

# Strategic challenges of outsourcing innovation in global market

Outsourcing  
innovation

ChangSeob Yeo and Vafa Saboori-Deilami

*Department of Marketing, Barowsky School of Business,  
Dominican University of California, San Rafael, California, USA*

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## Abstract

**Purpose** – The purpose of this study is to theoretically clarify under which circumstances MNCs should outsource the innovation function. In the globalization era, multinational companies (MNCs) face the challenge of making a strategic decision. They ought to adjudicate upon outsourcing the research and development, i.e. innovation function and bearing the risks of it, or keeping innovation function in house and paying the price of this decision. This decision becomes more crucial when the host country has dissimilar characteristic and high uncertainty compared to the home country.

**Design/methodology/approach** – This study is among the very first studies that evaluate the issue of outsourcing innovation for MNCs from a transaction cost economics (TCE) theoretical perspective. By setting forward propositions that serve as a guideline for conditions in which MNCs should outsource innovation, this paper contributes to innovation, new product development, global business and, last but not least, to the TCE literature. This study also provides managerial implications and avenues of future research for academicians.

**Findings** – This study shows that heterogeneity between the home and host country affects the autonomy of the innovation at the host country; this autonomy in turn leads to higher transaction cost, and finally, transaction cost is the main determinant of the decision on whether to outsource the innovation.

**Originality/value** – This study fills this gap by looking at the problem of outsourcing innovation from a TCE theoretical perspective and, based on an extensive literature review, puts forward a set of propositions that clarify under which circumstances MNCs should outsource the innovation function.

**Keywords** Outsourcing, Innovation, Cultural distance, Offshoring, Transaction cost economics, Governance

**Paper type** Research paper

## Introduction

Innovation is a key element for organizational survival in the volatile environment (Damanpour and Aravind, 2012; Harper, 2015; Han *et al.*, 1998; Damanpour and Evan, 1984; Drucker, 1954). Innovation derives from both a competitive process in market and a source of responding to a market (Hunt and Morgan, 1996), as well as through proactive managerial force wherein firms work to be first movers. Various studies (Ngo and O'Cass, 2013; George *et al.*, 2012; Ariss and Saboori-Deilami, 2012; Baregheh *et al.*, 2009; Brown and Eisenhardt, 1997; Barney, 1991) suggest that innovation is one of the core activities of a firm's

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competitive advantage. Through innovative activities, a firm pursues profits from a market, as the resultant innovative market offerings allow a firm to position itself superior to the competitors in the market and to acquire favorable financial profits. As more and more markets have become online in the global market and multinational companies (MNCs) have reached to new corners of the globe in light of the global market environment, they have come to experience in increasing number of new challenges in governing their innovation.

The strategic challenge for an MNC is determining how to effectively structure the governance its innovation in global market. Transaction cost economics (TCE) would be an effective framework for understanding governance of innovation in a cost context. Under the view of TCE, a MNC may fully control its innovation by keeping it in-house or use the market mechanism to outsource its innovation. Furthermore, this study suggests that the concept of the cultural distance as an important factor to understand firm's governance decision.

This study intends to answer this main question:

- Q1. In the case that a firm located its innovation in a highly heterogeneous foreign market, if high transaction costs are caused by the distance and discretion of its innovation, should the firm outsource its innovation function to the third party of the host country?

By answering this question, two contributions will be made:

- (1) this study suggests TC as a strategic determinant for governance decision of innovation function of a MNC; and
- (2) this study makes a strong connection framework of distance–discretion–transaction costs.

## Background literature

### *Offshoring innovation*

Internationalization of R&D is not the recently occurred issue. For instance, in the 1930s, the largest European and US firms located about 7 per cent of their R&D abroad, and the proportion has steadily increased, since the 1960s, in technologically intensive industries (Teece, 2014; Cantwell, 1995). Also, offshoring of such knowledge work was an emerging business practice of particular importance (Manning, 2013; Horvit, 2004). According to Lewin *et al.* (2009), offshoring refers to “the process of sourcing and coordinating tasks and business functions across national borders” and “to sourcing rather than sales activities, and it supports global or domestic rather than local operations”.

Some reasons of offshoring innovation which are related with product development activities are securing strategic advantages (Holmes *et al.*, 2013; Delios and Henisz, 2003) and accessing to skilled workforces (D'Agostino *et al.*, 2013; Ernst, 2006; Thursby and Thursby, 2006). Moreover, it allows a firm to have an access to local knowledge not readily available at home, and to learn complementary technologies (Kalinic *et al.*, 2014; Florida, 1997; Zander, 2002). Some examples of motivations for small-sized entrepreneurial firms are the need to grow, or speed to market, or survival (Kenney *et al.*, 2013; Dossani and Kenney, 2007; Rangan and Schumacher, 2006). Dunning (1993) identified three motives for developing foreign operations (market seeking, resource seeking and efficiency seeking).

### *Outsourcing innovation*

Within many industries such as aerospace and software, product development has been fundamentally deemed as a function that is dispersed across collaborating firms (Dahan and

John 2002; Quinn, 2000). Relationships with suppliers associated with new product development are different from those of typical channel (e.g. material supply, distribution), partially due to the requirement of considerable degree of creativity from external suppliers (Soukhoroukova *et al.*, 2012; Carson, 2007). Furthermore, Carson (2007) found that “the creative nature of the task negatively moderates the relationship between ex post client control and supplier performance”. And:

[...] the protection of creativity is an important governance objective even in inter-organizational relationships, in which the risk of opportunism might otherwise prompt firms to retain tight control of external suppliers.

Some potential advantages and motivations behind outsourcing are higher returns on investment, cost savings (e.g. development costs), shortened time to market, lower employee requirement, improvement in flexibility and accessibility to the specialized resources, skills and creativity of external suppliers (Gobble, 2013; Chesbrough and Teece, 1996; Deutsch, 2004; Linder, 2004; Lynch, 2004; Dahan and John, 2002; Quinn, 2000). However, outsourcing innovation might result in Imitation and substitution of core competencies, and opening the market to new entrants (Scott and Davis, 2015; Porter, 1980; Piachaud, 2005).

For instance, a third-party supplier or a collaborating firm might have unique or specific knowledge which is a source for innovation activities and is difficult to acquire. Some studies argued that acquiring knowledge skill through collaboration has been considered an effective and efficient way of successful innovation (Holt, 2013; Adams *et al.*, 1998; Moorman and Rust, 1999; Madhavan and Grover, 1998; Li and Calantone, 1998; Han *et al.*, 1998; Cooper, 1992). Cavusgil *et al.* (2003) suggested that, among two types of knowledge (explicit and tacit), because tacit knowledge is not equivalently available across competitors, obtaining such knowledge from outside the firm is an efficient way to improve innovation capability. In addition, they consider the pressure from market and technological changes, reasons why innovation gets more costly and risky; therefore, knowledge from partners and improved innovation capability could reduce costs of innovation, shorten the development cycle and achieve effective innovation. Quinn (2000) discussed that common reasons companies of any size are increasingly benefiting from outsourcing particular aspects of innovation are resource limits, specialist talents and multiple risks.

In some of cases, MNCs may outsource their innovation function to the third-party suppliers to take advantage of high-quality workforces, lower labor costs and accessibility to foreign markets. Calantone and Stanko (2007) showed some examples of outsourcing innovation in their article which seeks drivers of outsourced innovation; P&G is targeting to increase the proportion of new ideas generated from outside of the company from 20 to 50 per cent by 2010 (“Connect and Develop”) (Berchicci, 2013; Calantone and Stanko, 2007; Carson, 2007); designs for Dell are mostly not from in-house for its offerings; Hewlett-Packard develop new products with partner firms; GlaxoSmithKline and Eli Lilly outsource new product research on the purpose of cost savings. Calantone and Stanko (2007) found that elements such as, profit margin, employee sales efficiency (in short term) and inventory turnover (negatively) are related with the propensity of a firm to outsource innovation activities.

#### *Offshore-outsourcing innovation*

MNCs can choose offshore-outsourcing either as a contingent strategy of new product development plan or as an onset strategy of new product development. A fairly broad definition of offshore-outsourcing is “a firm’s delegation of in-house value chain activities to independent suppliers located in low-cost environments outside its home country”

(Larsenet *et al.*, 2013; Maskell *et al.*, 2007). MNCs have outsourced and built close supplier relationships in offshore market for their capabilities of innovation (new product development) and strategic flexibility (Carson, 2007; Kotabe and Murray, 1990; Yalcinkaya *et al.*, 2007). Also, offshore-outsourcing creates avenues for inter-firm learning and provides for global leverage (Griffith *et al.*, 2009).

Partnerships with offshore suppliers for new product development allow buyers to have the following advantages: the ability to increase product variety; decrease of necessary resources for new product development; cost reduction resulted from bringing new products into a market; high velocity of the introduction of innovative products to a market; increased efficiency of R&D; greater depth and width of knowledge; improved quality and reliability; focus on core activities; and stimulating internal R&D (Schmeisser, 2013; Griffith *et al.*, 2009; Paju, 2007).

Nonetheless, there are disadvantages or risks that MNCs should be aware of, namely, supplier-buyer dependence, leakage of tacit know-how, loss of knowledge-based capabilities, loss of direct control over main value-added activities, increased cognitive distance to new partners, unexpected costs occurrences, loss of competitive edge and limiting the provider's innovativeness (Schmeisser, 2013; Heide and Weiss, 1995; Stremersch *et al.*, 2003; Maskell *et al.*, 2007; Paju, 2007). However, recent literatures have not really argued or addressed the process issue related to dynamic and/or change in governance, over time. TCE will provide an effective theoretical framework for understanding governance in a cost context.

#### *Governance: transaction cost economics*

TCE works to explain how firms set boundaries on activities (Williamson and Ghani, 2012; Williamson, 1975). TCE divides *uncertainty* into two categories which are *environmental* and *behavioral*. *Environmental uncertainty* is to be featured by unpredictability of surroundings of exchange (Anderson, 1988; Heide and John, 1990). *Behavioral uncertainty* has been conceptualized as the degree of difficulty associated with assessing the performance of transaction partners (Rindfleisch and Jan, 1997, p. 43). The last aspect of TCE is *frequency of transaction*. Williamson (1985) posited that if a transaction is likely to occur frequently, firms are benefited by internalization of the activity; in that, involved costs are offset with the frequent recurrence of the activity. Before taking a look *distance*, issues of offshore-outsourcing in the view of TCE which was treated in previous studies are discussed.

According to TCE, if the performance of specific activities of a firm through the market results in prohibitive transaction costs which exceed the costs which is occurred from the performance of the same activities inside a firm, a firm prefers to internalize those activities. On the other hand, in the case that the transaction costs of performing strategic activities through the market are lower than inside a firm, the exploitation of market governance is favorable (Williamson and Ghani, 2012; Williamson, 1975, 1985).

Transaction costs are categorized into three problems, in terms of opportunism and bounded rationality because transaction-specific assets are involved in the exchange, environmental uncertainty causes inability to clarify surrounding conditions of an exchange and behavioral uncertainty of the exchange partner can be directly or indirectly linked to unwanted additional costs. For the first, adaptation costs refer to the difficulty in modifying contracts when conditions vary. For example, a firm might choose the internalization, in lieu of taking a risk of unwanted costs (e.g. penalty), in the case that there is high probability of modifications of contracts or agreements (Ulset, 1996). Second, according to Pisano (1990), safeguarding costs demonstrates the cost which is caused by the opportunistic action of an

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exchange partner after making investments in relationship. The last is measurement costs that are occurred in verification of the completion or fulfillment of contracts as specified (Calantone and Stanko, 2007).

Product development relationship with an outsourced supplier might be highly transaction specific, so the investment into the relationship involves the risk of ex post opportunistic behaviors from an outsourced supplier (Pisano, 1990; Ulset, 1996; Anderson, 1988; Rindfleisch and Jan, 1997).

Heide and John (1990) defined control in the any situation where a firm has authority or influence on decision by another firm. Carson (2007) suggested that there are two primary forms of control in product development relationships. First, ex ante control which is measured by the detail and comprehensiveness of contractual specifications issued for the supplier's work governs development relationships. The second is ex post client control (e.g. monitoring, reporting requirements) that is ongoing control, during the performance of supplier's work. Because uncertain and unfolding propensity of development tasks (Pisano, 1990) obstructs perfect anticipation of future situations, ex post control mechanism partakes of ex ante contracts. Associated with control issue, Robinson and Toby (2003) argued that the level of ex post control is relying on mostly ex ante agreements.

In sum, TCE argues that the relationship which results from outsourcing of product development should be controlled with relatively high extent to safeguard the transaction specific investments of the outsourcing firm, in that, this is mostly one-sided investment pattern (Williamson and Ghani, 2012; Williamson, 1985).

There are two different views:

- (1) environment uncertainty is positively related with ex post but negatively with ex ante, due to incompleteness of a contract to promptly response to variances of a market. In other words, more frequent modification or adjustment in a contract, higher risk of opportunistic behavior, and then stronger control (ex post) for safeguarding investments; and
- (2) on the contrary, some other studies (Crocker and Kenneth, 1993; Galbraith, 1977) argue that the outsourcing firm should decrease the level of control (ex post) to acquire strategic flexibility and smooth information processing.

Carson (2007) concluded with own study that:

[...] the creative nature of the task appears to be a more significant consideration in predicting inter-organizational governance arrangements in these models, and clients may sacrifice some level of safeguarding to protect the supplier's ability to perform creative tasks.

### *Distance*

Cultural distance is one of major cost factors and of the most complicated elements, in international business. In the decision of entry mode for a firm, the concept of distance is related with transaction costs; in other words, the greater distance leads to the higher costs, due to the cost of information, and the difficulty of transferring competencies and skills (Sousa and Bradley, 2008). In other words, costs result from high level of environmental and behavioral uncertainties. According to Sousa and Bradley (2008, p. 469), if a firm goes to the country which has similar (low distance between home and host countries) cultural traits or norms, the information-acquisition costs are close to zero. This is also counted in the issue of sourcing; that is, it is one of the factors which increase threat or risk of offshore-outsourcing of innovation for a firm (Griffith *et al.*, 2009).

In general, “distance” has two levels; the one is cultural distance (national level), and the other is psychic distance (individual level). According to [Johanson and Vahlne \(1977, p. 24\)](#), psychic distance is “the sum of factors preventing the flow of information to and from the market”. Later, some studies argue that psychic distance is to be perceived at individual level and should be measured at that level, and the revised definition is suggested. For example, [Sousa and Bradley \(2008\)](#) distinguished the psychic distance concept which refers to “Individual’s perception of the differences between the home country and the foreign country” from the cultural distance concept which is depicted as “the degree to which cultural values in one country and different from those in another country” and which has applied to national level assessment. Moreover, they introduced and postulated that psychic distance is influenced by cultural distance.

[Dow and Larimo \(2009\)](#) argued that many sources of distance construct have been overlooked in studies and that international experience should be concerned, in lieu of general experience. In particular, they brought three more elements (i.e. language distance, institutional distance and other forms of distance) on the top of national cultural distance (Hofstede’s national cultural dimensions), as psychic distance stimuli (say, national-level exogenous differences). As studied so far, distance is to be determined by various elements; some are explicit (e.g. language, political/legal system) but others are implicit (e.g. moral code); or some are observable but others are unobservable. At times, elements might take somewhat ambiguous positions. For example, for language, the problem could be occurred due to differences in ways of saying. In Japan and Korea, often times, positive answer can mean totally opposite meaning.

This article makes such arguments (similar with ones from [Dow and Larimo, 2009](#)) that, in the process of decision-making by managers, perceptions over individual level perceptions over environments are to be based, and that perceived individual level distance is influenced by aspects of national level distance that are psychic distance stimuli.

## Propositions

### *Relationship between distance and autonomy*

Firm’s innovation is usually located in the vicinity of its targeting markets; owing to have quick updates of market information that involves customers (e.g. tastes and preferences) and competitors (e.g. new product launching, new technology, comparatively advantageous resources) and then to promptly and strategically respond to variances of markets. Host country in which firm’s innovation is located might be culturally homogeneous or heterogeneous with home country. However, because it is impossible to be perfectly homogeneous or heterogeneous to each other, what matters is the extent of heterogeneity in elements of distance (e.g. language, religion, industrial development, education, political system, etc.).

Noting that market information is indispensable and a crucial element for the innovative function of the firm, the greater the heterogeneity that exists between the location of the innovation and the home market, the greater advantage to the MNC of its internationally located innovation. However, the extent of heterogeneity of distance has the positive relation with the level of uncertainty (environmental and behavioral). Suppose that an MNC has full responsibility and authority over its innovation and high level of distance exists. The high level of distance between home and host country would result in highly market-specific information and high environmental and behavioral uncertainty; therefore, by a headquarter having full control, potential problems occur. To have flexible and quick strategic responses to market (e.g. product reconfiguration, new product launching) is evident to be profitable and successful in a market. In

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proposed market state, processing market information to making strategic decision would be costly in light of money and time, due to high probability of misunderstanding information, difficulty in deciphering information, time-consuming reporting process, etc. Ultimately, to reduce unwanted costs and be profitable in global market, the certain level of autonomy on innovation function to its outsourcing party (i.e. less control) needs to be granted:

- P1. The level of heterogeneity in national-level differences (psychic distance stimuli) is positively related to the level of autonomy to the outsourcing third party.

#### *Relationship between autonomy and transaction costs*

Whereas, the granted autonomy enables a firm to make astute responses to variances of a market, increased autonomy also increases its transaction costs. The logic underlying this is that increased transactions costs arise from increased environmental uncertainty of a market (more limited information) and increased probability of behavioral uncertainty of its partner (opportunistic behaviors) as the firm grants greater levels of autonomy. To overcome environmental uncertainty in a given market, how to monitor partner's activities and what is appropriate level of monitoring are important issues. To decrease the level of behavioral uncertainty, along with monitoring, appropriate evaluation and reward mechanisms are evident. Those caused additional efforts in time and money might be invested into more effective and efficient strategic actions:

- P2. The level of autonomy of innovation centers is positively related to the level of transaction costs.

#### *Relationship between transaction cost and outsourcing*

Overall, TCE explicates how a firm organizes its outset of outsourcing, by using the extent of transaction-specific investments and the uncertainty from bounded rationality of a firm and opportunism of a supplier (Griffith *et al.*, 2009). High level of TC caused by given discretion makes a firm impossible to keep benefits from new product development and strategic flexibility in a given market. This article argues that outsourcing firm's innovation to the third supplier will reduce the level of TC and give a firm better effectiveness and efficiency in new product development by partnering with the third party. Then, the next question is "what will be advantages and disadvantages, in the view of TCE". As discussed in the earlier section, by outsourcing innovation, newly contracted partnership help a firm increase new product assortment, decrease resource necessity, improve the velocity of new product introduction, acquire new knowledge and technology, reduce costs of new product development (which includes increased TC by distance and autonomy) and improve quality and reliability in the market. However, the extent of dependency of buyer to supplier is related with the extent of transaction-specificity with the level of investment which is usually unilateral in this case. Due to high level of transaction-specificity, there is the probability of unfavorable ex post opportunistic behaviors from a supplier; therefore, to safeguard buyer's investment, ex post control is necessary. In addition, there are other disadvantages (risks or threats), such as lose of direct control toward activities of new product development, leakage of tacit knowledge, occurrences of unexpected costs, etc. However, by using appropriate level of ex ante and ex post control, building strong relationship with partner, most of risks or threats might be neutralized. Also, in this case of offshore-outsourcing of product development, a firm's past experience and information

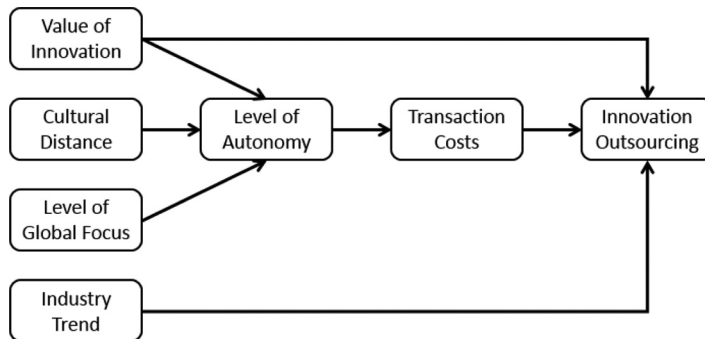
might enable the firm to release some degree of bounded rationality and environmental uncertainty:

- P3. The level of transaction costs is positively related with the decision of outsourcing of innovation centers (Figure 1).

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**Discussion**

As addressed, the main issue of this study is that, when MNC's innovation is located in a country where highly heterogeneous traits from home country are seen and also certain discretion of innovation function is necessary, whether a firm is better to outsource the innovation function not to have high level of TC. Noting that market information is indispensable and a crucial element for MNC's innovation, the greater the heterogeneity that exists between the host country and the home market, the greater the advantage to the MNC with locating its innovation in host country. However, the extent of heterogeneity of distance has a positive relation with the level of uncertainty (environmental and behavioral) and the level of specificity of market information. Ultimately, to reduce unwanted costs and be profitable in global market, a headquarter should grant certain level of autonomy to ICs; hence, the greater distance, MNC's headquarter less desire the full control on innovation function in its host country. Whereas, the granted autonomy to locally situated innovation enables it to make astute responses to variance in host country market, and its transactions costs will be also increased which is to be caused by the increased level of environmental and behavioral uncertainty. Finally, it is argued that if MNC's innovation is located in a highly heterogeneous host country market and the level of discretion of innovation is to be increased, the MNC will make governance decision of innovation (i.e. whether its innovation function is outsourced to a third-party supplier situated in host country market.). This study, in the deeper sense, extended the ramification of TCE on specific issue of offshore-outsourcing of MNC's innovation function. Also, for managers who are charge of innovation, the general idea will be a useful normative guideline for making the sourcing decisions.



**Notes:** The level of global focus refers to whether a firm's goal is more globally focused than locally focused or vice versa; value of innovation refers to the relative importance of a function of product which is going to be developed to other remaining function of a product; industry trend is determined here from change in competition intensity and change in consumers' needs and taste

Figure 1.



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**References**

- Adams, M.E., Day, G.S. and Dougherty, D. (1998), "Enhancing new product development performance: an organizational learning perspective", *The Journal of Product Innovation Management*, Vol. 15 No. 5, pp. 403-422.
- Anderson, E. (1988), "Transaction costs as determinants of opportunism in integrated and independent sales forces", *Journal of Economic Behavior and Organization*, Vol. 9, pp. 247-264.
- Ariss, S.S. and Saboori-Deilami, V. (2012), "An integrated framework for the study of organizational innovation", *International Journal of Innovation and Technology Management*, Vol. 9 No. 1, pp. 1250003-1250001.26.
- Baregheh, A., Rowley, J. and Sambrook, S. (2009), "Towards a multidisciplinary definition of innovation", *Management Decision*, Vol. 47 No. 8, pp. 1323-1339.
- Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.
- Berchicci, L. (2013), "Towards an open R&D system: internal R&D investment, external knowledge acquisition and innovative performance", *Research Policy*, Vol. 42 No. 1, pp. 117-127.
- Brown, S.L. and Eisenhardt, K.M. (1997), "The art of continuous change: linking complexity theory and time paced evolution in relentlessly shifting organizations", *Administrative Science Quarterly*, Vol. 42, pp. 1-34.
- Calantone, R.J. and Stanko, M.A. (2007), "Drivers of outsourced innovation: an exploratory study", *Journal of Product Innovation Management*, Vol. 24, pp. 230-241.
- Cantwell, J. (1995), "The globalisation of technology: what remains of the product cycle model?", *Cambridge Journal of Economics*, Vol. 19 No. 1, pp. 155-174.
- Carson, S.J. (2007), "When to give up control of outsourced new product development", *Journal of Marketing*, Vol. 71 No. 1, pp. 49-66.
- Cavusgil, S.T., Calantone, R.J. and Zhao, Y. (2003), "Tacit knowledge transfer and firm innovation capability", *The Journal of Business & Industrial Marketing*, Vol. 8 No. 1, pp. 6-21.
- Chesbrough, H.W. and Teece, D.J. (1996), "When is virtual virtuous? organizing for innovation", *Harvard Business Review*, Vol. 74 No. 1, pp. 65-71.
- Cooper, R.G. (1992), "The new prod system: the industry collaborative experience", *Journal of Product Innovation Management*, Vol. 9 No. 2, pp. 13-27.
- Crocker, K.J. and Kenneth, J.R. (1993), "The efficiency of incomplete contracts: an empirical analysis of air force engine procurement", *Rand Journal of Economics*, Vol. 24, pp. 126-146.
- D'Agostino, L.M., Laursen, K. and Santangelo, G.D. (2013), "The impact of R&D offshoring on the home knowledge production of OECD investing regions", *Journal of Economic Geography*, Vol. 13 No. 1, pp. 145-175.
- Dahan, E. and John, R.H. (2002), "Product development: managing a dispersed process", in Barton, W. and Robin, W. (Eds), *Handbook of Marketing*, Sage Publication, Thousand Oaks, CA, pp. 179-222.
- Damanpour, F. and Aravind, D. (2012), "Managerial innovation: conceptions, processes, and antecedents", *Management and Organization Review*, Vol. 8 No. 2, pp. 423-454.
- Damanpour, F. and Evan, W.M. (1984), "Organizational innovation and performance: the problem of organizational lag", *Administrative Science Quarterly*, Vol. 29, pp. 392-409.
- Delios, A. and Henisz, W.J. (2003), "Policy uncertainty and the sequence of entry by Japanese firms, 1980-1998", *Journal of International Business Studies*, Vol. 34 No. 3, pp. 227-241.
- Deutsch, C.H. (2004), "Outsourcing Design", *New York Times*, 30 December, C1.
- Dossani, R. and Kenney, M. (2007), "The next wave of globalization: relocating service provision to india", *World Development*, Vol. 35 No. 5, pp. 772-791.

- Dow, D. and Larimo, J. (2009), "Challenging the conceptualization and measurement of distance and international experience in entry mode choice research", *Journal of International Marketing*, Vol. 17 No. 2, pp. 74-98.
- Drucker, P.F. (1954), *The Practice of Management*, Harper & Row Publishers, New York, NY.
- Dunning, J.H. (1993), *Multinational Enterprises and The Global Economy*, Addison-Wesley, Wokingham.
- Ernst, D. (2006), *Innovation Offshoring: Asia's Emerging Role in Global Innovation Networks*, East-West Center Special Report, Honolulu.
- Florida, R. (1997), "The globalization of R&D: results of a survey of foreign-affiliated R&D laboratories in the USA", *Research Policy*, Vol. 26, pp. 85-103.
- Galbraith, J. (1977), *Organizational Design*, Addison-Wesley, Massachusetts, MA.
- George, G., McGahan, A.M. and Prabhu, J. (2012), "Innovation for inclusive growth: towards a theoretical framework and a research agenda", *Journal of Management Studies*, Vol. 49 No. 4, pp. 661-683.
- Gobble, M.M. (2013), "Outsourcing innovation", *Research-Technology Management*, Vol. 56 No. 4, pp. 64-67.
- Griffith, D.A., Harmancioglu, N. and Droge, C. (2009), "Governance decisions for the offshore outsourcing of new product development in technology intensive markets", *Journal of World Business*, Vol. 44, pp. 217-224.
- Han, J.K., Kim, N. and Srivastava, R.K. (1998), "Market orientation and organizational performance: is innovation a missing link?", *Journal of Marketing*, Vol. 62 No. 4, pp. 30-52.
- Harper, C. (2015), *Organizations: Structures, Processes and Outcomes*, Routledge.
- Heide, J.B. and John, G. (1990), "Alliances in industrial purchasing: the determinants of joint action in buyer-supplier relationships", *Journal of Marketing Research*, Vol. 27, pp. 24-36.
- Heide, J.B. and Weiss, A.M. (1995), "Vendor consideration and switching behavior for buyers in high-technology markets", *Journal of Marketing*, Vol. 59 No. 3, pp. 30-43.
- Holmes, R.M., Miller, T., Hitt, M.A. and Salmador, M.P. (2013), "The interrelationships among informal institutions, formal institutions, and inward foreign direct investment", *Journal of Management*, Vol. 39 No. 2, pp. 531-566.
- Holt, K. (2013), *Market Oriented Product Innovation: A Key To Survival In The Third Millennium*, Springer Science & Business Media.
- Horvit, M. (2004), "Delphi among firms sending engineering research work out of US fort worth star-telegram", Knight Ridder/Tribune Business News.
- Hunt, S. and Morgan, R. (1996), "The resource-advantage theory of competition: dynamics, path dependencies, and evolutionary dimensions", *Journal of Marketing*, Vol. 60 No. 4, pp. 107-114.
- Johanson, J. and Vahlne, J.E. (1977), "The internationalization process of the firm: a model of knowledge development and increasing foreign commitments", *Journal of International Business Studies*, Vol. 8 No. 1, pp. 23-32.
- Kalinic, I., Sarasvathy, S.D. and Forza, C. (2014), "Expect the unexpected": implications of effectual logic on the internationalization process", *International Business Review*, Vol. 23 No. 3, pp. 635-647.
- Kenney, M., Breznitz, D. and Murphree, M. (2013), "Coming back home after the sun rises: returnee entrepreneurs and growth of high tech industries", *Research Policy*, Vol. 42 No. 2, pp. 391-407.
- Kotabe, M. and Murray, J.Y. (1990), "Linking product and process innovations and modes of international sourcing in global competition: a case of foreign multinational firms", *Journal of International Business Studies*, Vol. 21 No. 3, pp. 83-408.
- Larsen, M.M., Manning, S. and Pedersen, T. (2013), "Uncovering the hidden costs of offshoring: the interplay of complexity, organizational design, and experience", *Strategic Management Journal*, Vol. 34 No. 5, pp. 533-552.

- 
- Lewin, A.Y., Massini, S. and Peeters, C. (2009), "Why are companies offshoring innovation? the emerging global race for talent", *Journal of International Business Studies*, Vol. 40, pp. 901-925.
- Li, T. and Calantone, R.J. (1998), "The impact of market knowledge competence on new product advantage: conceptualization and empirical examination", *Journal of Marketing*, Vol. 62 No. 4, pp. 13-29.
- Linder, J.C. (2004), "Transformational outsourcing", *MIT Sloan Management Review*, Vol. 45 No. 2, pp. 52-58.
- Lynch, C.F. (2004), "Why outsource?", *Supply Chain Management Review*, Vol. 8 No. 7, pp. 44-51.
- Madhavan, R. and Grover, R. (1998), "From embedded knowledge to embodied knowledge: new product development as knowledge management", *Journal of Marketing*, Vol. 62 No. 4, pp. 1-12.
- Manning, S. (2013), "New silicon valleys or a new species? commoditization of knowledge work and the rise of knowledge services clusters", *Research Policy*, Vol. 42 No. 2, pp. 379-390.
- Maskell, P., Pedersen, T., Petersen, B. and Dick-Nielsen, J. (2007), "Learning paths to offshore outsourcing: from cost reduction to knowledge seeking", *Industry and Innovation*, Vol. 14 No. 3, pp. 239-257.
- Moorman, C. and Rust, R.T. (1999), "The role of marketing", *Journal of Marketing*, Vol. 63, pp. 180-197.
- Ngo, L.V. and O'Cass, A. (2013), "Innovation and business success: the mediating role of customer participation", *Journal of Business Research*, Vol. 66 No. 8, pp. 1134-1142.
- Paju, T. (2007), "Conceptual model of R&D offshore outsourcing", *Journal of Global Business and Technology*, Vol. 3 No. 1, pp. 49-61.
- Piachaud, B. (2005), "Outsourcing technology", *Research Technology Management*, Vol. 48 No. 3, pp. 40-46.
- Pisano, G.P. (1990), "The R&D ssboundaries of the firm: an empirical analysis", *Administrative Science Quarterly*, Vol. 35, pp. 153-176.
- Porter, M.E. (1980), *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, Free Press, New York, NY.
- Quinn, J.B. (2000), "Outsourcing innovation: new engine of growth", *Sloan Management Review*, Vol. 41 No. 4, pp. 13-28.
- Rangan, U.S. and Schumacher, P. (2006), "Entrepreneurial globalization: lessons from the experiences of European small and medium enterprises", *IIM-B Management Review Conference*, Bangalore, pp. 13-15.
- Rindfleisch, A. and Jan, B.H. (1997), "Transaction cost analysis: past, present, and future applications", *Journal of Marketing*, Vol. 61, pp. 30-55.
- Robinson, D.T. and Toby, E.S. (2003), "Contractual, relational, and property rights-based control in biotech strategic alliances", Working Paper, Columbia Business School, Columbia University.
- Schmeisser, B. (2013), "A systematic review of literature on offshoring of value chain activities", *Journal of International Management*, Vol. 19 No. 4, pp. 390-406.
- Scott, W.R. and Davis, G.F. (2015), *Organizations and Organizing: Rational, Natural and Open Systems Perspectives*, Routledge.
- Soukhoroukova, A., Spann, M. and Skiera, B. (2012), "Sourcing, filtering, and evaluating new product ideas: an empirical exploration of the performance of idea markets", *Journal of Product Innovation Management*, Vol. 29 No. 1, pp. 100-112.
- Sousa, C.M.P. and Bradley, F. (2008), "Cultural distance and psychic distance: refinements conceptualization and measurement", *Journal of Marketing Management*, Vol. 24 Nos 5/6, pp. 467-488.
- Stremersch, S., Allen, M.W., Benedict, G.C.D. and Ruud, F.T. (2003), "Buying modular systems in technology-intensive markets", *Journal of Marketing Research*, Vol. 40 No. 3, pp. 335-350.

- Teece, D.J. (2014), "A dynamic capabilities-based entrepreneurial theory of the multinational enterprise", *Journal of International Business Studies*, Vol. 45 No. 1, pp. 8-37.
- Thursby, J. and Thursby, M. (2006), *Here or there? A Survey of Factors in Multinational R&D Location, Report to the Government-Industry Research Roundtable*, The National Academies Press, Washington, DC.
- Ulset, S. (1996), "R&D outsourcing and contractual governance: an empirical study of commercial R&D projects", *Journal of Economic Behavior and Organization*, Vol. 30 No. 1, pp. 63-82.
- Williamson, O. and Ghani, T. (2012), "Transaction cost economics and its uses in marketing", *Journal of the Academy of Marketing Science*, Vol. 40 No. 1, pp. 74-85.
- Williamson, O.E. (1975), *Markets and Hierarchies: Analysis and Antitrust Implications*, Free Press, New York, NY.
- Williamson, O.E. (1985), *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*, The Free Press, New York, NY.
- Yalcinkaya, G., Calantone, R.J. and Griffith, D.A. (2007), "An examination of exploration and exploitation capabilities: implications for product innovation and market performance", *Journal of International Marketing*, Vol. 15 No. 4, pp. 63-93.
- Zander, I. (2002), "The formation of international innovation networks in the multinational corporation: an evolutionary perspective", *Industrial and Corporate Change*, Vol. 11 No. 2, pp. 327-353.

**Corresponding author**

ChangSeob Yeo can be contacted at: [Changseob.yeo@dominican.edu](mailto:Changseob.yeo@dominican.edu)