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New product development in Asia: An introduction to the special issue

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Abstract

Given the increasing importance of Asia, the purpose of this special issue is to broaden the scope of our understanding of New Product Development (NPD) by going beyond the traditional Western research settings and looking at how new products are developed in Asia. This paper introduces the special issue on NPD in Asia and identifies key patterns of similarities and differences between Asian and Western NPD practices. The paper highlights key similarities and differences in the areas of organizational/top management support; technological proficiency; customer/market orientation; information sharing; cross-functional interface; entrepreneurship orientation; NPD strategies; innovation orientation; contingencies of innovation orientation; innovative marketing strategies; NPD process; appointment of project managers; rewarding team members; success rate; and cycle time.

Keywords: Asia; Innovation; New product development; NPD

The ever increasing importance of Asia needs no special introduction. Nor is there a need to highlight the demographic and economic realities of the region. What needs to be highlighted, however, is the fact that Asia is more than a large market for firms to consider when developing their new products. Besides a large number of potential buyers, Asia offers many other players of NPD, such as suppliers, contractors, R&D specialists, designers, manufacturers, packaging firms, distributors, and retailers. Firms engaging in NPD can certainly take advantage of the offerings of these Asian players in their NPD activities.

Another point that needs to be highlighted about Asia is that Asia can be relevant in almost any aspect of the long NPD process, going well beyond the commonly emphasized commercialization stage of the NPD process. For instance, in the opportunity identification and idea generation stages of the NPD process, Asia can be a valuable source for ideas for future new products not only for the Asian market but also for the rest of the world. In the new product testing stage, firms can test their new products in Asia irrespective of whether they intend to target Asian or non-Asian markets. If they are targeting Asia, they will have an opportunity to know how their new products work under real usage conditions and hence will be able to adapt their new products. If they do not intend to target the Asian market, they can still test their new products in Asia and hence prevent their competitors from finding-out their NPD activities. In the business analysis phase of the NPD process, they can assess the business viability of their new products irrespective of their final destinations. For the new products that they intend to develop for the Asian market, they can certainly take into account the local market size, and product costs and prices. For the new products that they intend to develop for the non-Asian markets, they can take into account the costs of sourcing some of their raw materials and parts from Asia when conducting their business analysis. It might very well be possible that a new product idea that is otherwise unviable can become viable if its business analysis is re-conducted based on the assumption of sourcing raw materials and parts from Asia. In the design and development phase of the NPD process, firms can take advantage of the Asian talent and resources. Finally, in the new product introduction stage of the NPD, firms can test-market their new products in locations such as Hong Kong or Singapore and can have a chance to improve their marketing strategies before introducing their new products to the rest of Asia or the world.

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In our call for papers for this special issue, we stated that given the increasing importance of Asia, we aim at broadening the scope of our understanding of NPD by going beyond the traditional Western research settings and looking at how new products are developed in Asia. Theoretically, we intend to understand how and why NPD in Asia differs from that in the rest of the world. We also wish to know whether Asia's unique market and cultural realities have any impact on NPD and its outcomes. Managerially, we hope to offer useful guidelines to both Asian and Western companies with regard to developing new products in Asia.

The purpose of this paper is to introduce the special issue on NPD in Asia and to identify some patterns of similarities and differences between Asia and the West with respect to NPD. The following section introduces individual contributions to this issue. After that, key similarities and differences between Asian and Western NPD practices are highlighted. Finally, the supports of an outstanding and dedicated group of reviewers are acknowledged.

1. New product development in Asia

The articles included in this issue cover a wide range of countries in Asia and make a significant and much-needed contribution to our understanding of the different aspects of NPD in Asia. In "Best New Product Development and Management Practices in the Korean High-Tech Industry," Michael Song and Jeonpyo Noh investigate critical factors affecting new product success and effective NPD models for Korean high-tech firms. The results show that successful projects differ from unsuccessful projects in project environment, skills and resources, project leadership, strategic fit, efficient NPD process, and effective product-positioning strategies. The authors confirm that efficient and effective NPD and management are important determinants of high-tech firms' competitive advantage. Furthermore, they raise questions about some commonly held beliefs when compared with Western studies focusing on high-tech industries.

In another best-practice study, Muammer Ozer and Ziagung Chen argue that one of the important aspects of the earlier "best practice" studies is that they are primarily based on Western samples. They further state that because management practices, cultures, and norms differ around the world it has been argued that the findings of the earlier studies will likely to be less applicable to firms managing NPD outside the West. They survey Hong Kong firms and compare the NPD activities in Hong Kong with those in the US. The results revealed interesting similarities and differences between US and Hong Kong firms with regard to their NPD activities.

In an article about the integration of marketing and R&D functions within an organization, Tony Garrett, David Buisson and Chee Meng Yap argue that of the mechanisms developed to aid functional integration, many have been developed in the West and may not have applicability in other national settings. Based on a sample of NPD workgroup personnel in New Zealand and Singapore, they show key differences between the two samples, indicating a link between formalization, centralization, role flexibility and interfunctional climate mechanisms with the Hofstede dimensions of Power Distance, Masculinity and Uncertainty Avoidance of national culture. They conclude that national cultural values and settings of the respondents are important when determining best integration mechanisms.

In another study about the marketing and R&D interface, Michael Song and R. Jeffrey Thieme develop hypotheses from a theoretical model of cross-functional team management in the NPD process based on the seminal work of Gupta, Raj, and Wilemon (1986) and test them using data collected from 376 U.S., 292 Chinese, and 279 Japanese firms. The results generally provide overall support for the model and reveal some surprising cross-national differences.

In "An Institutional Analysis of the New Product Development Process of Small and Medium Enterprises (SMEs) in China, Hong Kong and Taiwan," Wai-sum Siu, Tingling Lin, Wenchang Fang, and Zhi-Chao Liu use an institutional perspective to examine the interplay of government intervention, manufacturing systems and business approaches and its impact on the NPD practices of SMEs in the greater China region, including mainland China, Hong Kong and Taiwan. They conducted in-depth personal interviews with 43 Chinese, 26 Hong Kong and 28 Taiwanese SMEs to examine the respective similarities and differences in NPD practices and to compare and contrast them with those of their Western counterparts. The authors used a grounded theory approach to analyze the interview scripts. Based on the results, they propose a schema depicting the interplay and its impact on the NPD practices of Chinese SMEs.

Next, Yuan Li, Yi Liu and Yongbin Zhao build a conceptual model to describe the relationship among firm orientation, internal control systems and NPD and test empirically how market and entrepreneurship orientations affect the degree of improvement in NPD through personal control and/or output control in the Chinese transitional economy. The research findings provide some valuable insights into NPD in China. Most notable, entrepreneurship orientation not only has a direct positive effect on the degree of improvement in NPD, but also indirectly has a positive effect on it through personal control. At the same time, market orientation, through output control, has a negative indirect influence.

In a study of the role of the strategic orientation of the firm for successful NPD, Insik Jeong, Jae H. Pae and Dongsheng Zhou propose a conceptual model of strategic orientations, in which firm-internal (i.e., organizational support) and firm-external (i.e., environmental turbulence) factors are expected to influence strategic orientations, which, in turn, impact NPD performance. They test their model by using data collected from a large-scale survey of 232 manufacturing firms in China. The results largely support their hypotheses. First, organizational support and environmental turbulence have a positive influence on the implementation of strategic orientations. Second, different components of strategic orientation have different patterns of performance implications.

In "The Contingent Value of Marketing Strategy Innovativeness for Product Development Performance in Chinese New

Technology Ventures," Kwaku Atuahene-Gima, Haiyang Li and Luigi M. De Luca test the relationship between the Marketing Strategy Innovativeness (MSI) and new product performance in technology-based new ventures in China. Based on contingent resource-based view, they argue that MSI is a firm capability that must be bundled with external managerial relationships and be deployed in the appropriate environment to ensure its success. They show that top management team's extra industry relationships and market dynamism enhanced the impact of MSI on new product performance while its intra industry relationships, financial relationships, and technology dynamism hindered its impact.

The final three articles offer very interesting and useful insights about the choice between innovation and imitation strategies within the context of Asia. First, Gopalkrishnan R. Iyer, Peter J. LaPlaca and Arun Sharma argue that while radical innovations and growth strategies supporting such innovations may provide the firm with very high returns, there are also considerable risks in devising and implementing such innovations. Apart from the business risks of venturing into new territories and new markets, radical innovations also carry with them the burden of accounting for market and environmental factors that are often not under the control of the firm. The opportunities presented by the emergence of several Asian markets, such as India and China, are particularly appealing for Western firms willing to expand into these markets. However, market characteristics, institutional development, and customer behaviors bring into sharp focus the choice of a specific innovation and NPD strategy for such markets. The authors examine these various strategic issues in the context of India and offer strategic recommendations for managers and some propositions for future academic research.

Second, Michael B. Beverland, Michael T. Ewing and Margaret Jekanyika Matanda argue that much of the more recent (Western) literature implicitly identifies the importance of both driving-market and market-driven approaches to NPD success, although what this translates into practice is less clear. Drawing on multiple case studies, the authors identify four types of NPD practice in Chinese Business-to-Business (B-to-B) firms and explore the reasons for variation in performance between the four. Critically, the most successful firms were found to be those characterised by a driving-market approach, rather than those relying solely on relationships and reacting to changing market phenomena.

Finally, Kevin Zheng Zhou compares the effects of innovation and imitation strategies on new product performance and examines their contingencies across different market conditions in China. The results from a cross-industry survey show that, compared to an imitation strategy, an innovation strategy leads to better new product performance. In addition, the benefits of an innovation strategy over an imitation strategy become stronger when market demand is uncertain and technology changes rapidly. He compares the findings with the predictions put forward in previous Western-based literature and discusses the implications of the findings in light of China's unique market characteristics.

2. Highlights from the major findings

The papers included in this special issue collectively offer some interesting similarities and differences between the NPD activities in Asia and those in the West. The purpose of this section is to identify some patterns of those similarities and differences. Table 1 presents some examples of the similarities and differences with respect to organizational/top management support; technological proficiency; customer/market orientation; information sharing; cross-functional interface; entrepreneurship orientation; NPD strategies; innovation orientation; contingencies of innovation orientation; innovative marketing strategies; NPD process; appointment of project managers; rewarding team members; success rate; and cycle time. And, the details of these similarities and differences are discussed below:

2.1. Organizational and top management support

The positive impact of organizational and top management support on the success of new products has long been established in the NPD literature (Cooper, 1999; Menon, Bharadwaj, Adidam, & Edison, 1999; Ozer, 2004; Parry & Song, 1993; Song & Parry, 1997). Studies from Asia also confirm this positive relationship. For example, Song and Noh (2006-this issue) analyzed the Korean high-tech firms and found that top management support was a key distinguisher between success and failure. In addition, Jeong et al. (2006-this issue) examined Chinese manufacturing firms with respect to their organizational processes and found that organizational support was critical in the effective management of product innovation.

2.2. Technological proficiency

This factor deals with the proficiency of NPD, in-house testing of the new product or its prototype, trial/pilot production, production startup, and obtaining necessary technology (Ozer, 2004). Technological proficiency leads to greater efficiencies in NPD and provides companies additional resources, making them more competitive and more successful in their NPD activities (Cooper, 1999; Montoya-Weiss & Calantone, 1994; Ozer, 2004; Song and Parry, 1997). Consistently, Jeong et al. (2006-this issue) examined Chinese manufacturing firms with respect to their technological proficiencies and found that technology orientation was positively related to technical performance and profitability of new products.

2.3. Customer/market orientation

Similar to technological proficiency, a firm's proficiencies in understanding its customers and markets and in developing new products based on that understanding are positively related to new product success (Calantone, Schmidt, & Song, 1996; Montoya-Weiss & Calantone, 1994; Ozer, 2004). In a study of Korean high-tech firms, Song and Noh (2006-this issue) also found that customer orientation was important in the NPD process.

Table 1
Examples of similarities and differences in the Western and Asian NPD practices

Area	Conclusions of Western studies	Conclusions of Asian studies
Organizational/top management support	Organizational/top management support is positively related to new product performance (Cooper, 1999; Menon et al., 1999; Ozer, 2005; Parry & Song, 1993; Song & Parry, 1997).	Confirmed in a survey of Chinese manufacturing firms (Jeong et al., 2006-this issue). Confirmed in a survey of Korean high-tech firms (Song and Noh, 2006-this issue).
Technological proficiency	Technological proficiency is positively related to new product performance (Cooper, 1999; Montoya-Weiss & Calantone, 1994; Ozer, 2005; Song & Parry, 1997).	Confirmed in a survey of Chinese manufacturing firms (Jeong et al., 2006-this issue).
Customer/market orientation	Customer/market orientation is positively related to new product performance (Calantone et al., 1996; Montoya-Weiss & Calantone, 1994; Ozer, 2005).	Confirmed in a survey of Korean high-tech firms (Song and Noh, 2006-this issue). Disconfirmed in a survey of Chinese manufacturing firms (Jeong et al., 2006-this issue). Disconfirmed in two cross-sectional surveys in China (Li et al., 2006-this issue; Song and Thieme, 2006-this issue).
Information sharing	Information sharing has been identified as an important success factor in NPD (Brown & Eisenhardt, 1995; Dougherty, 1992; Ozer, 2004, 2005; Sheremata, 2000).	Confirmed in a survey of Korean high-tech firms (Song and Noh, 2006-this issue). Confirmed in a cross-sectional survey in China (Song and Thieme, 2006-this issue).
Cross-functional interface	The use of cross-functional teams in NPD is positively related to new product performance (Griffin, 1997).	Confirmed in a survey of Korean high-tech firms (Song and Noh, 2006-this issue). Confirmed in a cross-sectional survey in China (Song and Thieme, 2006-this issue). Variations were found in the usage of cross-functional teams: 1. Garrett et al. (2006-this issue) found in cross-sectional studies that in a less uncertainty avoidance culture such as New Zealand bureaucracy in NPD needs to be limited. On the other hand, in a higher uncertainty avoidance culture such as Singapore, emphasizing clear guidelines, task denotations, and reporting mechanisms can be helpful in reducing some of the perceived ambiguities in the NPD process. 2. Based on a cross-sectional survey in Hong Kong, Ozer and Chen (2006-this issue) concluded that Hong Kong firms use cross-functional teams equally for innovative and non-innovative new products while earlier studies report that US firms use multi-functional teams more for innovative new products and less for non-innovative products (Griffin, 1997).
Entrepreneurship orientation	Entrepreneurship orientation is associated with greater performance in NPD (Drucker, 1985; Lumpkin & Dess, 1996; Quinn, 1985).	Confirmed in a cross-sectional survey in China (Li et al., 2006-this issue).
NPD strategies	The adoption of a strategic viewpoint in NPD is positively related to new product success (Dougherty & Hardy, 1996; Griffin, 1997; Ozer, 2005).	Confirmed in a cross-sectional survey in Hong Kong (Ozer and Chen, 2006-this issue). Disconfirmed in a cross-sectional survey of Small and Medium Enterprises (SMEs) in the greater China region, including mainland China, Hong Kong and Taiwan (Siu et al., 2006-this issue).
Innovation orientation	The adoption of an innovation orientation in NPD is positively related to new product success (Bowman & Gatignon, 1996; Carpenter & Nakamoto, 1989; Robinson & Min, 2002).	Confirmed in a case study of 12 Chinese Business-to-Business (B-to-B) firms (Beverland et al., 2006-this issue). Confirmed in a cross-sectional survey in China (Zhou, 2006-this issue).
Innovation orientation in China	Given Chinese consumers' low consumption power, limited product experience, and frugal tradition, an imitation strategy with a low price may be the key to business success in China	Disconfirmed in a cross-sectional survey in China (Zhou, 2006-this issue).

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Table 1 (*continued*)

Area	Conclusions of Western studies	Conclusions of Asian studies
	(Kotler, 2002).	
Contingencies of innovation orientation	The choice of an innovation or imitation strategy will depend on both external and internal factors (Golder & Tellis, 1993; Kerin et al., 1992; Lieberman & Montgomery, 1998; Szymanski et al., 1995).	Confirmed in a study using a conceptual model and several case examples from India (Iyer et al., 2006-this issue). Confirmed in a cross-sectional survey in China (Zhou, 2006-this issue).
Innovation orientation under high demand uncertainty	The impact of an innovation strategy will be lower when demand uncertainty is high (Golder & Tellis, 1993; Kerin et al., 1992).	Disconfirmed in a cross-sectional survey in China (Zhou, 2006-this issue).
Innovation orientation under high technological changes	Rapid technological changes tend to offset the pioneering advantage because the appearance of replacement technology provides imitators with the opportunity to catch up with the pioneers quickly (Golder & Tellis, 1993; Kerin et al., 1992).	Disconfirmed in a cross-sectional survey in China (Zhou, 2006-this issue).
Innovative marketing strategies	Although it has not been tested in the West, it is widely suggested that the use of innovative marketing strategies should be positively related to new product success (Andrews & Smith, 1996; Eisenhardt & Tabrizi, 1995; Hambrick et al., 1996; Menon et al., 1999; Verona, 1999).	Variations were found: Atuahene-Gima et al. (2006-this issue) first found that in the case of Chinese new technology ventures, innovative marketing strategies are negatively related to performance and then showed that the negative direct effect can be turned into positive by extra-industry relationship and deployment in turbulent market environments or further worsened by intra-industry relationships, relationships with financial institutions and deployment in technologically turbulent environments.
NPD process	A high quality NPD process is one of the most critical success factors in NPD (Griffin, 1997).	Variations were found: Ozer and Chen (2006-this issue) compared the use of formal NPD processes in Hong Kong to that in the US and found that both Hong Kong and US firms use formal NPD processes; however, the US firms use them more than do the Hong Kong firms.
Appointment of project managers	A cross-sectional survey in the US indicated that on average 30% of NPD teams selected their leaders whereas on average 70% of them had a leader who was appointed by top management (Griffin, 1997).	Variations were found: In a cross-sectional study, Ozer and Chen (2006-this issue) found that the majority of team leaders are appointed by top management (90%) in Hong Kong.
Rewarding team members	Past research in the West has consistently found that non-financial rewards are very popular and project-based financial rewards are seldom used in rewarding the NPD personnel in the West (Griffin, 1997).	Variations were found: In a cross-sectional survey in Hong Kong, Ozer and Chen (2006-this issue) found that Hong Kong companies used both financial and non-financial rewards in rewarding their NPD personnel.
Success rate	Past surveys in the US indicate that the average success rate is 59% in the US (Griffin, 1997). In addition, in the US, 100 ideas lead to 15.2 successful new products, or put differently, US firms need 6.6 initial ideas for every successful new product.	Variations were found: In their cross-sectional survey in Hong Kong, Ozer and Chen (2006-this issue) found that the success rate in Hong Kong is 44.91% and 100 ideas lead to 2.15 successful new products or Hong Kong companies need 46.51 initial ideas for every successful new product.
Cycle time	Past surveys in the West indicate that American firms spend on average 23.8 months to develop an "innovative" new product (Griffin, 1997).	Variations were found: Ozer and Chen (2006-this issue) report that Hong Kong firms from different industries spend on average 12.94 months to develop it.

There are a few exceptions, however. In contrast to the findings of the Western studies, Jeong et al. (2006-this issue) found that customer orientation did not impact the profitability of new products of Chinese manufacturing firms. In addition, Song and Thieme (2006-this issue) found in a cross-sectional survey that the level of marketing's involvement in R&D tasks was lower in China. Finally, despite the positive role of marketing in NPD activities in the West, Li et al. (2006-this issue) found in a cross-sectional survey in China that market orientation did not have any significant impact on NPD. One of the reasons why market-orientation may not be strongly linked with product innovation in China is that many firms in China do not fully appreciate how to effectively implement the concept of being customer-oriented in their NPD process (Jeong et al., 2006-this issue; Song and Thieme, 2006-this issue).

2.4. Information sharing

Product innovation requires an immense amount of information from different functional units, and an effective and efficient information exchange in the NPD process is essential for generating successful outcomes. In fact, information sharing has been identified as an important success factor in NPD (Brown & Eisenhardt, 1995; Dougherty, 1992; Ozer, 2003, 2004; Sheremata, 2000). Consistent with the findings of the Western studies, Song and Noh (2006-this

issue), based on a sample of Korean high-tech firms, concluded that the level of information flow and contact between the technical entities and commercial entities were strongly correlated to both technical and financial success. Similarly, Song and Thieme (2006-this issue) report that their findings based on cross-sectional surveys in China, Japan and the US reinforce the importance of information sharing between R&D and marketing departments.

2.5. Cross-functional interface

Another important factor that has been found to be positively related to NPD outcomes is cross-functional interface (Griffin, 1997). Studies from Asia also confirm the importance of this factor. For example, Song and Noh (2006-this issue) found that cross-functional interface played an important role in the success of the new products of Korean high-tech firms. Similarly, Song and Thieme (2006-this issue) showed in cross-sectional surveys in China, Japan and the US that harmonious relationships between marketing and R&D and an environment that encourages participation in decision-making were important in China, Japan and the US.

Although the integration of cross-functional activities in the NPD process is important, national culture needs to be taken into account in the use of different mechanisms for the integration. In fact, as Garrett et al. (2006-this issue) show in their cross-sectional study of nine firms from New Zealand and nine firms from Singapore, in a less uncertainty avoidance culture such as New Zealand bureaucracy in NPD needs to be limited whereas in a higher uncertainty avoidance culture such as Singapore, emphasizing clear guidelines, task denotations, and reporting mechanisms can be helpful in reducing some of the perceived ambiguities in the NPD process.

Another difference between the West and Asia with regard to the use of cross-functional teams is highlighted in the study of Ozer and Chen (2006-this issue). Based on a cross-sectional survey in Hong Kong, the authors concluded that Hong Kong firms use cross-functional teams equally for innovative and non-innovative new products while earlier studies report that US firms use multi-functional teams more for innovative new products and less for non-innovative products (Griffin, 1997). They suggested that either (i) Hong Kong firms are not aware of the available organizational structures and unnecessarily use multinational teams even when they are not necessary or (ii) teamwork is part of Asian business culture and people perform better if they work in teams no matter what the task is.

2.6. Entrepreneurship orientation

Entrepreneurship orientation is usually defined as the propensity of a firm's top management to take calculated risks, to be innovative, and to demonstrate proactiveness (Morris & Paul, 1987). Because it provides an environment for learning and taking risk, it has been suggested that it is associated with greater performance in NPD, which requires learning and risk taking (Drucker, 1985; Li et al., 2006-this issue; Lumpkin & Dess, 1996; Quinn, 1985). In a cross-sectional study among Chinese firms, Li et al. (2006-this issue) showed that entrepreneurship orientation was significantly and positively related to improvement of NPD in China, confirming the relevance of this factor in China.

2.7. NPD strategies

It has long been known that firms are increasingly taking a strategic viewpoint in their NPD processes and that the adoption of this viewpoint is positively related to new product success (Ozer, 2004). A strategic viewpoint enables firms to achieve sustainable product innovation by making NPD more meaningful to people in the firm and by facilitating their active and deliberate engagement in the NPD process (Dougherty & Hardy, 1996; Ozer, 2005). In a cross-sectional survey of companies in Hong Kong, Ozer and Chen (2006-this issue) found that Hong Kong companies also emphasize a strategic viewpoint in their NPD activities. As an exception for the use of a strategic approach in NPD, Siu et al. (2006-this issue) found that due to their small size, Small and Medium Enterprises (SMEs) in the greater China region, including mainland China, Hong Kong and Taiwan, did not have a specific corporate strategy that directs and integrates their NPD activities.

2.8. Innovation orientation

Innovation orientation refers to a firm's strategy to develop and introduce innovative new products into the market before their competitors (Kerin, Varadarajan, & Peterson, 1992). Because of its economic, preemptive, technological, and behavioral benefits, numerous Western studies have emphasized the importance of following an innovation strategy (Bowman & Gatignon, 1996; Carpenter & Nakamoto, 1989; Lieberman & Montgomery, 1988; Robinson & Min, 2002). Consistently, based on a case study of 12 Chinese Business-to-Business (B-to-B) firms, Beverland et al. (2006-this issue) found that an innovation orientation was more effective than an imitation orientation, supporting earlier research conducted in the West on the increased likelihood of success for NPD launches by targeting new markets with radical innovations. Similarly, Zhou (2006-this issue) reports based on a cross-sectional survey that, compared with an imitation strategy, an innovation strategy has a greater impact on new product success in China.

Although the findings from China are consistent with the findings of Western studies that suggested that an innovation orientation is positively related to new product success, as Zhou (2006-this issue) notes, they are inconsistent with the current belief that, given Chinese consumers' low consumption power, limited product experience, and frugal tradition, an imitation strategy with a low price may be the key to business success in China (Kotler, 2002). Zhou (2006-this issue) offers several possible explanations for this counter-intuitive finding. First, after many years of isolation from the rest of the world prior to 1979 and then years of rapid

economic growth, Chinese consumers may be eager to try innovative products. Second, the Chinese are known for their propensity to "follow the leader," which means that Chinese consumers naturally have a positive attitude toward and desire for top-ranked products (Tse, 1996).

2.9. Contingencies of an innovation orientation

Although the importance of innovation orientation is well established in the Western literature, there is also an emerging literature suggesting that the choice of an innovation or imitation strategy will depend on both external and internal factors (Golder & Tellis, 1993; Kerin et al., 1992; Lieberman & Montgomery, 1998; Szymanski, Troy, & Bharadwaj, 1995). Consistent with this contingency view, Iyer et al. (2006-this issue) present a conceptual model and several case examples from India to identify specific conditions when following an innovative or imitative strategy in NPD will be more suitable. Most notable, they suggest that (i) incremental innovation would be more successful than radical innovation in countries where the infrastructure does not provide support necessary for the commercialization of an innovation; (ii) with increasing levels of economic development, institutional conditions are created that foster the imperatives for radical innovation; (iii) institutional conditions would impact the success of radical innovations, especially in developing countries; and (iv) as the target market size for the firm increases, firms will shift the product development strategy from one of continuous innovation to focus more on radical innovations for NPD.

One of the contingency factors that have been suggested in the Western studies is that the impact of an innovation strategy will be lower when demand uncertainty is high (Golder & Tellis, 1993; Kerin et al., 1992). However, Zhou (2006-this issue) shows in a cross-sectional survey that demand uncertainty does not hurt the performance of innovators in China. He suggested that because Chinese customers have limited exposure and knowledge about innovative products, firms in China may be more successful if they offer products that satisfy customers' latent needs and invoke customer demand by shaping the way customers behave (Hamel & Prahalad, 1994; Zhou et al., 2002). Consequently, a product innovation strategy works better when the demand is uncertain by leading the changes in market demand (Zhou, 2006-this issue).

Another contingency factor suggested in the Western literature is that rapid technological changes tend to offset the pioneering advantage because the appearance of replacement technology provides imitators with the opportunity to catch up with the pioneers quickly (Golder & Tellis, 1993; Kerin et al., 1992). However, Zhou (2006-this issue) reports in a cross-sectional survey that the benefit of an innovation strategy over an imitation strategy is stronger in times of rapid technological changes in China. He argues that in developing economies, the trajectory of technological development may follow the trajectory that takes place in developed economies. Hence, unlike in developed markets, technological changes in China may be more predictable. Because of their technological leadership, innovators may be able to identify next-generation technologies from what happens in developed markets and then be prepared to embrace and take advantage of these new technologies (Zhou, 2006-this issue).

2.10. Innovative marketing strategies

Although it has not been tested in the West, the current understanding in the West is that when a new product is marketed by using innovative marketing strategies that are different from competitors' strategies and conventional practices, the position of the new product in the marketplace is strengthened above and beyond the value conveyed by its physical characteristics, and as a result, there is a positive relationship between the use of innovative marketing strategies and new product success (Andrews & Smith, 1996; Eisenhardt & Tabrizi, 1995; Hambrick, Cho, & Chen, 1996; Menon et al., 1999; Verona, 1999). Atuahene-Gima et al. (2006-this issue) first found that in the case of Chinese new technology ventures, innovative marketing strategies are negatively related to performance and then showed that the negative direct effect can be turned into positive by extra-industry relationship and deployment in turbulent market environments or further worsened by intra-industry relationships, relationships with financial institutions and deployment in technologically turbulent environments. The authors offered at least three possible explanations for the difference, including (1) at the most basic level, the direct relationship between innovative marketing strategies and performance is simply more complex than hypothesized (but not fully tested) by marketing scholars in the Western context; (2) the relationship between innovative marketing strategies and performance is contingent on cultural differences (e.g., in the extent to which customers in different contexts are receptive toward rule-breaking marketing strategies); (3) the relationship between innovative marketing strategies and performance is contingent on product innovativeness.

2.11. NPD process

Past research has consistently shown that a high quality NPD process is one of the most critical success factors in NPD (Griffin, 1997). Ozer and Chen (2006-this issue) compared the use of formal NPD processes in Hong Kong to that in the US and found that both Hong Kong and US firms use formal NPD processes; however, the US firms use them more than do the Hong Kong firms. The authors suggest that given that the studies about the best NPD practices in the US date back to 1960s and the widespread dissemination of such information through numerous publications and conferences in the US, it is not surprising to find that NPD processes are more widely used in the US than they are in Hong Kong.

2.12. Appointment of project managers

Another issue that has received a considerable attention in the Western literature is the appointment of project managers. A cross-sectional survey in the US indicated that on average 30% of NPD teams selected their leaders whereas on average 70% of

them had a leader who was appointed by top management (Griffin, 1997). In a cross-sectional study in Hong Kong, Ozer and Chen (2006-this issue) found that the majority of team leaders were appointed by top management (90%), reflecting the autocratic nature of running business in Hong Kong.

2.13. Rewarding team members

Past research in the West has consistently found that non-financial rewards are very popular and project-based financial rewards are seldom used in rewarding the NPD personnel in the West (Griffin, 1997). However, in a cross-sectional survey in Hong Kong, Ozer and Chen (2006-this issue) found that Hong Kong companies used both financial and non-financial rewards in rewarding their NPD personnel. The authors refer to Griffin's (1997) observation that suggested that the choice of different types of rewards depends on the tax implications of the reward, the higher its impact on tax obligations the less likely that it will be used. Since the tax rates are relatively lower in Hong Kong than are in the US, financial rewards are used more often in Hong Kong than are in the US.

2.14. Success rate

New product success has been an important issue in NPD research. Past surveys in the US indicate that the average success rate is 59% in the US (Griffin, 1997). In addition, in the US, 100 ideas lead to 15.2 successful new products, or put differently, US firms need 6.6 initial ideas for every successful new product. In their cross-sectional survey in Hong Kong, Ozer and Chen (2006-this issue) found that the success rate in Hong Kong is 44.91% and 100 ideas lead to 2.15 successful new products or Hong Kong companies need 46.51 initial ideas for every successful new product. The authors argue that US firms seem to be more successful than Hong Kong firms partially because, as reported in Ozer and Chen (2006-this issue), compared to Hong Kong firms, more US firms use a NPD process; they use more NPD steps; and they are more flexible in terms of the organizational structures. Since all these factors are positively related to new product success, US firms are more successful.

2.15. Cycle time

As part of the NPD outcomes, it is also important to know the amount of time it takes to develop new products and ways to reduce it. Past surveys in the West indicate that US firms spend on average 23.8 months to develop an "innovative" new product (Griffin, 1997). On the other hand, Ozer and Chen (2006-this issue) report that Hong Kong firms from different industries spend on average 12.94 months to develop it, reflecting the fast pace of doing business in Hong Kong and also partially explaining why the success rate is lower in Hong Kong.

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