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Innovation in Emerging Markets: The Role of Management Consulting Firms[☆]

 Yujin Back^{a,1}, K. Praveen Parboteeah^{b,2}, Dae-il Nam^{a,*}
^a Korea University Business School, Anam-Dong, Seongbuk-Gu, Seoul 136–701, Korea

^b Management Department, University of Wisconsin, Whitewater, Whitewater, WI 53190, USA

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ABSTRACT

Firms in emerging markets are often reluctant to invest in innovation because of the institutional voids endemic to such markets. Addressing the gap in the literature concerning the role of consultancy firms in emerging markets, we argue that management consultancy firms can fill institutional voids and thus help firms implement innovation initiatives. We buttress our main argument by combining strands of institutional theory with the resource-based view. Acknowledging the tensions inherent in the use of consultancy firms, we also examine two contextual variables that may mitigate their positive effects. We explore the critical aspects of the firms' internal and external environments and posit that well-functioning national institutions and a high level of firm competency attenuate the positive roles of management consulting firms because there are few voids that management consultancy can effectively address under such conditions. To test our hypotheses, we examine the effects of management consultancy on both the input and output aspects of innovation. We use a sample of 1330 establishments operating in nine emerging markets. Our findings support all main and moderating effects on innovation inputs but not on innovation outputs. We discuss the theoretical implications of our findings and provide suggestions for future research.

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1. Introduction

Interest in innovation has been strong and sustained (Nam et al., 2014; Stock and Zacharias, 2011). This interest is not surprising given that innovation remains the primary source of competitive advantage and business success (Hult et al., 2004). Innovation is also a cornerstone of sustainable growth (Doz et al., 2001). However, a review of the extant literature suggests that most innovation studies have focused on firms in developed economies (Hult et al., 2004). This is surprising given that world-class emerging multinationals such as Tata Consulting Services in India and Samsung in South Korea are innovation leaders. The rapid development of emerging economies requires scholars to pay attention to innovation in those markets (Kothari et al., 2013). It is therefore very important to understand the source of innovation in emerging economies.

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^{*} Corresponding author. Tel.: +82 2 3290 2800; fax: +82 2 922 7220.

E-mail addresses: applejin04@korea.ac.kr (Y. Back), parbotek@uwv.edu (K. Praveen Parboteeah), namdaeil@korea.ac.kr (D. Nam).

¹ Tel.: +82 2 3290 2800; fax: +82 2 922 7220.

² Tel.: +1 262 472 3971; fax: +1 262 472 4863.

Emerging economies, both developing and post-communist transition countries, have higher growth rates and more business opportunities than the rest of the world (Fu et al., 2011; Kothari et al., 2013). Emerging economies also account for more than half of the world's population. The growing importance of emerging economies has resulted in increased scholarly attention (Bianchi, 2014). To better understand firms in such markets, we examine the use of consultancy. We believe that the work of consulting firms increases both R&D expenditure (innovation inputs) and the sales portion of newly developed products/services (outputs). Management consulting firms can provide not only necessary information and knowledge but also legitimacy to innovation decisions through their support and confirmation. Given the resource acquisition and legitimacy advantages they offer, firms in emerging economies that hire them may reduce risk and uncertainty.

Interestingly, even though using consultancy may help firms innovate more effectively (Hoecht and Trott, 2006; Love and Roper, 2005; Walker and Weber, 1984), some scholars argue that management outsourcing, such as in the use of consultancy, may not always have positive effects. For example, research shows that it frequently fails to enhance performance because it is difficult to manage the contracts. Decision-making speed may be slower, and quality control may be more difficult (e.g., Stanko and Calantone, 2011). Innovation outsourcing also has the problem of information leakage (Hoecht and Trott, 2006). Moreover, too much dependence on outsourcing may erode the internal capabilities firms need to recognize and exploit new opportunities on their own (Hoecht and Trott, 2006).

In addition to the disadvantages of consulting that occur because of its outsourced nature, some have argued that consulting also implies direct negative problems. Consulting firms have been accused of telling companies what they want to hear. They are also often criticized for providing “predefined solutions to unique problems” and for being “rigid in a rapidly moving environment” (Czerniawska, 2004: 47). Wright and Kitay (2002) argue that consulting can sometimes be used by companies to justify decisions that have already been made. Ejenās and Werr (2011) suggest that, though firms may need to accept consulting firms' control, they are often reluctant to submit to such control and tend to abide by the values of their own professions. Finally, Gibson (1998) argues that consulting applied to an international environment is fraught with difficulties: consultants may not be well versed in the cultures in which they are operating and may proceed according to the inherently ethnocentric assumption that the techniques or interventions that worked at home will also work in other cultures.

While consultancy may have some inconsistent effects on innovation, we argue that the support of management consulting firms still helps firms in emerging economies drive innovation because their role in substituting for missing institutions is significant in those countries. Specifically, institutional theory has shown that firms are more likely to perform efficiently if they receive adequate institutional support (e.g., Henisz and Levitt, 2010; Scott, 2008; Xin and Pearce, 1996). In the face of institutional voids, firms operating in emerging economies face higher transaction costs and operating challenges (Khanna and Palepu, 2010). In fact, recent research shows that firms in emerging markets often face institutional disadvantages that prevent them from acquiring firms in more developed economies (De Beule et al., 2014). In addition to the inherent uncertainty in emerging economies, innovation itself is highly uncertain. Thus, innovation decision-making in emerging economies may require additional support to avoid uncertainty and gain legitimacy.

Firms in emerging markets can receive help from external management consulting firms to address institutional deficiencies and complement necessary resources. Consulting firms can provide valuable resources in the form of knowledge or legitimacy based on their expertise and experience (e.g., Bessant and Rush, 1995; Miles, 2005). When firms lack necessary information, knowledge, or a protection regime for innovation, the substitutive role of consulting firms can be very effective in driving innovation. We argue that assistance from management consulting firms is important because they generally deal with activities directly related to innovation. While several recent studies have examined professional service firms in emerging markets (e.g., Freeman and Sandwell, 2008), to our knowledge no study has directly investigated the link between management consultancy use and innovation in emerging markets. We therefore address this gap.

In addition to understanding the role of consulting firms in emerging markets, we also consider two contextual variables in order to explore the moderators for the relationship between consultancy use and innovation. Specifically, we consider the institutional development at the country level and the level of products/services non-substitutability at the firm level. We believe these two variables have impacts on the effectiveness of consulting firms in emerging markets. If a country has relatively well-functioning institutions and if a firm has sufficient competencies relative to competitors, there is little for management consulting firms to improve.

Thus, this paper provides several important contributions to the literature. First, at a theoretical level, we combine institutional theory with the resource-based view and argue that management consulting firms complement necessary but lacking resources given institutional deficiencies. Second, amid the dearth of research on innovation in emerging economies and on management consultancy's direct effect on firm strategy and performance, we shed some light on innovation and management consultancy in the context of emerging markets. Third, our paper responds to the claims of numerous scholars that “research is required into specific professional service sectors to better analyze how firms act within these sectors” (Coviello and Martin, 1999; Freeman and Sandwell, 2008: 199). Finally, we provide a fine-grained examination of the innovation process by considering innovation inputs and outputs separately. Thus, we are able to observe the effect of using consultancy on both R&D spending and new product/service development.

The rest of this paper is organized as follows. First, we briefly explain the research background by describing the nature of innovation in emerging economies. Then, we present our theoretical foundations and propose hypotheses. Next, we test the hypotheses with a relatively large multi-country dataset. We use the Management, Organization, and Innovation (MOI) survey provided by the World Bank and test 1330 firms operating in nine emerging markets across seven Eastern European countries, one Central Asian nation, and one Southern Asian country. Finally, we discuss the study's results, contributions, and implications for future research.

2. Theory and hypotheses

2.1. Innovation in emerging economies

Emerging economies continue to grow much faster than developed markets (Fu et al., 2011). Recent data from the *Economist* indicate that emerging economies enjoyed high growth rates while most developed economies stagnated in 2011. Although the growth and innovative activities of firms in emerging markets are increasingly topical, the literature has not adequately facilitated an understanding of the factors driving innovation in emerging markets.

Research on the antecedents of innovation in emerging economies has largely highlighted corporate governance issues (e.g., Chang et al., 2006; Claessens and Lang, 2006; Khanna and Yafeh, 2007; Luo et al., 2009; Mahmood and Mitchell, 2004). For instance, Mahmood and Mitchell (2004) examine the effects of business groups on innovation in emerging markets. They discuss the sizable local companies controlled by very wealthy local families (known as *chaebols* in Korea and *grupos* in Latin America; La Porta et al., 1999; Morck et al., 2005). Relative to independent firms, group affiliations—several firms linked through a stock pyramid and cross-ownership—have several advantages (Khanna and Palepu, 2010; Khanna and Rivkin, 2001) when facing poorly functioning institutions in emerging markets. They can use internal factor markets (e.g., financial markets), have reduced transaction costs, and experience efficient capital allocation (Hermelo and Vassolo, 2010). Similarly, Chang et al. (2006) argue that business groups work as innovation-supporting institutions when operating within nonexistent or malfunctioning market institutions.

Likewise, having a unique corporate governance structure has often been considered the best way to overcome the institutional deficiencies inherent in emerging markets. Using such governance forms allows firms to increase innovation and bypass institutional weaknesses. A review of a dozen years of research on firm innovation in emerging economies (see Table 1) shows that both internal factors (such as foreign presence and competitiveness) and external factors (such as competition and technology) have been revealed as antecedents of innovation in emerging economies, along with corporate governance. However, to our knowledge, no study has examined the role of management consulting as a way to overcome institutional deficiencies. Most scholars have argued that either certain kinds of internal corporate governance structure or a particular external business environment can enhance firm innovation in emerging economies.

The fundamental factor among the many causes of uncertainty in emerging economies may be the presence of *institutional voids*, the lacunae created by the absence of market intermediaries and the main cause of the higher transaction costs and operating challenges in emerging markets (Khanna and Palepu, 2010). In most developed markets, firms take well-functioning institutions as a given. However, these institutions are absent or function poorly in emerging economies (Bianchi, 2014; Welsh et al., 2006). Institutional theory indicates that businesses tend to outperform if they receive institutional support (Henisz and Levitt, 2010; Scott, 2008; Xin and Pearce, 1996). Thus, we argue that firms in emerging markets need an extra mechanism that helps their operations by controlling a highly uncertain situation.

By definition, innovation usually involves research into unknown areas and requires extensive time and effort. Moreover, the outcome of innovation is typically uncertain and may take a long time to materialize. Thus, the significant amount firms spend on R&D does not necessarily produce innovation performance in the form of new products or services. Likewise, we believe that innovation

Table 1
Innovation in emerging economy firms: Published research (1999–2011).

Authors	Journal	Sample	What enhances innovation?
Ayyagari et al. (2011)	<i>Journal of Financial & Quantitative Analysis</i>	Over 1990 small- and medium-sized firms across 47 developing economies	Access to external financing/highly educated managers/ownership by families, individuals, and management/exposure to foreign competition
Krishnan and Jha (2011)	<i>Journal of Management</i>	5 local market leaders in India	High degree of ambidexterity/an approach to provide quick response/market exploration
Petrick and Juntiwisarakij (2011)	<i>Research Technology Management</i>		Growing customer demand for products
Ray (2010)	<i>Engineering Management</i>	India	Entrepreneurial leadership and vision
Wang and Kafouros (2009)	<i>International Business Review</i>	China	Technological opportunities/level of foreign presence/domestic R&D/FDI/imports/exports
Radosevic and Myrzakmet (2009)	<i>Technovation</i>	Kazakhstan	Technoparks
Gorodnichenko et al. (2008)	<i>National Bureau of Economic Research</i>	27 emerging market economies	Foreign competition/vertical linkages with foreign firms/international trade
Claessens and Lang (2006)	<i>Emerging Market Review</i>	2000 firms from 9 East Asian economies	Group affiliation
Chang et al. (2006)	<i>Organization Science</i>	Korea and Taiwan	Business groups
Mahmood and Mitchell (2004)	<i>Management Science</i>	Industrial sectors of both Korea and Taiwan	Business groups
George and Prabhu (2003)	<i>Research Policy</i>	India	Developmental financial institutions
Dawar and Frost (1999)	<i>Harvard Business Review</i>		The strength of globalization pressure/competitive assets

inputs and outputs reflect different aspects of innovation (e.g., Mol, 2005; Oh, 2005). Whereas R&D spending is primarily considered a measure for the inputs of innovation activities (Mol, 2005), new product/service development is usually regarded a core measure of innovation outputs (Ayyagari et al., 2011). Accordingly, we consider the two constructs of innovation (i.e., input and output) when we examine the effects of consultancy on innovation.

Innovation is costly, risky, and path-dependent (Fu et al., 2011). Investment in innovation, especially in emerging markets, is therefore highly dangerous. Firms in emerging markets inevitably hesitate to invest in innovation because markets have highly embedded uncertainty and weak institutions. Furthermore, innovation investments do not necessarily guarantee better performance. A significant amount of literature points out the interactive character of the innovation process, suggesting that innovativeness is fostered by interactions with external sources of knowledge (Powell and Grodal, 2005; Ren et al., 2014). Previous research confirms that relationships with others can be a valuable tool of innovation, with knowledge links affording firms easier access to new ideas (Lasagni, 2012). Thus, small- and medium-sized firms are more likely to depend on external knowledge than are larger firms (Zhou and Li, 2012). We can similarly expect firms in emerging markets to rely more heavily on professional service firms as a substitute for missing institutions.

Given the highly unstable nature of innovation in emerging economies, we argue that consulting firms play a particularly vital role in reducing risk by providing resources and legitimacy. The next section will discuss how consulting firms can deal with uncertainty in emerging economies and assist innovation decision making.

2.2. The effect of consultancy use on innovation in emerging economies

The evidence indicates that knowledge-intensive business sectors such as management consulting have rapidly grown (e.g., Creplet et al., 2001; Furusten, 2012). A lack of the knowledge necessary for every situation leads them to use management consulting services (Futusten and Werr, 2005). Although there were certainly doctors, accountants, and engineers in prior millennia, it is only in recent generation that specialist knowledge providers and knowledge brokers have become widespread (Brock et al., 2014). Parallel to the increasing significance of knowledge providers, scholarly research on the organizations in which knowledge providers work has grown more prominent (Brock et al., 2014).

An example of a professional service firm (PSF; Von Nordenflycht, 2010), the management consulting firm has received much attention from organization theorists (e.g., Empson, 2001; Greenwood et al., 2006; Hinings and Leblebici, 2003). Management consulting is an independent contracted advisory service provided by qualified management consultants who assist a client organization in identifying, analyzing, and solving business and management issues (e.g., Canback, 1998; Greiner and Metzger, 1983). Business historians have revealed the role of management consultants in spreading managerial fads and fashions (McKenna, 2006). In the age of “soft” or “knowing” capitalism (Thrift, 2005), management consultancy is a significant “generator and distributor of new knowledge”; consultants are “capitalism’s commissars” (Thrift, 2005: 35–36, 93) and “knowledge transferors” (Jacobson et al., 2005). Despite the importance of management consulting firms, few studies have examined their substantial effectiveness, even with empirical tests. Therefore, it is worthwhile to demonstrate their benefits, which are likely more pronounced in the emerging markets that serve as the focus of this study.

The importance of consulting firms is underscored by the two examples provided below. General Motors (GM) entered into China in 1997. A wide range of market intermediaries, including research and consulting firms, facilitated GM’s successful operation by offering product market information, advice, and credibility (Khanna and Palepu, 2010). The market intermediaries provided both hard infrastructure like logistics and transportation and soft infrastructure such as deep supplier networks. The market intermediaries helped GM identify its market and suppliers and allowed them to make decisions with confidence. The substitution for institutional deficiencies performed by market intermediaries such as management consultancies was necessary for success.

Another example is Blue River, a financial advisor in India. Global companies seeking R&D partners in the Indian market have little publicly available information about potential partners to work with. This problem is much worse for small- and medium-sized firms because they do not even provide annual reports. Blue River tried to fill this institutional void by endorsing small- and medium-sized firms. While Blue River’s primary role may be to provide financial advice to firms in emerging markets, the mere status of being a Blue River-advised firm can send a credible signal to foreign investors looking for potential partners. Blue River utilizes its own network to make inquiries about small- and medium-sized firms and collects private data. Thus, foreign investors can reduce uncertainty about small- and medium-sized firms in emerging markets while also obtaining endorsements about the quality of local firms (Khanna and Palepu, 2010).

Furthermore, the literature on inter-firm relationships asserts that firms can obtain new insights and knowledge from external sources, contributing significantly to innovation performance (Johnsen et al., 2006; Ren et al., 2014). Searching for information through inter-firm relationships enables firms to benefit by gaining access to knowledge and business ideas that they are unlikely to find on their own (Coviello, 2006; Ren et al., 2014). This broadly enriches firms’ knowledge pool and helps them identify and trade upon complementary assets offered by external sources (Classen et al., 2012). We thus argue that management consulting firms can help firms in emerging economies facilitate innovation by providing the resources they lack (Hitt et al., 2001; Lin et al., 2009).

Firms that have operated in emerging markets may have been protected by a number of barriers, such as high tariffs, license fees, or even state ownership (Perez-Batres and Eden, 2008). With these barriers gone, the firms may not have the ability to compete or exploit innovative ideas. We therefore contend that consultants can act as market and information intermediaries to fill institutional voids not only by providing access to knowledge and expertise but also by being a legitimizing force. Their role as a resource, knowledge, and information provider is the primary and most substantial one. Consulting firms can compensate for emerging economies’

institutional voids by offering timely and appropriate sources of innovation. Through the breadth of their experience, knowledge, and resources, external consultants can provide firms with access to advantages that allow them to ensure value creation (Andreas et al., 2010; Makadok, 2011). Thus, firms in emerging markets using external consultants may have access to critical information that increases their innovation potential.

The second important role played by consulting firms is that of legitimizer, supporting and justifying clients' decisions (Van Werven and Bouwmeester, 2010). Although this role is less substantial than the former, it can also facilitate innovation in emerging markets. Professional management consulting firms can make client firms accelerate risky decisions and foster change by providing legitimacy for innovation based on their wealth of experience and high-quality analytical skills. In this context, external consultants can be viewed as key agents and symbols of contemporary social change (Sturdy, 2011). Similarly, Tisdall (1982) sees consultancy as facilitating organizational change while also providing expertise and extra staff. Consulting firms typically lead the generation of management ideas and organizational reforms. They are thus major resources that can help firms implement innovation in emerging markets.

Management consultancy can offer cutting-edge knowledge and advice on innovation and lend legitimacy to innovation decisions. It provides emerging market firms with guidance in facilitating innovation because one of the key antecedents of firm innovation is access to knowledge networks (Hoegl et al., 2003). Given extensive knowledge, information, expertise, and even reputation, we believe that the involvement of consulting firms can increase firm innovation in terms of both inputs and outputs. Incumbent firms can obtain access to a network of critical knowledge that can facilitate innovation.

In addition to the above advantages centered on the nature of emerging markets, consultancy also offers several mechanisms by which innovation can be enhanced. Sandberg and Werr (2003) discuss the potential provided by consultancy services focused on customers. Customer-oriented consulting services may provide the incumbent firm with strong customer intelligence that can be combined with technological expertise to foster the development of new products and contribute to innovation. Furthermore, such consulting services can also reveal the gaps between what customers want and what the firm is offering; addressing such gaps can lead to innovation. Sandberg and Werr (2003) mention the development of internet banking in Sweden as an example of customer insights offered by an internal consulting firm and of an innovative approach to satisfying customer needs.

Another of consultancy's important benefits to innovation is generating in-depth knowledge of a firm's industry. Czerniawska (2004) argues that specialist sectoral knowhow is among consultants' most sought-after qualities. Given the importance of knowledge acquisition and integration to the innovation process (Aranda and Molina-Fernández, 2002), it is undeniable that the in-depth expertise provided by consultants can allow firms to encounter insights and connections that will help them innovate. Furthermore, consulting firms may have had experiences that can be helpful with the firm's current situations.

Hertog (2000) observes that knowledge-intensive business services (KIBS) such as management consultancy sometimes function as co-producers of innovation by working as facilitator, carrier, and source. Specifically, KIBS firms can act as facilitators by supporting their client firms' innovation processes. For instance, management consultants can help a client introduce a new account management system or develop a new service distribution channel. They can also contribute to innovation as carriers when transferring existing innovations from a firm/industry to the client. Finally, they can be the source of innovation when playing a major role in initiating and developing innovation through close interactions with a client.

Thus, given the strong links between consulting and innovation in general and the even stronger links in emerging markets, we hypothesize the following:

Hypothesis 1–1. The relationship between consultancy use and innovation inputs will be positive in emerging economies.

Hypothesis 1–2. The relationship between consultancy use and innovation outputs will be positive in emerging economies.

2.3. Moderating variables: Countries' institutional environment and firm competencies

The literature on the relationship between the use of consultancy and innovation shows that the relationship is not always positive. As mentioned, use of consultancy can sometimes result in information leakages (Hoecht and Trott, 2006) and even slow down the speed of decision making (e.g., Stanko and Calantone, 2011). Such cases suggest that, under specific contextual conditions, the relationship between the use of consultancy and innovation may weaken or even become negative. We therefore believe that a more comprehensive understanding of the relationship between consultancy and innovation requires an examination of the conditions under which the relationship depends. We therefore consider two main factors—the country's institutional environment and the effect of firms' competencies. We selected these factors because they represent the most critical internal and external aspects of a firm's environment.

2.3.1. The effect of a country's institutional environment

We include the existing institutional environment at the country level as a moderator because market conditions and institutions—the “rules of the game”—have a significant impact on firm strategies (Choi et al., 2007). Institutions offer essential support to the effective functioning of market mechanisms in a market economy (Meyer et al., 2009), allowing firms and individuals to engage in innovation without incurring excessive costs or risks. To examine the macroenvironment's influence on firm decisions, we assess the institutional development level of each country.

Institutions can facilitate and inhibit economic growth on their own. Certain institutions promote economic prosperity by protecting property rights, whereas others can hinder economic development by failing to play the vital role of providing security (e.g., Scott, 2008; Washington and Ventresca, 2004; Xin and Pearce, 1996). In general, non-emerging economies have well-developed institutions and pose less risk to investments in innovation. Such institutions can guarantee the successful outcomes of innovation produced through tremendous investment. Even without the assistance of professional service firms, institutions in such markets provide firms with firmer ground on which to operate.

By contrast, firms in emerging economies may be less likely to innovate because of the lack of institutional support. Emerging economies, where institutional protection regimes are traditionally weak (Orozco, 2007), cannot easily assure institutional stability and support for innovation. In such situations, the positive effects of consulting firms are stronger than in other contexts. We argue that consultants play an even more critical role in emerging markets by substituting for institutions that are weak and malfunctioning. As information and knowledge providers and legitimizers, management consulting firms are more effective in emerging economies where they substitute for weak institutions.

We therefore argue that management consulting firms can fill institutional voids in environments lacking institutional mechanisms (Khanna and Palepu, 2010). The greater the voids, the stronger the roles consulting firms must play in emerging economies. We thus expect the relationship between consultancy and innovation to be stronger. Under favorable institutional conditions, however, consultancy may not be as effective; the relationship between consultancy and innovation is likely weaker when fewer institutional voids need to be filled by consultants. Thus, we hypothesize as follows:

Hypothesis 2-1. A country's institutional development will negatively moderate the relationship between consultancy use and innovation inputs, such that the positive relationship between consultancy use and innovation inputs will be weakened under conditions of high institutional development.

Hypothesis 2-2. A country's institutional development will negatively moderate the relationship between consultancy use and innovation outputs, such that the positive relationship between consultancy use and innovation outputs will be weakened under conditions of high institutional development.

2.3.2. *The effect of firm competencies: The presence of non-substitutable products/services*

Although firms in emerging markets tend to be categorized similarly, they usually have resources representing different levels of competencies and non-substitutability (Newbert, 2007). As the resource-based view suggests, firms with strong competencies and non-substitutable resources are more likely to outperform other firms (Priem and Butler, 2001). Firms with high levels of competency and non-substitutability can develop their own capacity to pursue and realize innovation, even in the absence of management consulting firms' assistance (Quinn, 1999). On the other hand, firms with insufficient competencies increasingly rely for innovation on relationships with other firms that can act as an effective substitution (Dyer and Nobeoka, 2000; Dyer and Singh, 1998; Quinn, 2000).

The resource-based view suggests that core competencies are catalysts to asset accumulation, which underpins the building and sustaining of competitive advantages (Verdin and Williamson, 1994). According to this view, distinctive firm resources and competencies are indispensable assets (Oliver, 1997), as firms with distinctive competencies can enjoy sustained superior performance (Hitt and Ireland, 1985). In the context of emerging markets, we argue that firms with non-substitutable products have distinctive competencies that allow them to enjoy sustainable competitive advantage. Firms can acquire products/services that display non-substitutable characteristics simply through their competitive efforts. However, it is also important to note that such non-substitutability can also be obtained through non-competitive reasons. For instance, if the emerging market's environment contains barriers such as license fees, state ownership, or a close relationship between the government and businesses (Perez-Batres and Eden, 2008), such factors may make products/services artificially non-substitutable, as such non-substitutability is mandated by non-competitive reasons.

We argue that, because customers cannot easily have access to substitute products, the non-substitutable products of incumbent firms make it difficult for other firms to win competition. Such characteristics ensure that these firms can enjoy sustainable competitive advantage. In addition, we argue that strong competencies motivate firms to explore external opportunities on their own and examine their internal circumstances more closely since firms with valuable competencies are able to evaluate their external and internal situations by themselves. Unlike firms in resource-constrained environment, firms with non-substitutable products/services can experiment with new strategies and innovative projects (Cyert and March, 1963; Nohria and Gulati, 1996).

We therefore propose that firms with non-substitutable products are more likely to rely on their competitive advantage to explore both external and internal opportunities. For such firms, the positive effect of using consultancy would be less influential. By contrast, poorly performing firms that do not have non-substitutable products can gain more beneficial effects by using consultancy (Hall and Liedtka, 2005). Our main claim is that poorly performing firms may benefit more from the insights provided by consultancy. However, if the client firm has non-substitutable strong products/services, they can leverage their high performing products/services to continue beating the competition without needing recourse to consultancy. They are also more likely to have the means to adequately scan their internal and external environments for future opportunities. Such firms are thus better equipped to deal with institutional voids. Thus, we propose that the positive effect of using consultancy would be weaker for such firms.

Hypothesis 3–1. The presence of non-substitutable products/services will positively moderate the relationship between consultancy use and innovation inputs, such that the positive relationship between consultancy use and innovation inputs will be weakened in the presence of non-substitutable products/services.

Hypothesis 3–2. The presence of non-substitutable products/services will positively moderate the relationship between consultancy use and innovation outputs, such that the positive relationship between consultancy use and innovation outputs will be weakened in the presence of non-substitutable products/services.

3. Methods

3.1. Data

3.1.1. The MOI survey³

To test our hypotheses, we use a large, multi-country dataset, the World Bank's Management, Organization, and Innovation (MOI) survey. This survey uses a standardized survey instrument and a uniform sampling methodology to minimize errors in measurement and produce data that are comparable across countries. The MOI questionnaire is comprised of eight sections organized by topic: (1) control information, (2) general information about the respondent, (3) general information about the firm, (4) management practices, (5) organization of the firm, (6) innovation, (7) degree of competition, and (8) labor.

In order to achieve representativeness and reduce possible biases, the random sample covers all regions of the country. The sample in each region equals at least half of that region's share of the total population to match a comparable size. Each response rate is at least 25%. To ensure reliability, the survey was implemented in two stages. In the first stage, a screener survey was conducted over the phone to determine eligibility and make appointments; in the second stage, a face-to-face interview took place with the manager. These procedures yield a high success rate and remove potential biases from the results. The primary sampling unit, the firm, is the physical location where business is carried out, industrial operations take place, or services are provided. The target respondents were the firm managers, the best informants about the firms and their environments.

The sample frame for each country includes firms with at least 50 but fewer than 5000 employees since management and organization tend to come to the forefront in medium and large firms. In total, the MOI survey includes 1777 firms in 12 countries (i.e., Belarus, Bulgaria, Germany, India, Kazakhstan, Lithuania, Poland, Romania, Russia, Serbia, Ukraine, and Uzbekistan) and covers 2008 and 2009. The MOI survey targets firms operating in 11 emerging economies and Germany regardless of whether the firms are locally owned or subsidiaries of MNEs. Emerging countries are categorized as *emerging and developing economies* based on the criteria of the International Monetary Fund's (IMF) *World Economic Outlook Report* as of April 2010. Germany is a reference country as a developed market. Of the 11 emerging economies, we exclude two (Belarus and Uzbekistan) because their institutional scores were missing. Therefore, the final sample size is 1330, drawn from nine emerging markets.⁴

3.2. Main variables

3.2.1. Dependent variable

Innovation as a process comprises two important aspects—innovation inputs and innovation outputs (Hansen, 1992). As they are not necessarily correlated, we measure them separately.

In line with prior research, we created an innovation input variable, R&D spending, by taking the logarithm of R&D spending to account for extreme values (e.g., Artés, 2007; Fong, 2010; Rao, 2013). R&D expenditure indicates a firm's propensity to create knowledge and has been frequently used to gauge the effort with which a firm pursues innovation (Cuervo-Cazurra and Annique Un, 2010; Eklund and Wiberg, 2008; Greve, 2003; Helfat, 1994). Other input activities are less developed (e.g., customer innovation labs), much more disparate (e.g., business planning), or hard to observe (e.g., executive insights; Yip and McKern, 2014). We thus focus on R&D expenditure as a proxy for innovation inputs.

To measure our innovation output variable, we observed the percentage of annual sales accounted for by new products or services introduced in the last 3 years. Newly developed and introduced products/services are regarded as a core measure of innovation outputs (Ayyagari et al., 2011; Hansen, 1992) because innovation represents an impact on the new product development process (e.g., Kamath and Liker, 1994; Roy and Sivakumar, 2012; Roy et al., 2004).

3.2.2. Independent variable

For the measure of *management consulting firm use*, we first considered the average number of hired external consultants in the last fiscal year. Given the nature of knowledge-intensive services, these strategic activities can be effectively carried out through human capital (Becker, 1964). The number of human resources working for firms is thus a meaningful measure of consulting firm use. We

³ Although the MOI survey allows us to explore many research questions, it has several limitations. First, the survey has not provided panel data. It is trying to build a panel dataset by re-interviewing the firms at various time intervals, but this is not yet complete. Second, though the German sample is incorporated into the dataset as a benchmark country for developed markets, the sample size is not comparable to that of the emerging economies. Third, several questions of interest to researchers cannot be asked because the survey uses a standardized format, as mentioned above.

⁴ The sample sizes by country are as follows: Bulgaria (154, 11.58%), India (200, 15.04%), Kazakhstan (125, 9.40%), Lithuania (100, 7.52%), Poland (103, 7.74%), Romania (152, 11.43%), Russia (214, 16.09%), Serbia (135, 10.15%), and Ukraine (147, 11.05%).

also consider the average number of person-days each consultant worked in order to measure the actual working time. A person-day is a unit equal to the work one person can produce in 1 day (i.e., 8 h). For example, if each external consultant worked an average of 4 h each working day for 8 weeks (40 working days), this should be converted into 20 person-days.

To include the number of both the consultants and person-days worked, we run a factor analysis to create a composite variable, the use of external consultants (*consultancy use*). We factorize (1) the average number of external consultants hired and (2) the man-days each consultant worked. The results of the factor loadings show that the two variables form only a single factor, with an eigenvalue of 1.280, and explain 63.991% of total variance. Based on the factor loadings, then, the composite measure of consultancy use is a linear combination of $0.80 \times$ the number of external consultants hired + $0.80 \times$ man-days worked by external consultants.

3.2.3. Moderating variables

For *institutional development*, we use data from the *International Property Rights Index Report 2009* as provided by the American Property Rights Alliance. This, the first international comparative measure of institutions, describes the degree of both physical and intellectual property rights protection available in 115 countries. To match the timeframe with the MOI survey sample, we use the results of the *International Property Rights Index* as of 2009 when the survey was completed. The property rights index for each country comprises three components. First, it addresses the legal and political environment (LP). Judicial independence from the influence of political and business groups, rule of law, political stability, and the control of corruption are measured. In legally and politically stable environments, firms are not discouraged from transacting property. Second, the index addresses physical property rights (PPR) by covering three components: the protection of physical property rights, property registration, and access to loans. The third component, intellectual property rights (IPR), evaluates intellectual property rights protection, patent protection, and copyright piracy. By considering all three categories, an *International Property Rights Index* (IPRI) score is calculated for each country. We use this to measure country-level institutional development (e.g., Kotov, 2008; Sanandaji and Leeson, 2013).

To measure *the level of the non-substitutability of focal firms' main products/services*, we use the question, "If this firm shut down its business, how long would it take your largest customers to find an alternative supplier for its main product?" The answers have five possible categories. If customers can find alternative suppliers within a day or less, it is coded as 1. If it takes more than a day but less than a week, it is coded as 2. If the customers have to spend more than a week but less than a month, it takes a value of 3. If it would take more than a month, it takes a value of 4. If it would be impossible to replace, it is coded as 5.

3.2.4. Control variables

We incorporated 11 control variables, consisting of five subcategories. First, we included *general information about the firm*. The *industry* to which the firm belongs is included as a control variable because appropriability and technological opportunities within the industry may influence a firm's R&D investments (Levin et al., 1985). Manufacturing is coded as 1, and other industries, as 0. According to Hage and Dewar (1973), organizational structural variables such as formalization and centralization are predictors of innovation. Therefore, we considered the *number of hierarchies* in the firm between the typical production employee and the national headquarters' top manager as a control variable. We believe a flatter structure is more conducive to innovation. Next, due to the contradictory views on the effect of firm size on innovation, we controlled for *firm size*. While research shows that firm size tends to be inversely related to innovative output (Hansen, 1992), Schumpeter (1942) insists that larger firms may have to undertake R&D investments more frequently to generate innovations that address the needs of a larger and more diverse customer base and achieve economies of scale in their R&D. We measured firm size as the number of permanent employees (Sirén et al., 2012). We also included *firm age*, as some authors argue that older firms may need to invest in R&D more often to compensate for the obsolescence of their initial advantages (e.g., Cuervo-Cazurra and Annique Un, 2010). Firm age is measured as the number of years since its founding. We measure firm size and age by taking a logarithm to adjust for extremeness.

Second, we include *corporate governance-related* variables. We measured *top manager experience* in the sector. Executives with work experience outside the industry have been exposed to different concepts and business models (Liu et al., 2012). Therefore, top managers with more work experience in other industries may have a stronger capacity to identify innovative opportunities and follow through on them, while longer experience in a single sector may inhibit innovative decisions. This variable is measured as the years of experience the top manager has in the current sector. We also controlled for ownership concentration (*the existence of multiple owners*) to accommodate agency issues, since perspectives on the relationship between ownership structure and innovation may differ (Li et al., 2010). The existence of a single large ownership block is regarded as a proxy for this measurement. If the firm has no single large owner but has multiple owners, the variable is coded as 1, and 0 otherwise. We controlled for the founder effect with the variable *founder-manager*. Founders usually have entrepreneurial characteristics such as positivity, optimism (Cooper et al., 1988), and confidence (Krueger and Dickson, 1994). Therefore, a founder is more likely to implement innovation than other managers are. We also created a dummy variable: if the founder is a top manager at the national headquarters, the dummy takes a value of 1, and 0 otherwise.

Third, we examined the variable for *competition*. Competition has been viewed as an important predictor of innovation intensity (Gilbert, 2006). We control for the *number of competitors* in that market to measure the intensity of competition in the main market: an absence of competitors in the main market is coded as 1; one competitor is coded as 2; two to five is coded as 3; and more than five competitors is coded as 4.

Fourth, we controlled for variables related to the interview and the respondents. The *interview duration* (in minutes) and *the number of years they have worked in their current position* are incorporated into the model to eliminate the common method bias (Bloom and Van Reenen, 2010). Finally, since we included nine countries within a single dataset, we control for country effects (e.g., Kanavos et al., 2009) by creating *country dummies*. We divided the nine countries into two groups based on their average

GDP.⁵ Countries with higher than average GDP are coded as 1, and 0 otherwise. All the variables used in the analysis are summarized in Table 2.

3.3. Analytical approach

The hypothesis tests use ordinary least squares (OLS) hierarchical regression analysis with innovation input and output as the dependent variables. As a post hoc analysis, we also examine whether our results hold for a different context.⁶

We attempted to rule out the common method bias. First, during the data collection period, face-to-face interviews were conducted by each country's local agency team, which had the appropriate expertise and could therefore collect more accurate responses. This process likely removed the causes of the bias from the estimates. Second, separating the measures of the predictor and dependent variables remedies the common method bias, as Podsakoff et al. (2003) suggest. Our independent and dependent variables have a different scale. In addition to making the aforementioned efforts to avoid the common method bias, we also statistically demonstrated the absence of common method bias. Harman (1976) one-factor test is a post hoc statistical test for the common method effect. Statistically, if items load on multiple factors (rather than on a single factor) and one factor does not account for most of the covariance, the common method variance is not an issue (Podsakoff and Organ, 1986). The one-factor test reveals two distinct factors with eigenvalues greater than 1.0. Two factors together account for 65% of the total variance, and the largest factor does not account for a majority of the variance (38%). Therefore, it is reasonable to say that common method bias does not threaten the validity of our results (Sirén et al., 2012).

4. Results

4.1. Results of testing hypotheses 1, 2, and 3

Table 3 shows the means, standard deviations, and correlations of the key variables. In order to prevent multicollinearity, we computed the variance inflation factors (VIFs). A VIF test reveals the extent to which non-orthogonality among the independent variables inflates the standard errors (Agarwal, 1993). The VIFs range from a low of 1.01 to a high of 1.15 in our sample and are below the cut-off of 10 recommended by Neter et al. (1985). This finding suggests that multicollinearity does not affect this sample as a source of conclusions with the parameter estimates.

The results of the OLS regression are shown in Tables 4 and 5. Table 4 presents the examination of nine emerging economies in hypotheses 1–1, 2–1, and 3–1. The dependent variable is innovation inputs. Model 1 in Table 4 incorporates all 11 control variables, among which firm size has a positive effect on innovation inputs ($\beta = .064, p < 0.05$).

Model 2 in Table 4 adds the independent variable consultancy use. Hypothesis 1–1 predicts that using external consultants will increase R&D spending. Our model supports Hypothesis 1–1. The result of Model 2 shows a positive coefficient for consultancy use, and the coefficient is statistically significant ($\beta = .056, p < 0.05$), indicating that consultancy use is positively associated with innovation inputs in emerging economies. Consistent with our logic, it seems that employing external consultants reduces uncertainty related to innovation inputs in emerging economies.⁷

Hypothesis 2–1 predicts that a country's institutional development might work as a negative moderator. As we predicted, the interaction term between consultancy use and institutional development has a negative coefficient and is statistically significant ($\beta = -.267, p < 0.1$) in Model 4 of Table 4. Our findings thus support Hypothesis 2–1. Fig. 1(A) graphically represents this interaction effect. Finally, Hypothesis 3–1 expects that the non-substitutability level of the firms' products/services has a moderating effect on the relationship between consultancy use and innovation. Model 6 in Table 4 includes the interaction term between consultancy use and the level of non-substitutability. The coefficient of the interaction term is negative and statistically significant ($\beta = -.141, p < 0.05$), supporting Hypothesis 3–1: higher non-substitutability weakens the positive relationship between the use of management consultancy and R&D spending. Fig. 1(B) depicts the interaction effect of consultancy and the level of products/services non-substitutability on innovation inputs.⁸

Table 5 shows the results of hypotheses 1–2, 2–2, and 3–2. In this case, the dependent variable is innovation outputs. Model 1 in Table 5 incorporates all 11 control variables. Among the controls, we find that the founder–manager variable has a positive effect on innovation outputs ($\beta = .061, p < 0.05$). By contrast, firm age, competition, and GDP level are negatively associated with innovation outputs. Older firms have lower innovation performance than do younger firms ($\beta = -.051, p < 0.1$). This is consistent with Hansen

⁵ As GDP may not fully explain the different institutional factors, we used a privatization level variable as an alternative measure to control for country effects. Utilizing World Bank data, we examined the percentage of public firms at the country level. Our regression analysis using this alternative measure generates similar results ($\beta = .058, p < 0.05$; $\beta = -.267, p < 0.1$; $\beta = -.136, p < 0.05$ for Hypotheses 1–1, 2–1, and 3–1 respectively).

⁶ To compare the result with a non-emerging market sample as an alternative research context, we replicate the regression with the Germany data (222 observations). As a result, we cannot see the significant effect of using consultancy on both innovation inputs and outputs ($\beta = .056, n.s.$ and $\beta = .047, n.s.$, respectively). The coefficients of using consultancy on R&D spending and newly developed products/services are positive as expected but not significant.

⁷ Additionally, we attempted to control for foreign ownership because the impact of institutional voids may differ according to whether the firm is a foreign entrant. After we included a control variable reflecting whether the firm's largest block-holder is a domestic or foreign individual/state/firm, the analysis produced roughly the same results ($\beta = .058, p < 0.05$; $\beta = -.253, p < 0.1$; $\beta = -.139, p < 0.05$ for hypotheses 1–1, 2–1, and 3–1 respectively).

⁸ We ran a supplementary analysis by controlling for whether the firms are state-owned or not. We included this variable because state-owned firms may be more likely to be given advantageous environments than are other types of firms in emerging economies. The result shows that the moderating effect of non-substitutability remains even after controlling for state ownership ($\beta = -.140, p < 0.05$ for Hypothesis 3–1).

Table 2
Summary of variables.

Variable names	Source	Operationalization
Dependent variables	Innovation input	MOI Survey
	Innovation output	MOI Survey
Independent variable	Consultancy use	MOI Survey
Moderating variables	Institutional development (country level)	International Property Rights Index Report 2009 (by the American Property Rights Alliance)
	Non-substitutability (firm level)	MOI Survey
Control variables	Industry	MOI Survey
	Number of hierarchies	MOI Survey
	Firm size	MOI Survey
	Firm age	MOI Survey
	Top manager experience	MOI Survey
	Multiple owners	MOI Survey
	Founder–manager	MOI Survey
	Number of competitors	MOI Survey
	Interview duration	MOI Survey
	Interviewers' tenure	MOI Survey
Country	International Monetary Fund (IMF)'s World Economic Outlook Database	

(1992), who shows that newer firms have higher sales percentages with new products than older firms. Next, fierce competition in the market leads to less innovation outputs ($\beta = -.088, p < 0.01$). According to Aghion et al. (2005), severe competition ultimately impedes better innovation outputs because competition drives neck-and-neck firms into a corner by forcing them into irrational management. We also found that countries' economic development levels as measured by GDP reduce innovation outputs ($\beta = -.075, p < 0.05$). Although counterintuitive, this result is feasible since GDP only superficially represents the size of the market. Thus, checking the effect of institutional development—another country-level factor—is necessary because the institutional development variable reflects national features more comprehensively. As a result, we can see the positive effect of institutions on innovation performance in models 3 and 4 in Table 5: a favorable institutional environment generates better innovation outputs in emerging economies.

Models 2, 4, and 6 in Table 5 present the results of hypotheses 1–2, 2–2, and 3–2. We find no significant results for innovation outputs, suggesting that using consultancy is not directly linked with innovation outputs in emerging economies ($\beta = .014, n.s.$), although it increases R&D spending. Additionally, the interactions between using consultancy and the country- and firm-level moderators do not influence innovation outputs ($\beta = -.001, n.s.$; $\beta = -.069, n.s.$, respectively), even though they work as moderators when we consider the innovation inputs. The directions of all three coefficients relating to the innovation output hypotheses are consistent with the expectation, but the coefficients are not statistically significant.

5. Discussion and conclusion

In this paper, we have attempted to explore the role of management consultancy in emerging economies. Our results make several important contributions to the literature. First, our combination of institutional theory and the resource-based view (Priem and Butler, 2001; Scott, 2008; Verdin and Williamson, 1994) offers theoretical contributions to the existing literature. For example, we explain that consultancy use is more effective in the presence of institutional voids, consistent with institutional theory. Such institutional voids can be filled by the complementary resources that management consulting firms offer, as the resource-based view suggests. Second, this study also contributes to the management consultancy literature. Numerous studies have observed that the literature has focused on practical implications without performing a systematic analysis of consultants' role (e.g., Reihlen et al., 2010), and few theoretical discussions or empirical tests on the effect of management consultancy have been conducted. This study has demonstrated the effect of management consultancy on innovation by using a large data set drawn from emerging economies. Third, we have found two moderators at the levels where consultancy's positive effect on innovation inputs is weakened. At the country level, better protection of property rights mitigates the positive relationship between consultancy use and R&D spending. At the firm level, the

Table 3
Descriptive statistics and correlations.

Variable	Mean.	s.d.	1	2	3	4	5	6	7	8	9	10	11	12
1. Innovation input ^a	12.63	2.89												
2. Innovation output	28.90	24.56	-.085											
3. Consultancy use ^b	0.00	1.00	.180*	.041										
4. Institutional development	4.71	0.72	-.179**	.083*	-.178**									
5. Non-substitutability	2.64	1.45	.128*	.006	-.077	.072**								
6. Industry	0.69	0.46	-.083	.034	-.014	.064*	-.037							
7. Number of hierarchies	2.90	2.29	.114	-.052	.033	.054	.125**	.039						
8. Firm size ^a	5.00	0.87	.164**	.020	.064	-.004	.101**	-.108**	.161**					
9. Firm age ^a	1.33	0.36	.123*	-.071	.040	-.063*	.093**	-.016	.127**	.240**				
10. Top manager experience	16.99	10.78	.104	-.008	-.096	.196**	.111**	-.013	.092**	.040	.132**			
11. Multiple owners	0.12	0.33	-.066	.015	.134*	.064*	-.018	.027	-.027	.059*	-.114**	-.027		
12. Founder-manager	0.30	1.30	-.036	.068	-.084	.063*	.057*	.053	.109**	-.073**	-.113**	.142**	-.094**	
13. Number of competitors	3.28	1.12	.069	-.138**	-.023	-.042	.104**	.028	.085**	-.008	.016	.010	-.104**	.077**

Interview- and respondent-related variables and country dummy are not shown.

* $p < .05$; ** $p < .01$.

^a Firm size and age are measured by the logarithm.

^b This variable is standardized.

Table 4
Results of OLS for innovation input^a.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Control variables</i>						
Industry	-.032 (.078)	-.031 (.078)	-.024 (.078)	-.023 (.078)	-.030 (.078)	-.029 (.078)
Number of hierarchies	.021 (.016)	.020 (.016)	.020 (.016)	.021 (.016)	.016 (.016)	.015 (.016)
Firm size ^a	.064* (.044)	.062* (.044)	.060* (.044)	.060* (.044)	.060* (.044)	.059* (.044)
Firm age ^a	.028 (.109)	.027 (.109)	.021 (.109)	.021 (.109)	.025 (.109)	.023 (.109)
Top manager experience	.043 (.004)	.045 (.004)	.060* (.004)	.058* (.004)	.042 (.004)	.046 (.004)
Multiple owners	-.028 (.113)	-.032 (.113)	-.024 (.113)	-.024 (.113)	-.032 (.113)	-.031 (.113)
Founder-manger	-.015 (.028)	-.015 (.028)	-.013 (.028)	-.014 (.028)	-.016 (.028)	-.018 (.028)
Number of competitors	.025 (.032)	.024 (.032)	.019 (.032)	.019 (.032)	.021 (.032)	.021 (.032)
<i>Independent variables</i>						
Consultancy use (H1)		.056* (.075)	.049† (.075)	.311* (.409)	.057* (.075)	.184** (.175)
Institutional development			-.092** (.052)	-.091** (.052)		
Consultancy use × Institutional development (H2)				-.267† (.086)		
Non-substitutability					.039 (.025)	.036 (.025)
Consultancy use × Non-substitutability (H3)						-.141* (.059)
F	1.561	1.773*	2.428**	2.482**	1.784*	1.998*
R ²	.013	.016	.023	.026	.017	.021
Adjusted R ²	.005	.007	.014	.015	.008	.010

Notes: Interview- and respondent-related variables and country dummy are included in the model but are not shown in Table 4. Standardized estimates are reported. Two-tailed tests with standard errors appear in parentheses.

N = 1330, †p < .10; * p < .05; ** p < .01; *** p < .001.

^a Innovation input (R&D spending), firm size, and age are measured by the logarithm.

product/service non-substitutability level attenuates the positive relationship between consultancy use and R&D spending. Through the two weakening moderators for innovation inputs, we observe the differential effects of management consultancy on innovation. This finding adds to the evidence that consultancy may not always be effective. Fourth, we divide innovation into two different variables—input and outputs. In response to recent calls for the need to look at both sides of innovation, we examine innovation inputs and outputs simultaneously as dependent variables for consultancy use. We confirm that the main effect of using consultancy and the two moderating effects affect only the innovation input.

While all innovation input-related hypotheses are supported, we are surprised to find that all innovation output-related hypotheses are rejected. We believe that there are many reasons for these results. First, firms in emerging economies may not have the capabilities required to convert their innovation inputs into innovation performance. For example, the research shows that, unlike firms in advanced markets, emerging market firms usually suffer from the inferiority of their technology and innovation capabilities (Dawar and Frost, 1999; Luo and Tung, 2007). Thus, although they may have access to the necessary innovation inputs, their insufficient capabilities preclude the firms from enjoying the fruits of their innovation efforts. Second, Teece's (1986) argument on the appropriability of innovation is also relevant. Appropriability refers to firms' ability to capture the rents generated by their innovation input activities (Zhang et al., 2007). As argued many times, emerging economies enjoy fewer effective institutional supports than do developed markets. Without the proper protection mechanisms, firms in emerging markets find it difficult to connect innovation-enhancing activities such as R&D investment with a satisfying innovation performance (Gulati and Singh, 1998). Third, innovation is inherently costly and risky because it takes much time to become realized (Farrell and Saloner, 2001). Firms may also suffer implementation failure because of the inadequately consistent or assiduous attitudes of senior managers and employees even if the innovation directions are initially well-formulated (Klein and Sorra, 1996).

Although this study focuses on the moderating effects of institutional development and non-substitutability, we also need to acknowledge these variables' direct effects on innovation inputs/outputs. While non-substitutability has no impact on either innovation inputs or innovation outputs, institutional development has a significant influence on both. We find that institutional development level reduces R&D spending but increases innovation outputs ($\beta = -.092, p < 0.01$; $\beta = .079, p < 0.01$ for innovation inputs and outputs respectively). Interestingly, the coefficients for innovation inputs and outputs have opposite directions. Concerning innovation outputs, a better institutional environment may result in better innovation performance, as normally expected (e.g., Henisz and Levitt, 2010; Zhu et al., 2012). A supportive institutional framework enhances firms' innovation performance, while institutional barriers to competition fairness, access to financing, and support systems prevent firms from improving their innovation performance (Zhu et al., 2012). However, we are surprised to find that institutional development has a negative relationship with R&D spending

Table 5
Results of OLS for innovation output.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Control variables</i>						
Industry	.023 (1.104)	.023 (1.105)	.017 (1.105)	.017 (1.107)	.024 (1.105)	.024 (1.105)
Number of hierarchies	-.021 (.230)	-.022 (.230)	-.023 (.230)	-.023 (.230)	-.024 (.231)	-.025 (.231)
Firm size ^a	.048 (.618)	.047 (.618)	.049 (.618)	.049 (.617)	.046 (.620)	.046 (.620)
Firm age ^a	-.051† (1.539)	-.052† (1.540)	-.047† (1.540)	-.047† (1.540)	-.053† (1.543)	-.054† (1.543)
Top manager experience	.009 (.051)	.009 (.051)	-.004 (.051)	-.004 (.052)	.008 (.051)	.009 (.051)
Multiple owners	-.011 (1.591)	-.012 (1.596)	-.019 (1.596)	-.019 (1.599)	-.012 (1.596)	-.011 (1.596)
Founder-manger	.061* (.398)	.061* (.399)	.060* (.399)	.060* (.398)	.061* (.399)	.060* (.399)
Number of competitors	-.088** (.456)	-.088** (.456)	-.084** (.456)	-.084** (.456)	-.090** (.458)	-.090** (.458)
<i>Independent variables</i>						
Consultancy use (H1)		.014 (1.053)	.020 (1.054)	.021 (5.782)	.015 (1.054)	.077 (2.474)
Institutional development			.079** (.738)	.079** (.738)		
Consultancy use × Institutional development (H2)				-.001 (1.222)		
Non-substitutability					.021 (.355)	.020 (.356)
Consultancy use × Non-substitutability (H3)						-.069 (.831)
F	2.595**	2.399**	2.800**	2.598**	2.257**	2.176**
R ²	.021	.021	.027	.027	.022	.023
Adjusted R ²	.013	.012	.017	.017	.012	.012

Notes: Interview- and respondent-related variables and country dummy are included in the model but are not shown in Table 5. Standardized estimates are reported. Two-tailed tests with standard errors appear in parentheses.

N = 1330, †p < .10; * p < .05; ** p < .01; *** p < .001.

^a Innovation input (R&D spending), firm size, and age are measured by the logarithm.

(i.e., innovation inputs). This result appears to indicate that poorly developed institutions force firms to spend more money on R&D in an effort to develop their capabilities internally and thus fill the institutional voids by themselves. On the other hand, well-developed institutions allow firms to exploit existing market opportunities without needing to invest deeply in R&D. Nevertheless, such findings are counterintuitive and deserve further investigation.

We also offer practical implications for firms in emerging economies. Professional management consulting services are helpful in overcoming the lack of strong institutional mechanisms and in driving firms to attempt more innovation. However, the decision to use consultancy should be made carefully because its effectiveness depends on the country- and firm-level situation. Thus, firms should evaluate the institutional environments of the countries in which they operate and their products/services' non-substitutability levels. Our results also have implications for management consulting and professional service firms. They must acknowledge that they cannot always be helpful to every firm. They should assess whether they can contribute productively and work effectively given the situation. They must evaluate a firm's environment—such as the available market institutions and the presence of non-substitutable products/services—before contracting with it.

This study has several limitations while also providing for future research directions. Our dataset is cross-sectional, making it difficult to draw accurate inferences about causal relationships. Furthermore, most of the emerging countries included in this study are Eastern European. In future research, using longitudinal or panel data is recommended in order to show the causal relationships more clearly. Researchers should also incorporate more countries and use a larger dataset in order to produce more generalizable results. Second, we do not compare emerging with non-emerging markets. Despite running the regression with the German sample, it is difficult to conclude that our argument is solely applicable to emerging economies due to the sample size incomparability. Thus, we invite future researchers to replicate the model with a non-emerging market sample to see whether consultancy use has a positive effect on innovation only in emerging economies and not in developed markets. Third, none of the innovation output-related hypotheses is supported. While many studies have used R&D spending alone as an important innovation variable (e.g., Baysinger et al., 1991; Fong, 2010; Graves, 1988), further implications may emerge if the antecedent/moderator of innovation performance in emerging economies is found. A research framework that facilitates new products/services development should be investigated in future research. Finally, future study should examine whether consultants from international consulting firms are more effective than those from domestic firms. While international consulting firms may be suitable for the innovation pursued by emerging market firms, with their broader knowledge base and stronger reputations, they may also suffer from the liability of foreignness in emerging economies. Exploring the effects of international consulting firms would provide interesting results.

We therefore contribute to the literature by explaining how the use of consulting firms increases firm innovation within the context of emerging markets. This effect is contingent on the country-level institutional environment and firm-level capabilities. We hope that researchers will build upon the findings provided by this research in identifying and analyzing innovations in emerging markets.

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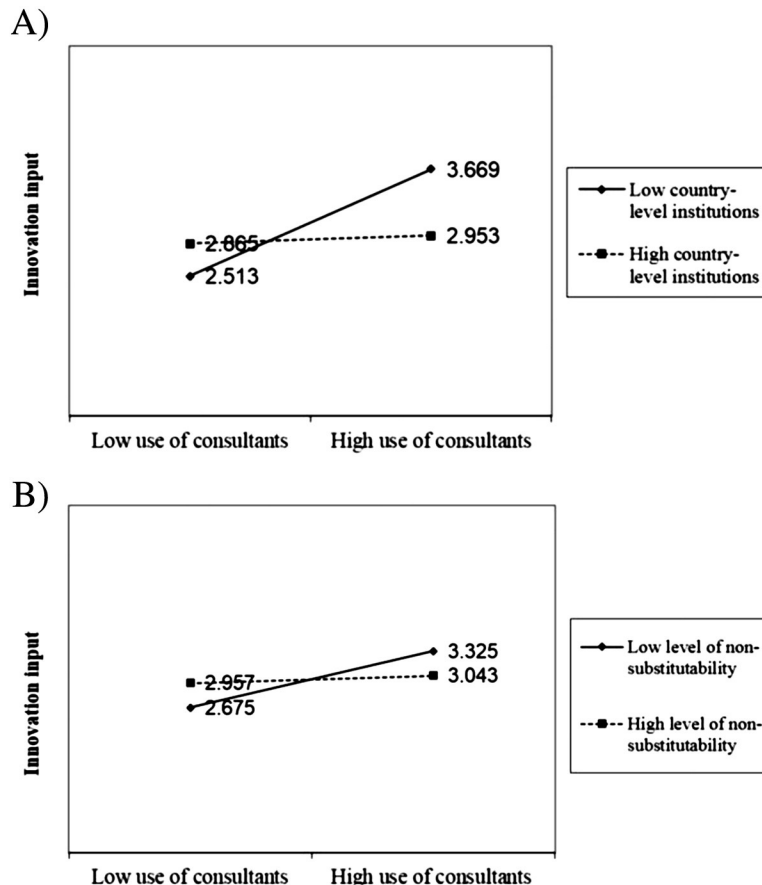


Fig. 1. Two-way interaction between consultancy use and institutional development/the level of non-substitutability on innovation input. The graph for the interaction between consultancy use and institutional development is based on the results shown in Model 4 of Table 4. The graph for the interaction between consultancy use and the level of non-substitutability is based on the results shown in Model 6 of Table 4.

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