

2013

A discriminant model of performance for emerging economy joint ventures

Craig C. Julian
Southern Cross University

Junqian Xu
Xi'an Jiaotong University

Publication details

Julian, CC & Xu, J 2013, 'A discriminant model of performance for emerging economy joint ventures', in D McArthur, R Varadarajan & ZU Ahmed (eds), *Proceedings of the tenth World Congress for the Academy of Global Business Advancement (AGBA)*, Bangkok, Thailand, 15-17 June, Academy of Global Business Advancement, vol. 1, pp. 625-636.

ePublications@SCU is an electronic repository administered by Southern Cross University Library. Its goal is to capture and preserve the intellectual output of Southern Cross University authors and researchers, and to increase visibility and impact through open access to researchers around the world. For further information please contact epubs@scu.edu.au.

Craig C. Julian
Southern Cross Business School
Coolangatta, Australia
E-Mail Address: craig.julian@scu.edu.au
Junqian Xu
Xi'an Jiaotong-Liverpool University
Jiangsu Province, China
Email address: junqian.xu@xjtlu.edu.cn

A DISCRIMINANT MODEL OF PERFORMANCE FOR EMERGING ECONOMY JOINT VENTURES

ABSTRACT

This study examines the empirical links between market-focused learning, internal learning, external learning, product and production process innovation, managerial and marketing innovation and marketing performance in Chinese international joint ventures (IJVs). Data were gathered via a self-administered mail survey directed to the Chief Executive Officer of 313 international joint ventures in China. The sample came from a wide cross section of industries. The findings indicate that internal and external learning as well as product and production process innovation, managerial and marketing innovation all had a significant impact on IJV marketing performance.

Key Words: Market-focused Learning, Internal Learning, External Learning, Innovation, Marketing Performance

INTRODUCTION

The organizational learning approach to innovation suggests that the degree of innovation reflects the extent of new knowledge embedded in an innovation (Dewar and Dutton, 1986). Radical and incremental innovations pertain to distinctions along a theoretical continuum of the level of new knowledge embedded in an innovation (Dewar and Dutton, 1986, p. 1423). Radical innovations imply that a firm is engaging in generative learning levels, the highest level of organizational learning.

The literature also suggests a strong relationship between organizational learning processes and organizational capabilities (Day, 1994; Leonard-Barton, 1992; Prahalad and Hamel, 1990). Researchers argue that organizational learning itself is a core capability of the organization. For example, Itami and Numagami (1992) suggest that the knowledge inside human heads in combination with technical systems is arguably the most fundamental of the core capabilities of the firm. Extending this view, Senge and Sterman (1991) suggest that the most critical core competence is organizational learning, the process whereby shared understandings change. In fact, organizational learning may be usefully considered a 'meta-competence' or 'meta-skill' that directs the resource conversion activities of the firm and is a source of sustainable competitive advantage (Crossan *et al.*, 1992; Senge, 1990). This discussion suggests that organizational learning theory provides a sound theoretical framework to explore the relationship between learning, innovation and performance in IJVs.

The conceptual framework is premised on the view that IJVs operating within a turbulent industry tend to challenge their current practices and tend to pursue greater learning and more innovative ways of serving their customers. Environmental turbulence underlies a major transformation in the competitive environment that determines strategic success (Keirnan 1993) and to which manufacturers' strategies must respond (Johannessen, Olsen, and Olaisen, 1999). Chandler (1990) also found that a discontinuous transformation of the structure and dynamics of organizational behaviour was necessary. Chandler (1990) suggests that organizations must not only strategize discontinuously as the level of their environmental turbulence demands, but they must also have the 'internal capabilities' to enact their strategies (Aburas, 2010). Aburas (2010) argues for an integrated corporate performance framework that included internally-focused performance dimensions while taking into account various external performance dimensions, including relationships with customers and other key stakeholders.

In other words, in today's competitive turbulent environment, there is a compelling need for manufacturers to constantly update their mental models with new knowledge of the right things to do and how to do those things right. This mental model updating process by firms via their senior managers is commonly known as organizational learning (Nonaka and Takeuchi, 1995; Senge, 1990). Since in a turbulent environment, the need to update mental models is very frequent, organizational learning needs to become an organizational 'habit pattern'.

Organizational learning capabilities emanate from multiple sources. As Dibella, Nevis and Gould observe, "some organizations acquire knowledge from their external environment; other organizations generate or create knowledge internally. Many organizations rely on both orientations or processes to varying degrees" (1996: 364). March (1991) suggests that learning from external sources (termed 'exploration') and internal sources (termed 'exploitation') are equally important for organizational change. March (1991) argues that organizations must continually balance between *exploitation* and *exploration* for survival and prosperity. March (1991) further suggests that a dynamic industry environment allows the firm more opportunities for exploration and exploitation. This suggests that the extent to which an organization possesses capabilities for learning from external and internal sources may depend on the strategic learning choices of the firms.

The literature on innovation-based competitive strategy suggests that organizations learn from three sources and these sources provide a sound basis to capture a firm's learning capability structure. Based on the sources of learning discussed above, the learning capabilities of the firm are identified as, market focused learning capability, internally focused learning capability and external learning. Market-focused learning capability and external learning capability are externally focused learning capabilities, whereas internally focused learning capability reflects a firm's capacity to learn from internal sources.

Accordingly the conceptual framework used in this paper incorporates eight constructs, namely, market focused learning capability, internally focused learning capability, external learning capability, organizational innovation intensity comprised of product, production process, marketing and managerial system innovations and an IJV's marketing performance. This framework suggests that IJVs operating within a turbulent industry environment tend to develop distinctive capabilities in market focused, internally focused and external learning. These learning capabilities enable the IJV to achieve higher levels of marketing performance.

Furthermore, organizational innovation is defined as the application of ideas that are new to the firm, to create added value either directly for the enterprise or indirectly for its customers, whether the newness and added value are embodied in products, processes, services, or in work organisation, management or marketing systems and this added value has a significant impact on marketing performance.

As such, the question that directs this study is: To what extent is organizational learning and innovation able to discriminate between high and low IJV marketing performance? These theoretical constructs and their relationships are discussed next.

LITERATURE REVIEW

Market focused learning capability

Learning from markets is cited as a key to innovation and greater firm performance. The literature on the market-driven firm paradigm suggests that “market driven firms stand out in their ability to continuously sense and act on events and trends in their markets. They are also better equipped to anticipate how their markets will respond to actions designed to retain or attract customers, improve channel relations, or thwart competitors” (Day, 1994: 9). Innovations are deemed to arise as a result of a perceived and sometimes clearly articulated customer need (Myers and Marquis, 1969). To be effective innovators, organizations should constantly scan the horizons for new opportunities to satisfy their customer’s needs (Levitt, 1960). These views are embedded in research on market orientation and organizational performance (Kohli and Jaworski, 1990; Slater and Narver, 1995). Because market orientation reduces the degree of incompatibility of the new product with customer needs, it is likely to enhance speedy adoption and the success of innovations (Cooper and Kleinschmidt, 1987). Sinkula (1994) indicates five reasons which make market-based organizational learning unique in the creation of knowledge. First, it is a core competency pertaining to external foci and it is less visible than most internally focused organizational learning competencies. Second, market-based learning results in fundamental bases of competitive advantage. Third, market-based organizational learning is distinct from other types of organizational learning in that observation of others is essential. Fourth, the market information that resides in organizational memory is typically more difficult to access. Finally, market-based learning is unique in that market-based learning is more equivocal. Market-focused learning capability is defined as the capacity of the firm relative to its competitors, to acquire, disseminate, unlearn and use market information for organizational change. This definition extends the concept of market orientation in that entrepreneurial firms possessing a high level of market-focused learning capability not only learn from markets but also disseminate such knowledge within the organization and integrate the waves of new knowledge acquired into the firm’s value-creating activities thereby enhancing performance.

Internally focused learning capability

Internally focused learning capability includes experiential learning (trial and error learning) and experimental learning (developing new ways of doing things) (Dixon, 1992; Huber, 1991). A commonly pursued experimental learning activity in a manufacturing firm is in-house R&D activity. R&D activity is interpreted as a search process to learn and generate cumulative technical advances in specific directions (Hyvarinen, 1990) and a source of technological capability of the firm (Durand, 1988). In-house R&D activity is a key source of knowledge acquisition (Macpherson, 1992) and there is overwhelming evidence to suggest that in-house R&D is essential for effective innovation (Kim, Song, and Lee, 1993) and enhanced performance. By definition, R&D as a flow is directly related to innovation because

it modifies the existing stock of technologies (Allen, 1977). Cohen and Levin (1989) found that incentives for R&D are predominantly shaped by industry-specific characteristics such as the degree of competition, demand and appropriability conditions, and technological opportunities. They found that industry effects explain half of the variance in R&D expenditure. Internally-focused learning capability is defined as the capacity of the firm, relative to its customers, to develop technological and non-technological knowledge through internal sources and to disseminate, unlearn, and use this knowledge for organizational change. This definition moves beyond the scope of traditional R&D activities; that is, firms possessing internally-focused learning capability not only learn from internal sources but also disseminate such knowledge within the firm and this wide dissemination of knowledge has the capacity to enhance performance.

External learning capability

There is strong evidence to suggest that the ability to exploit external knowledge is a critical component of organizational performance (Cohen and Levinthal, 1990; Myers and Marquis, 1969). Although in-house R&D and other forms of internally focused learning may be necessary, firms have to access external technological resources and modify them in order to develop the technological capabilities needed to respond to technological changes effectively (Dodgson, 1990; Rothwell, 1989). Collaborative linkages or 'networking' improves the innovation potential of the organization (Mowary 1988) and its subsequent performance. Most of the innovations result from borrowing rather than from invention (March and Simon, 1958; Myers and Marquis, 1969). As such, external capability is a source of competitive advantage for the firm (Lipparini and Sobrero, 1994). Building on this viewpoint, external learning is defined as the capacity of the organization, relative to its competitors, to acquire technological and non-technological knowledge through external linkages, and to disseminate, unlearn, and to use such knowledge for organizational change and enhanced performance. This definition makes the use of networking activity for knowledge acquisition explicit. It is suggested that a turbulent industry environment forces the firm to develop a knowledge base which will enable it to exploit emerging market opportunities for enhanced performance. This involves internal learning as well as from external sources (March, 1991). Therefore, external learning is a critical learning capability of the firm in its quest to gain positional competitive advantages in a turbulent industry environment.

Organizational innovation

Although the literature suggests that innovations can occur in any value-creating activity, suggesting that it should be conceptualised to cover a broad range of activities (Porter, 1990; Rothwell, 1992; Schumpeter, 1934), past innovation research is biased towards technological innovation. However, firms undertake both technological and non-technological innovations and all such innovations can lead to a competitive advantage (Hyvarinen, 1990). This discussion, whilst suggesting that innovation can be a key source of enhanced firm performance, highlights the need to conceptualise this construct broadly in examining its influence on sustained competitive advantage and performance. In this study organizational innovation is defined as the application of ideas that are new to the firm, to create added value either directly for the enterprise or indirectly for its customers, whether the newness and added value are embodied in products, processes, services, or in work organisation, management or marketing systems.

Our earlier discussion suggested that organizational learning capabilities are prerequisites for innovation. In reality what we may see is that firms operating within a competitive industry environment undertake greater learning though market focused, internally focused and

external learning activities. These learning activities enable the firm to pursue innovative ways of delivering superior products and services which in turn enable the firm to gain positional competitive advantages in the target market.

There appears to be no uniform definition of marketing performance in the literature. There has been a variety of marketing performance measures adopted by previous researchers. These include sales (Zou, Fang, and Zhao, 2003), sales growth (Madsen, 1989; Rose and Shoham, 2002), market share, profitability (Geringer and Hebert, 1991; Johnson and Arunthanes, 1995), technology transfer, durability, organisational learning, access to markets etc. (Johnson, Black, and Sakano, 1993). However, the most frequently used performance measures appear to be economic in nature. As an IJV is a hybrid formed from at least two separate organizations, which may have completely different marketing objectives for the IJV this study uses both economic and strategic measures of marketing performance.

In this study, we define marketing performance as the extent to which the IJV's objectives, both economic and strategic, with respect to marketing a product/service in the PRC is achieved through the planning and execution of a specific marketing strategy. An IJV usually has a number of objectives set by the individual partners', which can be economic (i.e. profits, sales, or costs) and/or strategic (i.e., market expansion, access to raw materials, technology transfer, economies of scale, gaining a foothold in a foreign market, blocking a competitor etc.). The extent to which the IJV's strategic and economic objectives are achieved is therefore a measure of its marketing performance.

Given the issues raised in the literature relating to IJVs the following research question is offered for testing in relation to IJVs in China:

RQ: To what extent is IJV marketing performance in China at an economic level, at a strategic level and at an overall satisfaction with performance level influenced by:

1. Market-focused learning.
2. External learning.
3. Internal learning.
4. Product innovation.
5. Production process innovation.
6. Managerial systems innovation.
7. Marketing innovation.

RESEARCH DESIGN

The empirical link between learning, innovation and IJV marketing performance were examined via an empirical investigation of 313 IJVs located in the People's Republic of China (PRC). The administration of the survey was via mail and a survey packet including a personalised cover letter and self-administered questionnaire was sent to the Chief Executive Officer (CEO) of each venture. The sample came from a wide cross section of industries. The questionnaire was developed from existing measures and pre-tested using a small sample before the final instrument was mailed to the sample. All independent variables were measured via seven-point bi-polar scales (Weerawardena, O'Cass, and Julian, 2006).

In this study CEOs were used as the key informants. To reach the most knowledgeable key informants, the questionnaire was directed to the Managing Director of the IJV. From the results of the pre-test, it was expected that the Managing Director would be the person most knowledgeable about the organisation's marketing performance. The case, where the

Managing Director was not directly responsible for the organization's marketing function it was expected that the Managing Director, as Chief Executive Officer, would re-direct the questionnaire to the appropriate executive within the organization.

The measures for each of the distinctive organizational learning capabilities encompassed the four learning activities that constitute the firm's overall organizational learning processes (Huber, 1991; Schein, 1990; Sinkula, 1994; Slater and Narver, 1995). These activities are knowledge acquisition, knowledge sharing, knowledge utilization and unlearning. A key element of the capability constructs is the extent to which a particular capability has been instrumental in outperforming competitors. This approach to measure the distinctiveness of organizational capabilities is based on the work of Snow and Hrebnick (1980).

Market-focused learning - High scores on the market-focused learning scale indicated that the firm possessed distinctive capabilities in the acquisition of knowledge on consumer preferences and competitor behavior in terms of the four learning activities indicated above. Firms that scored highly on this scale collected market information frequently and had a thorough understanding of market preferences. The measure developed for this construct was an adaptation of the market learning scale developed by Day (1994). The measure had 8 self-report items that demonstrated acceptable reliability and internal consistency, well above the 0.7 recommended by Nunnally (1967), with a coefficient alpha of 0.92.

Internal learning - The internal learning scale captured the extent to which the firm generated knowledge through internal experimental and experiential sources of learning. High scores on this scale suggested the firm's internal learning capabilities were in some way distinctive. The measure developed for this construct was an adaptation of the internal learning scale developed by Atuahene-Gima (1993). The measure had 8 self-report items that demonstrated acceptable reliability and internal consistency, above the 0.7 recommended by Nunnally (1967), with a coefficient alpha of 0.79.

External learning - High scores on the external learning scale indicated that the firm possessed distinctive capabilities in the acquisition of technological and non-technological knowledge through links formed with external organizations. The external learning scale was developed from past literature (e.g., Cohen and Levinthal, 1990; Rothwell, 1989). The measure had 6 self-report items that demonstrated acceptable reliability and internal consistency, above the 0.7 recommended by Nunnally (1967), with a coefficient alpha of 0.72.

Organizational innovation intensity - The innovation intensity scale captured the extent of the firm's product, process, marketing, and managerial system innovations. This definition reflected the importance of a broader conceptualization of innovation that incorporated both technological and non-technological innovations (Damanpour, 1991; Hyvarinen, 1990). High scores on the innovation intensity scale indicated that the firm had introduced radical innovations in its product, process, marketing, and managerial systems. The product innovation measure had 2 self-report items that demonstrated acceptable reliability and internal consistency, above the 0.7 recommended by Nunnally (1967), with a coefficient alpha of 0.88. The process innovation measure also had 2 self-report items that demonstrated acceptable reliability and internal consistency, above the 0.7 recommended by Nunnally (1967), with a coefficient alpha of 0.77. Whilst the marketing and managerial system innovation scales had modest reliabilities at 0.6 each, 0.6 is acceptable for a two-item scale

(Anderson and Coughlan, 1987) of which both the marketing and managerial system innovation scales were comprised.

IJV marketing performance - was assessed using a composite measure of IJV marketing performance. Respondents were asked to indicate their level of agreement with statements identifying the extent to which the IJV had achieved its objectives on a seven-point bipolar scale with scale poles ranging from a small extent (1) to a great extent (7). Respondents then indicated their perceived overall performance of the IJV on a 7-point bipolar scale (1=very poor, 7=very good). Finally, they were asked to indicate the IJVs sales growth and market share growth on a 7-point bipolar scale (1=very poor, 7=very good). These four indicators were then summed into a composite scale for measuring IJV marketing performance (Julian, 2005).

After the pilot test the questionnaire was directed to a purposeful sample of 313 IJVs in the PRC from a wide cross-section of industries, yielding 200 useable questionnaires being returned accounting for an effective response rate of 63.9 percent and considered to be adequate.

DATA ANALYSIS

The data were initially analysed using principal components analysis to assess the psychometric properties of the instrument. The primary concern was interpretability of the factors. All items loaded appropriately and no cross loadings above 0.2 were identified with only factor loadings of above 0.5 being accepted. Each scale was reviewed using factor analysis to establish that they were unidimensional. The final reliabilities for all scales were greater than 0.70 with the exception of marketing innovation and managerial innovation, however, an alpha reliability of 0.6 is acceptable for a two-item scale (Anderson and Coughlan, 1987).

The preliminary results indicated that the psychometric properties of the scale were acceptable and as such it was appropriate to examine the research question. To what extent is IJV marketing performance influenced by market focused learning capability, internally focused learning capability, external learning, product and production process innovation and marketing and managerial systems innovation when measured by a performance measure that includes satisfaction with performance, economic performance and strategic output performance.

To explore the influence of market focused learning capability, internally focused learning capability, external learning, product innovation, production process innovation, marketing innovation and managerial systems innovation on IJV marketing performance, a 2-group discriminant analysis was used in order to determine which variables best distinguished between firms with high- versus low- IJV marketing performance. All variables were entered simultaneously in the discriminant analysis so as to determine which variables were the best discriminators, after controlling for all other variables (Jackson, 1983). The antecedent variables of market focused learning capability, internally focused learning capability, external learning, product innovation, production process innovation, marketing innovation and managerial systems innovation were each measured on composite scales created by summing the items, respectively. In the discriminant analysis, the two groups were identified by splitting the groups at the median score for the composite measure of IJV marketing

performance that included overall satisfaction with the success of the IJV, strategic output and economic performance.

Table 1 Discriminant Analysis — Structure Matrix

Characteristics	Alpha Reliability	Composite Measure of Performance	P<
Process Innovation	0.77	.727	0.001
Product Innovation	0.88	.681	0.001
Managerial Innovation	0.60	.412	0.001
Marketing Innovation	0.60	.320	0.001
External Learning	0.72	.306	0.001
Internal Learning	0.79	.270	0.001
Market Learning	0.92	.051	NS

Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions

Variables ordered by absolute size of correlation within function.

All variables used for the discriminant analysis were measured on seven-point interval scales

Correctly Classified: 100%

Wilks' Lambda = 0.313, $p < 0.001$

Canonical Correlation = 0.829

In the discriminant analysis, marketing performance perceptions were examined by using a composite measure of IJV marketing performance that included satisfaction with performance, strategic output performance and economic performance. In the discriminant analysis, the discriminant function was significant (Chi Square [composite measure of marketing performance] = 175.010, $df = 7$; $p = 0.000$). Table 1 gives the correlations between each discriminating variable and its respective discriminant function. For the composite measure that was used to assess IJV marketing performance the strongest predictors were production process innovation, product innovation, managerial systems innovation, marketing innovation, external learning and internally focused learning capability. Market-focused learning was deemed to have a non-significant effect on being able to discriminate between high and low IJV marketing performance.

To assess how effectively the derived discriminant functions were able to classify cases, a confusion matrix was generated and the jackknife (leave-one-out) method was applied for classification (Crask and Perreault, 1977). For a composite measure of IJV marketing performance, market focused learning capability, internally focused learning capability, external learning, product innovation, production process innovation, marketing innovation and managerial systems innovation, 100 percent of the grouped cases were correctly classified.

Largely, the results indicate that the marketing performance of Chinese joint ventures at an overall satisfaction level and at a strategic and economic level is influenced by production process innovation, product innovation, managerial systems innovation, marketing innovation, external learning and internally focused learning capability.

DISCUSSION

This study sought to examine the influence of market focused learning capability, internally focused learning capability, external learning, product innovation, production process innovation, marketing innovation and managerial systems innovation on IJV marketing performance in China. Although the innovation literature provides evidence to suggest that firms learn through markets, internal and external sources, these learning activities have received limited attention as organizational capabilities having the potential to contribute significantly to performance outcomes in international marketing. This study's finding overcomes this void in the literature finding that organizational innovation enables IJVs to achieve enhanced performance. Furthermore, prior research has focused primarily on technological innovation paying limited attention to non-technological innovation. This study's findings suggest that the broader innovative activities of products, production processes, marketing, and managerial systems innovation enable a firm to build an effective and differentiated customer value proposition enabling enhanced performance outcomes.

Internally focused learning capability and external learning were also able to significantly discriminate between high and low IJV marketing performance. This finding highlights the role of firm specific effects on a firm's profitability and suggests the need to explore the internal factors driving a firm's knowledge acquisition efforts through internal sources. Furthermore, it highlights the need to learn from both internal and external sources for enhanced performance.

Market focused learning capability was deemed as being unable to discriminate between high and low IJV marketing performance suggesting that perhaps all firms, both low and high performing firms, learnt from the market. The findings of this study, therefore, contribute to the debate on the role of the Resource Based View (RBV) in predicting an IJV's overall performance. The study findings suggest that firms confronted with a turbulent environment learn primarily from internal research and development, staff and links with external organizations (Weerawardena et al., 2006). The IJVs in the sample appeared to share knowledge and integrate the new knowledge, driving innovative activities in their widest sense creating superior value for their customers and enhanced marketing performance.

The study findings contribute to the debate in the strategic management literature in two primary ways. First, the study introduces organizational learning into the innovation-based competitive strategy research as applied in international marketing identifying two of the three organizational learning capabilities as key antecedents of IJV marketing performance. Second, the study findings suggest that organizational innovation, with respect to product, production process, marketing, and managerial systems innovations have a significant impact on IJV marketing performance.

REFERENCES

- Aburas, H. M. 2010. An integrated performance management framework for a multi-business company. *South African Journal of Industrial Engineering*, 21(1): 35-43.
- Allen, T. J. 1977. *Managing the flow of technology*. Cambridge, MA: MIT Press.
- Anderson, E., & Coughlan, A.T. 1987. International market entry and expansion via independent or integrated channels of distribution. *Journal of Marketing*, 51(January): 71-82.

- Atuahene-Gima, K. (1993). Determinants of technology licensing intentions: An empirical analysis of Australian engineering firms. *Journal of Product Innovation Management*, 10: 230-240.
- Chandler, A. 1990. *Scale and scope*. Cambridge, MA: Harvard University Press.
- Cohen, W. M., & Levin, R. 1989. Empirical studies in innovation and market structure. In R. Schmalensee (Ed.), *Handbook on industrial organization*, Vol. 2: 1059-1101. New York: Elsevier.
- Cohen, W. M., & Levinthal, D. A. 1990. Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35: 128-152.
- Cooper, R. G., & Kleinschmidt, E. J. 1978. What makes a new product a winner: Success factors at the project level. *R&D Management*, 17: 175-189.
- Crask, M. R., & Perreault, W. D. 1977. Validation of discriminant analysis in marketing research. *Journal of Marketing Research*, 14: 60-68.
- Crossan, M. M., Lane, H., Rush, J.C., & White, R.E. 1992. Organisational learning: A meta competence for sustainable competitive advantage. Paper presented at the *Strategic Management Society Conference*, International Workshop in Belgium.
- Damanpour, F. 1991. Organisational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34(3): 555-590.
- Day, G. S. 1994. The capabilities of the market-driven organization. *Journal of Marketing*, 58: 37-51.
- Dewar, R. D., & Dutton, J. E. 1986. The adoption of radical and incremental innovations: An empirical analysis. *Management Science*, 32: 1422-1433.
- DiBella, A. J., Nevis, E. C., & Gould, J. M. 1996. Understanding organizational learning capability. *Journal of Management Studies*, 33(3): 361-384.
- Dixon, N. M. 1992. Organisational learning, A review of literature with implications for HRD professionals. *Human Resource Development Quarterly*, 3: 29-49.
- Dodgson, M. 1993. Organizational learning: A review of some literature. *Organization Studies*, 14(3): 375-394.
- Durand, T. 1988. R&D programmes competencies matrix: Analysing R&D expertise within the firm. *R&D Management*, 18: 312-320.
- Geringer, J. M., & Hebert, L. 1991. Measuring performance of International Joint Ventures. *Journal of International Business Studies*, 22(2): 249-263.
- Huber, G. 1991. Organizational learning: The contributing processes and literature. *Organisation Science*, 2: 88-115.
- Hyvarinen, L. 1990. Innovativeness and its indicators in small and medium-sized industrial enterprises. *International Small Business Journal*, 9: 64-74.
- Itami, H., & Numagami, T. 1992. Dynamic interaction between strategy and technology. *Strategic Management Journal*, 13: 119-135.
- Jackson, B. 1983. *Multivariate data analysis*. Homewood, IL: Irwin.
- Johannessen, J. A., Olsen, B., & Olaisen, J. 1999. Aspects of innovation theory based on knowledge-management. *International Journal of Information Management*, 121(1): 121-139.
- Johnson, J. L., & Arunthanes, W. 1995. Ideal and actual product adaptation in U.S. exporting firms. *International Marketing Review*, 12(3): 31-46.
- Johnson, J. L., Black, G. S., & Sakano, T. 1993. The consequences of culture and conflict in international strategic alliances. In R. Varadarajan, and B. Jaworski (Eds.), *Marketing theory and applications*: 32-37. Proceedings of the American Marketing Association Conference; 20-23 February; Newport Beach, CA: American Marketing Association.
- Julian, C. C. 2005. *International joint venture performance in South East Asia*. Cheltenham: Edward Elgar.

- Keirnan, M. J. 1993. The new strategic architecture: Learning to compete in the twenty-first century, *Academy of Management Executive*, 7(1): 7-21.
- Kim, Y., Song, K., & Lee, J. 1993. Determinants of technological innovation in the small firms in Korea. *R&D Management*, 23: 155-162.
- Kohli, A. K., & Jaworski, B. J. 1990. Market orientation: The construct, research propositions and managerial implications. *Journal of Marketing*, 54(April): 1-18.
- Leonard-Barton, D. 1992. Core capabilities and core rigidities: a paradox in managing new product development. *Strategic Management Journal*, 13: 111-125.
- Levitt, T. 1960. Marketing myopia. *Harvard Business Review*, 38(4): 45-56.
- Lipparini, A., & Sobrero, M. 1994. The glue and the pieces: Entrepreneurship and innovations in small-firm networks. *Small Business Venturing*, 9: 125-140.
- March, J. G. 1991. Exploration and exploitation in organizational learning. *Organization Science*, 2: 71-87.
- March, J. G., & Simon, H. A. 1958. *Organisations*. New York: Wiley.
- Macpherson, A. D. 1992. Innovation, external technical linkage and small firm commercial performance: An empirical analysis from western New York. *Entrepreneurship and Regional Development*, 4: 165-183.
- Madsen, T. K. 1989. Successful export marketing management: Some empirical evidence. *International Marketing Review*, 6(4): 41-57.
- Mowary, D. 1988. *International collaborative ventures in US manufacturing*. Cambridge: Ballinger.
- Myers, S., & Marquis, D. C. 1969. *Successful industrial innovations: 69-117*. Washington, DC: National Science Foundation.
- Nonaka, I., & Takeuchi, H. 1995. *The knowledge-creating company*. New York: Oxford University Press.
- Nunnally, J. C. 1967. *Psychometric theory*. New York: McGraw Hill.
- Porter, M. E. 1990. *Competitive advantage of nations*. New York: Free Press.
- Prahalad, C. K., & Hamel, G. 1990. The core competence of the corporation. *Harvard Business Review*, 68: 79-91.
- Rose, G. M., & Shoham, A. 2002. Export performance and market orientation: Establishing an empirical link. *Journal of Business Research*, 55: 217-225.
- Rothwell, R. 1992. Successful industrial innovation: Critical factors for the 1990's. *R&D Management*, 22(3): 221-239.
- Rothwell, R. 1989. SMEs, inter-firm relationships and technological change. *Entrepreneurship and Regional Development*, 1: 725-739
- Schein, E. H. 1990. Organizational culture. *American Psychologist*, 45: 109-19.
- Schumpeter, J. A. 1934. *The theory of economic development*. Cambridge: Harvard University Press.
- Senge, P. M. 1990. *The fifth discipline*. New York: Doubleday.
- Senge, P. M., & Sterman, J. D. 1992. Systems thinking and organisational learning: Acting locally and thinking globally in the organisation of the future. Paper presented at the *Strategic Management Society Conference*, Belgium.
- Sinkula, J. M. 1994. Market information processing and organizational learning. *Journal of Marketing*, 58(January): 35-45.
- Slater, S. F., & Narver, J. C. 1995. Market orientation and the learning organization. *Journal of Marketing*, 59: 63-74.
- Snow, C. C., & Hrebnick, L. G. 1980. Strategy, distinctive competence and organizational performance. *Administrative Science Quarterly*, 25(2): 317-336.

- Weerawardena, J., O'Cass, A., & Julian, C. C. 2006. Does industry matter? Examining the role of industry structure and organizational learning in innovation and brand performance. *Journal of Business Research*, 59: 37-45.
- Zou, S., Fang, E., & Zhao, S. 2003. The effect of export marketing capabilities on export performance: An investigation of Chinese exporters. *Journal of International Marketing*, 11(4): 32-55.