestic/Japanese/Western), from the interview transcript. The themes were used to pick new respondents and formulate new interview questions.</td>
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<tr>
<td>Reaching theoretical saturation (Glaser &amp; Strauss, 1967, pp. 61–76)</td>
<td>Data collection on a particular issue was stopped only when a state of theoretical saturation was reached. For example, when several interviewees in different settings described the same role of market capability in the strategic decision-making process, we no longer actively sought data on this topic.</td>
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<td>Theory development through constant comparative method (Glaser &amp; Strauss, 1967, pp. 101–115)</td>
<td>I identified and systematically compared the 6 firm’s 11 internationalization moves, the decision rationale behind each move, and the capability-building activities associated with each move. The emerging conclusions were then compared with related existing literature in IS, IB and Strategy.</td>
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Case Analysis

Case analysis identifies three components of a firm’s internationalization strategy: i) internationalization process, ii) strategic decision-making process iii) capability-building process. This section discusses each of the three processes, mingling case introduction with theoretical analysis. Table 1 provides an overview of the six firms. It outlines each firm’s, among others, time of entry into each of the three markets and current level of capability in each market. The following words are used to define firms’ current capability in each market: “Established” - having a significant number of large clients and long-term relationships; “Expanding” - having a smaller number of clients but the client base is growing rapidly; “Experimenting” - having a few small clients, mainly engaged in short-term, ad-hoc work.
The first component of firms’ internationalization strategies that emerges from the data is the internationalization process, which is centered on firms’ timing and sequence of entry into different countries. The cases provide mixed support for the traditional, incremental internationalization process models that suggest firms slowly and gradually enter increasingly psychically-distant countries (e.g., Johanson and Vahlne 1977). Specifically, Firms B and C followed the traditional model, entering domestic market first, then Japanese and/or Korean market, and finally the Western market; however, in contrast, Firms A, D, and E started with overseas clients before turning inward to the domestic market. Firms A and D were initially founded as collaborative initiatives between Chinese universities and Japanese firms. Firm A’s first major project was with its Japanese partner. The experience gained through this work helped Firm A’s top management to then explore the domestic market and rapidly grow the firm. After achieving leadership positions in both Japanese and domestic markets, Firm A expanded into the Western markets, initially through agents and later by setting up offices overseas. Today the U.S. market is a strategic focus of the firm. Firm D followed a similar path, although the Western market was not its focus and the firm only occasionally undertook agent-transferred Western projects. Firm E, on the other hand, was founded as a pure West-oriented outsourcing firm, with its first contract brought to China from North America by its founder, a Chinese expatriate. As the firm’s Western business increased, it started aggressively expanding into domestic and Japanese markets. Firm F, founded, owned and managed by American entrepreneurs, focused entirely on the Western market and achieved success.

In explaining why the traditional, incremental internationalization models do not fully explain our six cases, we uncovered three key factors from the data. First, the IT outsourcing industry has its unique characteristics. Many IT service firms are inherently export-oriented and were founded around a specific overseas market, for example, Firm E. In this sense they are similar to China-based manufacturing firms offering their products abroad, and dissimilar to MNCs offering their products in China. These firms may enter domestic and psychically-closer international markets at a later stage. Second, the domestic markets may not be well-established. Internationalization assumes that there is a well-defined domestic market in the first place, which is not necessarily the case for many IT service firms from emerging economies. For example, when Firm A worked with its first Japanese client on a software R&D project, there was little domestic demand for this type of software. This was also the case for Firm D. As the quote below suggests, Firm D brought advanced skills, technologies and domain knowledge from Japan into China’s telecommunication industry, whose development was much later than Japan. Third, the ubiquitous use of IT lowers the learning barrier. In particular, the highly modular and globally standardized nature of technologies and software specifications enabled vendors to adequately service a foreign market without a deep understanding of the business and social context of their work.

“The company’s initial mission was to obtain outsourcing contracts from Japan…During these projects, we wanted to apply some advanced ideas and technologies from Japan to China. So in 1997, we started applying a framework in a very successful project for a Japanese client to [a leading Chinese telecommunication company]… The project later reached significant scale … We even founded a son company.” [International Business Manager of Firm D]
Strategic Decision-Making Process

The second component of firms’ internationalization strategies that emerges from the data is the process by which firms’ internationalization decisions were formed. The cases helped us identify three key factors that shaped this process: firms’ internationalization plan, market capability, and relationship portfolio. Specifically, we define internationalization plan as a firm’s approach and steps to enter foreign markets; market capability as a firm’s ability to meet client needs in different markets; relationship portfolio as the set of contractual or informal relationships between a firm and its clients. The three factors interact with one another to shape a firm’s internationalization decisions. In this interaction, two patterns arise: a top-down, “planned” decision-making process and a bottom-up, “emergent” decision-making process. These two processes are respectively consistent with the rational process (e.g., Ansoff 1965) and emergent process (e.g., Mintzberg and McHugh 1985) discussed in the Strategy literature.

In the planned decision-making process, firms were driven by a defined internationalization plan. Specifically, three sub-processes occur. First, the internationalization plan influences firms’ selection of client portfolios. For example, Firm A had the clear goal of becoming a leader in the Western market. To achieve this, Firm A defined the plan of cultivating long-term relationships with large Western clients. Therefore, after entering the Western market, Firm A first only pursued projects with large clients, and chose projects with “business continuity”, that is, assignments that embedded future business opportunities. Second, the resulting relationship portfolio then facilitates the emergence of new market capability through the firm’s deliberate learning and learning-by-doing (Zollo and Winter 2002). For Firm A, large clients helped the vendor advance its technical abilities, promote rigorous management processes, and acquire domain knowledge in several key industries, as the following quote shows. Third, the improved market capability, in turn, led the firm to adjust its internationalization plan. For example, after gaining expertise with large clients, Firm A began to strategically focus on a few industries and build up competencies for future expansion.

“For U.S./European markets we mainly establish relationships with large clients ... because large clients have strong capabilities. In the process of interacting with these clients, we can gradually improve our technical competencies ... as well as management skills.” [International Business Development Manager of Firm A]

In the emergent decision-making process, firms are driven by their existing market capability rather than deliberate plans. Specifically, three sub-processes occurred. First, firms reflect upon what their key strengths are and create relationship portfolios to fully utilize these capabilities. For example, Firm C initially only operated in domestic and Japanese markets; however, after a U.S.-based IT service firm successfully contracted several people from Firm C for staff augmentation, Firm C began to realize its potential in the Western market. Since then, the firm had been expanding its relationships with Western clients. Second, the outcome of the relationship portfolio facilitated the emergence of an internationalization plan. For Firm C, the success of its initiatives led it to see further opportunities in the Western market. The firm therefore decided to strategically focus on the Western market, and created the goal of significantly increasing the proportion of U.S./European business. Third, the emerging internationalization plan led to firms’ adjustment of market capability in accordance with the plan. For example, since establishing the goal of increasing Western business, Firm C allocated more resources to build new capabilities like Western language skills. The adjusted market capability eventually helped Firm C obtain a multi-year contract with a major French client.

It is worth noting that the planned process and the emergent process coexist within the firm, but the degrees to which the two processes are enacted changed over time. In other words, there is a “dynamic oscillation” (Thomas et al. 2005) between the planned and emergent processes. For example, when Firm C first entered the Western market, the emergent process dominated; but as the firm’s internationalization plan became more clearly defined, a higher level of planning was utilized. The overall process (Figure 1) is largely consistent with the “planned emergent” strategy process, which suggests the “planned” and “emergent” processes converge in actual strategy-making (Grant 2003).

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Figure 1. Internationalization Strategic Decision-Making Process
Capability-Building Process

The third component of firms’ internationalization strategy that emerges from the data is the process by which firms build their capabilities for different markets. China’s IT vendors have three major client bases: domestic, East Asian, and Western. Analysis shows how different client bases helped vendors develop the three classes of complementary capabilities identified by Levina and Ross (2003), i.e., human resources (HR), process, and client relationship capabilities, to enter new markets. In particular, in this study we focus on firms’ entry into Western markets.

China’s vast and dynamic domestic market has been the driving force behind the country’s IT service industry. The outsourced work ranges broadly from basic coding to high value-added R&D. Many domestic projects have two unique characteristics. First, domestic clients tend to issue high-level, ambiguous requirements and focus on the end product without caring about the development process, while vendors are often given the freedom to design systems and make technical decisions. This gives vendors’ staff the opportunity to practice translating diverse business needs into technical specifications and designing new system architectures, as suggested by the following quote.

“(Domestic clients) have no concepts about computers. You have to use your framework to elicit the requirements from the clients. Personally, I prefer to work with domestic clients than Japanese clients, because as a technologist, working with domestic clients means more space…” [International Business Manager of Firm D]

Second, in China many companies are creating new systems from scratch, so vendors can use and experiment with latest technologies, which broaden the programming skill set of vendors’ human resources. These two characteristics make domestic clients attractive and motivating to vendors’ staff. Meanwhile, these two characteristics respectively strengthen vendor staff’s requirements analysis and design skills and programming skills, and collectively enhance vendors’ overall technical capabilities, which prepare the vendors for future entry into Western markets.

“(From a learning perspective,) domestic clients are more likely to use latest technologies… Domestic clients are building new things and therefore more willing to use new technology. With foreign clients we often face existing systems based on old technology.” [Senior VP of Firm B]

Japan, and to a lesser extent, Korea, have a long history of outsourcing IT to China. The type of work outsourced by Japanese firms tended to concentrate on lower-end coding, testing, and maintenance. The work often comes with highly precise requirement specifications, tends to be fragmented and has limited scale and scope, and brings little opportunity to face end clients. Also, a lot of work is based on legacy systems and cutting-edge technical work is less frequent. Therefore, there is often limited technical learning opportunity for vendors. However, Japanese firms tend to use rigorous process management methodologies and issue precise requirements for their vendors. By working with Japanese clients Chinese vendors were able to acquire significant process expertise and managerial skills through direct training by Japanese clients, deliberate imitation of clients’ managerial practices, and learning-by-doing. For example, the International Business Manager of Firm D emphasized that in the early years of the firm, the company’s core management team greatly benefited from its learning from a major Japanese client. The specific management techniques acquired by vendors from Japanese clients include confirmation of all requirements before starting coding, using multiple choice questions to standardize client interaction, and identifying and documenting clients’ implicit habits and assumptions. All these techniques contribute to the improvement of process capabilities.

“Japanese clients pay great attention to details. With Japanese clients you should be strict; you should stick to certain rules... Our general rule with Japanese clients is: 'If you don't tell me what to do, I shouldn't do it.' With domestic clients, the rule is: 'If I already know what to do, I am out of business.'” [Senior R&D Manager of Firm C]

U.S. and Europe are the new focus of China’s IT outsourcing industry, as established vendors strategically shift their business towards the Western market and new ventures are formed to enter this market. A wide range of work is outsourced to China from the West. In general, lower-end coding and testing is mixed with higher-end requirements analysis and system design. There tends to be more vendor innovation and more interaction with end users than the work from Japan, which brings important client-facing learning opportunities. Much of the work from the West is based on mature technologies and legacy systems, and vendors’ technical capabilities acquired in the domestic market are mostly sufficient. Like the Japanese, Western clients also emphasize process management, and vendors’ process capabilities acquired from the Japanese market helped to meet the needs. Chinese vendors’ major challenges in facing Western firms are language skills and cultural differences. However, these client-specific capabilities are rapidly improved through formal training and learning-by-doing. In summary, vendors’ HR capabilities acquired in the domestic market and process capabilities acquired in the Japanese market facilitate their expansion in the West, while the Western market enhances vendors’ client-facing capabilities, such as the abilities to manage customers.
“You (vendors and client staff) act almost like colleagues. Junior developers need to talk to their counterparts in the U.S. or Europe, and sometimes, defend their actions or decisions to these people. So language is incredibly critical. If you cannot communicate in English, that (client) relationship is not very valid. [Marketing Director of Firm F]

In summary, for a vendor expanding into the Western market, domestic, Japanese, and Western markets respectively enhance three sets of capabilities: human resource, process, and client-facing capabilities. Reinforcing one another, these capabilities not only drive the vendor’s internationalization process, but also strengthen the vendor’s overall capability in each of the three markets. In other words, there is complementarity between a vendor’s capabilities in these markets, as illustrated by Figure 2 (the dashed line is observed in the study but is not the focus of the paper).

![Figure 2. Internationalization Capability-Building Process](image)

The above three processes: internationalization process, strategic decision-making process, and capability-building process, represent the key components of the firm’s internationalization strategy. The three processes continuously interact with one another to shape firms’ internationalization practices. For example, the internationalization process brings the firm the needs and opportunities to build new capabilities, and therefore drives the capability-building process; capability-building shapes firms’ strengths and levels of maturity in different countries, which may affect firms’ adoption of planned versus emergent decision processes in these countries; the strategic decision-making process, in turn, determines firm’s next step of the internationalization process. From a managerial perspective, IT service vendors should systematically consider all three processes when forming their internationalization strategies.

**Expected Contributions and Future Research**

This study develops a theoretical model for conceptualizing the internationalization strategies of IT service vendors from emerging economies. This model contributes to the cross-fertilization of ideas between IS and IB, and addresses several gaps in the IS literature. First, it extends existing studies of vendor capabilities by showing how different markets help vendors develop distinct yet complementary capabilities; second, it sheds light on the micro-processes behind IT vendors’ internationalization strategies, which were not explored in IS; third, it conceptualizes internationalization as a strategy process, and challenges some established models in IB. The case study method may lead to some context-specificity in the findings. However, the overall theoretical model is not limited to China-based vendors. For example, the finding that different client geographies help vendors build different capabilities should be applicable to multiple industries and locations, e.g., Israeli firms discussed by Arora and Gambardella (2006). This research is still evolving and will include more interview-based data collection and further detailed analysis.

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