

The Influences of Market Information Management and Marketing Control in Small-Sized Firms in Korea

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Abstract

Studies in management and marketing strategy have proven that various dimensions of marketing capabilities are associated with firm performance in a positive way. However, most of the researchers have focused on the relationships within relatively large-sized firms in industrialized countries. In this study, the author investigates market information management capability and marketing control capability and their possible antecedents, strategic orientations (i.e., customer, competitor, and technology orientation) in small-sized firms in Korea. Based on 180 data of small-scaled firms with no more than 500 employees across industries, both capabilities have been found to have an affirmative influence on firm performance. Furthermore, three focal orientations have been proven to drive both capabilities in a positive way. From the additional two-group analysis based on firm size, market information management capability has been found to be more critical to micro-sized firms with 100 employees or fewer while both capabilities show equally important positive impact for small-sized firms with between 500 and 101 employees. Implications are addressed along with the limitations and further research directions.

Keywords: market information management, marketing control, customer orientation, competitor orientation, technology orientation, firm performance, resource-based view

1. Introduction

1.1 Research Background

Numerous studies have proven that various dimensions of marketing capabilities are associated with firm performance in a positive way, but most of the studies have focused on finding the relationship within relatively large-sized firms in industrialized countries (Morgan, Vorhies & Mason, 2009; Fahy et al., 2000). Therefore, researches regarding the value of marketing-related capabilities in small-sized firms have been rarely treated as a major topic in marketing strategy. Even though how marketing capabilities affect firm level outcomes in small businesses may differ from the influential paths of marketing capabilities in large firms, lack of research in the specific area leaves a marginal implication to relatively smaller-sized organizations in emerging nations such as Korea.

According to European Commission, small-sized enterprises provide around 75 million jobs in the 25 nations of the enlarged European Union (European Commission, 2003). Thus, the importance of understanding how small-sized firms develop competitive advantages with marketing-related capabilities should not be neglected. Due to the limited capitals, small businesses may have to find the specific set of capabilities which better fits their specific situational contexts among various types of organizational capabilities. Carefully selected and cultivated capabilities may bring the firms maximized financial benefits of resource allocations and sustainable advantages.

Among different facets of marketing capabilities, the critical roles of market information management and marketing control in small firms have been rarely conceptually explored or empirically tested, at least at the same time. Therefore, despite mountainous evidence from the previous research undertaken, that marketing capabilities positively influence firms' economic rents (e.g., Shin, 2012), these specific sub-categories have been left as under-discovered research topics.

Korea Small & Medium Business Administration (2012) defines SMEs as firms having fewer than 200 or 300 employees for most of industries with a wide range of annual sales of 30 to 300 Million in Korean won. Fewer than 100 and 50 is also used as a threshold for the sectors such as real estate business, education business, and waste management.

Nevertheless, no consensus in the literature is noted as to what constitutes a “small” firm (Deakins, 1999; McCartan-Quinn & Carson, 2003). The lack of a clear global definition of “what a small business actually is” may mitigate an accurate assessment of success factors for the small-scaled businesses. Furthermore, even among small firms required resources may differ from one another based on the sizes and industrial contexts.

In this paper, a small-sized firm is defined as “an independent owner/managed business organization employing less than five hundred employees”. In addition, a micro-sized firm is defined as “a small-sized firm with no more than hundred employees.” These two categories under the operationalized definition of small-sized firm are purely arbitrary for the purpose of this study based on the standards of US, EU, and Korea in a collective way. Because many of small or micro firms are created and run by the owner/manager’s omnipresence, a highly personalized management style can be witnessed. However, although this company-specific style may direct a characterized, prevalent types of marketing activities within a firm, desirable capabilities in marketing function can be recommended for success and survival of both micro- and small-sized firms.

2.2 Resource-Based View

Resource-based View (RBV), a well-known theory of strategy argues that firms with valuable, rare, inimitable, and non-substitutable resources have the potential of achieving superior performance (e.g., Barney, 1991; 1995). Traditionally, resources mean what a given firm possesses as its physical and financial property which can be input into production process (Barney, 1991; Miller & Shamsie, 1996). In an extended approach of RBV, resources implies intangible categories including organizational, human, and networks (Ahn & York, 2011; Day, 2011; Hunt & Morgan, 1995). This knowledge-based resource approach of RBV encourages firms to obtain, access, and maintain intangible endowments because these resources are the ways in which firms combine and transform tangible input resources and assets (Galunic & Rodan, 1998; Wiklund & Shepherd, 2003). Furthermore, intangible resources such as customer orientation are more causally ambiguous, and less observable than tangible resources, therefore, it is not easy for competitors to duplicate. Hitt, Ireland, and Hoskisson (1999) emphasize that organizational knowledge is a crucial bundle of intangible resources that can be the source of a sustainable competitive advantage. Due to its immobility (McEvily & Chakravarthy, 2002) and general applicability (Miller & Shamsie, 1996), knowledge has been argued as the key driver for a sustainable advantage.

Large size gives a firm advantages relating to the greater availability of financial resources, organizational routines, and capabilities (Bercovitz & Mitchell, 2007; Verwaal, Bruining, Wright, Manigart & Lockett, 2010). However, small firms have a smaller scale and scope of resources available (Bercovitz & Mitchell, 2007), so they can have a disadvantage in generating rents from its own possessed resources and assets. Thus, small corporates should carefully select and cultivate crucial knowledge-related assets including capabilities which can be added in the firm’s knowledge storages. In this paper, two knowledge-based assets; marketing information management and marketing control, will be offered as critical drivers of better firm performance within small-sized firms.

2.3 Market Information Management and Firm Performance

Previous studies undertaken have proven a positive correlation between dimensions of marketing capabilities and various firm level measures of economic rents (e.g., Lee, Yoon, Kim & Kang, 2006; Morgan, Zou, Vorhies & Katsikeas, 2003; Sashittal & Tankersley, 1997). Marketing capabilities are viewed as important market-relating mechanisms by which superior market knowledge may be deployed by firms to generate economic performance (Madhavan & Grover, 1998). Marketing capability is also viewed as an organization’s practices, routines, and work patterns applying the resources of the firm to the market-related needs of the business (Vorhies & Morgan, 2005). As one of the representative typologies, architectural marketing capability is referred as a firms’ ability to orchestrate marketing tactical tools in an integrative way (Morgan et al., 2003). It has been asserted that the concept includes market information management, marketing planning, and marketing implementation (e.g., Capron & Hulland, 1999; Day, 1994; Morgan et al., 2003).

Among these various types of marketing-related capabilities, one of the author’s foci is the critical roles of market information management in small-sized firms. Most of small businesses are deficient in well-developed skills and systems on how to collect, develop, manage, and utilize market information due to their resource limitation and relatively light-weighted importance of market research function. Some of small ventures are in

newly developed industrial sectors, so there has not been enough time for the firms to develop best practices to benchmark as well as an industry-wide guidance to gauge customer segments and targets. Thus, a firm's ability of market information management, the processes by which firms learn about their markets and use market knowledge (Day, 1994; Menon & Varadarajan, 1992) can be a critical weapon to bring clear market insights and therefore, become a source of competitive advantages. The market information management may include systematic information gathering about customers and competitors, excellence in utilization of market information to develop better marketing programs, and tracking customers' needs and wants (Vorhies & Morgan, 2005). Especially, for a small sized-firm, well-established processes in market knowledge development is hard to earn based on the given restraint budget. Thus, if a firm possesses excellence in this capability, this may influence firm performance positively. Hence, it can be hypothesized that;

H1: Market information management capability of a firm increases its business performance.

2.4 Marketing Control and Firm Performance

Marketing control is defined as "consistent evaluating the results of marketing strategies and plans and taking corrective actions to ensure that objectives are attained" (Armstrong & Kotler, 2011). Successful marketing control involves four steps; setting a goal, measuring its performance, evaluating the causes of any differences between expected and actual performance, and taking corrective actions to close the gap between goals and performance (Armstrong & Kotler, 2011).

Therefore, excellence in assessing, monitoring, and auditing the entire process of the marketing activities is assumed to be important to not only large- or medium-sized organizations but also to small-sized firms. However, small corporates generally do not have enough financial capitals to routinely review and evaluate marketing activities to develop a closed loop of enhancement on the process of marketing planning and execution. Because most of small businesses tend to focus on daily operations and short-lived sales tactics, setting up a set of marketing control processes with an anticipative perspective can be an impossible mission. Nevertheless, because it is essential to a firm to be equipped with skills and know-hows on improving marketing practices for a long run, the firm's marketing control may promote to carefully plan marketing programs from the beginning, to consistently assess every steps in marketing actions, and furthermore to disseminate the tacit knowledge for the next marketing opportunities. A Firm's ability to learn from the past, to evaluate self-accomplishments fairly, to document and share the assessments, and furthermore, to actively correct and redesign their marketing programs may bring competitive advantages over the competitors who without the relevant ability. This marketing control capability is relatively hard to be recognized as a critical resource due to its lack of visibility in the connection with enhanced organizational performance. However, marketing control is known to be one of the mandatory steps in marketing process with marketing analysis, marketing planning, and implementation (Armstrong & Kotler, 2011). Hence, it can be hypothesized that;

H2: Marketing control capability of a firm increases its business performance.

2.5 Customer Orientation, Market Information Management, and Marketing Control

Marketing capability of a firm is the extent of an excellence in applying the firm's collective knowledge, resources, and skills in order to add value in the marketing domain (Day, 1994; Su, Tsang & Peng, 2009). Therefore, marketing capability is expected to integrate, build and configure internal and external resources, including intangible strategic orientations (Su et al., 2009; Zhou & Li, 2010).

Customer orientation, one of most frequently studied strategic orientations, emphasizes the sufficient understanding of the target customers so as to deliver superior value to them. Organizational climate emphasizing the importance of understanding customers can be an essential company asset as itself and would guide a firm to learn what market-related information should be collected, managed, and assessed to improve the delivery of better value to the target. In particular, customer orientation helps a firm clearly identify their target customers, market, and partners, so information regarding the specified groups of its interests can be separated from overflowing general information. Therefore, the firm can efficiently focus on improving how to serve the needs of the groups. Customer-oriented market information management can support a firm to learn about customers' motives and attitudes as well as marketing programs in the market that customers actively respond to, and therefore, to promptly deliver enhanced marketing activities. Thus, better informed marketing actions become possible by using the polished routine of market information management, resulting in high levels of customer satisfaction as well as positive economic outcomes.

Marketing control can be fortified by customer orientation, too. Consistent evaluations on on-going marketing activities are the key of marketing control. Customer orientation may drive marketing control to set

customer-focused objectives, assess the reactions of customers, correctly measure their attitudes, and take an action to correct marketing programs to enhance their customers' brand experience. Therefore, marketing control can provide a firm an opportunity to re-design their marketing actions with better understanding of customers, and thus, it increases a chance to gain and maintain delighted customers. Hence, it can be hypothesized that;

H3: Customer orientation of a firm increases its a) market information management capability and b) marketing control capability.

2.6 Competitor Orientation, Market Information Management, and Marketing Control

It is not uncommon that multiple organizational orientations are exhibited in one organization at the same time (Greenley, Hooley & Rudd, 2005; Jackson, 2001). In the marketing literature, customer and competitor, as parts of market orientation or separately, have been actively researched as a critical market profile.

Competitor orientation refers the intention to identify, analyze, and respond to competitors' actions. Competitor orientation focuses on understanding the strengths and weaknesses of existing and potential competitors as well as on monitoring their behaviors (Narver & Slater, 1990). This enables the firm to rapidly sense, reverse-engineer, improve, and accumulate knowledge related to competitors within a firm. Therefore, marketing programs that competitors have implemented effectively and strategic directions that competitors are heading can be closely observed. Firm's capability in market information management can be led to competitive differentiations by this strategic orientation. Competitor-oriented firms emphasize the importance of examining and learning from competitors, so benchmarking the best practices becomes more affordable to a firm. The high cost of developing better market offerings make it crucial for the firms to invest in the right information, especially when the firms are not able to access sufficient financial stocks like small-scaled companies. Competitor orientation may empower the process of market information management within a firm, and therefore save resources and allocate un-used resources to differentiate marketing actions.

Marketing control can be well-directed by carefully observing competitors' behaviors and by understanding industry standards. Competitor-oriented firms may evaluate their goals and performance based on competitors' norms and outcomes. The monitoring process that is designed with locus on competitors may bring more objective evaluation approaches to gauge success and failure of its own marketing programs. Most of small firms operate their business locally and this causes a lack of varieties of business experiences out of their territories regardless their business history in the market. Competitor-focused marketing control may help firms go beyond their competitors and transfer knowledge from a different domain, and thus improve their marketing programs with innovative approaches. Thus, it can be hypothesized that;

H4: Competitor orientation of a firm increases its a) market information management capability and b) marketing control capability.

2.7 Technology Orientation, Market Information Management, and Marketing Control

Technology orientation implies that consumers will prefer products and services that maintain technological superiority (Gatignon & Xuereb, 1997; Zhou & Li, 2010; Zhou, Yim & Tse, 2005). Firms with technology orientation accumulate rich technological information through investments in R&D and relevant knowledge (Zhou & Li, 2010). Thus, this specific orientation can be one of a firm's critical foci related to gathering, interpreting and transforming information about new technologies.

Market information management is expected to have a positive effect on firm performance with gained knowledge about its market when focusing on the developments in the technological arena. Technology-oriented firms may be equipped with well-constructed operating systems as well as prompt communication processes, and thus, market information can be collected from multiple sources, accumulated in big data storages, and disseminated within the company easily. The firms can also detect new technologies in other industries, but without market information management capability backing up technology orientation, it is impossible for firms to use them for addressing an untapped customer need in their own industry.

Marketing control is expected to be cultivated by technology orientation, too. Especially, when management attempts to carry corrective actions, technology-focused marketing control can find better serving or best matching technologies to redesign next marketing arrangements. Furthermore, with state-of art technologies, real time monitoring and amendments become possible. These prompt adjustments and corrections may bring a chance to the firm to be ahead of competitors. Hence, it can be hypothesized that;

H5: Technology orientation of a firm increases its a) market information management capability and b) marketing control capability.

3. Research Design

3.1 Sampling and Data Collection

Survey method was used in this study. The sample was restricted to Seoul, South Korea and its metropolitan coverage where most suitable samples are located in. Data collection with convenience sampling was used for the project convenience, yet several restrictions were applied. Only one participant per organization joined in the survey, and the sizes of the corporations were strictly controlled to fall into the designed sample characteristics. Additionally, to obtain sound and reliable responses to the questions related capabilities in the survey, the respondents were carefully screened in. The detailed instructed questionnaire including the research objectives was sent to the key informants by email after the initial contact. The survey was designed in two sections with a cover page. The cover page included an invitation from the author, an assurance of confidentiality of the information, and contact methods for any questions and comments related to the research. First section included the main survey part with the measures, and the second section included questions related to the general information of the firms and the demographic information of the respondents. There were total twice follow-up calls and emails to encourage their participation. Data collection occurred over five weeks and resulted in a sample of 188. After discarding eight unusable questionnaires, total 180 were determined to use for analysis. Among 180 companies 69 were manufacturing and 75 were service organizations. The average firm size was 162.2, and all are with from 6 to 500 employees. Among the respondents, 73.3% were in marketing related functions including marketing, sales and strategy. The average working years of the participants in the current job was 4.3 years ranging from 2 to 23. Managers or higher rankings account for about 68% of the participants. Demographic information of the samples is in Table 1.

Table 1. Statistical information of samples

Respondents		No.	%	Company		No.	%
Function	Marketing	68	37.8	No. of employees	6-50	58	32.2
	Sales	35	19.4		51-100	37	20.6
	Strategy/Business Planning	29	16.1		101-200	27	15.0
	Administration	22	12.2		201-300	33	18.3
	R&D	13	7.2		301-500	25	13.9
	Others	12	6.7	Industry	Manufacturing	69	38.3
Title	Vice President/Director	25	13.9		Service (Consumer/Financial)	75	41.7
	General Manager	43	23.9		Distribution	17	9.4
	Manager/Assistant Manager	55	30.6		Others	19	10.6
	Senior Team Staff	57	31.7				
Working years	2-5	117	65.0				
	6-10	51	28.3				
	11-23	12	6.7				

Notes: N = 180.

3.2 Measures

All of the measures used in this study were drawn from the existing literature except marketing control capability. Throughout the survey, 7-point, Likert-type scales with the anchors 1=strongly disagree to 7=strongly agree were used.

Market information management was asked in total three items, and all the measures were adopted from Vorhies and Morgan's (2003) study. Marketing control was asked in total four items. To develop the measures for marketing control capability, raw scales were created based on the relevant literature reviews and interviews with marketing experts both in academic and practical fields. After eight meaningful measures were first screened in, four most critical aspects of marketing control were selected through the discussions. These newly

arranged measures indicate excellence in monitoring and control in marketing programs, checking progress of marketing activities and developing feedback, fair evaluation process on performance of marketing and firm, and sharing assessment results to take corrective actions. All four items were judged to use based on the item-to-total correlation and Cronbach's alpha. Customer orientation was asked in total four items, competitor orientation in four items, and technological orientation in four items. To measure three orientations, the original items by Narver and Salter (1990) and Gatignon & Xuereb (1997) were adopted with little modification.

For the dependent constructs, total fourteen subjective measures; customer satisfaction in four items, market effectiveness in four items, adaptability in three items, and profitability in three items were adopted from the previous studies. Customer satisfaction represents the effectiveness of the organization in delivering value to its customers (Day & Wensley, 1988; Kaplan & Norton, 1996). Market effectiveness as a scale that tapped the degree to which the firms' market-based goals had been accomplished (Ruekert, Walker & Roering, 1985; Vorhies & Morgan, 2003) and adaptability as an ability of the firm to respond to changes in its environment (Ruekert, Walker & Roering, 1985) were measured. Profitability, using perceptual scales related to financial performance over the past twelve months (Morgan, Clark & Gooner, 2002) was also asked. For further analysis, firm-specific questions were included such as industry type, firm age, and the number of employees. Respondents' working years in the current-working firm and their professional functions were also recorded as control variables.

4. Data Analysis and Results

4.1 Measurement Validation

Reliability, means, standard deviations, and inter-construct correlations are presented in Table 2. A test of reliability using Cronbach's coefficient alpha showed that all of the focal constructs (market information management: .861; marketing control: .928; customer orientation: .896; competitor orientation: .791; technology orientation: .875; customer satisfaction: .927; market effectiveness: .877; profitability: .890; adaptability: .900) exceeded Nunnally's (1978) standard of .70. Therefore, the author established support for convergent validity (Bagozzi, Yi & Phillips, 1991) of the constructs, exhibiting good measurement properties.

Table 2. Reliability and correlation coefficients, and descriptive statistics

	1	2	3	4	5	6	7	8	9	10	11	12
1. CO	.896											
2. PO	.369**	.791										
3. TO	.419**	.465**	.875									
4. MI	.500**	.418**	.438**	.861								
5. MC	.415**	.428**	.469**	.613**	.928							
6. CS	.554**	.415**	.524**	.550**	.581**	.927						
7. ME	.444**	.378**	.467**	.486**	.540**	.679**	.877					
8. P	.328**	.280**	.271**	.313**	.277**	.418**	.480**	.890				
9. ADP	.367**	.437**	.503**	.463**	.472**	.599**	.678**	.457**	.900			
10. SizeLn	.003	.004	-.102	-.048	-.163*	-.170*	-.047	-.075	-.017	N/A		
11. AgeLn	-.022	.041	-.142	-.061	-.129	-.135	-.263**	-.165*	-.199**	.247**	N/A	
12. Industry	-.011	.185*	.212**	.091	.048	.135	.190*	.163*	.055	.029	.056	N/A
Mean	5.386	4.640	4.833	4.670	4.104	4.912	4.584	4.732	4.264	N/A	N/A	N/A
S.D.	1.224	1.198	1.334	1.140	1.196	1.128	1.182	1.961	1.272	N/A	N/A	N/A
AVE	.63	.54	.68	.71	.68	.70	.69	.52	.58	N/A	N/A	N/A

Notes: N = 180; **p < .01, *p < .05; CO: Customer orientation; PO: Competitor orientation; TO: Technology orientation; MI: Market information management; MC: Marketing control, CS: Customer satisfaction; ME: Market effectiveness; P: Profitability; SizeLn: Company size (ln); AgeLn: Company age (ln); Company size and company age were transformed by taking logarithm; Industry: Manufacturing vs. Non-manufacturing; The reliability of the construct with Cronbach's alphas are presented on the diagonal in *Italic*.

The validity of the scale items used was assessed via principal-axis factoring which completed using an eigenvalue of 1.0 and factorings of .50 as the cut-off point suggested by Zaichkowsky (1985). All items were loaded significantly on the corresponding latent construct with no evidence of cross-loading (3 items of market information management loaded in factor 8: .793, .751, .673; 4 items in marketing control loaded in factor 3: .796, .796, .813, .793; 4 items of customer orientation loaded in factor 2: .828, .814, .736, .819; 4 items of competitor orientation loaded in factor 6: .766, .801, .702, .623; 4 items of technology orientation loaded in factor 5: .813, .848, .768, .611; 4 items of customer satisfaction loaded in factor 4: .731, .740, .744, .717; 4 items of market effectiveness loaded in factor 1: .767, .795, .651, .623; 3 items of profitability loaded in factor 9: .807, .588, .550; 3 items of adaptability loaded in factor 7: .717, .783, .761). The factor analysis of all variables resulted in a solution that accounted for 77.79% of the total variance. The summed means of all the measures were used for the hypotheses analysis.

4.2 Research Model Test Results

The research model was assessed using multilevel regression with SPSS statistics 19. To test main hypotheses, total three times of regressions were executed with market information management, marketing control, and firm performance as a dependent variable for each corresponding model. All three regression models were verified through coefficient of determination. R-squares of each model indicated satisfactory level of explained variability ($R^2/\text{Adj. } R^2 = .343/.331, .314/.302, \text{ and } .409/.396$, respectively), and therefore, validations were established.

All affirmative relationships between two marketing-related capabilities: market information management and marketing control and firm performance were proven ($\beta = .315, p < .001$; $\beta = .322, p < .001$, respectively) with the entire sample, thus supporting H1 and H2. Customer orientation was found to positively influence market information management ($\beta = .342, p < .001$) and marketing control ($\beta = .219, p < .01$), supporting H3a and H3b. The affirmative relationships between competitor orientation and market information management ($\beta = .197, p < .01$) and marketing control ($\beta = .220, p < .01$) were proven. Both H4a and H4b were supported. Technology orientation was proven to show a positive association with market information management ($\beta = .204, p < .01$) and marketing control ($\beta = .275, p < .001$), supporting both H5a and H5b. Firm age, a control variable, measured by the business period from the founding year of the firms, negatively linked to firm performance ($\beta = -.180, p < .01$). Industry type (i.e., manufacturing coded as 1; non-manufacturing coded as 2) also influenced firm performance ($\beta = -.137, p < .05$). The results of multilevel regression analyses are reported in Table 3. In table 4 regression results with four dimensions of firm performance were presented for the detailed explorations in relationships.

4.3 Additional Analysis

To check which of two marketing capabilities is more essential for increased firm performance based on different size of the firm, additional analysis was conducted without proposing hypotheses. Organizations with 101 to 500 employees were grouped as small-sized firms while companies with 100 or less employees were named as micro-sized firms in this study. Additional multilevel regressions were executed to gauge the possibly different relationships. With small-sized firms, both market information management and marketing control showed to be important for abnormal firm performance ($\beta = .357, p < .01$; $\beta = .388, p < .001$, respectively) while with micro-sized firms, only market information management showed to be associated with firm performance ($\beta = .324, p < .01$). For micro-sized firms, the relationship between marketing control and firm performance was marginal ($\beta = .202, p < .10$).

In addition, two groups of samples were again observed to search for possibly different antecedents for two capabilities. For small-sized firms, competitor orientation was found to be a positive driver for both market information management and marketing control ($\beta = .271, p < .01$; $\beta = .432, p < .01$, respectively), but failed to prove either of its relationships with market information management or marketing control for micro-sized firms ($\beta = .149, p > .10$; $\beta = .043, p > .10$, respectively). Customer orientation seemed to be the most important cultural resource among three focal orientations because it showed to influence both capabilities for small-sized firms ($\beta = .364, p < .001$; $\beta = .228, p < .05$, respectively) as well as micro-sized firms ($\beta = .335, p < .01$; $\beta = .277, p < .01$, respectively). Technology orientation showed mixed relationships. For small-sized firms, firm age again negatively linked to firm performance ($\beta = -.283, p < .001$), but industry type had no impact. For micro-sized firms, industry type negatively influenced firm performance ($\beta = -.193, p < .05$), showing being in service sector does not help improve firm performance. No relationship was observed between firm age and performance among micro-sized firms.

Table 3. Results of hypotheses testing

	Standard coefficient			Hypothesis testing results		
	All Firms (N=180)	Small Firms (N= 85)	Micro Firms (N= 95)	All	Small	Micro
H1: Market Info. Mgmt. → Firm Performance	.315***	.357**	.324**	O	O	O
H2: Marketing Control → Firm Performance	.322***	.388***	.202+	O	O	X
H3a: Customer Orientation → Market Info. Mgmt.	.342***	.364***	.335**	O	O	O
H3b: Customer Orientation → Marketing Control	.219**	.228*	.277**	O	O	O
H4a: Competitor Orientation → Market Info. Mgmt.	.197**	.271**	.149	O	O	X
H4b: Competitor Orientation → Marketing Control	.220**	.432**	.043	O	O	X
H5a: Technology Orientation → Market Info. Mgmt.	.204**	.192+	.203+	O	X	X
H5b: Technology Orientation → Marketing Control	.275***	.175+	.322**	O	X	O

Notes: N = 180; ***p < .001, **p < .01, *p < .05, +p < .10.

Table 4. Multilevel regression results with all data

Dependent Variables	Model 1	Model 2	Model 3	Model 3-1	Model 3-2	Model 3-3	Model 3-4
	Market Mgmt.	Info. Marketing Control	Firm Performance	Customer Satisfaction	Market Effectiveness	Profitability	Adaptability
Independent Variables							
Customer Orientation	.342 (4.968)***	.219 (3.106)**					
Competitor Orientation	.197 (2.782)**	.220 (3.041)**					
Technology Orientation	.204 (2.812)**	.275 (3.714)***					
Mediating Variables							
Market Information Management			.315 (4.267)***	.304 (4.120)***	.238 (3.198)**	.219 (2.471)*	.281 (3.477)**
Marketing Control			.322 (4.34)***	.381 (5.150)***	.359 (4.798)***	.117 (1.321)	.280 (3.457)**
Control Variables							
Firm Age (Ln)			-.180 (-3.058)**	-.073 (-1.127)	-.212 (-3.569)***	-.145 (-2.060)*	-.147 (-2.294)*
Industry (Mnft vs. Nonmnft)			-.137 (2.343)*	-.093 (-1.590)	-.163 (-2.762)**	-.146 (-2.078)*	-.024 (-.369)
R ² (Adj. R ²)	.343 (.331)	.314 (.302)	.409 (.396)	.411 (.397)	.397 (.383)	.149 (.129)	.293 (.277)
F	30.582	26.802	30.278	30.483	28.754	7.655	18.130

Notes: N = 180; ***p < .001, **p < .01, *p < .05, +p < .10; Firm age was transformed by taking logarithm; Industry: Manufacturing vs. Non-manufacturing.

4.4 Mediating Effect Analysis

To check the possibility of a mediating role of market information management and marketing control, the approaches suggested by Baron and Kenny (1986) and Preacher and Hayes (2008) were used. According to

Baron and Kenny (1986) to test a mediation effect, “first, regressing the mediator on the independent variables; second, regressing the dependent variable on the independent variables; and third, regressing the dependent variable on both the independent variable and on the mediator” (Baron & Kenny, 1986). However, Baron and Kenny’s (1986) assessment strategy is for simple mediation, involving only one mediating or intervening variable, but not for multiple mediator models. Therefore, the multiple mediation assessment by Preacher and Hayes (2008), which involves simultaneous mediation by multiple variables, was adopted as well. In addition, the author also followed the guideline of Sobel’s (1982) test, which is a test of whether the indirect effect of the independent variable on the dependent variable via the mediator is significantly different from zero.

In the first analytical step, firm performance was regressed on two capabilities at the same time as Preacher and Hayes (2008) propose. As Model 3 shows, the relationships which have been specified as H1 and H2 were statistically meaningful. In the second step, firm performance was regressed on all three dependent variables of strategic orientations. The regression results showed all strategic orientations are significantly related to firm performance in Model 4 ($\beta = .307, p < .001$; $\beta = .201, p < .01$; $\beta = .295, p < .001$; respectively). In the third step, the mediators were regressed on all three strategic orientations as Sobel (1982) proposes. As the results were shown in Model 1 and Model 2, and as H3, H4, and H5 were supported through multilevel regression tests, the relationships between three orientations and mediators were statistically meaningful. In the last step, two capabilities were loaded with all three orientations as independent variables. The results in Model 5 show that customer orientation and technology orientation were still found to still have a positive impact on firm performance but the effects of each were significantly decreased (customer orientation: .307 to .205; technology orientation: .295 to .204). Competitor orientation no longer influenced firm performance when two capabilities were loaded as predictors together, indicating the strongest demonstration of mediation occurring.

Table 5. Multilevel regression results with small-sized firms

	Model 1	Model 2	Model 3	Model 3-1	Model 3-2	Model 3-3	Model 3-4
Dependent Variables	Market Info. Mgmt.	Marketing Control	Firm Performance	Customer Satisfaction	Market Effectiveness	Profitability	Adaptability
Independent Variables							
Customer Orientation	.364 (3.844)***	.228 (2.463)*					
Competitor Orientation	.271 (2.813)**	.432 (4.576)**					
Technology Orientation	.192 (1.912)+	.175 (1.776)+					
Mediating Variables							
Market Information Management			.357 (3.619)**	.294 (2.535)*	.315 (2.971)**	.238 (1.905)+	.378 (3.519)**
Marketing Control			.388 (3.886)***	.393 (3/356)**	.362 (3.373)**	.257 (2.038)*	.316 (2.910)**
Control Variables							
Firm Age (Ln)			-.283 (-3.690)***	-.100 (-1.109)	-.294 (-3.566)**	-.304 (-3.138)**	-.257 (-3.203)**
Industry (Mnft vs. Nonmft)			-.108 (-1.447)	-.021 (-.239)	-.155 (-1.937)+	-.111 (-1.180)	-.080 (-.988)
R ² (Adj. R ²)	.396 (.374)	.420 (.398)	.575 (.554)	.415 (.385)	.509 (.485)	.320 (.286)	.496 (.471)
F	17.698	19.524	27.098	14.164	20.744	9.420	19.699

Notes: N = 85 (100 < Size ≤ 500); ***p < .001, **p < .01, *p < .05, +p < .10; Firm age was transformed by taking logarithm; Industry: Manufacturing vs. Non-manufacturing.

Table 6. Multilevel regression results with micro-sized firms

	Model 1	Model 2	Model 3	Model 3-1	Model 3-2	Model 3-3	Model 3-4
Dependent Variables	Market Info. Mgmt.	Marketing Control	Firm Performance	Customer Satisfaction	Market Effectiveness	Profitability	Adaptability
Independent Variables							
Customer Orientation	.335 (3.296)**	.277 (2.679)**					
Competitor Orientation	.149 (1.421)	.043 (.686)					
Technology Orientation	.203 (1.889)+	.322 (2.948)**					
Mediating Variables							
Market Information Management			.324 (2.973)**	.376 (3.809)***	.211 (1.937)+	.237 (1.937)+	.245 (2.051)*
Marketing Control			.202 (1.865)+	.291 (2.955)**	.285 (2.625)*	.038 (.311)	.185 (1.557)
Control Variables							
Firm Age (Ln)			-.093 (-1.045)	-.006 (-.073)	-.159 (-1.975)+	-.059 (-.594)	-.080 (-.816)
Industry (Mnft vs. Nonmft)			-.193 (-2.170)*	-.206 (-2.557)*	-.203 (-2.287)*	-.189 (-1.896)+	-.005 (-.054)
R ² (Adj. R ²)	.313 (.290)	.290 (.267)	.304 (.273)	.428 (.402)	.304 (.273)	.124 (.085)	.161 (.124)
F	13.828	12.415	9.808	16.821	9.836	3.187	4.329

Notes: N = 95 (Size =<100); ***p < .001, **p < .01, *p < .05, +p < .10; Firm age was transformed by taking logarithm; Industry: Manufacturing vs. Non-manufacturing.

Table 7. Mediation test results

	Market Information Management		Marketing Control	Firm Performance ^a	
	Model 1	Model 2	Model 3	Model 4	Model 5
Main Effects					
Customer Orientation	.342 (4.968)***	.219 (3.106)**		.307 (4.650)***	.205 (3.059)**
Competitor Orientation	.197 (2.782)**	.220 (3.041)**		.201 (2.967)**	.122 (1.845)+
Technology Orientation	.204 (2.812)**	.275 (3.714)***		.295 (4.258)***	.204 (2.975)**
Mediating Effects					
Market Info. Mgmt.			.323 (4.250)***		.163 (2.147)*
Marketing Control			.346 (4.557)***		.212 (2.859)**
R ² (Adj. R ²)	.343 (.331)	.314 (.302)	.362 (.354)	.398 (.388)	.466 (.451)
ΔR ²					.068 (.063)
F	30.583	26.802	50.143	38.755	30.399

Notes: N = 180; ***p < .001, **p < .01, *p < .05, +p < .10; a. Firm performance is the mean value of Customer Satisfaction, Market Effectiveness, Profitability, and Adaptability.

From the mediation analysis, both capabilities indeed acted as a mediator between strategic orientations and business performance. Specifically, they partially mediated customer orientation and technology orientation to firm performance while competitor orientation was fully mediated by two capabilities.

5. Discussion

5.1 Conclusions and Implications

The current study investigates the relationships between two marketing capabilities: market information management and marketing control and firm performance among small-scaled Korean firms. By analyzing data from 180 companies, the author finds both capabilities are proven to influence firm performance. As antecedents for two capabilities, three organizational orientations have been offered and proven to be positively related to two capabilities. However, when two group analysis has been adopted, interesting differences between small-sized firms and micro-sized firms have been found. Thus, this study delivers several meaningful substantive contributions. First, the results show a direct influence of two dimensions of marketing capability on firm performance within small-sized firms—further strengthening findings from previous studies with larger firms (e.g., Morgan et al., 2003; Shin, 2011; Vorhies & Morgan, 2005). It is recommended that small-sized firms need to invest on building capabilities although they are limited to access rich resources, in order to develop sustainable advantages. Second, for small firms with 101 to 500 employees, both capabilities are meaningful to cultivate improved firm performance. However, for micro firms with 100 or less employees, only information management capability has been positively associated with firm performance. This may imply that when a company starts its business as a micro scale, market information management is the mandatory capability. As the company grows and expands its serving market, balanced development in both capabilities are required to enhance organizational performance. Third, all three organizational orientations have been proven to have an impact on both capabilities linking to firm performance. It emphasizes the importance of developing and maintaining desirable organizational climate to strengthen the capability-firm relationship. From additional analysis, competitor orientation is found to be only impactful to firm performance among small firms, not among micro firms. Technology orientation influences marketing control capability for micro-sized companies only, implying system-oriented marketing auditing process may be critical at the initial stage of a business.

Our findings provide implications to small-sized firms in emerging countries, or at least small-scaled companies in Korea. First, firms need to cultivate market information management capability and marketing control capability to increase business performance. Especially in emerging market, due to the un-predictable economic transformation and fast changing trends in the market, firms may hesitate to invest in building their knowledge assets. In particular, small-sized firms may not consider it is one of their priorities in doing businesses. However, the study findings recommend managers and small business owners to start building their knowledge assets, which can bring sustainable competitive advantages. In addition, as the size of a firm grows, a firm may need to move its resource assignments from information management to a balanced emphasis on both capabilities to grow further. Market information management specially brings an opportunity to micro-sized firms to grow and survive through to be small-sized firms. Second, customer-oriented organizational climate is considered as the most versatile resources among all small firms. However, importance of competitor orientation increases as firms grow their sizes. Optimal and timely allocations of resources on both or either of these two strategic orientations of an organization may help the firm to successfully build its own knowledge assets and increase a chance to competitively survive through the economic transitions.

5.2 Limitations and Directions for Future Research

This study suffers from limitations despite the insights gained through the study results. First, generalizability is not justified because the findings are based on 180 small-sized firms in Korea. Second, this research has been conducted with the survey responses provided by one key informant per firm. Using multiple informants might be recommended for further research. Third, the interrelationships among strategic orientations as well as between two capabilities have not been explored for the objectives of the study. Especially, interaction effects between two capabilities may generate further understandings related to the focal constructs.

Future research might take some of the following directions. First, it would be valuable to link marketing capabilities to objective measures of firm performance such as share prices and ROI. Second, it may also be worthwhile to examine full multidimensionality of marketing capabilities including information management, planning, implementation, and control. Third, further research might explore the detailed paths of other strategic values such as entrepreneur orientation to firm performance. Lastly, further empirical investigations and precise validations are invited to explore the associations between multi-dimensional marketing capabilities and strategic orientations, especially among small-sized firms in varied economic domains.

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