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Abstract

Purpose – The purpose of this paper is to help firms to create competitiveness by developing marketing capabilities. It analyzes how the component and architectural competences affect and enhance market orientation and firm performance.

Design/methodology/approach – Built on the theories of organizational capability, knowledge creation, and market orientation, this research develops the contents of marketing capabilities, including component and architectural competences that contribute to marketing capability by responding to external changes, and analyzes their influence on market orientation and firm performance.

Findings – The study reveals the following effective marketing capabilities which benefit to marketing performance. First, hiring and retaining employees with higher professional, local, and specific knowledge. Second, firms with higher tacit knowledge enhance market orientation. Third, arranging employees into teamwork to implement marketing tasks. Fourth, assigning employees into small-scale experiments on creative proposals. Fifth, standardizing procedures of generation, dissemination, and response of marketing intelligence. Sixth, providing written market information and training programs to non-marketing staff. Seventh, appropriately delegating to staff. Eighth, establishing apprenticeship among the staff to deliver experiential know-how.

Research limitations/implications – From a dynamic capability perspective, this research construct the two kinds of marketing competences and examine their effect on market orientation and firm performance. For further understanding the complementary effects of marketing capabilities, market orientation, and synergistic performance, a larger sample data (e.g. product, market share, sales, characteristics of staff, firm, and knowledge, etc.) and objective evaluation are encouraged. Otherwise, from the viewpoint of agency theory, the incentive system should also be discussed.

Practical implications – This research has potentially significant implications for knowledge management and marketing management fields as well as managerial practice. The results suggest the importance of marketing capability for market orientation and firm performance.

Originality/value – Marketing resources and marketing capabilities are significant drivers of firm performance, and their impact is greater when they are complementary to each other. This study takes the perspectives of organizational capabilities and market orientation to find out the factors which contribute to marketing capability and performance. This study provides practitioners with a framework for analyzing marketing capabilities as an object of improving firm performance by creating market orientation. Furthermore, this research empirically introduced strategic specific competence (tacit knowledge and autonomy) into the model and tests their effect of market orientation and firm performance.

Keywords Market orientation, Organizational capability, Competence

Paper type Research paper

1. Introduction

Despite the common belief that everyone knows how conduct marketing campaigns, truly, market-oriented organizations achieve success in fierce marketing wars by establishing inimitable competitive advantages. Although selling and promoting products, frequent advertising, and establishing well-known brands appear to be all that marketing involves, these acts are neither the essence of marketing nor the issue of

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market-oriented organizations. Compared with their competitors, market-oriented organizations possess superior skills in understanding and satisfying customers (Day, 1990). A market-oriented organization adheres to the needs of its customers and enables the improvement of cross-sectional cooperation within organizations to create value for customer (Kok and Biemans, 2009; Deshpande *et al.*, 1993; Kohli and Jaworski, 1990; Narver and Slater, 1990; Narver and Slater, 1995; Shapiro, 1988).

Marketing competencies, which help to drive the generation, dissemination, and responsiveness of marketing intelligence, are the main composition of market orientation. In some cases, market orientation may play a positive and complementary role to linkage marketing competencies and firm performance (Menguc and Auh, 2006; Morgan *et al.*, 2009). Marketing resources and marketing capabilities are significant drivers of firm performance, and their impact is greater when they are complementary to each other (Ngo, 2012). A successful market-oriented organization should effectively use and integrate its competencies to gather marketing intelligence, and smoothly quickly make the proper strategic response.

To understand the complex marketing mechanism inside the organization, we construct a competencies model to test how it affects firm's performance. Built on the theories of organizational (dynamic) capability (Nelson and Winter, 1982; Henderson and Cockburn, 1994; Teece *et al.*, 1992), knowledge creation (Nonaka and Takeuchi, 1995), and market orientation (Kohli and Jaworski, 1990; Day, 1990; Deshpande *et al.*, 1993), this research develops the contents of marketing capabilities, including component and architectural competencies that contribute to transform market intelligence into the fuel of marketing capability by responding to environmental changes, and analyzes their effects on market orientation. Furthermore, this research empirically introduced strategic specific competence (tacit knowledge and autonomy) into the model and tests their effect of market orientation and firm performance.

2. Related studies and hypotheses

2.1 Organizational capability

Nelson and Winter (1982) proposed a theory of organizational capabilities, which originate from routines in an organization. Similar to personal skills, organizational routines involve processes and technologies that need to be repeated and familiarized to ensure operating tasks smoothly. However, unlike personal skills, organizational routines contain frequent and complex communication and coordination among employees as well as numerous interactions with the whole working environment. Fieldman and Pentland (2003) divided organizational routines into two coexisting aspects: ostensive and performative. The former aspect is conceptual. The ostensive routines refer to the generalized and abstract understanding of routines by members of an organization, and could be considered as routines in principle (Taylor, 1993; Giddens, 1984; Zimmerman, 1970; Blau, 1955). The latter aspect is practical. The performative routines refer to specific actions composed by specific people at specific time and place, and could be considered as the routine in practice (Ryle, 1949). The coexistence of two aspects brings about endogenous changes to routines. The ostensive aspect assists the performative aspect by guiding, accounting, and referring. It guides and explains the behaviors of organization members. Meanwhile, it also provides standards to organization members to choose appropriate behaviors.

Organizational capabilities are the outcome of memories of performing organizational routines. Day (1994) argued that capabilities are complex bundles of skills, competencies, and collective learning, exercised through the organizational routine that ensure superior

coordination of functional activities. The dynamic capability is the firm's ability to integrate, build, and reconfigure internal and external competencies to cope with changing environments (Teece *et al.*, 1992). Therefore, organizational capabilities are the source of competitive advantage. Different from normal assets, organizational capabilities are deeply embedded in organizational routines and practices. Hence, organizational capabilities cannot be judged by monetary value, or easily imitated and traded (Direckx and Cool, 1989; Bourdieu, 1977, 1990; Teece *et al.*, 1992).

Marketing tasks are full of diversity and flexibility. The process of executing marketing tasks should be changed in accordance with the environment. This study argues that the greater diversity and flexibility of work is, the more systematically it should be done. Following the viewpoint, marketing capabilities are rooted in marketing routines. Therefore, this study further explores the necessary marketing capabilities along with marketing routines that allow organizations to execute marketing tasks outperform than competitors.

2.2 Market orientation and market capability

In the 1980s, the field of marketing was under change as the concept of "market orientation" gradually formed. The concept proposed that marketing is not the business of one department but rather that of the entire organization. In addition to prioritizing customer needs, marketing requires both top-to-bottom and cross-functional cooperation within an organization. (Webster, 1988; Shapiro, 1988; Kohli and Jaworski, 1990; Dickson, 1992; Jaworski and Kohli, 1993; Sinkula, 1994). The contents of market orientation are introduced in several perspectives, e.g., knowledge, customer, culture, and behavior. The customer orientation perspective focusses on the importance of customer satisfaction. It defines market orientation as to "possess better skills in understanding and satisfying customers" (Day, 1990; Deshpande *et al.*, 1993). The cultural perspective considers market orientation as a corporate culture. A fit culture helps an organization maintain its capabilities. It defines market orientation as "the organization culture that efficiently coordinates the necessary behavior to create value for customers and, thus, produce superior performance for the business" (Deshpande *et al.*, 1993; Narver and Slater, 1990; Slater and Narver, 1995; Deshpande and Webster, 1989). And, the behavioral perspective focusses on marketing routines and processes of practicing marketing activities (Kohli and Jaworski, 1990; Day, 1990, 1994; Hunt and Morgan, 1995; Deshpande and Farley, 1999). It defines marketing as three interactive processes in which organizations generate, disseminate market intelligence (e.g. information about product, price, supplier, customer, competitor, regulation, and environment change, etc.) as well as make strategic responses to market intelligence (Kohli and Jaworski, 1990).

Following the viewpoint of organizational capability theory, market orientation has been generated, which is composed of many marketing routines and competencies. There, market orientation has emerged as a marketing capability that helps an enterprise utilizes its skills and knowledge to add value to the marketing domain (Kok and Biemans, 2009; Su *et al.*, 2009; Kirca *et al.*, 2005; Kapferer, 1992; Day, 1994; Kotler, 1988). In terms of market-oriented organizations, marketing capability is expected to integrate, build, and reconfigure internal and external resources, including tangible and intangible strategic orientations (Zhou and Li, 2010; Su *et al.*, 2009; Jesús *et al.*, 2011; Shin and Aiken, 2012). According to this line of argument, this study introduces a dependent variable, firm performance, which composes three attributes of market orientation and marketing capability, e.g., market knowledge creation,

customer satisfaction, and profit performance. Therefore, this research proposes the following hypotheses:

H1. The higher market orientation leads to better firm performance.

2.3 Marketing routine and competency

Capability, a kind of an ability of an object, which adapts to change, generates new knowledge, and continues to improve the performance. The capability is a complex bundle of competencies (a kind of routines) which refers to what an object knows or is capable of in terms of knowledge, skills, and attitude. Porter (1996) stated that core competence and key success factors are crucial components, but competitive advantage and profitability could only be accelerated through connection with other complementary activities that fulfill company mission. Following the viewpoint of organizational capability theory, market orientation has been generated, which is composed of many marketing routines and competencies. There, market orientation has emerged as a marketing capability that helps an enterprise utilizes its skills and knowledge to add value to the marketing domain (Kok and Biemans, 2009; Su *et al.*, 2009; Kirca *et al.*, 2005; Kapferer, 1992; Day, 1994; Kotler, 1988). In terms of market-oriented organizations, marketing capability is expected to integrate, build, and reconfigure internal and external resources, including tangible and intangible strategic orientations (Zhou and Li, 2010; Su *et al.*, 2009; Jesús *et al.*, 2011; Shin and Aiken, 2012).

Henderson and Cockburn (1994) pointed out that competitive capability stems from two types of routines: component competence and architectural competence. Component competence is local knowledge and skills, which are usually embedded, fundamental to solving day-to-day problems in an organization. It stems from an organization's experts or expertise (Amit and Schoemaker, 1993; Leonard, 1992; Leonard-Barton, 1992; Teece *et al.*, 1992). According to this viewpoint, marketing component competence could be constructed from three sources. First, the marketing experts with expertise, who have more "professional knowledge" enables effective judgment and interpretation of gathered market intelligence, which leads to understanding of potential customer needs and generation of knowledge. They can quickly make an accurate response to newly generated knowledge. Second, the senior marketing employees with a gradual accumulation of experience and knowledge (experiential know-how) have more "local knowledge" to discover the potential needs or problems of relevant customers. Third, the tacit knowledge, which is embedded in individual's education, talent, and social complexes relationship, is not easily understood, recognizable, formalized, or observable by outsiders (Haleblian and Kim, 2006; Meilich, 2005; Kikoski and Kikoski, 2004; Teece *et al.*, 1997; Nonaka, 1991; Polanyi, 1962). Henderson and Cockburn (1994) pointed that the locally embedded knowledge and skills may be a "competence" for a firm and a source of enduring competitive advantage. From the viewpoint of resource-based theory, the objects with more tacit knowledge, which have more "specific knowledge", are a valuable asset to a firm. Moreover, the competencies with tacit knowledge cannot be easily imitated by competitors, and thus serve as competitive advantages of the organization.

Architectural competence is the ability to incorporate old knowledge and skills as well as to create the new one (Itami and Roehl, 1987; Lawrence and Lorsch, 1967). It refers to a communication and interaction system, control (management) system or cultural value. A market-oriented organization stresses the importance of marketing architecture competence. A market-oriented organization could establish architectural competence by encouraging and maintaining efficient marketing information flow,

which enables external knowledge to enter the organization while allowing internal knowledge to spread effectively across boundaries within the firm. This concept agrees with several previous studies, particularly with that of Kohli and Jaworski (1990), who believed that generation and dissimilation, as well as effective response to market knowledge, is crucial to the success of market-oriented organizations. The present concept is likewise similar to that of a learning organization, which argues that a competitive organization is capable of learning and growing through incessant exploration of new knowledge and challenges to old assumptions (Nonaka and Takeuchi, 1995). New knowledge, which is the niche of a market-oriented organization, is absorbed while old processes and behavior modes are changed. This concept similarly agrees with that of the control, values, and culture of an organization (Narver and Slater, 1990).

A successful market-oriented organization should effectively use its component competence to gather market knowledge, and smoothly operate its architecture competence to create correct market responses. Crucial to the development of superior marketing capabilities (Henderson and Cockburn, 1994; Kohli and Jaworski, 1990), this study introduced component (educational degree, tenure) and architectural (management system, such as teamwork, apprenticeship, experiment, standardization, and shared language) competence to highlight marketing capabilities that benefit to marketing orientation and firm performance.

2.3.1 Educational degree, tenure, and tacit knowledge. Jensen and Meckling (1995) believed that knowledge storage, processing, deliverance, and receipt all acquire costs because of the limitations of human mental and sensory faculties. The cost of transferring information depends on the nature of the knowledge. The value is lowest for general knowledge, which is easily observable, and highest for specific knowledge, which is not easily observable or transferable. Component competence represents knowledge stored in an organization. An organization with more knowledge and experience means that it has stronger component competence. An organization must first possess a significant amount of marketing-related knowledge in a wider scope (such as the understanding of its market and customer needs) to gain superior marketing capabilities.

Marketers with a higher marketing educational degree represent more professional training and market knowledge. Long employee tenure means accumulation of prior "learning by doing" experience by the firm. If the marketing staff has worked in the company for a long time, these employees have better marketing understanding and experience, which generates more experiential know-how regarding marketing.

Human assets with specific knowledge, skills, or personal relationships are special forms of strategic assets that are uniquely available in a given firm (Amit and Schoemaker, 1993; Coff, 1997). As a result of long-term interaction and learning between employees and the managerial system, the special skills, experiences, and social relationships of employees represent tacit knowledge, which cannot be easily delivered, shared, duplicated, or imitated. Therefore, this research proposes the following hypotheses:

H2a. The higher of educational degrees of marketing staff leads to better market orientation.

H2b. The more tenure of marketing staff leads to better market orientation.

H2c. The more tacit knowledge leads to better market orientation.

H3a. The higher of educational degrees of marketing staff leads to better firm performance.

H3b. The more tenure of marketing staff leads to better firm performance.

H3c. The more tacit knowledge leads to better firm performance.

2.3.2 Teamwork. As market orientation considers marketing as something that involves the entire organization, an emphasis is placed on market intelligence that may come from any functions of an organization (Day, 1994). Architectural competence of an organization springs from knowledge exchange among the members (Henderson and Cockburn, 1994). Nonaka and Takeuchi (1995) proposed four steps of a knowledge spiral, in which different knowledge in an organization can be combined for the purpose of growth and innovation. Teamwork, a kind of organizational structure, does substantially facilitate creativity processes and enhance efficiency (Sumanski *et al.*, 2007; Gupta, 2002). By establishing teamwork and working together, labor and management can enrich employees' work, improve product quality, increase capacity, and lower costs, e.g., Toyota (Fujimoto and Roehl, 2000). Deliberate "overlap" of members' tasks facilitate knowledge creation in the organization. Assigning members into a specific task group is a form of deliberate overlap that helps people communicate and share knowledge with each other. Therefore, this research proposes *H4a* and *H5a*:

H4a. The higher degree of marketing teamwork leads to better market orientation.

H5a. The higher degree of marketing teamwork leads to better firm performance.

2.3.3 Apprenticeship. A smooth marketing routine requires its participants to have the necessary knowledge to perform the tasks. The tasks often involve knowledge that cannot be delivered by language or tacit knowledge. Thus, an organization must know how to deliver and spread tacit knowledge to employ market knowledge effectively. As Nelson and Winter (1982) pointed out, to remember by doing is a means of better knowledge deliverance and the only effective means when knowledge is tacit. Drucker (1993) likewise pointed out that the skills that we remember by doing cannot be expressed in writing or speaking, and that the only way to learn skills is through observation and experience. Remembering by doing is what apprenticeship stresses. Apprenticeship is a training method that involves both the observation of apprentices on their master's work and obtaining guidance from their master when they repeat the task. Therefore, this research proposes *H4b* and *H5b*:

H4b. The higher degree of establishing apprenticeship among marketing staff leads to better market orientation.

H5b. The higher degree of establishing apprenticeship among marketing staff leads to better firm performance.

2.3.4 Experiment. The most fruitful learning comes from direct experience since the tacit knowledge cannot be easily communicated. For example, Japanese managers stress the importance of direct experience and trial-and-error (Nonaka and Takeuchi, 1995). At Hewlett-Packard, market survey involves three phases, namely, intelligence, testing, and tracking. The importance of an experiment is highlighted in the research field.

Implementing creative ideas on a small-scale has two advantages. First, an experiment not only lowers the rate of failed execution but also enhances the possibility of realization. The lower risk could reduce innovation cost. Second, the experiment could generate more knowledge or even skills that are necessary for innovation. Even when an experiment fails, the results of the process might lead to the next innovation (Fujimoto and Roehl, 2000). After being examined and refined in the experiment, old knowledge brings about new knowledge for the organization and thereby increases knowledge and skill. Therefore, this research proposes *H4c* and *H5c*:

H4c. The higher degree of establishing small-scaled experiments to assess creative proposals leads to better market orientation.

H5c. The higher degree of establishing small-scaled experiments to assess creative proposals leads to better firm performance.

2.3.5 Standardization. Organization memory relies on its routines, of which the smoothness relies on communication and coordination (Nelson and Winter, 1982). Market intelligence is defined as information that is gathered and analyzed for determining market opportunity, market penetration strategy, and market development metrics (Cornish, 1997). Standardized procedures ensure a smooth routine by providing clearly defined steps and responsibilities of the involved employees as well as facilitating coordination within the processes.

According to Kohli and Jaworski (1990), a market-oriented organization has three procedures/routines regarding intelligence, namely, generation/collection, dissemination, and responsiveness. Through standardization, intelligence generation would be defined clearly by a set of explicit procedures. With a standardized procedure for members to follow, an organization could improve their overall intelligence generation. Standardization provides stable and effective channels and methods for intelligence to disseminate. Senge (1990) argued that systems thinking are useful for describing a vast array of interrelationships and patterns of change. Given that members of an organization would clearly know where to obtain any necessary information, knowledge thereby spreads better in the organization. Intelligence, such as market trends and customer needs, would be fully recognized. Similarly, standardization helps members to become responsive (such as plan and carry out projects) after they receive market intelligence. With coordination among procedures enhanced by standardization, responsiveness/execution efficiency would be achieved. Therefore, this research proposes *H4d* and *H5d*:

H4d. The higher degree of establishing standardized procedures in market intelligence generation, dissemination, and responsive leads to better market orientation.

H5d. The higher degree of establishing standardized procedures in market intelligence generation, dissemination, and responsive leads to better firm performance.

2.3.6 Shared language. Communication in an organization is not achieved entirely by day-to-day language. Rather, communication likely involves on-sight judgment and professional knowledge. Kohli and Jaworski (1990) indicated the importance of informal communication, and pointed out that the significance of informal channels is widely recognized in business despite scarce discussion in the literature. Nonaka and Takeuchi (1995) believed that new

knowledge can be created through a knowledge spiral in which different knowledge is socialized, externalized, combined, and then internalized. The spiral would be improved with the use of formal and informal occasions.

In this sense, a shared language used among organization members helps them communicate and coordinate (Nelson and Winter, 1982). This language is a means to communicate based on marketing science and thus, the notion of market orientation is no longer limited to the marketing staff. Rather, non-marketing staff likewise becomes fully aware of the notion because satisfying customer needs is the concern of the entire organization (Day, 1994). Through basic marketing training, the non-marketing staff would be able to understand the rationale behind the ideas of the marketing staff. With such fundamental consensus, communication and coordination between the two staffs are facilitated, and knowledge and information exchanged. Therefore, this research proposes *H4e* and *H5e*:

H4e. The higher degree of giving written market information and market training to non-marketing staff leads to better market orientation.

H5e. The higher degree of giving written market information and market training to non-marketing staff leads to better firm performance.

2.3.7 Autonomy. Hackman (1983) defined autonomy as the amount of freedom and discretion an individual has in carrying out assigned tasks. Autonomy refers to the degree to which one may make significant decisions without the consent of others and can be treated as individual autonomy or organizational autonomy (Brock, 2003). In maximizing the performance, decision makers usually deliberately seek out knowledge through correct assignments (Jensen and Meckling, 1995). By knowledge conversion, innovation would be generated smoothly if an organization gives more autonomy to members (Nonaka and Takeuchi, 1995). Allowing staffs volunteered for the job and to think how to meet the needs of relative customers enhance the innovation capability (Langfred, 2005; Wageman, 2001). Autonomy is related to many variables crucial to organizational effectiveness, and plays a positive role to promote staff's motivation which is related with turnover outcome (Barnabas and Mekoth, 2010; Langfred, 2007; Osborn *et al.*, 1980; Porter *et al.*, 1975; Robins *et al.*, 2002; Hackman and Oldham, 1976). Therefore, this research proposes the following hypotheses:

H4f. The higher degree of delegation to marketing staff leads to better market orientation.

H5f. The higher degree of delegation to marketing staff leads to better market orientation.

Figure 1 presents the conceptual framework of this research.

3. Method

3.1 Data and sample

The data were collected from two kinds of surveys, print and web site online. To enhance the practicability and comprehension of the surveys, we targeted the companies with a marketing department, and whose marketing executives or product managers were chosen as the survey respondents. Printed surveys were sent to 200 randomly chosen marketing executives or product managers registered on 104 Job Bank, an online human resources service. Through an in-person web site, 200 students in the executive master of

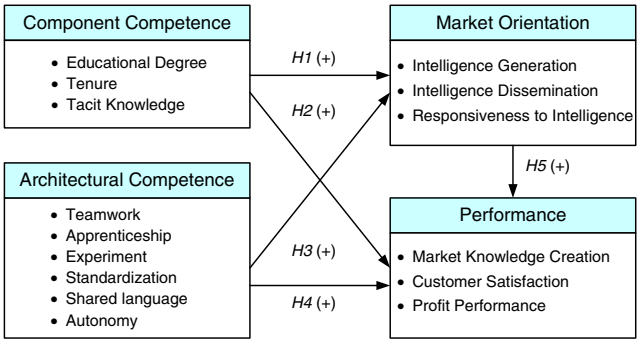

Figure 1. Conceptual framework

business administration (EMBA) program at National Taiwan University of Science and Technology were invited to participate in the survey.

A survey letter was sent to each respondent. For improving the response rate, a reminder letter was sent to the respondent who has not response after seven days. Of the 200 mailed surveys, 32 valid copies replied. It is about 16 percent response rate. On the other hand, 73 web-based surveys were collected from the 200 EMBA students. The response rate is about 36.5 percent. The characteristics of samples are listed in Table I.

3.2 Measures

All of the variables and questionnaire used in this study were chosen and developed from the theories of organizational capability (Nelson and Winter, 1982), market orientation (Day, 1990; Kohli and Jaworski, 1990), and knowledge creation (Nonaka and Takeuchi, 1995). Table II presents the measurements of variables of this study.

3.2.1 Dependent variable: market orientation, firm performance. Market orientation (Y_1) was measured using three items adapted from Kohli and Jaworski (1990).

Item	Sample	Item	Sample
Industry		*Capital (NTD, billion)*	
Computer	15	< 0.1	37
Electronics	11	0.1-0.5	19
Communication and software	11	0.5-1	9
Food and retailing	15	1-10	20
Manufacture	12	> 10	20
Banking and insurance	9		
Medicine	8		
Education	7		
Others	17		
Educational degree (master, %)		*Tenure (year)*	
< 20	45	< 2	14
20-40	19	3-5	34
40-60	14	6-10	23
60-80	14	11-15	10
> 80	13	16	24

Note: Samples ($n = 105$)

Table I. Samples of the study

Variable	Measurement
Market orientation, performance	
Market orientation (Y_1)	Compared with main competitors, market orientation (e.g. collecting and disseminating intelligence and responsiveness to intelligence) of the company is: worst, worse, the same, better, or excellent
Performance (Y_2)	Compared with main competitors, firm performance (e.g. market knowledge creation, customer satisfaction, and profit performance) of the company are: worst, worse, the same, better, or excellent
Component competence	
Educational degree (X_{11})	The level of master's degree of marketing staff
Tenure (X_{12})	The level of average seniority of marketing staff
Tacit knowledge (X_{13})	The market knowledge of the company is complex and comprehensive. It is difficult to understand, recognize, formalize, and transfer
Architectural competence	
Teamwork (X_{21})	Marketing staff are appointed to task groups as teamwork. They are encouraged to participate in team, and assigned tasks appropriately
Apprenticeship (X_{22})	The company establishes apprenticeship among marketing staff. The company values and constructs the apprenticeship to deliver professional knowledge and experiential know-how
Experiment (X_{23})	The company carries out small-scaled experiments on creative ideas to assess the feasibility. New knowledge created during the process leads to further revision, and the revised ideas undergo successful small-scaled experiments before being commercialized in a large scale
Standardization (X_{24})	The company establishes standardized procedures in market intelligence generation, dissemination, and responsiveness
Shared language (X_{25})	The company regularly provides written market information and training programs about marketing to non-marketing staff
Autonomy (X_{26})	The company delegates the decision-making right to staff. The staff may make significant decisions without the consent of others and can be treated as individual autonomy or organizational autonomy

Table II.
Measurement of variables

The respondents indicated how well their firms generate, disseminate the market intelligence, and make strategic responsiveness to market intelligence. Three items were measured on five-point Likert scales, 1 represents "worst" and 5 represents "excellent." From a full view, company performance comprises several constructs (Schlosser and McNaughton, 2004; Walker and Ruekert, 1987; Ruekert, 1992; Kohli *et al.*, 1993; Kaplan and Norton, 1992). Kotler (1988) provided three main definitions of marketing, namely, customer focus, coordinated marketing, and profitability. From this viewpoint, firm performance (Y_2) was measured using three items: market orientation, customer satisfaction, and profit performance. The respondents rated their firm performance on market orientation, customer satisfaction, and profit performance relative to their main competitors. The items were measured on five-point Likert scales. Compared with main competitors, 1 represents "worst" and 5 represents "excellent" to find the relationship between market orientation and firm performance, a simple model (Model 1) was introduced in Equation (1). The two variables were taken by a natural logarithmic conversion for enhancing the model fit and avoiding nonlinear problems:

$$\ln Y_2 = a_0 + b_2 \ln Y_1 + \varepsilon_1 \quad (1)$$

3.2.2 Independent variables: marketing competency. As mentioned, this study develops a main model to examine the effects of marketing competence on market orientation and firm performance. According to capability theory, all the independent variables were measured from the concept of Nelson and Winter (1982) and Henderson and Cockburn (1994). For choosing the proper variables, the opinions of professional experts were also included. There are three variables of component competence (educational degree, tenure, and tacit knowledge) and six variables of architectural competence (teamwork, apprenticeship, experiment, standardization, shared language, and autonomy) used as independent variables. Equation (2) presents the model (Model 2) which examines the impact of marketing competencies on market orientation. As the same way, Equation (3) presents the model (Model 3) which examines the impact of marketing competencies on firm performance. The variables of architecture competence and tacit knowledge are measured on five-point Likert scales, as 1 and 5 represent "strongly disagree" and "strongly agree", respectively. To enhance the fit of models and avoid nonlinear problems between the variables, we take the natural logarithmic conversion for all variables:

$$\ln Y_1 = a_0 + a_1 \ln X_{11} + a_2 \ln X_{12} + a_3 \ln X_{13} + a_4 \ln X_{21} + a_5 \ln X_{22} + a_6 \ln X_{23} + a_7 \ln X_{24} + a_8 \ln X_{25} + a_9 \ln X_{26} + \varepsilon_2 \quad (2)$$

$$\ln Y_2 = a_0' + a_1' \ln X_{11} + a_2' \ln X_{12} + a_3' \ln X_{13} + a_4' \ln X_{21} + a_5' \ln X_{22} + a_6' \ln X_{23} + a_7' \ln X_{24} + a_8' \ln X_{25} + a_9' \ln X_{26} + \varepsilon_3 \quad (3)$$

4. Result and discussion

The validity of this study improved through scholars in the field of organization and strategy as well as marketing managers in the business. To examine the reliability, we utilize the Cronbach's α coefficient to test the internal consistency of variables that are measured. Agreed with a suggested standard of Nunnally (1978), the Cronbach's α coefficients for all variables exceed 0.7, which demonstrates an appropriate internal consistency. Table III presents the Cronbach's α coefficients, descriptive statistics, and correlation matrix of variables utilized in this study.

Consistent with the hypotheses of the model (marketing competence-market orientation), the dependent variable (market orientation) is significantly correlated with all independent variables (marketing competence) except educational degree and tenure: tacit knowledge ($r = 0.256$, $p < 0.01$), teamwork ($r = 0.348$, $p < 0.01$), apprenticeship ($r = 0.354$, $p < 0.01$), experiment ($r = 0.634$, $p < 0.01$), standardization ($r = 0.536$, $p < 0.01$), shared language ($r = 0.485$, $p < 0.01$), and autonomy ($r = 0.406$, $p < 0.01$). In addition to the educational degree, tenure, and autonomy, the other variables of marketing competence are correlated with each other except autonomy. Meanwhile, consistent with the hypotheses of the model (marketing competence-firm performance), the dependent variable (firm performance) is significantly correlated with all independent variables (marketing competence) except educational degree, tenure, and autonomy: tacit knowledge ($r = 0.203$, $p < 0.05$), teamwork ($r = 0.427$, $p < 0.01$), apprenticeship ($r = 0.318$, $p < 0.01$), experiment ($r = 0.534$, $p < 0.01$), standardization ($r = 0.3456$, $p < 0.01$), and shared language ($r = 0.364$, $p < 0.01$). In addition to the educational degree, tenure, and autonomy, the other variables of marketing competence are correlated with each other except autonomy.

Table III.
Cronbach's α coefficient, descriptive statistics, and correlation coefficients

Variable	Consistency[a]	1	2	3	4	5	6	7	8	9	10	
1. Performance	0.828	1										
2. Market orientation	0.802	0.518**	1									
3. Educational degree	–	0.131	0.028	1								
4. Tenure	–	0.010	0.033	−0.025	1							
5. Tacit knowledge	0.728	0.203*	0.256**	0.134	−0.006	1						
6. Teamwork	0.863	0.427**	0.348**	0.001	0.099	0.316**	1					
7. Apprenticeship	0.918	0.318**	0.354**	0.142	0.104	0.193*	0.351**	1				
8. Experiment	0.843	0.534**	0.634**	0.160	0.045	0.220*	0.370**	0.328**	1			
9. Standardization	0.803	0.345**	0.536**	0.142	0.017	0.190	0.461**	0.244*	0.553**	1		
10. Shared language	0.710	0.364**	0.485**	0.136	0.008	0.257**	0.339**	0.301**	0.474**	0.358**	1	
11. Autonomy	0.812	0.118	0.406**	0.114	−0.004	0.080	0.198*	0.099	0.180	0.144	0.078	1
Minimum	–	1.00	1.50	1.00	1.00	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	–	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Average	–	3.69	3.70	2.34	2.69	3.63	3.87	3.05	3.36	3.57	3.28	3.15
Standardized deviation	–	0.79	0.69	1.45	1.07	0.81	0.79	1.05	0.93	0.83	1.04	1.09

Notes: Correlation coefficients: *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

To further identify the net influence of the models, this study constructs a hierarchical OLS regression analysis to test the net influence of each marketing competence on market orientation (Model 2) and firm performance (Model 3), respectively.

Table IV contains the testing results of the regression models: market orientation-firm performance (Model 1) and marketing competences-market orientation (Model 2). The two regression models fit the data reasonably well as indicated by the strongly significant F-statistics ($p < 0.01$). In Model 1, the impact of market orientation on firm performance is strongly significant ($\beta = 0.518$, $p < 0.001$). This analysis indicates that the hypothesis, *H1*, which posits a positive relationship between market orientation and firm performance, is supported.

In Model 2, the impacts of some marketing competencies (experiment, standardization, shared language, and autonomy) on market orientation are strongly significant ($\beta = 0.337$, $p < 0.001$; $\beta = 0.226$, $p < 0.01$; $\beta = 0.191$, $p < 0.05$; $\beta = 0.30$, $p < 0.001$). The analysis indicates that *H4c*, *H4d*, *H4e*, and *H4f*, which posits positive relationships between marketing competence (experiment, standardization, shared language, and autonomy) and market orientation, are supported. Meanwhile, in the partial part (component competence-market orientation) of Model 2, the impact of tacit knowledge on market orientation is strongly significant ($\beta = 0.268$, $p < 0.01$). The analysis indicates that, *H2c*, which posits positive relationships between tacit knowledge and market orientation, is supported.

From the results of this model, there are two component competencies (educational degree, tenure) and two architectural competences (teamwork, and apprenticeship) insignificant. *H2a*, *H2b*, *H4a*, and *H4b* are not supported. Compared to the results of correlation analysis (see Table III), the relationships between two component competencies (educational degree and tenure) and market orientation, two architectural competencies (teamwork, and apprenticeship), and market orientation are insignificant and significant, respectively. For the two component competencies,

Variable	Market orientation (Model 2)			Performance (Model 1)
Market Orientation				0.518***
Component variable				
Educational degree	0.030		0.040	
Tenure	0.106		0.006	
Tacit knowledge	0.268**		0.028	
Architectural variable				
Teamwork		−0.050	−0.058	
Apprenticeship		0.114	0.112	
Experiment		0.340***	0.337***	
Standardization		0.229**	0.226**	
Shared language		0.201**	0.191*	
Autonomy		0.295***	0.300***	
R^2-value	0.084	0.579	0.601	0.268
Adj R^2-value	0.057	0.553	0.563	0.261
F-value	3.08*	22.46***	15.87***	37.786***

Notes: Ordinary least squares estimation; Standardized regression coefficients (β value): *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Table IV.
Regression analysis: prediction of market orientation, performance from market competence

from a resource-based point, whether the knowledge and skill are valuable or not, which depend on their specificity. Hence, the possible reasons may be that the sample data lack of specificity, or chosen by meaningless classification. On the other hand, the two architectural competencies are significantly correlated with the market orientation. Moreover, in Model 3, they have a positive relationship with firm performance. It means that there may be a complementary effect exists among the three dimensions of variables (marketing competence, market orientation, and firm performance). For market orientation and firm performance, teamwork and experiment are relative useful marketing competencies.

With the same method, Table V contains the testing results of the regression models: marketing competences-firm performance (Model 3). The regression model also fit the data reasonably well as indicated by the strongly significant F-statistics ($p < 0.01$). In Model 3, the impacts of two marketing competencies (teamwork, experiment) on firm performance are strongly significant ($\beta = 0.228$, $p < 0.05$; $\beta = 0.398$, $p < 0.001$). The analysis indicates that *H5a* and *H5c*, which posits positive relationships between marketing competencies (teamwork, experiment) and firm performance are supported. Meanwhile, in the partial part (apprenticeship-customer satisfaction) of Model 3, the impact of apprenticeship on customer satisfaction is significant ($\beta = 0.192$, $p < 0.05$). The analysis indicates that *H5b* that posits positive relationships between apprenticeship and customer satisfaction is supported.

From the results of this model, there are three component competencies (educational degree, tenure, and tacit knowledge) and three architectural competences (standardization, shared language, and autonomy) insignificant. *H3a*, *H3b*, *H3c*, *H5a*, *H5b*, and *H5c*, are not supported. As above mentioned, compared to the results of correlation analysis (see Table III), the three competencies (tacit knowledge, standardization, shared language) are significantly correlated with the market orientation. Hence, there also may be a complementary effect exists among them. They are still relative useful marketing competencies for firm performance and market orientation.

Variable	Performance (Model 3)	Knowledge creation	Customer satisfaction	Profit performance
Component variable				
Educational degree	0.022	0.004	0.005	0.033
Tenure	−0.040	0.038	−0.057	−0.092
Tacit knowledge	0.066	0.114	0.038	−0.003
Architectural variable				
Teamwork	0.228*	0.184*	0.285**	0.120
Apprenticeship	0.089	0.049	0.192*	−0.020
Experiment	0.398***	0.393***	0.298**	0.341**
Standardization	−0.044	0.009	−0.084	−0.059
Shared language	0.062	0.087	0.072	0.004
Autonomy	−0.008	−0.058	0.012	0.035
R^2-value	0.581	0.387	0.356	0.144
Adj R^2-value	0.541	0.319	0.297	0.082
F-value	14.64***	6.42***	5.87***	2.33*

Notes: Ordinary least squares estimation; Standardized regression coefficients (β value): *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Table V.
Regression analysis: prediction of performance from market competence

5. Conclusions and suggestions

Marketing competencies, which help to drive the generation, dissemination, and responsiveness of marketing intelligence, are the primary composition of market orientation. From the framework of marketing mechanism, this study concludes the following results. First, market orientation has a positive effect on firm performance. Second, retaining employees with professional, local, and specific knowledge enhance knowledge stock and hence benefits market orientation. Third, firms with tacit knowledge improve market orientation. Fourth, the small-scale experiment enhances market orientation and benefits firm performance. Fifth, standardizing the market intelligence process benefits market orientation. Sixth, regularly providing marketing information and training programs to non-marketing staff increase co-understanding about marketing among marketing and non-marketing staffs. It in turn benefits market orientation. Seventh, delegating appropriate decision-making right to staff benefits market orientation. Eighth, assigning staff into teamwork enhances knowledge transferring and benefit firm performance. Ninth, establishing apprenticeship among the staff to deliver experiential know-how would benefit customer satisfaction.

5.1 Managerial implications

From the viewpoint of routine, organization capability includes component and architectural competencies. The results of this study support the findings of Henderson and Cockburn (1994) as well as Henderson and Clark (1990) that firms with competence will raise its performance. This research also supports the viewpoint of market orientation: the firm performance depends on market knowledge creation, customer satisfaction, and profit performance. This study applies the theory of organizational routine (Nelson and Winter 1982) to market orientation analysis. The concept of organizational routine enables us not only to see the insight of the operation process of market intelligence but also to gain fruitful management implications. For business practitioners, a company can enhance its market orientation ability by taking marketing experiment, standardizing the process of market intelligence, sharing the marketing information and knowledge with non-marketing employees, and decentralizing the decision right in an organization. The above suggestions for managers also have theoretical implications for future research on knowledge management in marketing management field.

Furthermore, a company can raise its financial or non-financial performance by establishing an efficient management system with a good teamwork, apprenticeship, and small-scale risk-taking experiment. Finally, this research combines three theories, the organizational routine, firm competence, and market orientation to reach a more completed model that helps us understanding the complicated process of market intelligence and its effect on firm performance.

5.2 Limitation and suggestions

From a dynamic capability perspective, this research constructs the two kinds of marketing competences and examines their effect on market orientation and firm performance. One important limitation of our analysis is that we did not consider the industrial impact on the effectiveness of firm's marketing competencies. Future research can explore the industrial effect on the relationship between marketing competence and firm performance.

References

Amit, R. and Schoemaker, P.J. (1993), "Strategic assets and organizational rent", *Strategic Management Journal*, Vol. 14 No. 1, pp. 33-46.

Barnabas, N. and Mekoth, N. (2010), "Autonomy, market orientation and performance in Indian retail banking", *Asia Pacific Journal of Marketing and Logistics*, Vol. 22 No. 3, pp. 330-350.

Blau, P.M. (1955), *The Dynamics of Bureaucracy*, University of Chicago Press, Chicago, IL.

Bourdieu, P. (1977), *Outline of a Theory of Practice*, Cambridge University Press, New York, NY.

Bourdieu, P. (1990), *The Logic of Practice*, Stanford University Press, Stanford, CA.

Brock, D.M. (2003), "Autonomy of individuals and organizations: towards a strategy research agenda", *International Journal of Business*, Vol. 2 No. 1, pp. 57-73.

Coff, R.W. (1997), "Human assets and management dilemmas: coping with hazards on the road to resource-based theory", *Academy of Management Review*, Vol. 22 No. 2, pp. 374-402.

Cornish, S.L. (1997), "Product innovation and the spatial dynamics of market intelligence: does proximity to markets matter?", *Economic Geography*, Vol. 73 No. 2, pp. 143-165.

Day, G.S. (1990), *Market-Driven Strategy: Process for Creating Value*, The Free Press, New York, NY.

Day, G.S. (1994), "The capabilities of market-driven organizations", *Journal of Marketing*, Vol. 58 No. 4, pp. 37-52.

Deshpande, R. and Farley, J.U. (1999), "Understanding market orientation: a prospectively designed meta-analysis of three market orientation scales", in Deshpande, R. (Ed.), *Developing a Market Orientation*, Sage Publications, Thousand Oaks, CA, pp. 217-235.

Deshpande, R. and Webster, F.E. (1989), "Organizational culture and marketing: defining the research agenda", *Journal of Marketing*, Vol. 53 No. 1, pp. 3-15.

Deshpande, R., Farley, J.U. and Webster, F.E. (1993), "Corporate culture, customer orientation, and innovativeness in Japanese firms: a quadrad analysis", *Journal of Marketing*, Vol. 57 No. 1, pp. 23-37.

Dickson, P.R. (1992), "Toward A General Theory of Competitive Rationalit", *Journal of Marketing*, Vol. 53 No. 1, pp. 3-15.

Dierckx, J. and Cool, K. (1989), "Asset stock accumulation and sustainability of competitive advantage", *Management Science*, Vol. 35 No. 12, pp. 1504-1511.

Drucker, P. (1993), *Post-Capitalist Society*, HarperCollins Press, London.

Feldman, M.S. and Pentland, B.T. (2003), "Reconceptualizing organizational routines as a source of flexibility and change", *Administrative Science Quarterly*, Vol. 48 No. 1, pp. 94-118.

Fujimoto, T. and Roehl, T. (2000), "The evolution of a manufacturing system at Toyota", *The Academy of Management Review*, Vol. 25 No. 2, pp. 439-441.

Giddens, A. (1984), *The Constitution of Society*, University of California Press, Berkeley, CA.

Gupta, R.K. (2002), "Prospects of effective teamwork in India: some cautionary conjectures from a cross-cultural perspective", *Indian Journal of Industrial Relations*, Vol. 38 No. 2, pp. 211-229.

Hackman, J.R. (1983), *Designing Work for Individuals and for Groups*, McGraw-Hill Press, New York.

Hackman, J.R. and Oldham, G.R. (1976), "Motivation through the design of work: test of a theory", *Organizational Behavior and Human Performance*, Vol. 16, pp. 250-279.

Haleblian, J. and Kim, J. (2006), "The influence of acquisition experience and performance on acquisition behavior: evidence from the U.S. commercial banking industry", *Academy of Management Journal*, Vol. 49 No. 2, pp. 357-370.

Henderson, R. and Cockburn, I. (1994), "Measuring competence? Exploring firm effects in pharmaceutical research", *Strategic Management Journal*, Vol. 15 No. S1, pp. 63-84.

Henderson, R.M. and Clark, K.B. (1990), "Architectural innovation: the reconfiguration of existing product technologies and the failure of established firms", *Administrative Science Quarterly*, Vol. 35 No. 1, pp. 9-30.

Hunt, S.D. and Morgan, R.M. (1995), "The comparative advantage theory of competition", *Journal of Marketing*, Vol. 59 No. 1, pp. 1-15.

Itami, H. and Roehl, T. (1987), *Mobilizing Invisible Assets*, Harvard University Press, Cambridge, MA.

Jaworski, B. and Kohli, A. (1993), "Market orientation: antecedents and consequences", *Journal of Marketing*, Vol. 57 No. 3, pp. 53-70.

Jensen, M. and Meckling, W. (1995), "Specific and general knowledge and organizational structure", *Journal of Applied Corporate Finance*, Vol. 3 No. 4, pp. 305-360.

Jesús, C.F., Florin, J., Perez, L. and Whitelock, J. (2011), "Inter-firm market orientation as antecedent of knowledge transfer, innovation and value creation in networks", *Management Decision*, Vol. 49 No. 3, pp. 444-467.

Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard-measures that drive performance", *Harvard Business Review*, Vol. 70 No. 1, pp. 71-79.

Kapferer, J.N. (1992), *Strategic Brand Management*, The Free Press, New York, NY.

Kikoski, J.F. and Kikoski, C.K. (2004), *The Inquiring Organization: Tacit Knowledge, Conversation, and Knowledge Creation: Skills for 21st-Century Organizations*, Greenwood Publishing Group Press, CA.

Kirca, A.H., Jayachandran, S. and Bearden, W.O. (2005), "Market orientation: a meta-analytic review and assessment of its antecedents and impact on performance", *Journal of Marketing*, Vol. 69 No. 2, pp. 24-41.

Kohli, A.K. and Jaworski, B.J. (1990), "Market orientation: the construct, research propositions, and managerial implications", *Journal of Marketing*, Vol. 54 No. 2, April, pp. 1-18.

Kohli, A.K., Jaworski, B.J. and Kumar, A. (1993), "A measure of market orientation", *Journal of Marketing Research*, Vol. 30 No. 4, pp. 467-477.

Kok, R. and Biemans, W. (2009), "Creating a market-oriented product innovation process: a contingency approach", *Technovation*, Vol. 29 No. 8, pp. 17-526.

Kotler, P. (1988), *Marketing Management*, Prentice-Hall Inc., Englewood Cliffs, NJ.

Langfred, C.W. (2005), "Autonomy and performance in teams: the multilevel moderating effect of task interdependence", *Journal of Management*, Vol. 31 No. 4, pp. 513-529.

Langfred, C.W. (2007), "The downside of self-management: a longitudinal study of the effects of conflict on trust, autonomy and task interdependence in self-managing teams", *Academy of Management Journal*, Vol. 50 No. 4, pp. 885-900.

Lawrence, P.R. and Lorsch, J.W. (1967), *Organization and Environment: Managing Differentiation and Integration*, Irwin, Homewood, IL.

Leonard-Barton, D. (1992), "Core capabilities and core rigidities: a paradox in managing new product development", *Strategic Management Journal*, Vol. 13 No. 5, pp. 111-125.

Leonard, D.A. (1992), "Core capabilities and core rigidities: a paradox in managing new product development", *Strategic Management Journal*, Vol. 13 No. 5, pp. 111-126.

Meilich, O. (2005), "Are formalization and human asset specificity mutually exclusive? – a learning bureaucracy perspective", *Journal of American Academy of Business*, Vol. 6 No. 1, pp. 161-169.

Menguc, B. and Auh, S. (2006), "Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness", *Journal of the Academy of Marketing Science*, Vol. 34 No. 1, pp. 63-73.

Morgan, N.A., Vorhies, D.W. and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal*, Vol. 30 No. 8, pp. 909-920.

Narver, J.C. and Slater, S.F. (1990), "The effect of a marketing orientation on business profitability", *Journal of Marketing*, Vol. 54 No. 4, pp. 20-35.

Nelson, R.R. and Winter, S.G. (1982), *An Evolutionary Theory of Economic Change*, Harvard University Press, Cambridge MA.

Ngo, L.V. (2012), "Performance implications of market orientation marketing resources, and marketing capabilities", *Journal of Marketing Management*, Vol. 28 Nos 1/2, pp. 173-187.

Nonaka, I. (1991), "The knowledge creating company", *Harvard Business Review*, Vol. 69 No. 6, pp. 96-104.

Nonaka, I. and Takeuchi, H. (1995), *The Knowledge-Creating Company*, Oxford University Press, NY.

Nunnally, J.C. (1978), *Psychometric theory*, 2nd ed., McGraw-Hill Press, New York, NY.

Osborn, R.N., Hunt, J. and Lauch, L. (1980), *Organization Theory: An Integrated Approach*, Wiley Press, New York.

Polanyi, M. (1962), *Personal Knowledge: Towards a Post-Critical Philosophy*, 2nd ed., University of Chicago Press, Chicago, IL.

Porter, M.E. (1996), "What is strategy", *Harvard Business Review*, Vol. 74 No. 6, pp. 61-78.

Porter, L.W., Lawler, E.E. and Hackman, J.R. (1975), *Behavior in Organizations*, McGraw-Hill Press, New York.

Robins, J.A., Tallman, S. and Fladmoe-Lindquist, K. (2002), "Autonomy and dependence of international cooperative ventures: an exploration of the strategic performance of U.S. ventures in Mexico", *Strategic Management Journal*, Vol. 23 No. 10, pp. 881-901.

Ruekert, R.W. (1992), "Developing a market orientation: an organizational strategy perspective", *International Journal of Research in Marketing*, Vol. 9 No. 3, pp. 225-245.

Ryle, G. (1949), *The Concept of Mind*, Hutchinson House, London.

Schlosser, F.K. and McNaughton, R.B. (2004), *Building Competitive Advantage upon Market Orientation: Constructive Criticisms and a Strategic Solution*, ASAC, Department of Management Sciences, University of Waterloo, Waterloo.

Senge, P.M. (1990), *The Fifth Discipline*, Doubleday, New York, NY.

Shapiro, B.P. (1988), "What the hell is 'market orientated'", *Harvard Business Review*, Vol. 66 No. 4, pp. 119-125.

Shin, S. and Aiken, K.D. (2012), "The mediating role of marketing capability: evidence from Korean companies", *Asia Pacific Journal of Marketing and Logistics*, Vol. 24 No. 4, pp. 658-677.

Sinkula, J.M. (1994), "Marketing information processing and organizational learning", *Journal of Marketing*, Vol. 58 No. 1, pp. 35-45.

Slater, S.F. and Narver, J.C. (1995), "Market orientation and the learning organization", *Journal of Marketing*, Vol. 59 No. 3, pp. 63-74.

Su, Y., Tsang, E.W.K. and Peng, M.W. (2009), "How do internal capabilities and external partnerships affect innovativeness?", *Asia Pacific Journal of Marketing and Logistics*, Vol. 26 No. 2, pp. 309-331.

Sumanski, M.M., Kolenc, I. and Markic, M. (2007), "Teamwork and defining group structures", *Team Performance Management*, Vol. 13 Nos 3/4, pp. 102-116.

Taylor, C. (1993), "To follow a rule", in Calhoun, C., Lipuma, E. and Postone, M. (Eds), *Bourdieu: Critical Perspectives*, University of Chicago Press, Chicago, IL, pp. 45-60.

Teece, D.J., Pisano, G. and Shuen, A. (1992), *Dynamic Capabilities and Strategic Management*, Mimeo, Haas School of Business, University of California, Berkeley, CA.

Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-533.

Wageman, R. (2001), "How leaders foster self-managing team effectiveness: design choices versus hands-oncoaching", *Organization Science*, Vol. 12 No. 5, pp. 559-577.

Walker, O.C. and Ruekert, R.W. (1987), "Marketing's role in the Implementation of business strategies: a critical review and conceptual framework", *Journal of Marketing*, Vol. 51 No. 3, pp. 15-33.

Webster, F.E. (1988), "Rediscovering the marketing concept", *Business Horizons*, Vol. 31 No. 3, pp. 29-39.

Zhou, K.Z. and Li, C.B. (2010), "How strategic orientations influence the building of dynamic capability in emerging economies", *Journal of Business Research*, Vol. 63 No. 3, pp. 224-231.

Zimmerman, D. (1970), "The practicalities of rule use", in Douglas, J. (Ed.), *Understanding Everyday Life: Toward the Reconstruction of Sociological Knowledge*, Aldine, Chicago, IL, pp. 221-238.

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