

The Effect of Market Orientation on Speed-to-market in International Markets*

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Abstract

Purpose – The major aim of this article is to advance understanding of the relationship between market orientation and speed-to-market. Specifically, this study examines the different impacts of component of market orientation on commitment to R&D and speed-to-market and explores whether market uncertainty plays a role of moderating in speed-to-market for market-oriented firms.

Research design, data, and methodology – This study collected a survey data from Korean exporting firms. The Final sample size was 196. The measure of market orientation was conceptualized with second order constructs. All items were measured on five-point scale. To confirm hypotheses, this study conducted a hierarchical regression.

Results – As sub-constructs of market orientation, customer orientation, competitor orientation and interfunctional coordination foster speed-to-market, and the relationship between only customer orientation and speed-to-market might be weakened when the extent of market uncertainty is high.

Conclusions – This study confirmed the relationship between market orientation and speed-to-market, with three components of market orientation respectively, and whether market uncertainty plays a role of moderating which weaken the link between market orientation and speed-to-market. It could be useful to take a component approach to the market orientation construct, because the roles of different market orientation components might vary, contingent on uncertainty in the environment.

Keywords: Market Orientation, Customer Orientation, Competitor Orientation, Interfunctional Coordination, Market Uncertainty, Speed-to-market.

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1. Introduction

Rapid technological change is the primary impulse that guides the development strategies of nations enjoying high economic growth. The range of technological possibilities creates unprecedented change which brings both technical and market uncertainty and as a consequence new challenges for organizations (Iansiti, 1995). To meet such challenges, organizations need to engender extreme flexibility and responsiveness to market demands. For many, product innovation is a fundamental strategy, in enabling competitive advantage in extreme turbulent environments (Iansiti, 1995). The development of product innovation needs to be based on a close alignment between technology, products and markets, with the aim of achieving increased aggregate value from fast new product developments.

The consistent introduction of new products and development of existing products that customers value is an important criterion for corporate growth and sustained competitive advantage (O'Connor, 1986). As a fundamental competitive criterion, new product development (NPD) for most advanced industries can therefore be characterized, to some degree, by such factors as turbulent domestic and global competition; continuous development of new technologies that quickly enter the market; changing market needs and requirements which directly alter existing and new product development; higher new product development costs; and increased need for organizational alliances, with customers, suppliers, strategic partners, government bodies, in the NPD process.

Speed-to-market is emerging as a pivotal factor for strategic success in an expanding variety of industries (Nadler & Tushman, 1999). Firms today face highly competitive and dynamic environments and the associated need to bring products to market more quickly. Global competition, exponential advancements in technology, and shifting customer demands combine to produce shorter product life cycles and the need for faster product development. Customers in virtually every product–market segment increasingly categorize speed in the same set of essential product and service characteristics as quality and competitive price (Pearce, 2002).

The major objective of this study is to advance understanding of the relationship between market orientation and speed-to-market. Though several studies examined the role of market orientation in NPD activities, there are few studies focusing on speed-to-market as NPD performance. Moreover, most literature in a NPD area have explored the integrated effect of market orientation. Because market orientation consists of three different sub-constructs such as customer orientation, competitor orientation, and interfunctional coordination, it is needed to examine the role of individual components of market orientation. To fill these research gaps, this study examines the different impacts of components of market orientation on speed-to-market. In addition, international business environment is more dynamics and it could be a challenge for exporting firms to meet different market conditions.

Though firms pursue a market oriented approach in abroad markets, external market condition could affect the effect of market orientation on NPD performance. Thus, this study aims to open up the relationship between market orientation and speed-to-market by studying the role of market uncertainty. Although several studies mentioned importance of environmental factors, empirical research has been inconclusive regarding the moderating role of market uncertainty and there is little literature to examine the role of market uncertainty on the link between market orientation and speed-to-market. In line with this limitation of literature, this study explores whether market uncertainty plays a role in speed-to-market for market-oriented firms.

Moreover, most studies examined the effect of market orientation on NPD performance have been based on Western multinational enterprises (MNEs). Despite the growing levels of participation of Asian countries in international business, there is a lack of academic research examining the role of market orientation on NPD performance. To fill the gap, this study conducts a research model based on Korean exporting firms. Because quite a number of Korean exporting firms are small-medium sized and more concentrated technological products, these characteristics of Korean exporting firms are more useful to examine the innovation issues, such as speed-to-market.

The article is organized as follows. First, the study's conceptual framework and hypotheses are detailed. Subsequently, the methodology used to design the empirical study is described. Then the results are presented. The article closes with the discussion of the main findings, limitations of the study, and future research directions.

2. Literature Review and Hypotheses Development

2.1. Literature Review

2.1.1. Speed-to-market

Rapidly changing customer preferences, exponential technological developments and readily available information from markets and technologies are forcing organizations to develop new products, services and technologies faster. Speed in new product development has become the mantra of companies wishing to compete (Cooper & Kleinschmidt, 1994; Gupta & Wilemon, 1990). Speed has become a new paradigm for innovation. Over the past five to ten years, many studies have been completed to determine what factors or practices help speed the development of new products and services (Carmel, 1995; Cooper & Kleinschmidt, 1994; Cordero, 1991; Griffin, 1997; Kessler & Chakrabarti, 1999). Despite the plethora of researches completed on cycle time and new product development, there are still new techniques emerging to help teams innovate faster.

A variety of strategic concepts based on speed have been recently noted. For example, time-based/oriented competition/strategy, first-mover strategy, fast-follower strategy, fast product development cycle time, and on-time schedule performance (Lambert & Slater, 1999; Menon, Chowdhury, & Lukas, 2002). Time-based competition is a competitive strategy that seeks to compress the time required in the process of developing products (Stalk, 1988). First-mover strategy says that firms that reach market first achieve higher average profit and market share (Kerin, Varadaragan, & Peterson, 1992). Fast-follower strategy is an alternative strategy that recognizes the risks of being first. For both first-mover and faster-follower strategies, the greater speed-to-market, the greater the competitive advantage over later entrants (Kessler & Chakrabarti, 1996). The belief is that reducing development cycle time leads to faster market feedback, reduced costs, and business success. Speed differentiates the firm from its competition through faster learning and greater proliferation of products in the marketplace (Wheelwright & Clark, 1992).

Numerous discrepancies exist in the use of terms and the subsequent measurement of speed in NPD. First, there are several terms related to speed in NPD: time-to-market, cycle time, innovation speed, NPD speed, and speed-to-market. In some cases, different terms have similar meanings, while in other cases the same term may have different meanings in different studies. One major source of inconsistency is the difference in notions of what an appropriate starting and end point is for the development of a new product. For example, cycle time can have several different meanings depending upon the starting point used (Griffin, 1997). We chose a cognitive measure of speed-to-market for our research. We used speed-to-market to describe the entire NPD process from concept to launch.

A variety of approaches have been used to measure speed (Kessler & Chakrabarti, 1996). One approach uses the actual elapsed time between the generation of an idea and the introduction of the product embodying that idea. A related problem with research on speed in NPD involves differences in the units of analysis (Kessler & Chakrabarti, 1996). Some variables that are measured at the project level are difficult to measure properly at the organizational level. Studies at the organizational level tend to collapse the results of a firm's NPD projects, obscuring each project's particular characteristics and the effects of speed on a specific product's success. Since our view is that theory and research would be better to focus on organization-wide system, we measured speed-to-market at organizational level.

Speed-to-market describes how quickly an idea moves from conception to its commercialization or introduction into the marketplace. At the firm level, speed-to-market measures the capability to move quickly from ideas to actual products in the marketplace, increasing the potential to realize first-mover or fast-follower advantages. As our definition is stated in relative terms, it is also possible to make comparisons between industries and different types of products. Absolute measures of speed-to-market introduce a lack of comparability among industry and product types. Absolute duration can be affected by several factors including industry type, innovation type, project complexity, or size.

2.1.2. Market orientation

Market orientation is defined as the organizational culture that places the highest priority on the profitable creation and maintenance of superior customer value and provides norms for behavior regarding the organizational development and responsiveness to market information (Slater & Narver, 2000). Especially, Narver and Slater (1990) suggest the three components of market orientation: (1) customer orientation, (2) competitor orientation, and (3) interfunctional coordination. Customer orientation and competitor orientation represent a relative emphasis on collecting and processing information pertaining to customer preferences and competitor capabilities, respectively. Interfunctional coordination encompasses the coordinated application of organizational resources to synthesize and disseminate market intelligence.

Market-oriented firms are able to use market knowledge as the basis for the organization-wide generation of product ideas and the decisions to use those ideas to develop strong market positions with customers and to take advantage of market development opportunities (Slater & Narver, 2000). Storey and Easingwood (1998) argued that the use of comprehensive and up-to-date market knowledge is the starting point of successful product development. It reflects the extent to which the firm considers the needs and wants of its customers and the positioning, strengths and weaknesses of its competitors.

From a strategic standpoint, however, there is insufficient empirical support for the presumed relationship between market orientation and organizational performance. Han, Kim, and Srivastava (1998) proposed that a market-oriented firms are likely to be innovative, which is likely to lead to achievement of superior market sensing and customer linking capabilities, and it should be in a position to innovate in a manner that provide superior value for its target customers (Narver & Slater, 1990). Moreover, a significant amount of management literature supports the idea that innovation leads to superior performance (Carbonell & Rodrigues, 2006; Paladino, 2007). Consequently, it makes sense to study the indirect linkage between market orientation and profitability.

The potential benefit of market orientation is that the firm is more likely to introduce innovations that are compatible with the needs and wants of customers. The literature indicates that market orientation facilitates the firm's ability to innovate and achieve new product success (Kohli & Jaworski, 1990). Han, Kim, and Srivastava (1998) argue that market orientation contributes to the number of administrative and technical innovations, and that the effect of market orientation on financial performance is mediated by innovations. Being oriented toward the market provides a significant source of ideas for new products, as well as improvements of current products (Troy, Szymanski, & Varadarajan, 2001). Because market orientation increases the degree of compatibility between new products and customer needs, it is likely to enhance the adoption and success of innovations (Atuahene-Gima, 1995).

Accordingly, the market-oriented firms are able to have more information about customers' current and future needs and the competitors' market strategies and market activities, and the extensive information with organizational coordination leads to a better understanding of areas where new products could be developed and used (Sandvik & Sandvik, 2003). The corporate reinforces the innovation for making the best use of market information from market-oriented activities, and it is able to achieve speed-to-market successfully.

2.2. Hypotheses development

2.2.1. Market orientation and speed-to-market

Despite the multidimensionality of the market orientation construct, a review of the literature reveals that the primary emphasis on empirical research has been on the combined (versus individual) effects of the market orientation components. Yet, the study of market orientation as a composite construct might result in ignoring subtleties due to its multidimensionality. Indeed, such practice might lead to incomplete or misleading conclusions about the usefulness to firms of specific market orientation's components (Frambach, Prabhu, & Verhallen, 2003). The present study, therefore, follows a component-level approach and examines direct effects of each of market orientation's components – customer orientation, competitor orientation, and interfunctional coordination – on speed-to-market. By splitting market orientation into components, we are able to examine more closely the relationships between market orientation and speed-to-market. As shown in Figure 1, we can determine whether and how each component affects speed-to-market.

H1: Market orientation has a positive impact on speed-to-market.

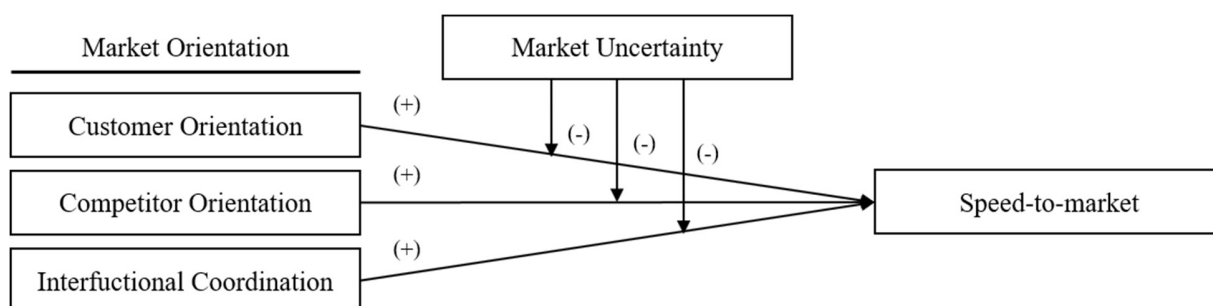


Figure 1: Research Model

Customer orientation helps firms to introduce innovations that are compatible with the needs and wants of customers (Slater & Narver, 2000). It also facilitates to the firms' ability to innovate and achieves new product success. Comprehensive market knowledge which is created through customer orientation might be beneficial to the firms' ability to see more opportunities in the marketplace, and thus generate more ideas for new products (Jaworski & Kohli,

1993). Learning about customers' current and future needs leads to a better understanding of areas where new products could be developed and used.

In general, speed-to-market is connected with the customer's experience. To make use of relevant market experience, the organization needs to gather extensive customer (Atuahene-Gima, 1995). Therefore, customer orientation should be a more critical and effective antecedent when the complexity and novelty of the speed-to-market increases. Because the strong commitment to customers should impel the incumbents to consider R&D activities as a viable option in meeting customers' needs, the customer-oriented firms enhance speed-to-market. Thus, we hypothesize that a strong customer orientation will have a fostering effect on speed-to-market:

H1a: Customer orientation has a positive impact on speed-to-market.

Competitor orientation entails gathering intelligence on information about competitors. It might play a key part in the strategy to understand market environment and to figure out opportunities to launch their new product successfully. Innovations may come from monitoring the product innovation behavior of competitors, through the assessment of the attractiveness of the firm's current product portfolio and the assessment of the likelihood of customer adoption of the different products and services offered by competitors. From identifying firms' own strengths and weaknesses using competitor-oriented information, the firms can have insights into their relative standing in the marketplace (Han, Kim, & Srivastava, 1998).

Competitor orientation has potential benefits that the firm is more likely to introduce innovations that are compatible with learning from competitors and understanding of market trend. Moreover, competitor-oriented information is useful to set up their appropriate position which is less risky and less competitive struggle in market (Atuahene-Gima, 1995). Being oriented toward the competitors provides a significant source of ideas for new products, as well as improvements of current products. Therefore, a competitor-conscious attitude will have fostering effect on speed-to-market. From this view, we expect that competitor orientation influence speed-to-market positively:

H1b: Competitor orientation has a positive impact on speed-to-market.

Various departments being cognizant of the market intelligence cannot be sufficient and coordinated effort among various functions (Kohli & Jaqorski, 1990). Zaltman, Duncan, and Holbek (1973) argued, as functions are integrated across departments in an organization, the problem-solving capabilities are enhanced by employees working toward the common goal. However, if personnel in different departments do not open up to one another, they are more likely to conform to their routine mode of problem solving and less likely to be creative and take risks. Moreover, Gatignon and Xuereb (1997) mentioned that interfunctional coordination has a role to enhance the communication and exchange between organizational functions that are concerned with customers and competitors, and to give these functions greater proximity to the latest market trends.

In addition, interfunctional integration in communications provide the bridgework in mitigating distrust and conflict among the separate functional units. This, in turn, provides an environment that is more receptive to innovations. The organizational environment from interfunctional integration provides more opportunities for innovations to arise and is more supportive of efforts towards innovation (Han, Kim, & Srivastava, 1998). In summary, the interfunctional coordinated firms share information across departments actively, and these openness environments foster speed-to-market with creation of new product ideas. Therefore, we expect that interfunctional coordination facilitate speed-to-market.

H1c: Interfunctional coordination has a positive impact on speed-to-market.

2.2.2. Market uncertainty

Some recent research suggests that speed-to-market is more important in certain environments. Kessler and Bierly (2002) found that innovation speed is positively related to quality and has a great influence on success, but the relationship is moderated by several external and firm-level uncertainties. Informed by Ittner and Larcker's (1997) suggestion to examine the effects of different technological and competitive settings on the benefits of fast cycle time, we explore the impact of market uncertainty on the relationship between market orientation and speed-to-market.

Market uncertainty is defined as the level of ambiguity about competitive behavior, composition of customers and their preferences, and substitutes that may appear (Boyd, Dess, & Rasheed, 1993). There are multiple perspectives on the speed-uncertainty relationship (Kessler & Bierly, 2002). On the one hand, uncertainty may provide more opportunities and benefits for faster response. Under quickly changing environments, being late to market may

increase the risk of obsolescence because of competitor activity, shifts in customer preferences, or some other uncontrollable force. Thus, speed-to-market may help ensure at least some realization of profit. The study of Chen, Reilly, and Lynn (2005) provided support for this perspective. Their results showed that a timed-based strategy is more suitable under conditions of high market uncertainty.

On the other hand, uncertainty might warrant greater caution and better intelligence before one commit to action. Under uncertain market conditions, because of the increased forecasting error, shifting rules of the game, and obscured profit windows, effectiveness may not be equivalent to speed, and speed may not necessarily be conducive to success (Meyer & Utterback, 1995). In keeping with this argument, Tatikonda and Montoya-Weiss (2001) contend that external uncertainties makes customer definition and translation into product specification more complex and challenging, thereby diminishing the value of innovation speed as a means of supporting marketplace performance goals. Findings from Kessler and Bierly (2002) support this perspective. Their results showed that the link between innovation speed and success is weakened when market uncertainty is high.

Market-oriented firms acquire abundant information in terms of customers and competitors and they need to handle various information to fit with their new product development activities. However, when market uncertainty is high in international markets, firms could face with excessive information and market-oriented behaviors could be a barrier to introduce new product quickly. In dealing with the turbulence in international markets, market uncertainty might weaken the positive impacts of acquiring, sharing, and responding market information on speed-to-markets.

H2: Market uncertainty weakens the positive relationship between market orientation and speed-to-market.

3. Methodology

3.1. Sample

The sample consists of 196 Korean exporting firms. Korean industries were selected for this study primarily because of the country’s status as a newly industrialized nation and quite a number of Korean exporting firms are small-medium sized firms and more concentrated technological products. These characteristics of Korean exporting firms are more useful to examine the innovation issues. Specifically, as a result of Korea’s relatively short industrial history, the evolutionary progression of industries in the Korean economy has been characterized as rather dynamic (Han, Kim, & Kim, 2001), which should provide a consummate setting for studying the possible causes for the success and the downfall of industries’ incumbents.

Table 1: Sample Characteristics

Annual sales (Won)	Number	%	Number of employees	Number	%
Bellow 5 billion	59	30.10	Below 30	49	25.00
5 – 10 billion	61	31.12	31 – 150	53	27.04
10 – 500 billion	51	26.02	151 – 500	46	23.47
Over 500 billion	25	12.76	Over 500	48	24.49

3.2. Data Collection

Using the lists of Korean exporting firms, which is provided by KITA, we selected 1,000 Korean exporting firms with our target sample list. For each firm on this list, we identified the person actively involved in the firm’s strategic planning at the senior management level as the target respondent, the rationale being that someone in this type of position is likely to possess a well-rounded knowledge of the firm’s various functional areas. The questionnaires were sent out, accompanied by a cover letter from the KITA soliciting cooperation and a letter from the researchers plus general instructions for the survey. Two weeks after the mailing, follow-up telephone calls were made in twice, urging a completed return of the survey. 203 responses were returned in the end-a response rate of 20.3%. Among those, 7 were discarded because of incomplete. Therefore, the usable sample size was 196. The firms in the final sample

encompass a broad spectrum of industries in the area of consumer products and industrial goods. The profiles of the sample are shown in Table 1.

3.3. Measures

We adapted Narver and Slater’s (1990) scale capturing a firm’s orientation on customer orientation, competitor orientation, and interfunctional coordination, which constitute a firms’ market orientation. As shown in Table 2, Cronbach’s alpha coefficients are 0.709 for customer orientation, 0.686 for competitor orientation, and 0.772 for interfunctional coordination, which correspond closely with those reported by Han, Kim, and Srivastava (1998) and Narver and Slater (1990). In addition, respondents indicated the extent of market uncertainty. Following Greenley (1995), Jaworski and Kohli (1993), and Slater and Narver (1994), we assessed a set of questions related to market uncertainty. The reliability of the market uncertainty is 0.655. Speed-to-market, which was described to respondents as the ability to minimize the time it takes from the beginning of idea generation to market introduction, was measured using two items based on Droge, Jayaram, and Vickery (2000). Respondents answered how they were satisfied with new product’s performance, with regards to (1) speed to market and (2) the number of new products in last three years. Cronbach’s alpha for speed-to-market is 0.628. Construct-level correlation coefficients between these focal variables and descriptive statistics are summarized in Table 3.

Table 2: Measurement Model Results

Measurement items	Reference	Factor loading	Cronbach’s α
Customer orientation			0.709
Customer commitment		0.666	
Creation of customer value		0.868	
Objectives of customer satisfaction		0.860	
Competitor orientation			0.686
Rapid response to competitors’ actions	Narver & Slater (1990)	0.674	
Sharing of competitors’ information	Han, Kim, & Srivastava (1998)	0.815	
Targeting opportunities for competitive advantage		0.880	
Interfunctional coordination			0.772
Information shared among functions		0.819	
Sharing resources with other business units		0.855	
Contributing of all functions to increase customer value		0.824	
Market uncertainty			0.655
Extent of market turbulence	Greenley (1995) Jaworski & Kohli (1993)	0.705	
Frequent changes in customer preferences	Slater & Narver (1994)	0.784	
Extent of technological turbulence		0.819	
Speed-to-market			0.628
Speed to market	Droge, Jayaram, & Vickery (2000)	0.855	
Number of developed products		0.855	

Table 3: Descriptive Statistics and Correlations

	Mean	S.D.	1	2	3	4	5
1. Customer orientation	3.94	0.662	1.00				
2. Competitor orientation	3.89	0.619	0.71	1.00			
3. Interfunctional coordination	3.63	0.733	0.53	0.61	1.00		
4. Market uncertainty	3.46	0.668	0.18	0.29	0.26	1.00	
5. Speed-to-market	3.10	0.709	0.52	0.58	0.52	0.23	1.00

Table 4: Results of Regression Analysis

	Model 1	Model 2	Model 3	Model 4
Intercept	2.701*** (0.282)	-0.008 (0.370)	-0.029 (0.388)	0.032 (0.386)
Product type	-0.171 (0.110)	-0.140 (0.091)	-0.140 (0.091)	-0.114 (0.090)
International experience	0.108 (0.078)	0.094 (0.064)	0.093 (0.064)	0.111† (0.064)
Export intensity	0.020 (0.056)	-0.035 (0.046)	-0.035 (0.046)	-0.035 (0.045)
R&D intensity	0.106* (0.049)	0.093* (0.040)	0.091* (0.041)	0.099* (0.040)
Customer orientation		0.199* (0.095)	0.200* (0.096)	0.158† (0.095)
Competitor orientation		0.364** (0.106)	0.359** (0.109)	0.333** (0.107)
Interfunctional coordination		0.200* (0.076)	0.199* (0.076)	0.240** (0.076)
Market uncertainty			0.013 (0.069)	0.014 (0.069)
Customer orientation * Market uncertainty				-0.286* (0.120)
Competitor orientation * Market uncertainty				-0.043 (0.137)
Interfunctional coordination * Market uncertainty				0.058 (0.101)
Adjusted R ²	0.058	0.390	0.390	0.424
F value	2.575	14.981***	13.035***	10.707***

† $\rho < 0.10$; * $\rho < 0.05$; ** $\rho < 0.01$; *** $\rho < 0.001$

4. Results

To confirm our hypotheses, we conducted a hierarchical regression. Hypothesis 1 suggested that there are positive relationships between speed-to-market and sub-constructs of market orientation. As shown in Table 4, customer orientation ($\beta = 0.158$; $\rho < 0.10$), competitor orientation ($\beta = 0.333$; $\rho < 0.01$), and interfunctional coordination ($\beta = 0.240$; $\rho < 0.01$) had positive effects on speed-to-market, respectively. Thus, H1a, H1b, and H1c were supported. These results showed that customer orientation, competitor orientation and interfunctional coordination foster speed-

to-market. In addition, H2 suggested that market uncertainty weakens the positive relationship between market orientation and speed-to-market. Although market uncertainty had a negative moderating effect on the relationship between customer orientation and speed-to-market ($\beta = -0.286$; $p < 0.05$), there was no significant moderating effect of market uncertainty on the link between competitor orientation ($\beta = -0.043$; *n.s.*) and interfunctional coordination ($\beta = 0.058$; *n.s.*) and speed-to-market. This result showed that a positive impact of customer orientation on speed-to-market could be reduced when market condition fluctuates in international markets.

5. Discussion

The key objective of this study is to examine the relationship between market orientation and speed-to-market. In general, we empirically provided some evidence that market orientation facilitates speed-to-market. At the component level of analysis, we found that customer orientation, competitor orientation and interfunctional coordination are highly significant for speed-to-market and customer orientation is the dominant factor in both a main effect and an interaction effect. Moreover, as a moderator of market uncertainty, our results indicate that customer orientation could lose a positive impact toward speed-to-market when the level of market uncertainty in the business environment is relatively high. In conditions of high market turbulence, there is a higher extent of heterogeneity of customer preferences and the rate of preference changes. It means that firms need to collect abundant information related to customer information and reflect various customer needs on new product development. These complex business activities could hinder to introduce new product rapidly in international markets.

To summarize, we explored the relationship between market orientation and speed-to-market, with three components of market orientation respectively. Customer orientation, competitor orientation and interfunctional coordination foster speed-to-market. We examined, moreover, whether market uncertainty plays a role of moderating which weaken the link between market orientation and speed-to-market. When the extent of market uncertainty is high, the relationship between only customer orientation and speed-to-market will be weakened. Customer-oriented corporates might beware of acquiring and utilizing customer information to increase speed-to-market in international markets. In addition, it may be useful to take a component approach to the market orientation construct, because the roles of different market orientation components might vary, contingent on uncertainty in the environment.

5.1. Managerial and Academic Implications

Our study provides some supports that market orientation facilitates speed-to-market. The market-oriented behaviors should be designed with the innovation strategy in mind, and vice versa. Being market oriented or market driven alone increasingly does not appear to be comprehensive enough to be used as a strategic beacon in achieving competitive advantage. Accordingly, Slater and Narver (1995) advocate “organizational learning,” and Day (1994) suggests “anticipating future needs for capabilities” to supplement market-oriented or market-driven planning. In a similar spirit, formulating an innovation strategy to complement the firm’s market orientation strategy should provide a more coherent and comprehensive road map for organizations to follow.

In prior research, market orientation has been found to be more effective in affecting performance, contingent on the business environmental conditions the firm faces (Slater & Narver 1994). Likewise, the results of our study showed that market orientation is conducive to provide an innovation-friendly environment, which also is contingent on factors in the business environment. As Jaworski and Kohli (1993) and Slater and Narver (1994) concur, market orientation, as a complex process, entails substantial financial and resource commitment by the organization. This study indicates that different market orientation components differently interact with various environmental variables in facilitating speed-to-market. Therefore, an organization hoping to enhance corporate performance through speed-to-market should consider the following steps for an efficient allocation of its resources: (1) determine the current business environmental conditions the firm faces and (2) allocate resources disproportionately to the market orientation component that is most effective in the identified condition.

5.2. Limitations and Directions for Further Research

There are several key factors beyond the scope of this study that we leave for future investigation. First, our study emphasizes the importance of market orientation and speed-to-market. Further study should consider in a high-technology industry case sample, such as IT industry, because in this industry, speed-to-market is a more important

factor relatively. Hence, future studies need to examine the covered process in a high-technology industry, and the study can have more extensive results and reflect the result of actual.

Second, we adapted measurement of the market orientation with Narver and Slater's (1990) scale, but we do not use all items which Narver and Slater's (1990) suggested. Although the items are not had construct problems, it will be better to examine the result with whole items proposed by Narver and Slater (1990). Moreover, even though we divide market orientation into customer orientation, competitor orientation, and interfunctional orientation for examining the different effects of component respectively, it will be meaningful the scales of Kohli and Jaworski (1990), such as market intelligence generation, market intelligence dissemination, and market responsiveness.

Third, organizational characteristics, such as firm size and time in market, have been considered to affect the link between market orientation and speed-to-market (Menon & Varadarajan, 1992). Additional research should involve investigating the effects of incumbents' organizational characteristics. Moreover, the empirical finding of this study is based on data form Korean industries. Although Korea supports a free-market system, there are factors idiosyncratic to the Korean economy, which may limit to be generalized the findings somewhat. Thus, future studies should corroborate and further research about the relationship between market orientation and speed-to-market in diverse economic context.

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