

# **EXPORT MARKETING CAPABILITY AND FIRM PERFORMANCE IN THE CONTEXT OF MARKET ORIENTATION**

## **ABSTRACT**

A number of studies question the linear and over simplistic relationship between market orientation and firm performance positing that the dynamic capability generation ability of market orientation can be analyzed more effectively when it interacts with other firm-level factors such as innovativeness and organizational responsiveness. Drawing on the resource and the knowledge-based views, this study assumes firm level responsiveness of market knowledge as intricately linked to knowledge utilization at firm and market levels. We develop and empirically test a theoretical model that captures the market orientation-performance relationship by investigating the processes of knowledge dissemination and utilization of market knowledge and complementary resources of product advantage. We link the effects of knowledge dissemination and utilization of market knowledge and complementary resources of product advantage on export marketing capability. Further, our model, then investigates the direct link between export marketing capability and firm performance.

Our study extends the understanding that market orientation as an organizational capability when combined with other resources results in development of further organizational capabilities. We test our model on a sample of 100 firms in ICT industry from Denmark, Sweden, Finland, Australia, New Zealand, USA and UK.

Our findings provide significant support to the market knowledge acquisition and firm level inter-functional coordination relationship than the other constructs in our model. Product advantage is reveal as strongly linked to inter-functional knowledge dissemination. Further, the positive relationship between product advantage and architectural marketing capability indicate the complementary connection between knowledge dissemination at firm level. It can be concluded that for export ventures continuously acquiring market information knowledge, its internalization ad transformation into value offerings are significantly important.

## **1. INTRODUCTION**

The growing body of literature analyzing strategic assets and intangible organizational resources identifies that firms look abroad to exploit firm-specific intangible assets and to take advantage of market imperfections (Daekwan and Gary 2009; Hitt, Uhlenbruck, and Shimizu 2006; Peng 2001). Resource- and knowledge based studies view organizational knowledge base as key intangible resource with positive implications on firm performance and emphasize the use of organizational knowledge. These studies maintain that organizational knowledge when continually reconfigured to meet changing environmental conditions results in dynamic capabilities which inevitably enhance competitive advantage (Teece, Pisano and Shuen 1997).

Market orientation studies however, focus on the generation and dissemination of and responsiveness to market knowledge. By exploring the effects of organizational resources, capabilities and processes these studies view market orientation as one of several organizational capabilities that influences firm performance (Foley and Fahy 2009; Kirca, Jayachandran and Bearden 2005). A number of studies however question the linear and over simplistic relationship between market orientation and firm performance (Hult and Ketchen 2001; Grewal and Tansuhaj 2001; Narver and Slater 1994). These studies posit that the dynamic capability generation ability of market orientation can be analyzed more effectively when it interacts with other firm-level factors such as innovativeness and organizational responsiveness to name a few. Other studies in the field, however also suggest to examine factors internal to a firm from the contingencies of the market orientation-firm performance relationship (Ketchen, Hult, and Slater 2007; 2005; Menguc and Auh 2006).

On the basis that market orientation perspective focuses on the generation and dissemination of market knowledge, drawing on the resource and the knowledge-based views, we assume firm level responsiveness of market knowledge as intricately linked to knowledge utilization at firm and market levels. Our study extends the understanding that market orientation as an organizational capability when combined with other resources results in development of further organizational capabilities. The utilization of market knowledge may be linked to product advantages and export marketing capability development. Therefore, we develop and empirically test a theoretical model that captures the market orientation-performance relationship by investigating the processes of knowledge dissemination and utilization of market knowledge and complementary resources of product advantage. We link the effects of knowledge dissemination and utilization of market knowledge and complementary resources of product advantage on export marketing capability. Further, our model, then investigates the direct link between export marketing capability and firm performance.

Our study contributes in advancing the literature that investigates the market orientation-performance relationship by exploring the role of internal complementary resources to market orientation, and see how market orientation may produce greater improvement in firm performance when combined with internal complementary resources to create new dynamic capabilities (Ketchen, Hult, and Slater 2007; 2005; Menguc and Anuh 2006). However, in addition to internal complementary resources, our study also investigates organizational processes of knowledge dissemination and utilization as yet another organizational resource. Despite wide recognition of the organizational processes of knowledge dissemination (Ketchen, Hult, and Slater 2005; 2007), little research exist on how such processes ‘per se’ can be treated as a resource, and how market orientation resource may benefit by investing on knowledge generation and dissemination processes. In this way, we also contribute to the growing body of literature that examines market orientation-performance relationship in the context of resource based and the knowledge based views (Cavusgil, Sinkovics, Wu and Roath 2007; Cavusgil and Zou 1994; Ketchen, Hult, and Slater 2007; 2005; Menguc and Auh 2006; Morgan et al 2003).

The resource based view of the firm suggests that a firm achieves competitive advantage through the conversion of firm resources into capabilities (Yalcinkaya, Calantone and Griffith 2006; Teece, Pisano and Shuen 1997), and as noted by Day and Wensley (1988) and Hult and Ketchen (2001), market orientation is one of several organizational capabilities. However, the firm processes and resource combinations that firm’s use to convert market orientation resource into an organizational capability differ from firm to firm. We follow Jaworski and Kohli’s (1993) behavioural-based market orientation perspective and posit that the firm level processes of an export venture’s market information knowledge acquisition and its utilization in organization interact with internal complementary resources for converting market orientation resource into an organizational capability. Thus, consistent with the knowledge based view which posits that unless firm knowledge is continually reconfigured with new knowledge, it may not yield

competitive advantage, we consider knowledge residing at market level and organizational processes of market knowledge acquisition, integration and utilization significant to continual reconfiguration of organizational knowledge into export marketing capabilities (Luo 2000; Balabanis, Theodosiou and Katsikeas 2004), which consequently influence firm performance.

Although several different kinds of export marketing capabilities have been analyzed in literature in the context of market orientation studies, we adapt the concept of architectural marketing capability presented by Morgan, Katsikeas, Vohries and Zou (2003). Architectural marketing capabilities are defined as the processes by which firms plan appropriate combinations of available knowledge and other resources to deploy into their market place, execute these planned resource deployments, and transform them into realized value offerings for target markets (Morgan et al 2003). Consistent to the approach we adopt for our model, their study also collectively analyzed organizational and the market-level knowledge relevant to marketing environment, and analyzed how market knowledge use relates to the development of capabilities; specifically architectural marketing capability and its association with export venture performance.

Morgan et al (2003) define an export venture's market knowledge as an information input to the venture's architectural marketing capability that helps to improve the quality of decision making. Market knowledge is helpful in guiding how venture's marketing planning capability should be designed and managed to align it with the requirements of the export venture's market environment. We consider knowledge about customers' needs as a specific kind of market knowledge that may facilitate the quality of the decision making concerning marketing activities in export market such as developing customized product for that market. Market knowledge about customers' needs is acquired either through direct experience or indirectly via supplier-distributor relationship. For firms operating in foreign markets through indirect exporting, the knowledge of customer preferences that local suppliers possess can be critical to create product

advantages. Therefore we focus on market knowledge acquisition processes between supplier and the firm operating in foreign countries by indirect exporting.

The paper is organized as follows: Section 2 presents a review of existing literature and develops hypotheses and a theoretical framework that emphasize internal complementary resources to market orientation. In section 3, we present research methodology including, data collection, characteristics of export sample, and data analysis. Section 4 presents the empirical results and a discussion of them. Section 5 presents the conclusion, limitations and implications for future research.

## **2. LITERATURE REVIEW**

### *2.1. Market knowledge acquisition and inter-functional coordination*

The deployment of market knowledge of an export venture and its influence on export marketing capabilities has been the subject of current interest in international business literature (Cavusgil, Sinkovics, Wu & Roath 2007; Balabanis et al 2004; Morgan et al. 2003). These studies link the ability of the firm to leverage or transfer export marketing capabilities across markets and the ability to constantly upgrade them using proper organizational learning routines with export venture performance. The degree of market orientation appears to be significantly different for firms from varying industries, depending on certain processes, systems and procedures which can limit a firm's ability to respond to necessary changes and collect market information (Jaworski and Kohli 1993). Narver and Slater (1990) maintain that market orientation is an organization's culture and desire to create a superior customer value that leads a firm to develop necessary behaviours and activities to create and maintain that culture.

The key idea supporting export venture performance in the resource and knowledge-based view relates exploiting the available firm-specific advantages in another location in a way that gives further firm-specific rewards (Peng 2001) to new product competitive advantage and

organizational capabilities. Peng and Wang (2000) assume that the tacit knowledge firms accumulate about their own firm-specific resources and strategic assets provide a surplus of tacit knowledge. Other studies also emphasize that when firms leverage such knowledge for strategic tasks (Mitchell, Smith, Seawright and Morse 2000); it is likely to provide them with a competitive advantage in foreign markets.

We also argue that architectural marketing capabilities enable firms to access the local innovations in foreign countries. As other firms enter foreign market, knowledge spillovers are expected to lead to opportunities for future organizational learning and growth (Peng and Wang 2000). However, only firms with an existing firm-specific advantage, due to their resources and capabilities, will be able to integrate and exploit the knowledge spillovers. The integration of knowledge depends on the user firm's capabilities; specifically the processes that allow the user firm to reconfigure reintegrate and transform its resources into new competencies (Teece et al. 1997). Thus, if a firm's knowledge acquisition and integration mechanisms are not developed, it will face problems in disseminating the market knowledge to different departments and consequently utilizing it for exploiting local innovations available. Thus, market entry and further expansion is pushed by firm-specific advantages but also pulled by the resources and capabilities available in foreign markets.

Knowledge without the right organizational mechanisms to transfer it into productive use is relatively worthless for firms (Grant 1996). Complementing Grant's argument, Morgan et al. (2003), emphasize that in order to attain export venture objectives, the market knowledge must be converted into organizational level capabilities that should allow the export venture to successfully adapt to its environment (Kogut and Zander 1992; Nonaka 1994). Morgan & Strong (1998) also attribute export venture performance to the firm's organizational structure and market information processing capabilities. They mention market knowledge processing capabilities as the mechanisms and processes firms use to transform market information into a

strategic resource. Similarly Leonidou and Theodosiou (2004) suggest that the aim of information acquisition for firms is to collect information for the purpose of detecting and/or solving a specific marketing problem. This is further supported by Yeoh (2005), who describes export information acquisition as the process involved in bringing information about the external environment into the boundary of the organization (Moorman 1995). The acquisition and utilization of knowledge requires firms to implement managerial processes to transfer and receive knowledge (Teece et al 1997; Eisenhardt and Martin 2000). Because knowledge acquired from the external environment must be utilized within the firm in order for it to be transformed into commercial use, firm-level knowledge coordination mechanisms are considered important in acquiring market information and disseminating it throughout the organization. We thus hypothesise:

H1: Market knowledge acquisition is positively related to firm level inter-functional coordination.

## 2.2. *Market knowledge and product advantage*

Within the perspective of market orientation, studies related to market knowledge acquisition acknowledge information as a key factor which influences a firm's export venture performance (McAuley 1993; Kohli and Jaworski 1990; Diamantopoulos and Souchon 1999; Narver and Slater 1996). We assume that the knowledge of customer needs affects product advantage outcomes only when utilized and is put to use within the firm (Day and Glazer 1994; Diamantopoulos 2003). Other studies also relate market knowledge acquisition and utilization processes of firms as crucial inputs to new product development (Day 1994; Nonaka and Takeuchi 1995). Nonaka and Takeuchi find that effective new product development processes involve continuous information sharing and utilization. They also support the idea that the way knowledge is used within a firm is a function of its organizational systems or processes.

Similarly, the relationship between new product development and market knowledge utilization and integration at the firm level has also been advanced and proposed in studies related to new product innovation (Cooper 1983; Cooper and Kleinschmidt 1990; 1993; Nightingale

2000). These studies suggested a user-producer interaction and integration of the acquired knowledge within firm-level practices to create superior value-oriented products. These studies also highlighted the performance differences between firms that integrate functional disciplines and those having a sequential innovation process. In line with market orientation studies, the objective behind understanding customer needs is to ensure the final product matches customer requirements.

Previous research suggests that three types of market information processes: acquisition, transmission and utilization determine the effective timeliness of new product development. Thus, the efficient utilization of market knowledge for new product development purposes may bring timely products to the market. Information transmission processes would speed up the new product development process, as it shows that needed information has been transferred to the relevant departments. Moreover, the firms have been able to cut down on overlapping between the new product developmental stages and overload of multifunctional teams (Moorman 1995; Clark and Fujimoto 1991; Nonaka 1990).

Cavusgil and Li (1999) describe the relationship between new product development and market knowledge through marketing-R&D interface. Marketing-R&D interface refers to the process in which marketing and R&D functions communicate and cooperate in new product development for export markets. Cavusgil and Li (1999) also acknowledge that close interfacing improves the prospects of new product acceptance in a foreign market. However, in their opinion a lack of integration increases the degree of mismatch between customer needs and the product that firms develop. The other idea behind close marketing-R&D interface is assumed to enable a firm to see through its own capabilities of new product development, such as technological capability, more than the competition is able to. Other authors present a very similar notion emphasizing that market knowledge and its utilization positively affect new product advantage (Song and Dyer 1995; Souder 1988). From the above it can be proposed:

H2: Firm level inter-functional coordination is positively related to product advantages.

### 2.3. *Market knowledge, product advantage and export marketing capability*

Cavusgil and Zou (1994) identified that an export marketing strategy is the means by which a firm responds to the interplay of internal and external forces to meet the objectives of the export venture. The export marketing strategy broadly includes all aspects of the conventional marketing plan, including product, promotion, pricing and distribution. In their view, the choice of the export marketing strategy is profoundly influenced by the knowledge base of an organization. Specifically, this refers to the capabilities which enable a firm to execute a marketing strategy, such as marketing planning and implementation capability. The relevant skills and knowledge used in the implementation of the marketing strategy are significant to performance in foreign markets. Therefore, marketing related skills and prior experience enables a firm to identify specific characteristics of that export market, to develop an appropriate marketing strategy and to execute it effectively. Thus export marketing capabilities are determined by acquisition, sharing and use of market knowledge acquired and its transformation at firm level into value offerings (Ghauri, Hadjikhani and Johanson 2005).

Further, architectural marketing capability and product competitive advantage are inter-related. For example firms gain product competitive advantage when market information knowledge is shared inside the firm and is utilized into value added for customers and only then firms will be able to get benefits from export marketing capabilities (Narver, Slater and MacLachlan 2004). The information processing systems related to product development affect product outcomes, which in turn affects architectural marketing capability in export ventures. Further, informational sharing knowledge is also seen as affecting new product creativity. New product creativity is the degree to which a new product is novel and to which its introduction changes marketing thinking and practice (Wilton and Myers 1986). Market orientation studies,

however, emphasize that the aim of acquiring the customers' knowledge is not only to produce a new product for the market. Rather, through the use of this knowledge firms change and restructure certain procedures related to marketing. We thus propose:

H3: Market information knowledge acquisition is positively related to architectural marketing capabilities.

And

H4: Product advantage is positively related to architectural marketing capabilities.

#### *2.4. Export marketing capability and firm performance*

Day (1994) identifies informational knowledge as the key sources of market competence in market-driven organizations. A capability to acquire market knowledge and its utilization determines how well the firm is equipped to continuously sense changes in its market and to anticipate the responses to marketing actions. Morgan et al. (2003) however, identify through a survey of 445 companies in China and UK, that the marketing capability of an exporting firm is one of the primary mechanisms by which accumulated experiential knowledge can be utilized to better adapt to their market environment. In the context of export ventures, to put planning into actions, firms need to adapt to the existing market, change or upgrade previous tasks not suitable to a given foreign market and allocate resources required for the implementation of the planned strategy (Morgan et al 2003). Thus architectural marketing capability is helpful in implementing the planned marketing strategy. (Hooley, Lynch and Jobber 1992) mentioning that marketing capabilities are manifested at organizational culture, strategy and operational implementation levels further assert that, at the operational level marketing capabilities are significantly important in implementing the specific marketing operations, tactics and activities that are deployed to achieve the desired competitive positioning. The market information knowledge acquisition, its

internalization and transformation into a product value offering can be few of such marketing tactics and activities. These tactics and activities help achieve a sustainable competitive advantage in foreign markets (Hooley et al 1999). Day (1994) also asserts that superior marketing capability at operational levels will result in superior performance. We therefore, suggest

H5: Architectural marketing capability of an export venture is positively related to export venture performance.

Figure 1 presents the conceptual framework for our study. Our model primarily investigates the effects of interaction between market level knowledge acquisition and firm level processes of market knowledge dissemination firm resource of product advantage and export marketing capability. Then it links export marketing capability with firm performance.

These hypotheses are shown in the following figure.

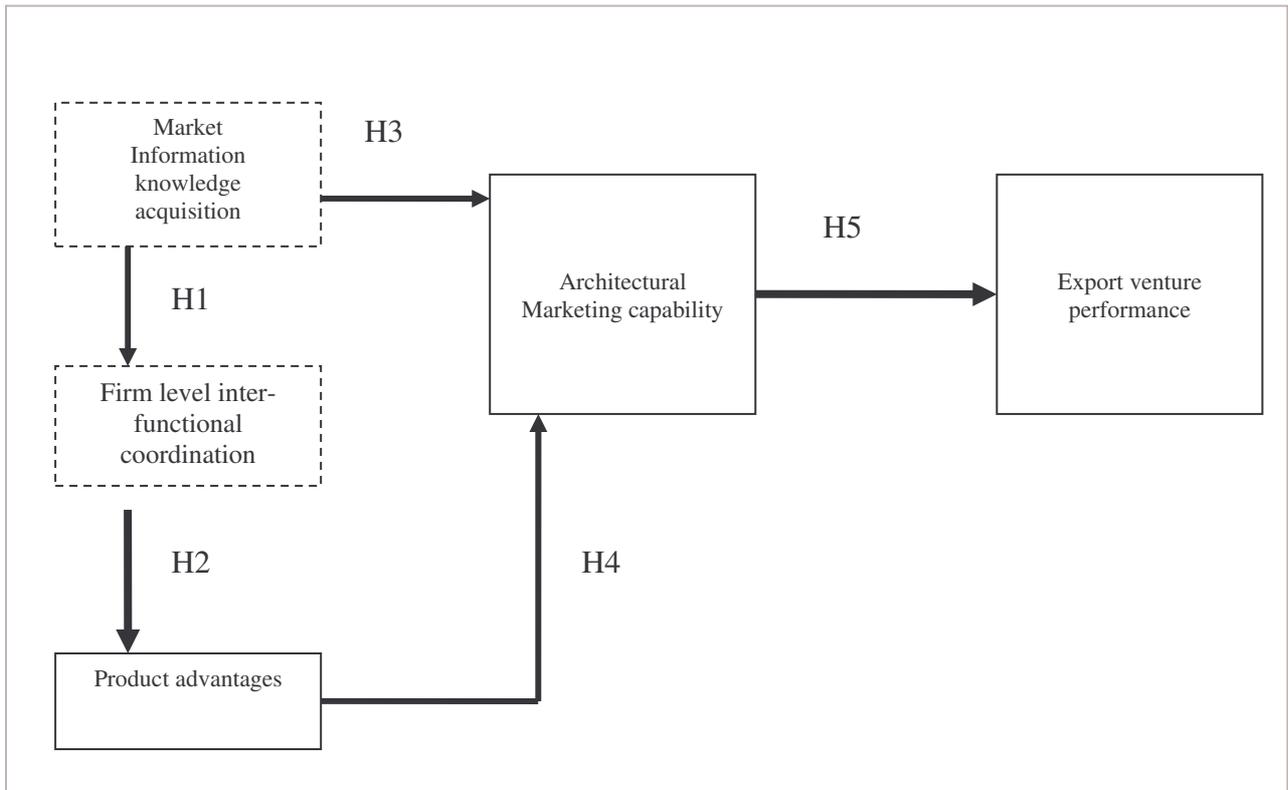


Figure 1: A framework for knowledge acquisition and export performance

Thus, in sum we conceive export venture performance as a result of a complementary process of acquiring, organizational as well as market level knowledge, internalizing it and transforming it in producing the right products for the markets when customers need it.

### **3. RESEARCH METHODOLOGY**

#### *3.1. Data Collection*

We selected small and medium sized firms (SMEs) from Information Communication Industry (ICT) as our target population which sold software solutions in foreign countries. European Commission defines small- and-medium firms on the basis of their total staff and annual turnover (<http://europa.eu/scadplus/leg/en/lvb/n26026.htm>). The small- and-medium sized firms in our samples had number of employees between 50-250 respectively.

In our view, organizational as well as market knowledge and its utilization is specifically critical for small- and medium sized firms as these firms not only lack tangible resources, but also intangible resources such as knowledge of the foreign market, experience, knowledge-based advantages. Although a firm's international experience contributes to the development of new knowledge and capabilities that influences a firm's performance, knowledge generated in one country may have less application for another country (Delios and Beamish 2001). SMEs are also disadvantaged due to lacking organizational experience, facing operational difficulties and other impediments to survival and growth. To overcome this disadvantage, SMEs are required to build product related competitive advantages from domestic settings and from their rather limited international experience. SMEs, thus, still confront the challenges of acquiring new knowledge from foreign markets and internalizing it within the organizational knowledge base.

Initially a random contact list of 500 companies from ICT industry was developed by using key words in internet search engines and online yellow pages of this industry. The software firms were mainly from Denmark, Sweden, Finland, Australia, New Zealand, USA and UK. These

countries were selected because of increasing export ventures of ICT companies. The target respondents were chosen to be the international sales and marketing managers of the company and their contact information were collected from the internet web pages of these firms. We chose firms with a minimum of two years of experience of sales to foreign customers, having reseller-supplier relationship with local firms, and lastly having a software product developed originally by the firm and being sold internationally. The reseller-suppliers were considered as market level market information knowledge sources. After the contact list was prepared, a total of 300 usable contacts were compiled which fulfilled the selection criteria and were included in the sample of the study.

Prior to sending the questionnaire in May 2006 a preliminary email describing the survey purpose of the study was sent to these firms. The purpose was to inform the firms about the study and ask them to participate in the survey. In June 2006, the detailed questionnaire was emailed to all the 300 companies through a research software programme. Each respondent could retrieve the survey page by logging in to their specific account; software ensured that no double counting of their complete answers could be possible. In the first attempt, only few answers were received. Two weeks later reminder email was sent, which resulted in that after another couple of weeks 25 answers were received. Due to the slow response rate, we decided to change the strategy for retrieving the answers. Thus, direct contacts with the respondents were made through phone calls. It was suggested to the respondents to fill in few answers at a time and then come back later to fill in more answers when they had time. With this strategy a continuous pool of answers was received. With some more reminding phone calls and emails finally responses of 115 firms were retrieved. However fifteen of these were eliminated because of missing values. The total of 100 companies from Denmark, Sweden, Finland, Australia, New Zealand, USA and UK made up approximately 33% response rate for 300 of the sample firms.

Table 1 indicates the years of foundation, product development, starting year of export, number of employees and the country of foreign operations for the responding firms.

Table 1. Descriptive for Responding Firm Characteristics

Years	Variables						
	Time of foundation	Time of product development	Time of exports	Number of employees (%)		Country of operations (%)	
	(%)	(%)	(%)				
Before 1990	5	4.3	3.2	1-50	77.2	Scandinavia	33.9
1991-1995	10	9.7	4	51-100	8.7	United Kingdom	7.5
1996-2000	22	20.4	26.7	101-150	4.3	North and South Americas	20.4
2001-2006	69	65.6	67	More than 150	8.7	Europe	26.9
						Asia Pacific	9.8
						Asia	4.3
						Global	2.2

N=100

The north and South Americas included USA + Canada and Latin America. Europe included Germany, France, Austria, Netherlands, Spain, Switzerland, and Eastern Europe. Asia included China, Russia, Korea, Japan, and Hong Kong. Asia Pacific included Australia, New Zealand, Japan, Singapore and Malaysia. Rest of the countries were arranged under the Global.

### 3.2. Characteristics of export operations

Table 2 indicates the characteristics of export operations. A total of 92 of the total responding firms (N=100) had export operations going on from 1-10 years. The mean of the export operations years for the total sample was 6.5 years. Similarly for number of export countries, about 72 percent of firms had export operations in 1-5 countries with a mean of 11.63 countries. The mean for number of export products was 5.07, 15.37 for international customers, 8.08 for international distributors, and for number of technology partners the mean was 2.43. A positive Skewness and kurtosis value in table 2 indicates scores clustered to the left of low values and clustered in the centre showing the even distribution of the sample.

**Table 2. Descriptive Statistics for Export Characteristics of Responding Firms**

	Minimum	Maximum	Mean	Std. Dev	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Duration of export operations	1	36	6.50	5.075	2.825	.249	12.622	.493
Number of export countries	1	100	11.63	14.497	3.416	.247	15.536	.490
Number of export products	0	50	5.07	6.585	4.399	.247	25.180	.490
Number of international clients	0	10000	15.37	10521	9.066	.249	84.970	.493
Number of international distributors	0	100	8.08	16.291	4.269	.247	20.845	.490
Number of international technology partners	0	15	2.43	2.835	2.644	.247	8.139	.490

### 3.3 Measures of Independent variable

The measures of the main construct of the study were developed mainly as reflective indicators. The items for firm-level market orientation based inter-function coordination were selected from Jaworski & Kohli (1993). As suppliers were considered as the key sources of market level information thus, the items for market level market knowledge acquisition were chosen from Heide and John (1992); Baker & Sinkula (1999); Calantone, Cavusgil & Zhao (2002) and Maydeu-Olivares & Lado (2003). Product advantage was measured by three-item which were originally used by Song and Parry (1997) as a measure of product competitive advantage. For architectural marketing capability all three multi-item reflective measures were adopted from Morgan, Zou, Vorhies and Katsikeas (2003).

### 3.4. Measures of Dependent variable

Export venture performance, a seven-point Likert scale consisting of strongly dissatisfied to strongly satisfied was used (Ghauri & Gronhaug 2005). We asked the managers to mention to what extent firms have been able to be ahead of our key competitors in producing the product for the market when customers needed it, to capture the key export markets as expected, to produce the

right product for the market when customers needed it and to enter at the time when profit margin opportunities were still open in the industry. Following Gray, Matear and Matheson (2002), items related to market share relative to its stated objectives, sales relative to its stated objective, profit margin relative to its stated objectives, return on investment relative to its stated objectives, and return on assets relative to its stated objectives were also included to conform for the export venture performance.

Pre-testing was carried-out with academicians and practitioners. Two professors studied the questionnaire and then provided feedback. Face-to-face meetings with managers from two different companies were then held to pre-test the questionnaire. During the pre-testing procedure each respondent's comments were recorded. Their understanding of a question was matched with the researcher's intended meaning. When the correct understanding had been achieved and the question had been answered, the respondent then proceeded to the next question. Sometimes the researcher's intended meaning of a question did not match the respondent's understanding; in which case such questions were modified. These questions were further re-tested through email exchanges with the relevant managers.

### 3.5. *Data Analysis*

We applied the structural equation modelling (SEM) to analyze the data (Chin 1998; Falk and Miller 1982) using PLS-Graph 3.0 and SPSS software. SEM is particularly suitable for measuring and estimating a theoretical model with linear relations between variables, which may be either observable or directly unobservable and may only be measured imperfectly (Fornell and Larcker 1981; Haenlein and Kaplan 2004; Fornell and Bookstein 1982).

The measurement model consisted of the relationship between market level knowledge acquisition construct, firm level inter-functional coordination construct, and the product advantage construct which were all reflective in nature. For the internal reliability assessment of the

measurement model, we followed the guidelines for acceptable values of a) internal consistency b) convergent validity and c) discriminant validity as suggested by Chin (1998) and Falk and Miller (1982). At the individual construct level, Cronbach's alpha for independent and the dependant variable constructs were reliable at a threshold of .70. The composite reliability for the all the reflective latent constructs of market level knowledge acquisitions, inter-functional coordination and product advantage was greater than .70 thresholds. Composite reliability is considered as an advanced criterion than Cronbach's alpha and it showed greater than acceptable values especially for inter-function coordination and product advantage constructs. Thus, a satisfactory level of construct reliability was achieved for the measurement model. Concerning the individual item internal reliability, all the items indicated greater than .50 loadings. Thus all the reflective constructs showed good internal consistency of individual item measures. Then, we followed the Fornell and Larcker (1981) criterion of average variance extracted (AVE) for the discriminant validity of the model.

At a threshold of  $AVE = .50$ , the values for average variance extracted demonstrated that the latent independent variables of market level market knowledge acquisition construct captured 77 %, firm level inter functional coordination captured 55 %, and architectural marketing capability 66 % and product advantage captured 53 % of the variance where as latent dependent variables of export venture performance captured 50 % of variance respectively. Further, as shown in table 3, the square roots of the average variance extracted of the all latent variables were larger than the correlations among latent variables. As can be seen from table 3, R- square for the latent endogenous variables of the export venture performance provided a moderate (22 %) value. Moderate value explains the extent to which the endogenous variable (export venture performance) is explained by few (one or more) latent exogenous variables.

**Table 3. Inter-construct Correlations Matrix and AVE Squared along the diagonal**

Latent variables	Market knowledge acquisition	Inter functional coordination	Product advantage	Architectural marketing capability	Export venture performance
	$\rho_c = .92$ AVE = .77 Alpha Coeff = .924 R-square=.10 Q-square=.06	$\rho_c = .82$ AVE= .55 Alpha Coeff = .745 R-square=.12 Q-square=.05	$\rho_c = .91$ AVE = .53 Alpha Coeff = .760 R-square=.09 Q-square=.04	$\rho_c = .84$ AVE = .66 Alpha Coeff = .744 R-square=.06 Q-square=.01	$\rho_c = .79$ AVE = .50 Alpha Coeff = .864 R-square=.22 Q-square=.01
<b>Market knowledge acquisition</b>	<b>.877</b>				
<b>Inter functional coordination</b>	.320	<b>.741</b>			
<b>Product advantage</b>	.100	.285	<b>.728</b>		
<b>Architectural marketing capability</b>	.083	.258	.149	<b>.812</b>	
<b>Export venture performance</b>	.076	.351	.421	.193	<b>.707</b>

Q-square for the latent dependent variables greater than zero redundancy indexes indicated the predictive relevancy of the path model. Thus, the structural model demonstrated internal consistency in convergent and discriminant validity at the standard levels of indicator and construct reliability, (Fornell and Larcker 1981).

#### 4. EMPIRICAL FINDINGS

For hypothesis significance of the theoretically assumed relationships between latent variables, Chin (1998) recommended that standardized path coefficients should be 0.2 to be significant. The relationship between market knowledge acquisition and firm level inter functional coordination demonstrated highly significant with ( $t=4.6$ ,  $p= 0.01$ ). This confirmed that market knowledge acquisition is positively related to firm level inter-functional coordination. The second hypothesis also confirmed ( $t=2.3$ ,  $p= 0.01$ ) the positive association between firm level inter functional coordination and product advantage. The third hypothesis tested the relationship between market information knowledge acquisition and architectural marketing capability. This hypothesis tested positive ( $t=0.46$ ,  $p=.34$ ) with no significance level statistically positive. The fourth hypothesis tested the relationship between product advantage and architectural marketing capabilities. This

confirmed a positive association ( $t=1.3$ ,  $p=0.05$ ). The fifth hypothesis tested the direct relationship between architectural marketing capability and export venture performance. This was also confirmed statistically positive and significant ( $t=0.98$ ,  $p=0.05$ ). We also tested another hypothesis which was not originally included in our framework. For this we modelled the relationship in an overall structural model of architectural marketing capability and product advantage with export venture performance. In this case the model indicated a greater effect of product advantage on export venture performance ( $t=4.72$ ,  $p=0.01$ ) and architectural marketing capability ( $t=1.04$ ,  $p=0.05$ ).

**Table 4. Standardized beta coefficients in the overall structural model**

Latent variables	Sample mean	Standard dev	parameter estimates (t-value)
<b>H1:</b> Market knowledge acquisition - inter-functional coordination	.33	.071	4.50*
<b>H2:</b> Inter-functional coordination - product advantage	.30	.116	2.38*
<b>H3:</b> Market knowledge acquisition- architectural marketing capability	.06	.167	.467
<b>H4:</b> Product advantage- architectural marketing capability	.18	.125	1.37***
<b>H5:</b> Architectural marketing capability- export venture performance	.14	.161	.989***

\*, \*\*, \*\*\*, refer to .100, and .050 significance levels

#### 4.1. DISCUSSION AND CONCLUSIONS

Our results confirmed the previous research on the topic, however with empirical testing (Kogut and Zander 1992; Mitchell, Smith, Seawright and Morse 2000; Hitt, Uhlenbruck, and Shimizu 2006; Sapienza, Autio, George and Zahra 2006) which stated that organizational knowledge if continuously reconfigured may have positive impact on firm performance. This is clear from the highly significant relationship between market knowledge acquisition and firm level inter-functional coordination than the other constructs in our model. Further, inter-functional coordination also significantly influenced product advantage. This is in consistency with previous studies of market orientation that link organizational responsiveness to firm performance.

However, those studies are not clear concerning in what functional areas of firm market knowledge market knowledge can be disseminated. Our study extended the organizational responsiveness factor to product development functional area and linked market knowledge dissemination to product advantages.

In our model market knowledge was conceptualized to influence product advantage and product advantage was later linked with architectural marketing capability. However, the positive relationship between product advantage and architectural marketing capability indicated the complementary connection between knowledge dissemination at firm level. Thus, inter functional coordination, market information knowledge acquisition and product advantage are complementary to each other in influencing the over all export venture performance.

Our results are also consistent to previous studies (Hooley, Möller and Broderick 1998; Hooley, Fahy, Cox Beracs, Fonfar, and Snoj 1999) that report a positive relationship between market orientation and performance when marketing capabilities are adopted within organization; however, these studies analyze a straight forward, linear relationship between market orientation and export venture performance without focusing on the internal complementary resources and processes.

Architectural marketing capability, though significantly related to export venture performance, demonstrated an insignificant relationship market knowledge acquisition. This result was somewhat expected, as in our model only market knowledge acquisition was focused. Previous research such as Morgan et al. (2003) report market information enables firms to architect marketing capabilities when combined with the experiential knowledge of the firm specifically in the important context of exporting. However, the architectural marketing capability appeared as significant with the export venture performance.

Our results also confirmed the theoretical assumptions developed in this study. Further, the knowledge-based view complements the resource-based and market orientation perspective in the

specific setting of our study. In line with Ketchen, Hult, and Slater (2005; 2007) we agree that organizational responsiveness is critical in order to develop certain activities, processes, procedures and marketing strategies to cater to customers' needs. However, we extend this argument further and stress that knowledge acquisition and integration mechanisms act as predecessor to organizational responsiveness as firms disseminate market knowledge within the firm through these inter-functional coordination mechanisms. Inter-firm knowledge deployment through these knowledge acquisition and integration mechanisms can be directly linked to product advantages. Firms achieve product advantages by understanding, disseminating and utilizing the knowledge about needs of customers at firm levels. Thus, knowledge about customers' needs is of significance if it is integrated with previous knowledge for increasing product-related benefits and decreases the cost of these benefits to the customers (Brockman and Morgan 2006). To this end, product advantage can indicate how successfully firms have deployed export venture's market knowledge from market to firm in producing a successful product and architectural marketing capabilities may indicate how successfully firms utilized the processes to acquire and disseminate market knowledge from the market to firm.

However, market orientation studies, although focusing on customer orientation do not explicitly link use of market knowledge to product advantages. Kohli and Jaworski (1990) explain market orientation as an appreciation by the firm to understand present and potential customer needs and perform coordinated activities for the systematic gathering of information regarding present and potential customers and competitors. They conclude that market orientation refers to the organization-wide generation, dissemination and responsiveness related to current and future customer needs and preferences. The highly significant path coefficient concerning the relationship between market knowledge acquisition and inter-functional coordination further emphasized the need to acquire market information knowledge, and embed it into organizational knowledge base to develop product advantages for export ventures. It can be concluded that for export ventures

continuously acquiring market information knowledge, its internalization and transformation into value offerings are significantly important. Therefore, our results contributed in furthering the customer orientation aspect of market orientation resource.

In our results, insights for theoretical development from the viewpoint of market orientation studies are also profound. This view emphasizes export market information use, organizational knowledge and firm performance (Toften and Olsen 2003; Souchon and Diamantopoulos 1996). In our view, market orientation perspective lacks an explicit emphasis on how export market information is utilized, interpreted, and disseminated within the firm. Thus, there is a need to explain in the context of market orientation studies that why and how organizational knowledge may improve a firm's understanding of how to utilize the market specific knowledge in order to have a sustained performance. Acknowledging this shortcoming in the theory, Hult, Ketchen and Slater (2005; 2007) suggest combining the arguments from resource and knowledge based views and the market orientation studies. With reference to this, our study emphasized the intangible organizational resources of architectural marketing capability and presented product advantage as one distinct area where firms may utilize market information knowledge to achieve competence.

## **5. FUTURE RESEARCH DIRECTIONS AND IMPLICATIONS**

This study attempted to extend our knowledge in three ways. First of all, the phenomenon of market orientation and its impact on export venture performance though already existing in some form in literature, and due to its stated importance (Toften and Olsen 2003) was investigated further to analyze how factors internal to firm level influence the relationship. Second, unlikely to previous studies which attempt to integrate market orientation and the resource and knowledge based studies, rather than just considering market orientation as an organizational resource, the synergistic effects of market level and firm level factors were analyzed. Thus, our study integrated

the literature which separately either tests the market orientation and firm performance or marketing capability with export venture performance (Hart and Tzokas 1999; Souchon and Diamantopoulos 1996; 1999). For future studies, we suggest to analyze the processes of market knowledge acquisition and inter-functional coordination. This may demand a qualitative analysis, however, may unfold several areas where firms deploy and disseminate market knowledge.

With reference to how firms may benefit by adopting export venture strategy which integrates market orientation as well as the resource and the knowledge based insights in real business situations; our findings suggest that a synergistic view of the market orientation and organizational capabilities can lead a to better understanding of how to utilize the market knowledge to exploit opportunities by developing specific capabilities (Clerq et al 2005) for example in product development and export venture marketing areas. Integration of heterogeneous knowledge acquired from different sources reduces the uncertainty about the inherent capabilities of the firms.

For the top management teams of the firms, this study provides clear evidence that a coordinated effort between market knowledge acquisition and inter-firm dissemination is an investment and key to competitive advantage. Thus, investments in the areas develop knowledge sharing mechanisms, product experimentations, and discretions to the R&D teams can contribute positively to export expansion.

Some of the limitations of this study deserve consideration. The first of these is that this study deals specifically with firms belonging to the software industry. Thus, the findings and the implications of the study can be generalized to software industry specifically. Second, this study specifically is conceived in the context of export ventures for small and medium sized firms, thus findings may not be generalized to larger firms which have far greater experience and are advantaged in terms of factors internal to firms.

The findings of this study also had implications for software development firms and the managers planning to initiate and expand export in foreign markets. First of all, firms planning to export must consider both the dimensions of international expansion. Speed of export expansion is more significant at the initial phases of exports where as success leads to a long term achievement. Second, managers must consider what kind of knowledge their firm lacks for international expansion with reference to a particular foreign market.

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