Drivers and performance implications of international key account management capability

Ruey-Jer "Bryan" Jean [a], Rudolf R. Sinkovics [b,c,*], Daekwan Kim [d], Yong Kyu Lew [e]

[a] Department of International Business, National Chengchi University, 64, Sec. 2, Zhi-Nan Road, Taipei 11605, Taiwan
[b] Centre for Comparative and International Business Research (CIBER), The University of Manchester, Manchester Business School, Booth Street West, Manchester M15 6PB, United Kingdom
[c] Lappeeranta University of Technology, Skinnarilankatu 34, PL 20 53851 Lappeenranta, Finland
[d] Florida State University, Department of Marketing, College of Business, Tallahassee, FL 32306-1110, USA
[e] School of Business, Sejong University, 209 Neungdong-ro, Gwangjin, Seoul, 143-747, South Korea

A B S T R A C T

Key account management plays a pivotal role for managers and practitioners in the maintenance of successful customer–supplier relationships. Yet, little is known conceptually or empirically about how suppliers can move beyond market scanning and develop international key account management capabilities in international customer–supplier relationships.

Drawing from the dynamic capability literature, we develop and test a model of antecedents and performance implications of suppliers' international key account management capabilities. In addition, the moderating effects of cultural distance and supplier information technology advancement are examined.

An analysis of 246 Taiwanese electronics suppliers reveals that market scanning and trust are recognized as critical to the development of suppliers' international key account management capabilities. Moreover, these key account management capabilities can facilitate suppliers' market performance. Importantly, cultural distance and suppliers' IT advancement moderate the impact of market scanning on the development of key account management in international exchange relationships.

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1. Introduction

Driven by globalization-related competitive pressures, many multinational enterprises (MNEs) outsource some of their value-adding activities, including manufacturing and innovation functions, to external suppliers. As more economic activities are taking place through alliances and outsourcing, managing interorganizational relationships is becoming vitally important (Mayer & Salomon, 2006). Also, many MNEs have centralized procurement and expect from their suppliers similarly coordinated selling activities such as uniform pricing, logistics, and service on a global basis (Birkinshaw, Toulan, & Arnold, 2001). In response to increasing demands from international customers, many suppliers are rethinking how they manage their relationships with significant customers and how they can design their internal organization in order to be optimally responsive on a global basis. Many supplying firms have developed international key account management programs as a tool to manage their international customers. For example, Unilever has developed specific key account programs to serve global customers such as Wal-Mart wherever they go in the world. According to Birkinshaw et al. (2001), international key account management (IKAM hereafter) is defined as organizational processes in companies by which the worldwide activities for serving multinational customers are coordinated centrally by one person or team within the supplying company (Homburg, Workman, & Jensen, 2002; Shi, Zou, White, McNally, & Cavusgil, 2005; Song & Thieme, 2009; Swoboda, Schlüter, Olejnik, & Morschett, 2012).

Despite the importance of IKAM in practice, academic research on this area is still rather patchy. Although some prior studies have focused on this issue, the existing literature has several shortcomings. First, the research is fragmented, and a coherent and accepted theoretically integrative framework that helps to

* Corresponding author at: The University of Manchester, Manchester Business School, Booth Street West, Manchester, Greater Manchester M156PB, United Kingdom. Tel.: +44 1613068980; fax: +44 1612756464.
E-mail addresses: bryan@nccu.edu.tw (R.-J.B. Jean), Rudolf.Sinkovics@manchester.ac.uk (R.R. Sinkovics), dkim@fsu.edu (D. Kim), yklew@sejong.ac.kr (Y.K. Lew).

understand IKAM strategies and the contingent conditions that impact on their effectiveness is yet to emerge (Gao & Shi, 2011; Shi, White, Zou, & Cavusgil, 2010). Second, while some anecdotal evidence exists, the IKAM literature has primarily been conceptual and descriptive. So far, with notable exception of Gao and Shi (2011), relatively little empirical research in the international business domain has engaged in hypothesis testing to explain how IKAM capability may be conceptualized and to examine its effect on firm performance (Workman, Homburg, & Jensen, 2003). Third, most of the previous work has focused on US and European firms' perspectives. We add to the existing knowledge by providing an external generalization through an Asian-Pacific perspective.

These underdeveloped IKAM studies in the field of international business led us to ask the following questions: What are the drivers of IKAM capability at the suppliers' end? To what extent do they affect the suppliers' IKAM capability and in turn market performance. Given the state of knowledge about IKAM, we focus on developing a conceptual framework based on dynamic capability theory (Teece & Pisano, 1994; Teece, 2007). This framework integrates drivers and performance outcomes of IKAM capability in international customer–supplier relationships. To identify the key drivers of dynamic IKAM capability, we look at the sensing dimension of dynamic capability in the context of the decision-making process suppliers use when cooperating with international buyers (Helfat et al., 2007; Teece, Pisano, & Shuen, 1997). We also view the coordination and reconfiguration aspects of the suppliers' IKAM process as dynamic capabilities (Shi, 2005; Shi, Zou, & Cavusgil, 2004; Teece et al., 1997).

The empirical context of this study is the specific cross-border relationship between Taiwanese suppliers and their international original equipment manufacturer (OEM) buyers. This was a deliberate choice as we wanted to examine key account management as a strategic dimension in the management of cross-border relationships. Taiwanese suppliers tend to have less bargaining power than their international OEM customers. In this asymmetric relationship, the development of IKAM capability plays a crucial role in driving the supplier's competitive position. In the conceptual framework we include two moderators – cultural distance and the information technology (IT) capability of the supplier – of the link between IKAM orientation, resource dependence and trust (as antecedents/drivers) and the IKAM capability of the supplier.

We specifically focus on IT advancement in supply chain technologies as a key IT capability for suppliers in international exchange relationships (Wu, Yeniyurt, Kim, & Cavusgil, 2006). IT advancement refers to the extent to which the supplier adopts the most advanced supply chain technologies in dealing with the key customer (Wu et al., 2006). We view supply chain technologies as applications that are implemented in order to effectuate integrated supply chain management processes within or across organizational boundaries (Autry, Grawe, Daugherty, & Richey, 2010; Richey, Tokman, & Dalela, 2010). Various types of supply chain technologies have been identified as such applications, including electronic data interchange (EDI), enterprise resource planning (ERP), customer relationship management (CRM), sales forecasting tools and supply chain management systems (SCMs) (Autry et al., 2010). Given the importance of cultural characteristics and the emerging adoption of advanced IT in international exchange relationships (Bstieler & Hemmert, 2008; Erumban & de Jong, 2006), we deem it important to explore the moderating effects of these two variables.

The proposed contributions to the extant knowledge on IKAM are as follows: First, drawing from the idea of dynamic capability, we develop and conceptualize IKAM capability, which is defined as complex bundles of skills and accumulated knowledge that are exercised through organizational processes that enable suppliers

to address rapidly changing international customers' needs (Shi et al., 2005). Moreover, using a unique survey-based dataset, a model of drivers and performance outcomes of IKAM capability in international exchange relationships is proposed and empirically tested. Hence, we conceptualize IKAM as organizational capability and empirically examine its drivers and performance implications. Second, there is a lack of empirical research examining how IKAM can be developed in the international context. By examining the moderating effects of cultural distance and suppliers' IT advancement in supply chain technologies on the impacts different antecedents have on IKAM capability, this research helps us to understand the circumstances under which IKAM capability can develop.

2. Conceptual framework

2.1. IKAM capability: Coordination and reconfiguration

According to Shi and Wu (2011), prior academic work on global account management (GAM) or IKAM draws greatly on different theoretical lenses, including relationship marketing (Birkinshaw et al., 2001), global marketing strategy (Shi et al., 2010), the resource-based view and the dynamic capabilities view (Shi & Wu, 2011; Shi et al., 2005). There is an emerging trend of adopting resource-based and dynamic capabilities perspectives to identify organizational processes that suppliers can employ to address their global customers' fast-changing needs and create a competitive advantage for themselves in global markets. Teece et al. (1997) conceptualized dynamic capability as the "ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments". Researchers have argued that these critical resources and capabilities can span the firm's boundaries and be embedded within interorganizational processes and activities (Dyer & Singh, 1998). In this study, we focus on IKAM capability, which is defined as complex bundles of skills and accumulated knowledge that are exercised through organizational processes and enable suppliers to address international customers' rapidly changing needs (Shi et al., 2005). It has been argued that the ability to create and deliver superior customer value through efficient and fast-responding processes can contribute to a firm's financial performance (Day, 1994; Fang & Zou, 2009). The dynamic capability perspective argues that organizational capabilities must be understood mainly in terms of organizational processes (Eisenhardt & Martin, 2000; Teece et al., 1997; Zhou & Li, 2010). From this viewpoint, organizational capabilities are processes that are embedded in firms. According to Eisenhardt and Martin (2000), dynamic capability is a set of specific and identifiable organizational processes set up in response to market changes. Thus, a firm should search for and select opportunities through its decision-making process, and coordinate and reconfigure its resources through its implementation process (Helfat et al., 2007; Teece et al., 1997).

Based on the aforementioned review of the IKAM and dynamic capabilities literature (Teece et al., 1997), we focus on two specific organizational processes that are critically important to a supplier's effective management of its key international customers: coordination and reconfiguration. We select these two particular capabilities because prior researchers have identified them as fundamental to suppliers' decision making and task accomplishment in serving international key customers (Shi, 2005; Shi et al., 2004). Coordination is considered an important aspect of IKAM. According to Shi (2005) and her colleagues, IKAM coordination in international exchange relationships includes interorganizational and cross-country coordination. Interorganizational coordination requires communication and joint action not only between the cross-functional operations of the supplier and

customer, but also between the top executives of both (Homburg et al., 2002). Cross-country coordination refers to the supplier's use of its worldwide strategic resources to achieve coordination and flexibility in order to serve its key customer around the world. KAM reconfiguration has also been identified as a key process of successful KAM (Harvey, Novicevic, Hench, & Myers, 2003; Shi et al., 2005). It refers to the processes by which suppliers adapt to a changing environment (Shi et al., 2005). Because global environments are constantly changing, suppliers must continually modify their product offering, services, and processes in order to adapt to changing customer needs. The dynamic nature of IKAM reconfiguration enables firms to leverage their relational capabilities through the formation of key account relationships with their international customers (Harvey et al., 2003). Recent studies have also identified firm reconfiguration and adaptive capabilities as crucial to enhanced international performance for a firm (Lu, Zhou, Bruton, & Li, 2010). Therefore, we consider reconfiguration as one of the key dimensions of a firm's IKAM capability.

In addition, we view market scanning, trust, and resource dependence as key drivers of dynamic IKAM capability at the decision-making stage (Helfat et al., 2007). Market scanning (e.g. sensing opportunities) is a cornerstone of building the capacity to seize new opportunities and reconfigure business process (Teece, 2007); social capital such as interorganizational trust is an essential source of dynamic capability (Blyler & Coff, 2003); and a firm's dependence on external resources drives its resource-picking mechanism which in turn is a precedent for building its dynamic capability (Eisenhardt & Martin, 2000; Makadok, 2001).

We view these three factors as salient drivers of IKAM capability development by resource-constrained suppliers in the context of relationships between suppliers and international buyers. Fig. 1 shows the dynamic capability view of the development of IKAM capability taken in this paper.

2.2. Hypothesis development

Using the dynamic capability perspective, we illustrate our proposed conceptual model in Fig. 2. We argue that IKAM capability, which enables the supplier to coordinate efficiently at different levels with the international customer and thus become more responsive to market changes, is the driver of the supplier's market performance. Prior studies have demonstrated this (Shi, 2005; Shi et al., 2010). In terms of the drivers of IKAM capability, we focus on three variables, namely, market scanning, supplier's resource dependence, and trust.

The dynamic capability literature highlights that dynamic capability is developed through resource-picking and capability-building mechanisms (Eisenhardt & Martin, 2000; Fang & Zou, 2009; Grant, 1996a,b; Makadok, 2001). The resource-picking mechanism explains which resources are required by a firm and how effective it is at selecting and acquiring these complementary resources so as to implement them within the firm (Fang & Zou, 2009; Makadok, 2001). The capability-building mechanism encompasses the activities by which a firm combines the newly acquired resources with existing resources and deploys the combined resources (Mahoney & Pandian, 1992; Makadok, 2001).
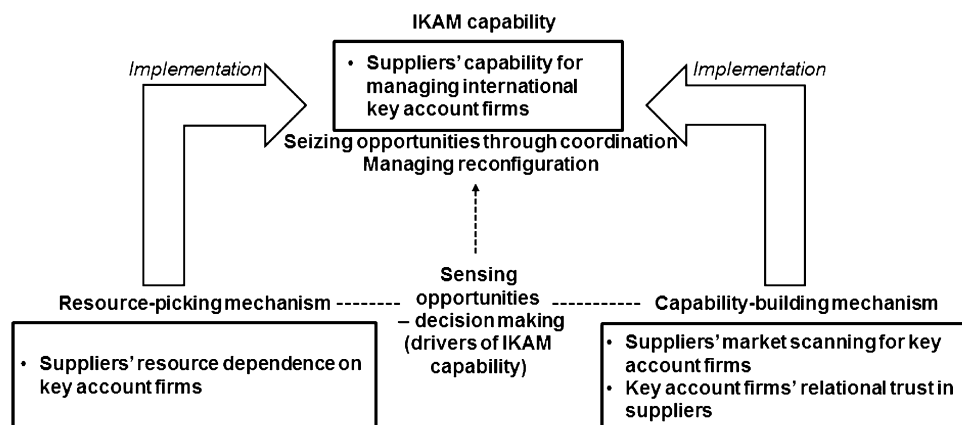

Fig. 1. Dynamic capability view of the development of IKAM capability.
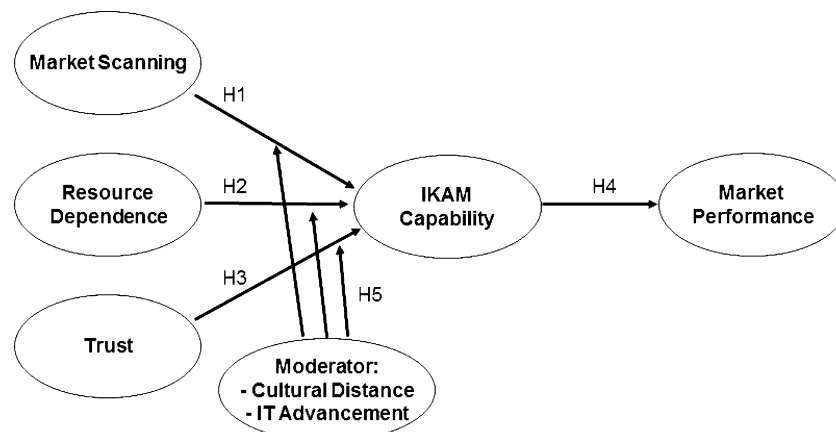

Fig. 2. Conceptual framework.

According to Makadok (2001), the resource-picking mechanism shows how firms can be more effective than their competitors in selecting resources so as to gain rents. Through their resource-picking mechanism, managers gather information and perform analysis to outsmart the resource market in choosing which resources and how much of them to put into the firm. In contrast, the capability-building mechanism shows how firms can be more effective than their competitors in deploying these resources. These two mechanisms can be extended to the development of IKAM capability. With respect to the resource-picking mechanism, in a situation of constrained and stringent resources, we argue that a resource-dependent supplier will become more skilled at discerning which resources are more valuable and so avoid acquiring bad resources in the market, which, in turn, can help the supplier to integrate different resources more effectively, so as to coordinate and reconfigure interfunctional processes and respond to the key customer's needs. Hence, we suggest that a supplier's resource dependence helps enhance the resource-picking mechanism in the IKAM capability development process. According to this argument, resource dependence is an antecedent of the resource-picking mechanism.

Regarding the capability-building mechanism, this paper focuses on two of its functions (i.e., market scanning and trust) in the IKAM context. First, market scanning is an important part of a supplier's strategic orientation in the IKAM context, as scanning and gathering information about the key customer's changing needs and market changes help to enhance the supplier's KAM capability (Jaworski & Kohli, 1993). Following Noble, Sinha, and Kumar (2002), we conceptualize market scanning as a competitive culture, a dimension of the organizational culture that provides the organization with value and priorities in its interactions with its marketplace – both customers and competitors – and influences the more specific strategies and tactics the organization uses. We use this view of strategic orientation because it is based on the belief that an organization's deep, culture-driven characteristics influence both its internal processes related to marketing and strategic thinking, and the strategies that emerge from it. Developing KAM capability is not a static but a dynamic process at the supplier's end, because it relies on real-time information regarding current and future customers and market needs (Teece et al., 1997). Second, trust has been conceptualized as a relational governance structure in prior literature, and the literature on dynamic capability reveals that social capital such as trusting relationships plays a crucial role in firms' development of capabilities in response to market changes (Blyler & Coff, 2003). Social capital facilitates the acquisition of resources external to a firm by promoting a constant flow of information from diverse sources. A high level of trust between a supplier and its key international customer lessens opportunism and uncertainty in that interorganizational relationship. Thus, trust at the interorganizational level can be treated as the key aspect of the capability-building mechanism in the IKAM context.

In addition, we argue that the relationship between IKAM capability and its antecedents is moderated by cultural distance and the supplier's IT advancement in supply chain technologies. Cultural characteristics and IT play a crucial role in the development of IKAM capability in international exchange relationships (Fang & Zou, 2009), although empirical evidence on their effects is very limited.

2.2.1. Supplier's market scanning and IKAM capability

We conceptualize market scanning as a firm's strategic orientation to gather and track information about the needs of its key account and market changes (Olsen & Saetre, 2007). Market scanning is a key channel through which suppliers develop strong relationships with their most valuable customers. A supplier focusing on market scanning will engage in activities geared toward gathering information about their key customers and competitors. This timely information can help suppliers to identify current and future customer needs and changes, helping them to better coordinate their products and services across their supply chain members and across different countries. Moreover, market scanning can help suppliers to continually sense environmental changes and thus adapt their products and services so as to serve their key account more efficiently. By actively collecting competitor-related information and monitoring its rivals' behavior, a market-scanning firm can identify its position and determine its strategy, and thus respond more quickly to competitors' actions. According to the resource-based view, an organization's culture, which includes its market orientation, is a firm resource that can facilitate capability-building processes (Barney, 1986). The dynamic capability perspective argues that effective market scanning in terms of customers' and competitors' information helps firms to enhance their learning capabilities, ultimately enabling them to create, extend, and modify their resource base (Teece et al., 1997). Empirically, in a recent study, Fang and Zou (2009) found that a learning culture among international joint venture partners could improve the development of dynamic marketing capability. Zhou and Li (2010) also showed that customer and competitor orientation could enhance dynamic capability for emerging market firms. Therefore,

Hypothesis 1. A supplier's market scanning is positively related to its IKAM capability.

2.2.2. Suppliers' resource dependence and IKAM capability

Suppliers' resource dependence has been identified as an important factor in KAM relationships (Handfield & Bechtel, 2002). A supplier is more dependent on the customer when the supplier has limited alternative resources compared to the customer. In the relationship between supplier and international customer, the supplier relies on the key international customer to offer key resources, including R&D and information on customers and competitors. We argue that resource dependence can enhance the resource-picking mechanism that can in turn develop IKAM capabilities for the following reason. Due to its constraints in key resources, a resource-dependent supplier will be more prudent in selecting resources in the market and will integrate key resources with organizational processes to develop IKAM capability. In addition, according to resource-dependence theory (Pfeffer & Salancik, 1978), a firm will strive to reduce its reliance on, or increase its influence over, other firms in its task environment. Birkinshaw et al. (2001) contend that IKAM will only be effective at high levels of supplier dependence. Drawing on the resource-dependence and dynamic capability theories, we argue that a dependent supplier will be willing to invest resources in developing the IKAM capability to serve its key customer, in order to increase its bargaining power. The dynamic capability perspective also argues that resources accumulated through the resource-picking mechanism form the "building blocks" of dynamic capability. A dependent supplier can accumulate technology and market resources by working continuously with the international key customer, thus developing better IKAM capability in terms of both coordination and reconfiguration in response to a changing environment. Therefore,

Hypothesis 2. A supplier's resource dependence is positively related to its IKAM capability.

2.2.3. Trust and IKAM capability

In this study, trust is defined as the confidence that exchange parties have in each other's reliability and integrity

(Doney & Cannon, 1997; Zhang, Cavusgil, & Roath, 2003). The literature highlights that trust provides a better ability to govern cross-border relationships because physical and cultural distance undermine the ability of formal contracts to identify and cover each contingency (Wu, Sinkovics, Cavusgil, & Roath, 2007).

In the context of KAM, prior studies have also highlighted the key role of trusting relationships (Abratt & Kelly, 2002). Trust can be a good foundation for the development of KAM capability because a supplier will be more willing to commit resources to specific organizational processes to serve a trustworthy key customer. Due to potential concerns about the abuse of power in the buyer–supplier relationship, a supplier will not be willing to develop large resources such as KAM teams to coordinate with their key customer unless the exchange relationship includes a large amount of trust. Further, a trusting relationship signals transparency and openness, making a supplier more likely to go beyond contractual agreements and be more adaptable and responsive to unforeseen environmental changes. Hence, in the context of IKAM, a trusting relationship can drive suppliers to better coordinate with their customers across borders and reconfigure critical resources to serve those customers more effectively and efficiently.

The dynamic capability theory views trust as social capital that is essential to creating an organizational climate conducive to learning, which ultimately leads to resource creation and the development of capabilities (Blyler & Coff, 2003). For example, Wu et al. (2007) found that trust can enhance the market competence of exporting manufacturers in relationships with foreign distributors. Recently, Griffith, Yalcinkaya, and Calantone (2010) also recognized trust as positively related to the development of firms' marketing capabilities in the global market. Thus,

Hypothesis 3. Trust is positively related to the supplier's IKAM capability.

2.2.4. Supplier's IKAM capability and market performance

We conceptualize KAM capability as a supplier's organizational processes including coordination and reconfiguration, and define market performance as the extent to which the firm achieves market-related goals such as revenue growth, market share, and profitability (Workman et al., 2003). IKAM capability thus incorporates not a single but a complex set of organizational capabilities that are developed dynamically and jointly with the key customers. Being dynamic in its IKAM capabilities can provide a supplier with a sustained competitive advantage in its relationship with its key international customer (Teece et al., 1997), enhancing the supplier's market performance. In international supplier–customer relationships, a supplier's coordination capability allows it to manage sales activities at each organizational level on a global basis in order to serve the international customer's needs. Moreover, a responsive and flexible supplier can alter its organizational structure and process and redeploy its strategic resources accordingly (Shi et al., 2005). Some empirical work has demonstrated that KAM capability-related constructs, including coordination and reconfiguration, can enhance firm performance in the exchange relationship (Buvik & John, 2000; Kim, Cavusgil, & Calantone, 2006). On the basis of the above arguments and empirical evidence, we argue that, when a supplier's KAM capability is greater, it is in a better position to perform well in the market for its key customer. Thus,

Hypothesis 4. IKAM capability is positively related to the supplier's market performance.

2.2.5. Moderating effects: Supplier's IT advancement and cultural distance

As discussed previously, the development of a supplier's KAM capability is dependent on its market scanning, its resource dependence, and the trust in the international exchange relationship. Given the significant cultural differences that can be present in international exchange relationships, it is expected that the latter effects will be influenced by cultural distance. Moreover, it can be argued that increased IT adoption and advancement in terms of the supply chain technologies used in the international supplier–customer relationship (Jean, Sinkovics, & Cavusgil, 2010) might also influence the process of cultivating KAM capability through market scanning, resource dependence, and trust.

Although a supplier's market scanning motivates the development of KAM capability, it is contended that developing a KAM-oriented culture by gathering customer and competitor information imposes significant costs (Yip & Bink, 2007). Because supply chain technologies can significantly enhance information-processing capability and reduce coordination costs, the supplier's IT capability is expected to enhance its KAM capability development through market scanning.

The literature on market orientation has found that IT capabilities can facilitate a market-oriented culture (Pavlou & Sawy, 2006). In our study, we focus on one specific IT capability: supplier's IT advancement in terms of supply chain technologies, which is defined as the extent to which the supplier adopts the most advanced supply chain technologies (Wu et al., 2006). The salesforce literature has found that supply chain technologies facilitate the effective transfer of information between the supplier and key customer (Hunter & Perreault, 2006, 2007). In addition, supply chain technologies such as ERP systems help firms to better coordinate their information across different business functions (Yamin & Sinkovics, 2007, 2010). Therefore, it is argued that, when a supplier's IT advancement is high, it can process more of the information gained from the market and customers, strengthening the positive effect market scanning has on its IKAM capability. Thus,

Hypothesis 5a. The positive relationship between the supplier's market scanning and its IKAM capability is strengthened when the supplier's IT advancement is high.

It has been argued that national culture plays a crucial role in shaping the process of managing international key account relationships (Yip & Bink, 2007). In our study, we adopt Hofstede's conceptualization of culture, and follow Kogut and Singh's (1988) operationalization of cultural distance. In our study, the supplier and the international customer are assumed to belong to diverse cultures, coming from different countries. Recent studies have suggested that national culture can affect a firm's market-oriented culture and behavior (Kirca, Cavusgil, & Hult, 2009; Nakata & Sivakumar, 2001). In their conceptual framework, for example, Nakata and Sivakumar (2001) suggested that higher individualism was related to greater market intelligence generation. Cultural distance creates great uncertainty for a supplier in an international exchange relationship, creating significant demand for information processing. Accordingly, the greater is the cultural distance between a supplier and its international customer, the more actively will the supplier engage in market scanning, gathering customer and competitor information so as to develop coordination and reconfiguration capabilities in response to uncertainties and ambiguities in the exchange relationship. Hence,

Hypothesis 5b. The positive relationship between the supplier's market scanning and its IKAM capability is strengthened when the

cultural distance is high in the international customer–supplier relationship.

The relationship between the supplier's resource dependence and its KAM capability is also moderated by the supplier's IT advancement and cultural distance. Prior research has argued that the supplier's IT advancement, as a relationship-specific commitment, can increase the mutual commitment to support the exchange relationship. That is, in an exchange relationship featuring a high level of supplier's IT advancement, the role of supplier's dependence is likely to be weakened due to the increase in the customer's commitment that increases its dependence on the relationship. In his seminal empirical work, Subramani (2004) found that a supplier can use supply chain technologies, for instance, as a token of commitment, to strengthen the relationship with the key customer and create relationship value. Accordingly, it is argued that a supplier's IT advancement will reduce the impact its dependence has on the development of KAM capability.

Turning to cultural distance, in a high cultural distance relationship, a supplier will find it more difficult to predict the key customer's preferences and behaviors. Therefore, the supplier's KAM capability will become more important. Research on relational exchange has already discussed the interaction effect of environmental uncertainty and interdependence structure in the exchange relationship (Ryu & Eyuboglu, 2007). Resource-dependence theory further argues that the need for coordination increases when uncertainty increases (Pfeffer & Salancik, 1978). Therefore, a dependent supplier is more likely to develop IKAM capability when the cultural distance is high. The logic is that cultural distance produces extra uncertainty and ambiguities that drive a resource-dependent supplier to develop greater KAM capability in terms of interfirm coordination and reconfiguration activities. Thus,

Hypothesis 5c. The positive relationship between a supplier's dependence and its IKAM capability is reduced when the supplier's IT advancement is high.

Hypothesis 5d. The positive relationship between a supplier's dependence and its IKAM capability is strengthened when the cultural distance in the international customer–supplier relationship is high.

Regarding the relationship between trust and KAM capability, studies have indicated that trust functions differently in different cultural environments. Moreover, in interfirm relationships, IT can serve as a governance enabler and is expected to influence the effect of trust on KAM capability.

It has been argued that trust can help develop relational behaviors such as coordination and knowledge sharing. However, research also shows that developing trusting relationships incurs certain costs and has potential risks. Selnes and Sallis (2003) found that the effectiveness of relationship learning is reduced as a result of the hidden cost of trust. However, when a supplier strengthens its IT advancement in SCMs, the information exchange between it and the key customer will increase significantly (Wu et al., 2006) and transparent information sharing creates an environment that can facilitate the development of trust in interfirm relationships. The literature on communication strategies has shown that quality and quantity of communication can enhance the development of trust (Mohr & Nevin, 1990). Therefore, we argue that, when a supplier has highly advanced IT, it will be more willing to develop KAM capability, given the level of trust in the relationship.

In terms of the moderating effect of cultural distance, the literature on relational exchange has argued that trust provides a better way to govern interfirm relationships when cultural distance is high (Cavusgil, Deligonul, & Zhang, 2004; Zhang

et al., 2003). The logic is that, the more distant are the cultures, the greater is the effort that the two organizations must exert to bridge the gap, and the greater is the reliance on trust in building the exchange relationship. Therefore, trust plays a more crucial role in the supplier's development of coordination and reconfiguration in an international exchange relationship featuring high cultural distance. In other words, a supplier is expected to commit more resources to developing its IKAM capability in a trusting relationship when the cultural distance is high. Hence,

Hypothesis 5e. The positive relationship between trust and IKAM capability is strengthened when the supplier's IT advancement is high.

Hypothesis 5f. The positive relationship between trust and IKAM capability is strengthened when the cultural distance in the international customer–supplier relationship is high.

3. Method

3.1. Unit of analysis

For the empirical context of this study, the specific international exchange relationship between Taiwanese suppliers and their international OEM buyers was chosen. This was a deliberate choice as we wanted to examine IKAM capability as a strategic dimension in the management of cross-border relationships. The relationships between Taiwanese suppliers and their international OEM customers in the electronics industry are significantly asymmetric. Most of the buyers have well-established international brands and are in a superior bargaining position. According to a survey by the 2005 International Procurement Office (IPO) in Taiwan, the top five IPO purchasing companies (HP, Dell, Sony, Apple, and IBM) accounted for 73% of all international IT purchasing in Taiwan. Thus, a high degree of power asymmetry is considered a key feature of the OEM-supplying networks we examine. Given the increasing demand from their dominant international customers, Taiwanese contracting suppliers have developed KAM strategies in response to customer needs. Given that most of the extant literature on IKAM focuses on the European and American markets, an Asian-Pacific perspective on IKAM strategies offers a valuable empirical contribution to this stream of research.

3.2. Sampling frame and data collection

Senior account managers directly involved in international OEM relationships with branded firms were chosen as the key informants in this research. A survey methodology was used to collect the data. The sampling frame constituted all electronics companies from the year 2007 directory of the Top 5000 Largest Firms in Taiwan, published by China Credit Information Service Ltd (a total of 1069 companies). All firms in the database were contacted to assess their eligibility and to identify additional appropriate informants for the study. Following the approach of Workman et al. (2003), we define the key customer as the supplier's most important international customer, in terms of largest sales volume. The respondents were specifically asked to identify their most important international OEM customer.

Data collection was carried out in two stages. Initially, in-depth interviews were conducted with 15 senior account and/or marketing managers or directors from Taiwanese suppliers. This qualitative approach helped us to further calibrate the questionnaire, which was subsequently developed to fit the industry context, and it also served as an a priori test of the key constructs with respect to usefulness and appropriateness. In the second stage, the final survey instrument was mailed out on a large scale

to the Taiwanese electronics companies identified from the directory as described above. Yu and Cooper's (1983) suggestions for maximizing response rates were applied, and multiple contact points (Dillman, 2000) were established via telephone and personal contacts to solicit contributions. We also sent out questionnaires via e-mail to accommodate respondents' preferences. Each informant who agreed to participate was either faxed or emailed a questionnaire packet.

3.3. Survey response and informant evaluation

246 useable questionnaires were returned, resulting in an effective response rate of 23.01% (246/1,069). The international OEM buyers in the dataset originated mainly from the USA (41.7%), Japan (20.4%), Germany (9.2%), China (7.5%) and France (4.2%), with other countries making up the remaining 17%. The Taiwanese electronics suppliers were involved in supplying computer components (37.1%), semiconductors (15.8%), communication products (12.1%), and computer peripherals and optoelectronics (35%). Over 67% of the Taiwanese suppliers in our dataset were small or medium-sized (i.e. less than 250 employees). Our survey instrument also allowed us to identify the level of the supplier's dependence on their key international OEM buyer, both in terms of resource-endowment and the potential to replace them with another buyer.

Non-response bias was assessed by classifying the responses into two groups, early responses and late responses (Armstrong & Overton, 1977). Furthermore, independent *t*-tests were performed on demographic variables such as revenue and number of employees. No significant differences were identified for these descriptive variables between the early and late respondents. We ran additional *t*-tests on key variables in the proposed conceptual model, such as IT advancement, between these two groups. Again, no significant difference emerged.

As a reliable assessment of non-response bias can only be achieved via feedback from the non-respondents themselves, we identified ten non-respondents and called them to obtain explanations for their lack of response. In all 10 cases the reasons provided were related to time pressures, the time required to complete the questionnaire and the general notion that too many requests for questionnaire feedback had landed on their desk. Taking all of these test results together, it seems that non-response bias does not pose a significant threat to the study.

3.4. Measurements

Multi-item scales and seven-point response formats were used to operationalize all constructs and variables. The measures in this study were adapted from previous work and refined on the basis of feedback from experienced researchers and practitioners in the area of inquiry.

We conceptualized IKAM capability as a complex bundle of knowledge and skills, deeply embedded in interorganizational routines and processes, and deployed through the idiosyncratic contributions of the international key customer in question. The operationalization of IKAM capability followed a five-item scale, originally developed by Shi et al. (2005) and Shi et al. (2010). The items capture efforts to coordinate service, product, and supply chain activities with the international customer, the collaboration of international customer support teams across multiple countries, and the adjustment of organizational processes in response to the customer's changing needs, amongst other aspects.

Supplier's market scanning was operationalized as its behaviors in scanning the key account's needs, and environmental needs such as market and competitor information in relation to the international customer's product, service, and strategies. A

four-item scale was used, adapted from the work of Li and Calantone (1998) and Uzzi (1997). Resource dependence captures the extent to which the supplier depends on its key customer for critical resources. The measure was taken from Lusch and Brown (1996). A three-item scale was used to measure trust, taken from Doney and Cannon (1997) and adapted to our context, and capturing the supplier's perception of the credibility and benevolence of its key international customer. IT advancement was conceptualized as the extent to which a firm is proactive in adopting or using the most advanced supply chain technologies to build new technical solutions to meet its partner's needs ahead of its competitors (Wu et al., 2006), and was measured using a five-item scale.

For supplier's market performance, we adopted the conceptualization of Venkatraman and Ramanujam (1986), namely market share, sales growth, and profitability (see also Sarkar, Echambadi, & Harrison, 2001). The scale captures the performance impacts of the supplier's relationship with its most important customer.

Finally, we used cultural distance measures suggested by Kogut and Singh (1988) to test for the moderating effect of cultural distance on the impact of the three antecedents on KAM capability.

3.5. Measurement model results

We conducted confirmatory factor analysis (CFA) using EQS for Windows 6.1 to evaluate the measurement model. The CFA model included all six study constructs, including IT advancement as one of the moderators captured in the survey. As part of the measurement purification process, items with a loading less than .5 were eliminated to increase the convergent validity. Furthermore, item scales linked to more than one construct were removed to improve the discriminant validity. The purification left at least three items remaining for each construct. As shown in Table 2, the CFA model reveals an acceptable fit with the covariances provided by the dataset, with χ^2 = 566.46 on 215 d.f., NNFI = .907, CFI = .921, and RMSEA = .082 (Bentler & Chou, 1987).

Next, the unidimensionality of the constructs was assessed using the largest standardized residuals reported. According to the results, there is no significant threat to the unidimensionality of the constructs, the largest standardized residual being less than .20 (Fornell & Larcker, 1981). Further, all items are significantly loaded on their corresponding factor ($p < .01$) and their loadings are greater than .5, as shown in Table 1. This indicates an adequate level of convergent validity (Nunnally & Bernstein, 1994). The composite reliability of each construct is reported in Table 2 along with the standardized parameters of the measurement items. All composite reliabilities are greater than .84, far above the acceptable level of .7 (Nunnally & Bernstein, 1994). For discriminant validity, average variance extracted (AVE) should be greater than the shared variances of each construct (Fornell & Larcker, 1981). We report the AVE for each construct, ranging from .64 to .81, in Table 2, and the shared variances among the constructs, ranging from .00 to .53, in the upper triangle of Table 2. These results demonstrate a good level of discriminant validity between the study's constructs.

3.6. Common method bias assessment

Since this study relies on a single source of information, it is possible that our survey data reflect some degree of common method bias. Consequently, we assessed common method bias in the dataset using a hierarchically nested covariance structure model, based on prior literature (e.g., Cote & Buckley, 1987). Following the process suggested in the literature, we estimated three models: a trait-only model (M2), a method-only model (M3), and a trait-and-method model (M4). The results are reported in Table 3 along with the results of testing for the presence of trait

Table 1
Measures[a] and composite reliabilities.

Constructs and measures	λ	Composite reliability
Trust: adapted from Doney and Cannon (1997)		.85
We believe the information that our international customer provides us	.78	
Our international customer is genuinely concerned that our business should succeed	.91	
When making important decisions, our international customer considers our welfare as well as its own	.73	
Resource dependence: adopted from Lusch and Brown (1996)		.84
Our company is strongly dependent on this major international customer	.65	
It would be very difficult for our company to replace the sales and profits realized from this major international customer	.87	
Our major international customer would be costly to replace	.86	
Market scanning: adapted from Li and Calantone (1998)		.89
We use multiple methods to gather information about our international customer's products, services, and strategies	.81	
We frequently collect information about the international customer's operations that are relevant to our business (e.g. purchasing, marketing, R&D)	.95	
We continually review the likely effects of changes in the business environment that may affect our international customer management practices	.81	
We regularly collect information about our competitors' products, services and strategies	.66	
International Key Account Management (IKAM) capability: adapted from Shi (2005) and Shi et al. (2010)		.92
We make great efforts to coordinate our service, product and supply chain activities for this international customer	.64	
Our international customer support team located across multiple countries works together well to serve this international customer	.62	
We can redeploy the strategic resources serving this international customer in the global market more quickly than our competitors can	.92	
We can realign our organizational processes with respect to this international customer's changing needs ahead of the competition	.97	
We can modify our products or services to accommodate this international customer's needs ahead of the competition	.96	
Market performance: adapted from Venkatraman and Ramanujam (1986)		.84
Please think of the benefits of your relationship with the most important international customer in terms of the following aspects		
Increased sales growth	.88	
Increased market share	.80	
Increased profitability	.71	
IT Advancement: adopted from Wu et al. (2006)		**.95**
Our company uses the most advanced IT for supply chain management	.90	
Our IT for our supply chain management is always state-of-the-art technology	.91	
Relative to our competitors, the IT we use for our supply chain management is more advanced	.91	
Our company is always first in our industry to use new IT for its supply chain management	.89	
In our industry our company is regarded as an IT leader in supply chain management systems	.88	

CFA model goodness of fit indices
Chi-square: 566.469 on 215 d.f.
NNFI: .907
CFI: .921
RMSEA: .082

[a] All items were measured using a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

factors and testing for the presence of a method factor. According to the results, variances from both construct items (or traits) and methods are present. This suggests that a portion of the covariance originates from the method used to collect the data.

Subsequently, we assessed the impact of the bias by calculating the mean percentages of the variance explained by each of the construct items and by the common method factor (Cote & Buckley, 1987). The results show that the mean percentage of variance explained by the construct items is 68.8% while that

of the common method factor is only 2.5%, indicating that the impact of common method bias in this study is minor (Lee, Sirgy, Brown, & Bird, 2004). We conclude that common method bias does not pose a major threat to the study.

4. Analysis and results

To test Hypotheses 1 to 4, the proposed structural model without the moderators was estimated with all measurement items from the CFA model, using EQS for Windows 6.1. The results show an acceptable fit of the model with the empirical covariances provided by the data, with χ^2 = 399.85 on 145 d.f., NNFI = .905, CFI = .920, and RMSEA = .085. Based on the acceptable fit of the structural model, the proposed Hypothesis 1 through Hypothesis 4 were tested. Specifically, Hypothesis 1, which claims that a firm's market scanning positively affects its IKAM capability, is supported (b = .495, p < .01). Hypothesis 2 posits that supplier dependence cultivates IKAM capability. However, it is not supported (b = .079, p > .10). In Hypothesis 3, we contend that trust enhances IKAM capability and this is supported by the results (b = .333, p < .01). We also claim (Hypothesis 4) that IKAM capability enhances a

Table 2
Intercorrelations and shared variances of measures (n = 246).

	F1	F2	F3	F4	F5	F6
Market scanning (F1)	**.66**	.00	.21	.28	.18	.11
Resource dependence (F2)	.06	**.64**	.00	.02	.03	.00
Trust (F3)	.46	.13	**.66**	.19	.21	.02
IKAM capability (F4)	.53	.13	.44	**.70**	.19	.05
Market performance (F5)	.43	.16	.46	.44	**.64**	.02
IT advancement (F6)	.33	−.05	.15	.23	.14	**.81**

Note: The correlations are in the lower left triangle of the matrix. Shared variances are in the upper right triangle of the matrix. The average variance extracted are along the diagonal.

Table 3
Assessment of common method bias.

Model	χ^2	d.f.	p	CFI	NNFI	SRMR
M1: null model	4713.02	253	.000	n/a	n/a	n/a
M2: trait-only model	566.47	215	.000	.921	.907	.059
M3: method-only model	3053.69	230	.000	.367	.304	.193
M4: trait-and-method model	365.19	192	.000	.961	.949	.056

Model comparison	$\Delta\chi^2$	Δd.f.	p		Conclusion	
Testing for the presence of trait factors						
M1–M2	4146.55	38	<.01		M1 > M2	
M3–M4	2688.5	38	<.01		M3 > M4	
Testing for the presence of a method factor						
M1–M3	1659.33	23	<.01		M1 > M3	
M2–M4	201.28	23	<.01		M2 > M4	

firm's market performance and this is supported ($b = .453$, $p < .01$). These results are summarized in Fig. 3.

To test the moderating effects of IT advancement and the cultural distance between the supplier and buyer, two additional models were estimated. First, to investigate the moderating effects of IT advancement on the three paths from market scanning, supplier dependence, and trust to IKAM capability, the observations were split around the mean level of IT advancement for a two-group analysis. Then, all three hypothesized paths were equality-constrained across the groups. The estimation results reveal an acceptable fit of the model with the data, with $\chi^2 = 481.87$ on 258 d.f., NNFI = .909, CFI = .923, and RMSEA = .084. The results further show that the path between market scanning and IKAM capability is moderated by IT advancement ($p < .05$, $b_{low} = .347$ and $b_{high} = .456$). However, the moderating effects of IT advancement on the other two paths, between supplier dependence ($p > .10$, $b_{low} = .070$ and $b_{high} = .047$) and trust ($p > .10$, $b_{low} = .215$ and $b_{high} = .289$), respectively, and IKAM capability, are not significant. Therefore, Hypothesis 5a is supported but Hypotheses 5c and 5e are not.

To test Hypotheses 5b, 5d, and 5f that concern the moderating effects of cultural distance, another two-group analysis was carried out by splitting the observations according to the mean cultural distance calculated between the supplier and the buyer. The formula suggested by Kogut and Singh (1988) was used. Then, the three paths, between market scanning, supplier dependence, and trust, respectively, and IKAM capability, were equality-constrained across the groups to investigate the moderating effects of cultural distance. The estimation results indicate a good fit of the model with the data, with $\chi^2 = 439.33$ on 258 d.f., NNFI = .928, CFI = .939,

and RMSEA = .076. The results also show that the path between market scanning and IKAM capability is moderated by the cultural distance between the supplier and the buyer ($p < .05$, $b_{low} = .371$ and $b_{high} = .479$). However, the moderating effects of cultural distance on the other two paths, between supplier dependence ($p > .10$, $b_{low} = .067$ and $b_{high} = .064$) and trust ($p > .10$, $b_{low} = .230$ and $b_{high} = .233$), respectively, and IKAM capability, are not significant. Therefore, Hypothesis 5b is supported but Hypotheses 5d and 5f are not. These results are summarized in Figs. 4 and 5.

5. Discussion and implications

With the tremendous increase in outsourcing and substantial shift toward demand-driven global supply chains, suppliers are being charged with higher value-adding activities and required to develop specific dynamic capabilities (Shi et al., 2005) in order to serve their demanding global customers. This study has sought to gain a greater understanding of how suppliers can enhance their IKAM capability in international customer–supplier relationships, and the resultant influence on the suppliers' market performance. Drawing on the dynamic capability and international business literature and taking a supplier's perspective, this study has developed and empirically tested an integrative model that delineates the antecedents and performance outcomes of IKAM capability in such relationships. Moreover, we have examined the moderating effects of IT advancement and cultural distance on the development of IKAM capability. Our research can serve as an initial effort to understand how suppliers can develop IKAM capability and make themselves competitive in their international exchange relationships with key customers.

5.1. The role of IKAM capability in the development of a supplier's competitiveness

Following a shift in KAM research toward a better understanding of the resource and capability dimensions of KAM, we contribute to IKAM research by making a conceptualization and empirical assessment of IKAM in relation to supplier performance. Drawing from the dynamic capability view, we conceptualize IKAM capability as a firm's ability to manage interorganizational relationships by effectively coordinating and reconfiguring its organizational processes to serve its international key customers. Our data show that IKAM capability enhances suppliers' market performance. Therefore, IKAM is an effective dynamic capability. It
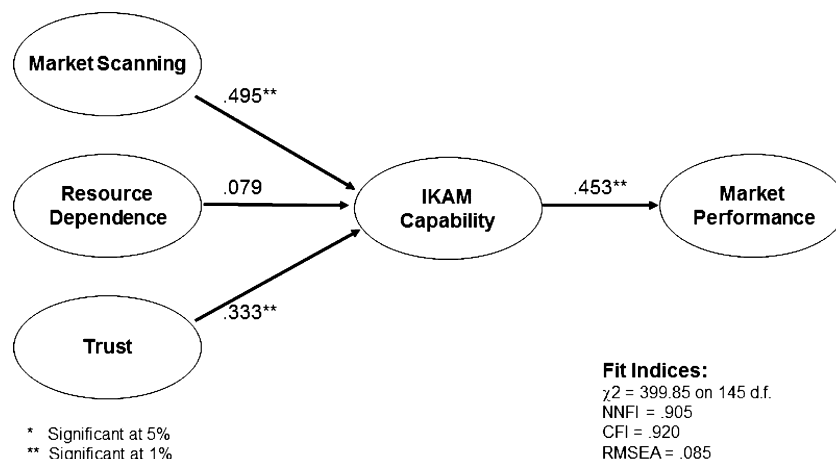
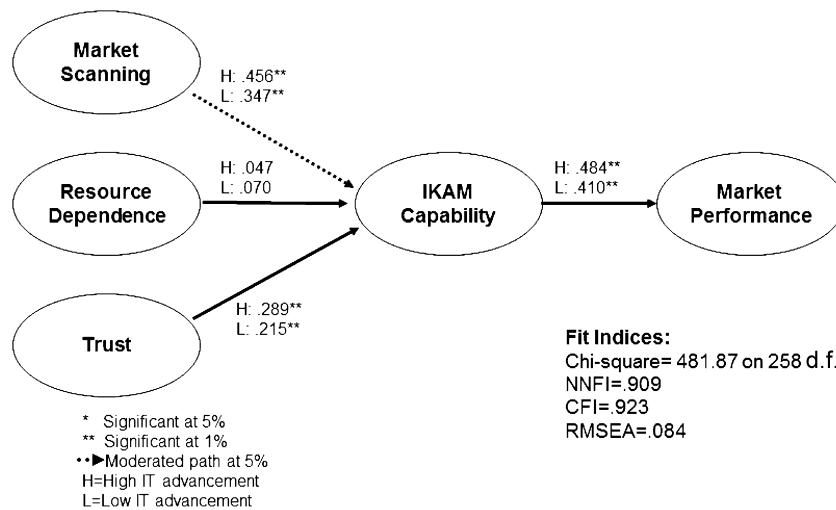**Fig. 3.** Results of model estimation.

Fig. 4. Moderating effect of IT advancement and IKAM capability.

serves as a governance mechanism, enabling suppliers to reduce transaction costs and enhance transaction value in relation to their key customers. This study also contributes to IKAM research by linking IKAM capability to the suppliers' market performance. Despite the importance of the performance implications of IKAM strategies, empirical evidence on this issue is scarce in the extant literature (Workman et al., 2003). This study sheds lights on this important gap in the international marketing and international business fields.

5.2. Development of IKAM capability

In terms of the antecedents of IKAM capability in international exchange relationships, our findings demonstrate that a supplier's market scanning and the trust in the international exchange relationship both enhance the supplier's IKAM capability, with market scanning having the strongest effect. Thus, market scanning and trust are the integral parts of the supplier's IKAM capability-building mechanism. However, against our expectations, the supplier's dependence on the customer was found not to be significantly and directly linked to its IKAM capability. This research thus contributes to the call for research on the

conditions that facilitate the formulation of IKAM capability (Shi et al., 2004).

The strength of the impact of market scanning on IKAM capability is consistent with prior findings and thus reinforces the importance of a culture oriented toward the key customer as a crucial foundation of an effective IKAM strategy in the exchange relationship (Workman et al., 2003). This finding is also consistent with the dynamic capability literature that has highlighted the importance of strategic orientation in driving the development of dynamic capability (Zhou & Li, 2010). Thus, managers on the supplier side need to dynamically develop market-scanning activities relating to international key account customers (e.g., gathering market information about key customers, identifying their latest business strategies and their new product/service development milestones), as this can help them coordinate and reconfigure their resources and thus build their capabilities.

This study proposed another potential driver of IKAM capability: supplier's resource dependence. Hypothesis 2 postulated that the higher is the supplier's dependence on the international key customer, the greater is its IKAM capability. The empirical results do not support this relationship. This may indicate that, when a supplier is dependent on the international key
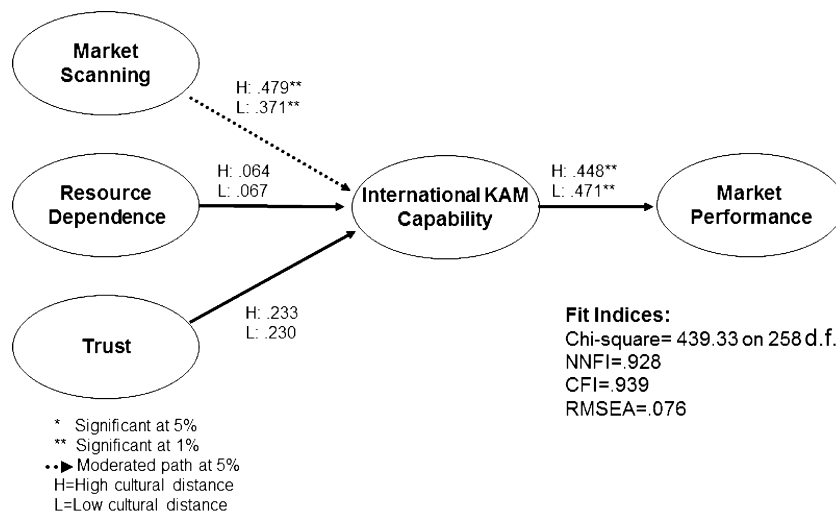

Fig. 5. Moderating effect of cultural distance and IKAM capability.

customer, its perceived vulnerability and the uncertainty of the focal relationship increases as well. A recent study argued that focusing on a key accounts creates strategic vulnerabilities and a shared business risk for suppliers (Piercy & Lane, 2006). Concerns over potential risks may offset the incentives for suppliers to adopt IKAM strategies. This is consistent with the literature on relational exchange, which has argued that a weaker party may not be willing to adopt relational governance strategies in an asymmetric interorganizational relationship. From the dynamic capability perspective, the suppliers' resource-picking mechanism, conceptualized as their resource dependence on their key customer, may contribute to their building of superior IKAM capabilities by internalizing valuable and unique resources in the process of overcoming the customers' resource constraints in the IKAM context. In line with this view, account managers need to understand and allocate their resources mindfully for specific customer relationships in the process of developing IKAM capability.

The findings also show that trust can enhance IKAM capability in an international exchange relationship. A trusting relationship sets up a foundation for the development of IKAM capability by the supplier. Compared to the use of power to force the supplier to provide consistent IKAM programs in the exchange relationship, a relational governance mechanism such as trust better facilitates IKAM strategy development. Trust can reduce the risk of opportunistic behavior and can therefore signal the pursuit of a long-term relationship (Zhang et al., 2003). In a trusting relationship, the supplier will thus be willing to commit resources to designing an IKAM program that will deliver superior value to the customer. Account managers are advised to recognize the value of trusting exchange relationships in developing IKAM capability.

5.3. The moderating roles of IT advancement and cultural distance

This study also examines the moderating effects of the supplier's IT advancement and cultural distance, two important but under-researched dimensions of the IKAM capability development process. Regarding the supplier's IT advancement, our study finds that it can shape the development of IKAM capability. In particular, the two-group analysis results indicate that the influence of market scanning on IKAM capability is enhanced when a supplier includes more advanced IT in its SCMs. The findings demonstrate that a supplier's IT capabilities in relation to supply chain management can improve its information-processing capabilities and thus strengthen the effects of market scanning, which requires an information-intensive organizational culture. This finding provides some empirical evidence of the potential of IT for developing successful IKAM strategies. That is, this finding suggests that managers should understand the enhancing role of information technology in developing IKAM capability given the level of KAM orientation, resource dependence, and trust.

The analysis of moderating effects also reveals that market scanning has a stronger and more significant influence on IKAM capability when the international business relationship is characterized by high cultural distance. These results are interesting and demonstrate that cultural differences between exchange partners can increase key account orientation and shape the development of IKAM capability in the relationship. That is, when a supplier is in a relationship with a culturally distant customer, uncertainties and cultural differences can drive them to use more customer and market information to develop specific interorganizational capabilities so as to create greater customer value. This is one of the first empirical studies to demonstrate the importance of national culture in shaping the process of IKAM capability development in international exchange relationships. Given the results, managers need to adjust their expectation on the level of contributions each exchange relationship can make to IKAM capability development, depending on the degree of cultural differences between their own culture and that of the exchange partners.

6. Limitations and further research

Several limitations of this study can be addressed in future research. First, this study relies on cross-sectional data. Future research may consider validating its findings using time-series data. Secondary data on market performance may better validate our empirical results. While we tried our best to collect secondary data on market performance, most of our respondents are SMEs, for which public information on market performance is lacking. However, for around 50 companies from our sample secondary data on market performance were available. We checked the correlation between the market performance from our survey data and the secondary data. The correlation was .75, indicating the high validity of our survey data on market performance. Second, one of the model fit indexes (RMSEA) revealed only an acceptable fit, due partially to the low loading (less than .7) of one of the measures of supplier dependence. Although it should ideally have been replaced with another item, our study design only included three measures for that construct. Readers are advised to interpret our results with this in mind. Third, the study only explores three antecedents of IKAM capability. Other antecedents such as environmental uncertainty, competitive intensity, or partners' goal congruence may prove valuable as potential additional drivers of IKAM capability. Fourth, this study conceptualizes IKAM capability using just coordination and reconfiguration. Other dimensions of IKAM capability, such as standardization or global integration, deserve further research attention.

With respect to the impact of cultural differences on IKAM, this study adopted Hofstede's conceptualization, which is at the country level. While it does not seem to harm the statistical outcomes substantially (Wendorf, 2002), this country-level variable could potentially be better evaluated using a multi-level analysis method (e.g., hierarchical linear modeling). It is suggested that future studies do so to help validate our results. Moreover, as key account managers are increasingly developing global mindsets in terms of managing their key customer relationship, other cultural dimensions than Hofstede's, such as the manager's cultural sensitivity, deserve consideration.

Finally, this study focuses on only one type of supplier IT resource: IT advancement. Other types of IT resources could influence a firm's IKAM capability as well, for example, IT integration and IT flexibility, among others. Future research should incorporate these in exploring the development of IKAM strategies and the firm performance implications.

Acknowledgements

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