Strategic marketing capability: Mobilizing technological resources for new product advantage

Namwoon Kim a,⁎, Sohyoun Shin b, Sungwook Min c

a Department of Management and Marketing, Faculty of Business, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong
b College of Business, California State University, Chico, USA
c Department of Marketing, California State University, Long Beach, USA

ABSTRACT

Although scholars have paid much attention to the conceptualization of marketing capability and its performance implications (e.g. Krasnikov & Jayachandran, 2008; Vorhies, Morgan, & Autry, 2009), there has been little research on the leading role of marketing capability in new product success. Especially, more research efforts are necessary to demonstrate how marketing capability initiates new product development and selectively articulates product advantage. This study presents a conceptual frame of new product-market success, emphasizing that strategic marketing capability (SMC) contributes to matching the revealed or potential market needs to the most appropriate technological resources. Such best-matched marketing and technological resources create either or both of new product advantages, differentiation or cost advantage, which finally lead to better new product performance. Using 209 survey data from the manufacturing and service industry firms in Korea, the current study validates the influence of a firm’s SMC on the two different technological resource mobilization modes en route to product advantages and product-market performance.

© 2016 Elsevier Inc. All rights reserved.

1. Introduction

Firms’ marketing capacity is considered to play a critical supporting role for a new product success as advertising and promotion are of no doubt affect awareness and initial trial of the new product, increasing the possibility of early survival of the new product (Vorhies et al., 2009). Nevertheless, this view overlooks a more comprehensive aspect of marketing capability that contributes to customer value creation in the entire new product-development process. A strong marketing capability of a firm not only provides communication and promotion of a new product in the commercialization, but also can play a leading role in developing a competitive new product. The main research question of the current study is: how do marketing capabilities contribute to creating competitive advantages of new product, which lead to eventual market success?

Drawing on the seminal work by Day (1994) on strategic capabilities, this study proposes a framework in which strategic marketing capability plays a leading role in developing competitive advantages of a new product, that is, differentiation or cost advantage for new product success. Strategic marketing capability (SMC) for new products is accumulated market knowledge and strategic planning that enable the firm to coordinate strategic activities for new products. Like other organizational capabilities, SMC is a firm-specific resource that is superior, rare, non-transferable, and idiosyncratic and its importance to strategic planning has been distinctive as it relates to acquiring and sustaining competitive advantages (e.g. Day, 1994; Greenley, Hooley, & Rudd, 2005; Krasnikov & Jayachandran, 2008).

With a new conceptual framework, the current study asserts that SMC alone may not be able to develop a competitive new product, instead it takes a leading role in creating a competitive new product by mobilizing appropriate technological resources. In particular, this study proposes that two types of technological resources – dynamic and embedded technological resources – mediate firm’s marketing capability into the competitive advantages of new product. Furthermore, the current study demonstrates that the relative importance of utilizing different types of technological resources depends on the level of firms’ perceived environmental uncertainties (i.e., technological and market uncertainties). Using a large survey data from the manufacturing and service industry firms in Korea, this article empirically tests the influence of a firm’s SMC on the two different technological resource mobilization modes en route to product advantages and product-market performance. The empirical results show SMC indeed plays a significant leading role in creating both differentiation and cost advantages of new product only through the two types of technological resources. The
proposed mediation links are even stronger when market and technological uncertainties are high, implying a greater role of SMC in those uncertain new product environments.

The main contribution of this study is to provide a theoretical ground of the leading role of strategic marketing capability (SMC) that initiates and orchestrates the whole new product development process. Incorporating strategic choices theory as a complementary theory to the resource-based view (RBV) (Helfat & Raubitschek, 2000), the current study explores how SMC drives the transformation of resources into competitive advantages for new product success. Furthermore, this study is the first empirical study that attempts to establish and validate the mediating role of a firm’s technological resources that realize SMC into the competitive advantage of the firm’s new products.

The following section briefly reviews the resource-based view (RBV) and the strategic choices theory as theoretical foundations, and presents a conceptual framework and corresponding hypotheses for a new product success. The authors test the framework with firm-level survey data of South Korean enterprises and discuss the structural equation modeling results.

2. Background and hypothesis development

In line with an integrative view of marketing capabilities and strategic choices in the literature (Day, 1994; Desarbo, Di Benedetto, Song, & Sinha, 2005; Hunt & Morgan, 1995), the current study looks into the role of SMC for a new product success at the conjunction of resource-based view (RBV) and strategic choices theory. New product success depends on both superior, rare, non-transferable capabilities as well as management’s strategic choices on how to combine resources to optimize their utilities. Two theories complement each other when put together in one frame (Day, 1994). Integrating both theories helps to overcome some of the persistently argued limitations of classic RBV — inability to explain how resources are developed and deployed to achieve competitive advantage (e.g. Morgan, Slotegraaf, & Vorhies, 2009; Priem & Butler, 2001).

Child (1972) defines strategic choice as the process whereby powerholders within organizations decide upon the course of strategic actions. The strategic choices theory focuses on the actions that organizational decision makers take to adapt to an environment as an explanation for different organizational outcomes (Andrews, 1986; Child, 1972). The theory argues that management has a pool of various options, selections, and preferences to compose a resource set that may optimize the matching between internal formations and external environments (Hambrick & Finkelstein, 1987; Venkatraman & Camillus, 1984). Therefore, the management’s strategic choice of product differentiation over cost advantage or vice versa, depends on contingency factors such as varied market and environmental conditions, which induce the management to make a right choice to better fit the given factors.

While strategic choices theory well elaborates on the management’s autonomic decisions on what competitive advantages to create and how to create them, it assumes that all firms are equally able to access needed resources, make right decisions, and implement their decisions on the bases of value chain analysis. Actually, this assumption of equally-endowed resource opportunities may not be that persuasive because according to RBV, the firm heterogeneity does exist in terms of resource portfolios. The RBV proposes that a firm’s idiosyncratic, imitable, and non-substitutable resources, which are basically heterogeneous in the organizationally embedded levels, create a competitive advantage (Barney, 1991; Eisenhardt & Martin, 2000) and generate abnormal performance (Barreto, 2010). Recently, to incorporate dynamic resource application capability, a resource deployment approach of RBV explains why some firms perform better than others with the similar amount of accessible capitals (Helfat & Raubitschek, 2000). Well-developed strategic capability of a firm’s marketing function is the firm’s idiosyncratic resource that determines which customer benefits to pursue. Furthermore, such strategic marketing capability (SMC) prescribes the guidelines on whether to use the firm’s currently serving technologies or to access new techniques for new product development process. The research framework of this study is in Fig. 1, where SMC leads and drives integrative strategic processes designed to recognize, collect, and apply the needed technologies and methodologies to create competitive new product (Fig. 1).

As “[technology] can have a powerful effect on both cost and differentiation” (Porter, 1985, p. 169), this study conceptualizes two types of technological resources that are critical to obtaining competitive advantages of new products — dynamic technological resources (DTR) and embedded technological resources (ETR). Although Michael Porter recognizes that marketing capability is crucial to obtain differentiation (See 8 steps in differentiation on Porter, 1985, p. 162–163), the connection of marketing capability to different types of technological resources has not been established. The schematic linkage of firms’ SMC to appropriate technological resources (i.e., DTR and ETR) is important because although SMC takes a kind of process enabler role for creating competitive advantages for firms, SMC itself may not be able to create competitive advantages unless it is effectively and efficiently implemented via reasonable technological support. A firm with great SMC is proficient at monitoring market trends and corresponding to changing customer needs by purposefully connecting internal and external resources. This type of proficiency should play a lead role in competitive resource configuration by gluing necessary internal endowments, knowledge in network, and external technologies.

In the following section, the current study introduces two types of technological resources and develops hypotheses, which explain the inter-relations between SMC and technological resources and the moderating impact of environmental uncertainty on the technological resources—new product advantages relationship.

2.1. Product differentiation advantage by mobilizing dynamic technological resources

Dynamic technological resources (DTR) refer to the firm resources that provide new ways of wiring its exploratory ability to select appropriate foreign means, methods, and technologies and adapt them to its internal operations (Barreto, 2010; Teece, Pisano, & Shuen, 1997). These resources include a firm’s buyout of licenses and patents from external sources and explorations of new networks, communities, and relationships as well as the acquisition of new foreign procedures that can bring new technological portfolios into the firm (Capron, Dussauge, & Mitchell, 1998; Eisenhardt & Martin, 2000). When a firm detects market opportunities, which are not to be served with its current resource sets, DTR is geared to explore, select, and bring the most appropriate technologies and scientific knowledge into the organization that will seize the juncture. These newly accessed resources help the firm overcome the continuous recycle of internal tacit knowledge, and create timely and superior paths out of the routine processes created through firm experience. Based on the strategic choices theory (Hambrick & Finkelstein, 1987; Venkatraman & Camillus, 1984), SMC is able to induce new, unique, and different outputs — product differentiation, when it takes a leading role in mobilizing DTR to outplay the internal limitations and to realize market opportunities. Thus, firms, that strategically empower SMC as a role of the leading integrator, need to fortify the efforts in mobilizing DTR to appropriate the chosen resources for product differentiation. Hence, a suggested hypothesis is:

$H1$: A firm’s strategic marketing capability increases product differentiation of new product via mobilizing its dynamic technological resources.

2.2. Cost advantage by mobilizing embedded technological resources

Embedded technological resources (ETR) illustrate already owned, therefore identifiable and specific proprietary assets, knowledge, and skills deeply rooted in the organizational routines, process, and
A high market uncertainty involves not clear and therefore, product specification, product development because dominant technology in the industry is of high technological uncertainty, obsolescence characterize technological uncertainty. Under conditions of high technological uncertainty, firms face crucial challenges in new product development because dominant technology in the industry is not clear and therefore, product specifications need continued modification as technological draft and changes occur. Market uncertainty refers to "changes in the composition of customers and their preferences" (Slater & Narver, 1994, p. 51). A high market uncertainty involves significant pace of change, heterogeneity, and unpredictability of customer needs and market demand, all of which require firms' prompt responses to market dynamics and efficient use of technologies to increase new product-market acceptance and to achieve the efficiency in new product development.

In the previous section, H1 argues that mobilization of dynamic technological resources (DTR) as identified by SMC provides firms with creative, distinctive, and nontraditional methods to configure new offerings (Tushman & Anderson, 1986). According to the literature on environmental effects (Pelham & Wilson, 1996), such firms' efforts to incorporate new technological resources for new product features are becoming more effective under uncertain environmental conditions. This is because firms' product differentiation advantage is mainly obtained via DTR mobilization and whether a firm is better in DTR mobilization than another firm means more to product differentiation when DTR is great (i.e., in a highly uncertain environment that needs great and constant adjustment efforts from the firms). Acquiring and implementing new technological resources (e.g., DTR in this study) provide diverse resource opportunities to the firms and therefore significantly helps their adjustment efforts to continuously create distinctive product features in changing technological/market circumstances where the dominant industry technology is short-lived and customer preferences are not stable (Aragon-Correà & Sharma, 2003; Grewal & Tansuhaj, 2001). On the contrary, under rather certain environmental conditions, the impact of firm's DTR mobilization efforts on creating distinctive product aspects may be relatively less influential because such firm's exploratory sourcing efforts are less appreciated in stable technological/market environments where customers show consistent preferences and loyalty to the existing technologies. Therefore, the firms' efforts to mobilize dynamic technological resources as identified by SMC will contribute to product differentiation more when environmental uncertainties are high than when they are low. Therefore, H3: As environmental uncertainties (i.e., technological uncertainty and market uncertainty) increase, the impact of firms' efforts to mobilize dynamic technological resources on product differentiation of new product will become stronger.

Previously, H2 argues that embedded technological resources (ETR), if strategically mobilized by SMC, realize the cost advantage of new products by minimizing R&D expense burdens and time constraints (Andreas, 1986; Child, 1972) as well as reducing related financial losses caused by possible product market failures (Han et al., 2001). When frequent changes occur in market and technological environments, firms find it more difficult to understand and predict the future market preferences (Cui & O'Connor, 2012). As far as market demands are not stable, the corresponding revenue forecasts and the expected cash flow...
are not reliable enough to cover the R&D and production costs. Perceived risks caused by this uncertain cash flow will become more evident as environmental uncertainties increase. The new product strategy literature supports that under these uncertain environmental conditions, the importance of the firms’ owned resources (e.g., ETR in the current study) is more distinctive as they help to achieve cost efficiency by avoiding unnecessary or wrong spending decisions and saving the related product development efforts and time (Kyriakopoulos & Moorman, 1998; McGrath, 2001; Olson, Walker Jr., & Ruekert, 1995). Consequently, closely investigating and mobilizing possessed technologies, methods, and work-patterns, as identified by SMC will become more contributive to competitive price or cost advantage under uncertain technological and market conditions as such firms’ efforts will be an appropriate measure to avoid or reduce possible financial risks. Therefore,

H4: As environmental uncertainties (i.e., technological uncertainty and market uncertainty) increase, the impact of firms’ efforts to mobilize embedded technological resources on cost advantage of new product will become stronger.

3. Method

3.1. Sample data

As the framework is not idiosyncratic in any specific business domain, this study collects data from the firms in various industries in Korea including manufacturing and service sectors. Using a list of top 500 Korean firms in terms of sales in the TS-2000 database of KLEA (the Korea Listed Companies Association), this study develops a contact list of the directors and general managers in marketing-related functions in each strategic business units of the listed firms. The authors design an English-language questionnaire and then translate it into Korean. In the process of translating English measures into Korean, the authors conduct several in-depth interviews with business experts and researchers in related fields. To ensure conceptual equivalence, two professional translators independently back-translate the Korean version questionnaire into English. The authors and translators discuss any disagreements until they reach a consensus. Moreover, the translated questionnaires are pre-tested by 15 graduate students attending one of the leading MBA programs in Korea.

One of the major sources of common method bias is due to data collected from a common rater (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The authors collect the measures of the directly related predictor and criterion variables from multiple respondents from each firm because this approach would help reduce the common method bias through procedural remedies (Spector, 2006; Williams, Cote, & Buckley, 1989). The procedure of data collection is designed into ten precise major phases; initial contact development, prospecting, qualification screening, data collection from the first respondent, second respondent prospecting, qualifications check-up, data collection from the second respondent, data coding and entry, missing data management and data cleansing, preparation for the finalized data set, and data analysis. The authors collect the first set of questionnaires on technological resource mobilization constructs (i.e., DTR and ETR mobilizations), new product–market performance, and two moderators (i.e., technological uncertainty and market uncertainty) from the first respondent of each firm. For new product–market performance and the market and technological uncertainties of the new product, the survey asks the first respondent to refer to a specific new product launched by the firm within two years.

Upon the first respondents’ completion of the questionnaires, the survey asks them to refer to another manager in the same business unit who closely works with them. After careful reviews of the relevance and knowledge level of the referred manager, the authors then ask him/her (i.e., the second respondent) to fill up the remaining parts of the questionnaire set that include SMC and two new product advantage constructs (i.e., product differentiation and cost advantage). For these new product advantage constructs, the authors confirm that the second respondent to refer to the same new product by giving him/her the exact identification of the new product on which the first respondent answers. Most of the first and second respondents are in marketing functions including general marketing function, brand management, new product planning, advertising, sales, or marketing research. Our researchers reach the first contacts by phone and confirm their email address and participation, so that every email with the survey attachment is successful. As an incentive for their contributions, the authors promise the descriptive analysis report upon completion of the study. Total 324 managers agree to participate in the first half of the survey set. However, during the collection of questionnaires, 35 managers express a rejection to the invitation, and the authors do not hear from 26 until the end of the project. There are twice follow-up calls and also two emails to encourage each of their participations. The data collection occurs over eight weeks and results in a sample of 263 for the first respondent set and 214 for the second respondent set. To check non-response bias, the authors divide and compare the responses in two sets (i.e., media: mail (paper and pencil) vs. email (computer-aided), and time: first four weeks vs. last four weeks) and examine the differences in the characteristics across the sample. The result shows that the means of focal variables across each comparing set (i.e., SMC, mobilizations of DTR and ETR, and two types of advantages) are not statistically different ($p > .10$). Therefore, nonresponse bias may not be a significant concern for the current study. After discarding unusable questionnaires, total 209 sets that include both the first and second respondents’ responses are finalized for analysis.

3.2. Measures

For the construct measurement, the current study uses extensive literature review and in-depth field interviews following Gerbing and Anderson (1988). After a careful literature review, the authors adapt the measures of the related constructs operationalized and/or validated in the existing literature to the current study context. All measurement items are in 7-point, Likert-type scales with the anchors 1 = strongly disagree to 7 = strongly agree. To ground measurement assessment, the authors ask respondents to “focus on the general level of their own business unit capabilities and performance in a relevant perspective of their major competitors”. Appendix A shows the construct measurement items of the current study.

For strategic marketing capability (SMC), this study adopts the validated measure items of the firm’s planning and implementation marketing capabilities from Vorhies and Morgan (2003, 2005) and its architectural capability that integrates both capabilities (Vorhies & Morgan, 2003; Vorhies et al., 2009). The adopted measure items are re-phrased and adapted to this study context after incorporating the advice from research experts in the related study areas and the pilot-test results. To measure dynamic technological resource mobilization, the current study adopts and re-arranges the scales from the conceptually related constructs in the existing literature. The items reflect the use of sophisticated technologies in arranging new solutions (Gatignon & Xuereb, 1997), proactivity in developing new technologies (Gatignon & Xuereb, 1997), and the rapidity of integration of new technologies (Kanter, 1988; Zhou & Li, 2010), as well as the level of generating new ideas and approaches to formulate better products (Gatignon & Xuereb, 1997; Kanter, 1988). The authors polish the specific items statements to fit the current study context of measuring the dynamic aspects of technological resource appropriation. To measure embedded technological resource mobilization, this study uses the measure items from the conceptually related and empirically validated constructs in the existing literature. This research adopts four items from the initial endowed entry capability which helps a firm overcome entry barriers and the embedded process of resources appropriation in technology and R&D arena (Han et al., 2001; Karakaya & Stahl, 1989). To fit the

Please cite this article as: Kim, N., et al., Strategic marketing capability: Mobilizing technological resources for new product advantage. Journal of Business Research (2016), http://dx.doi.org/10.1016/j.jbusres.2016.03.072
study context and to clarify the organizational embedded resources and their appropriation mechanism in technology, the authors closely investigate and re-phrase each item as necessary.

The authors measure the respondent’s perceived level of product differentiation of a specific new product the firm has introduced in recent two years in comparison with other major competing products in the industry. They adopt four measure items from the existing literature in competitive strategies areas (Homburg, Workman, & Krohmer, 1999; Kim & Atuahene-Gima, 2010; Li & Calantone, 1998). They measure cost advantage at the level of the perceived competitive cost efficiency of the new product and adopt four measure items from the existing studies by Homburg et al. (1999) and Kim and Atuahene-Gima (2010). In order to measure new product market-performance, the authors ask the respondents to rate the extent to which the new product has achieved the affirmative outcomes in 24 months. These measures include sales, profit margin, return on assets, and market share relative to the major competitors (Atuahene-Gima & Ko, 2001; De Luca & Atuahene-Gima, 2007) as well as return on investment relative to the major competitors (Atuahene-Gima & Ko, 2001). This study measures both technological uncertainty and market uncertainty using the scale items developed and validated in the previous literature such as Atuahene-Gima and Li (2004); De Luca and Atuahene-Gima (2007); Hanvanich, Sivakumar, and Hult (2006), and Jaworski and Kohli (1993).

3.3. Measurement model, construct validity, and reliability

After verifying that an exploratory factor analysis for scale items results in the expected construct solutions, the current study performs confirmatory factor analysis (CFA), and assesses the construct validity and reliability of the measures following Gerbing and Anderson (1988). The measurement model estimation results for factor loadings and composite reliability for each construct are provided in Appendix A. Because the ratio of the sample size to the number of parameter estimates is less than five, the authors group the measures of related constructs together and conduct three CFAs, as suggested by Atuahene-Gima (2005) and Bentler and Chou (1987). The CFA results indicate a satisfactory fit of the three measurement models: one that includes strategic marketing capability and technological uncertainty ($\chi^2 = 126.90$, d.f. = 43, $p < .00$; comparative fit index [CFI] = .96; incremental fit index [IFI] = .96; root mean square error of approximation [RMSEA] = .097; and standardized root mean square residuals [SRMR] = .037), one for the mobilization of embedded and dynamic technological resources and market uncertainty ($\chi^2 = 90.58$, d.f. = 51, $p < .01$; CFI = .97; IFI = .97; RMSEA = .061; SRMR = .049), and the last one for product differentiation, cost advantage, and market performance ($\chi^2 = 143.28$, d.f. = 62, $p < .00$; CFI = .95; IFI = .95; RMSEA = .079; SRMR = .047). As Appendix A shows, all the factor loadings for each construct turn out to be significant, providing a convergent validity (Bagozzi, Yi, & Phillips, 1991). This study establishes reliability by securing composite reliability (CR) for each construct to be larger than .7, as in Appendix A. The authors assess discriminant validity by calculating the shared variance (i.e., squared correlation) between all possible pairs of constructs and verify that they are less than the corresponding AVE for all individual constructs in Table 1, thus satisfying Fornell and Larcker’s (1981) test and indicating that our multi-item scales display adequate discriminant validity.

4. Results

The current study estimates the parameters in the conceptual framework with the whole sample set ($N = 209$) using structural equations modeling. Based on the comprehensiveness of the estimated direct effects, this study provides three model estimation results (Model 1 to Model 3) in Table 2. The authors also conduct two-group analyses based on the different levels (i.e., high vs. low) of technological and market uncertainties to analyze the moderating effects of these environmental uncertainties. Table 2 demonstrates these estimation results as Models 4.1, 4.2, 5.1, and 5.2. For more detailed tests of mediation effects of dynamic and embedded technological resource mobilizations, the authors single out the corresponding relationships and provide mediation tests in Table 3.

4.1. Mediation effects

H1 and H2 predict a leading role of strategic marketing capability (SMC) cultivating differentiation through dynamic technological resources (DTR) mobilization and cost advantage through embedded technological resources (ETR) mobilization. As in Table 2, a direct effect of SMC on product differentiation is statistically insignificant ($β = −.12$ in Model 2 and $−.13$ in Model 3, $p > .10$). Also, the relationship between SMC and cost advantage is not statistically meaningful either ($β = −.07$ in Model 2 and $−.08$ in Model 3, $p > .10$). Thus, estimation of indirect effects of SMC shows no direct link with any of the new product advantages. Table 2 shows these results.

To confirm the mediation effects of DTR and ETR mobilizations, the authors single out these two paths of the relationship (SMC $→$ DTR mobilization $→$ product differentiation; SMC $→$ ETR mobilization $→$ cost advantage) and perform mediation tests, following the approach suggested by Baron and Kenny as in Table 3. First, for the mediating role of DTR mobilization in the SMC $→$ DTR mobilization $→$ product differentiation relationship, the authors note that SMC has a positive and significant effect on product differentiation ($β = .15, p < .01$) without considering any indirect effects in Table 3 (second column). SMC is positively related to DTR mobilization ($β = .66, p < .001$) (third column). When both SMC and DTR mobilization are included in the analysis, DTR mobilization shows a

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strategic marketing capability</td>
<td>4.55</td>
<td>1.19</td>
</tr>
<tr>
<td>2. Dynamic technological resource mobilization</td>
<td>4.69</td>
<td>1.25</td>
</tr>
<tr>
<td>3. Embedded technological resource mobilization</td>
<td>5.03</td>
<td>1.02</td>
</tr>
<tr>
<td>4. Product differentiation</td>
<td>4.93</td>
<td>1.18</td>
</tr>
<tr>
<td>5. Cost advantage</td>
<td>4.41</td>
<td>1.25</td>
</tr>
<tr>
<td>6. New product market-performance</td>
<td>4.32</td>
<td>1.45</td>
</tr>
<tr>
<td>7. Technological uncertainty</td>
<td>3.78</td>
<td>1.28</td>
</tr>
<tr>
<td>8. Market uncertainty</td>
<td>4.44</td>
<td>1.08</td>
</tr>
<tr>
<td>Skewness</td>
<td>.56</td>
<td>−.45</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>.32</td>
<td>−.29</td>
</tr>
<tr>
<td>Average variance extracted</td>
<td>.78</td>
<td>.82</td>
</tr>
</tbody>
</table>

Notes: $N = 209$. $^{+}p < .10$. $^{*}p < .05$. $^{**}p < .01$ (two-tailed t-test).
positive and significant effect on product differentiation (β = .38, p < .001) whereas SMC shows no significant effect on product differentiation (β = −.11, p > .10). This test demonstrates a full mediation effect of DTR mobilization between SMC and product differentiation. Therefore, this study supports H1.

To test the mediation of ETR mobilization for the SMC → ETR mobilization → cost advantage relationship, the authors first note that SMC has a positive and significant effect on cost advantage (β = .17, p < .05) when no indirect effects are considered. Also, SMC is positively related to ETR mobilization (β = .21, p < .01). Finally, when both SMC and ETR mobilization are included in the analysis, the ETR mobilization shows a positive and significant effect on cost advantage (β = .28, p < .01) while SMC shows no significant effect on cost advantage (β = .11, p > .10), proving a full mediation of ETR mobilization between SMC and cost advantage. Thus, data supports H2.

4.2. Moderation effects: two-group analysis

To test the moderation effects of environmental uncertainties, the authors split the sample into two groups for each condition—high and low in technology uncertainty and high and low in market uncertainty relative to the mean values for each (3.78 and 4.44, respectively). H3 posits a stronger effect of DTR mobilization on product differentiation under the conditions of high market and technological uncertainties. As in Table 2, the impact of DTR mobilization on product differentiation proves to be positive and significant when technological uncertainty is high (β_{HI} = .20, p < .05 in Model 4.1) whereas such impact is insignificant when technological uncertainty is low (β_{LO} = .01, p > .10 in Model 4.2). Similarly, the impact of DTR mobilization on product differentiation under the condition of a high market uncertainty turns out to be positive and significant (β_{HI} = .23, p < .05 in Model 5.1) whereas the impact is insignificant under the condition of a low market uncertainty (β_{LO} = .01, p > .10 in Model 5.2). Thus, H3 finds support.

Finally, H4 predicts that the impact of ETR mobilization on cost advantage becomes stronger with a high environmental uncertainty. Our empirical results in Table 2 demonstrate that the impact of ETR mobilization on cost advantage is positive and significant with a high technological uncertainty (β_{HI} = .39, p < .01 in Model 4.1) but is insignificant with a low technological uncertainty (β_{LO} = .19, p > .10 in Model 4.2). Also, the impact of ETR mobilization on cost advantage with a high market uncertainty is positive and significant (β_{HI} = .36, p < .01 in Model 5.1) while such impact is insignificant with a low market uncertainty (β_{LO} = .11, p > .10 in Model 5.2). Consequently, H4 finds support.

Table 3

Analyzing the impact of dynamic and embedded technological resources.

<table>
<thead>
<tr>
<th>Independent variable (I)</th>
<th>Mediator (M)</th>
<th>Dependent variable (D)</th>
<th>I → D (r-stat.)</th>
<th>I → M (r-stat.)</th>
<th>I → M → D (r-stat.)</th>
<th>Full mediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic marketing capability</td>
<td>Dynamic technological</td>
<td>Product differentiation</td>
<td>0.15** (2.03)</td>
<td>0.66*** (10.15)</td>
<td>I → D = 0.11 (1.08)</td>
<td>Full mediation</td>
</tr>
<tr>
<td>Resource mobilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M → D = 0.38** (3.68)</td>
<td></td>
</tr>
<tr>
<td>Strategic marketing capability</td>
<td>Embedded technological</td>
<td>Cost advantage</td>
<td>0.17* (2.24)</td>
<td>0.21** (2.64)</td>
<td>I → D = 0.11 (1.44)</td>
<td>Full mediation</td>
</tr>
<tr>
<td>Resource mobilization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M → D = 0.28* (3.12)</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Standardized parameter estimates are provided, with t-values in parentheses. N = 209.

* p < .05 (t = 1.65).
** p < .01 (t = 1.97).
*** p < .001 (t = 2.60).
**** p < .001 (t = 3.34) [two-tailed t-test].

Please cite this article as: Kim, N., et al., Strategic marketing capability: Mobilizing technological resources for new product advantage, Journal of Business Research (2016), http://dx.doi.org/10.1016/j.jbusres.2016.03.072
5. Discussion

Four distinctive contributions of this article emerge compared to the relevant theories and literature. First, this article explores the leading role of strategic marketing capability (SMC) that encourages the mobilization of diverse technological resources and creates competitive advantages for a new product. Although previous research efforts analyze the impact of firms’ marketing capability on business performance, they focus more on the supportive roles of marketing promotion and advertising capability in relation to the new product launch or commercialization (Day, 1994; Hunt & Morgan, 1995, 1996; Priem & Butler, 2001; Vorhies et al., 2009). Comparatively, the current study proposes that SMC be a core firm capability that takes the initiative and proactive role in the new product development process. Based on RBV and strategic choices theory, this study demonstrates and empirically validates that SMC plays a decisive role that links to either of the selected new product advantages – differentiation or cost advantage – by strategically triggering appropriate and timely technological resources. Thus, SMC could be a strategic enabler that matches the revealed or potential market needs with the most appropriate (or best-serving) technological resources that can respond to these market needs for new products.

Second, this article has drawn the conceptual framework based on both RBV and strategic choices theory to complement the limitations of both. Previous research based on the RBV explains better business performance by firm specific and non-transferable assets without providing a close examination of such performance creation process (Barney, 1991; Barreto, 2010). By incorporating strategic choices as an interrelated theory and further developing the resource deployment aspect of RBV (Helfat & Raubitschek, 2000), the current study provides an answer to how some firms with the similar amount of organizational resources use them more successfully while others do not. Considering SMC as a resource-deploying role, this study proves links between SMC and both technological resources toward competitive advantages under different environmental conditions, demonstrating that both theoretical bases are necessary to fully understand the processes and decisive criteria for new product success.

Third, this article sheds light on the importance of different aspects of technological resources that mediates SMC to competitive advantage. Although SMC proves to play a leading role in the new product development process, it may not be able to create either differentiation or cost advantage without strong and reasonable technological schemes to implement SMC. The current study contributes to the marketing strategy literature by demonstrating the mediating role of a firm’s dynamic and embedded technological resources that realize SMC into the competitive advantage of the firm’s new products. On the other hand, empirical results on the conceptual framework of this study are still in line with prior research (e.g., Porter, 1985; Vorhies & Morgan, 2005; Vorhies et al., 2009) by confirming that there exists a significant direct relationship between firms’ marketing capability (SMC) and business performance (new product–market performance) even after controlling the effects of competitive advantages.

Fourth, this article examines the relative importance of utilizing different types of technological resources depending on the corresponding environmental (i.e., technological and market) uncertainty situations, which the previous literature does not deal with. This contingency approach to SMC implementation followed by the use of appropriate technological resources helps to validate the resource-deploying mechanism of SMC and provides both theoretical and empirical contributions to research in new product strategy based on RBV. The current study validates that in highly dynamic markets with technological and/or market uncertainty, the mediation of technological resource mobilization that links SMC to new product advantage becomes more important.

The empirical findings of this article provide important managerial implications. First, on top of the conventional knowledge that marketing function provides a critical support for new product launch and promotion, this study demonstrates that strategically oriented marketing capability orchestrates more adaptive and profitable new product development process and thereby help to obtain relevant competitive advantages for the firm. Therefore, managements need to invest on building a strong strategic capacity of marketing and allow marketing play a leading role in creating a competitive product for the firm’s new product success. Second, top management team should recognize the value of integrated work process between marketing and the relevant technology departments, and support interdepartmental collaborations by assigning the leader role to marketing and setting shared common goals across critical functions for new product success. When marketing requests, the relevant personnel in R&D, engineering, IT, and other technology-concerned departments should cooperate to provide diverse technological resources that can address the firm’s strategic direction for a specific new product. The technologies summoned and incorporated will corroborate the firm’s distinctive selling points that normally take the form of innovative new features and/or increased customer value that the new product provides in terms of cost and gain.

Third, under the market and technical conditions of high velocity and unpredictability such as those of fast growing Asian economies, securing appropriate technological resources is getting more important to the establishment of firms’ competitive advantages. Even with well-equipped strategic marketing capability initiating the new product development process, it cannot be smooth in turbulent environments without a strong technological portfolio to create customer advantage. Therefore, firms need to give detailed guidelines to technical departments regarding how to secure timely and most reasonable technical resources from inside as well as outside the organization. Obtaining the relevant matches between technological resources and product advantages will help firms to survive and grow even in bitter industrial conditions.

Despite its contributions to the literature by suggesting the leading role of strategic marketing capability in new product development process, the current study is not free from limitations. First, difficulty in collecting data at the business-unit level prevents us from including objective measures of new product market performance. Future study can benefit from cross-validating the results with objective measures to complement the subjective nature of self-reported data particularly in measuring the performance variable. Second, this article proposes mobilization of two technological resources — dynamic and embedded, but does not investigate their interrelationship due to the current study objectives. Researchers or firm managers may expect that the embedded technological resources, if considered as the firm’s owned technological capability, could have a positive contribution to seeking external, dynamic technological resources. On the other hand, too much embedded technological resources may work as technological inertia, limiting the possible exploration of external, dynamic technological resources. A future study based on solid theoretical support and empirical validation will help find out which conjecture is more reasonable.

Third, this study analyzes the framework based on data across different industries but does not do so for each industry subset such as services, business-to-business, or consumer manufacturing industries. Future research that can analyze industry-specific data will provide a good comparison among different business sectors in terms of the inter-construct relationships the current study suggests, which will offer more valuable managerial implications to the corresponding industry. Finally, this study explores the leading role of strategic marketing capability in the context of a newly industrialized market. Markets of mature industrial backgrounds or currently developing economy may demonstrate different study results because of their heterogeneous industrial bases. Future research efforts that examine the marketing’s role for different phases of industrial growth will provide more plausible explanation on this issue.

Please cite this article as: Kim, N., et al., Strategic marketing capability: Mobilizing technological resources for new product advantage, Journal of Business Research (2016), http://dx.doi.org/10.1016/j.jbusres.2016.03.072
Appendix A. Measurement and confirmatory factor analysis.

Construct and measures | SFL (t-value)
--- | ---
Strategic marketing capability (CR = .95) | 
1. This firm has good marketing planning skills. | .91 (16.91)
2. This firm has clear marketing objectives. | .87 (15.90)
3. This firm has creative marketing strategies. | .90 (16.66)
4. This firm has effective market segmentation skills. | .89 (16.22)
5. This firm has effective distribution of marketing resources. | .84 (14.86)

Dynamic technological resource mobilization (CR = .95) | 
1. This firm uses the state-of-the-art product technology available in the industry. | .91 (16.94)
2. This firm uses sophisticated technologies in the industry for its new product development. | .91 (17.09)
3. Technological innovation based on research results is readily utilized in this organization. | .90 (16.71)
4. This firm rapidly integrates new technologies in the industry. | .90 (16.67)

Cost advantage (CR = .85) | 
1. This firm has a product that is easy to operate. | .87 (14.38)
2. This firm’s product provides a higher quality than other competing products. | .69 (10.06)
3. This firm’s product provides a better design than other competing products. | .59 (8.65)
4. This firm’s product permits a customer to do a job or do something s/he could not do with what was available. | .74 (11.70)

New product market-performance (CR = .96) for the new product introduced in recent two years | 
1. This firm has achieved higher profit margin relative to the major competitors. | .80 (14.09)
2. This firm has achieved higher sales revenue relative to the major competitors. | .94 (18.16)
3. This firm has achieved greater revenue on assets relative to the major competitors. | .97 (19.42)
4. This firm has secured larger market share relative to the major competitors. | .80 (14.08)
5. This firm has achieved greater ROI relative to the major competitors. | .97 (19.18)

Notes: N = 209, CR = composite reliability, and SFL = standardized factor loading. All measures are anchored at 1 = “strongly disagree” and 7 = “strongly agree.” The t-values are provided in parentheses.

References


Please cite this article as: Kim, N., et al, Strategic marketing capability: Mobilizing technological resources for new product advantage. Journal of Business Research (2016), http://dx.doi.org/10.1016/j.jbusres.2016.03.072


