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A resource-based view on marketing capability, operations capability and financial performance: An empirical examination of mediating role

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Abstract

Using a resource - based view of firms, this study provides a new viewpoint to model functional capabilities of the firm. It also emphasizes that a firm with marketing capabilities leads to superior financial performance as compared to those, focusing solely on operational capabilities. This paper sets out to examine the relationships among marketing capabilities, operations, capabilities and financial performance of the firm. It also investigates the mediating role of competitive advantage and supply chain management (SCM) in the above mentioned relation. An approach based on the survey was considered to gather data. The conceptual model was tested empirically using structural equation modelling. The results support the research model and reveal that competitive advantage fully mediates marketing capabilities to the financial performance relationship. Among the operations capabilities and financial performance of a firm, SCM plays a role of a partial mediator. Moreover, both marketing as well as operations capabilities found significantly linked, and has a positive influence on financial performance. In addition, findings also depict that SCM significantly influences the firm competitive advantage.

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Keywords: Marketing capabilities; Supply chain management; Operations capabilities; Performance; Competitive advantage

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1. Introduction

The resource-based view (RBV) ascribes better financial performance to the firm resources and capabilities (Bharadwaj, 2000; Wernerfelt, 1984). Firm possess different types of resource and capabilities, among them several will be strongly associated with better performance (Song *et al.*, 2007). These differences in the association are a result of efficiency that uses to translate firm resources in capability as well as in performance also (Liebermann and Dhawan, 2005). Capabilities generally described as "complex bundles of skills and accumulated knowledge that enable firms to coordinate activities and make use of their assets" (Day, 1990).

The center of attention in the marketing field, mainly laid down towards on customer's demand creation. The operations literature, has stressed on how to manage supply so to realize customer demand. Among all the functional areas of an organization, marketing and operations contribute to value creation and addition, whereas the rest of them contribute only for the products and service delivery (Porter, 1985). A growing number of researchers have underlined marketing and operations functions integration as a mean to achieve firm performance (Hausmana *et al.*, 2002; Malhotra and Sharma, 2002; Nath *et al.*, 2010; Roth and Vander Velde, 1991). Amazingly, there is no other empirical research that has investigated real association between marketing, operations capability and their influences on the firm's financial performance, especially in India. Therefore, in this paper author makes an attempt to specify the linkage among these constructs. In this study, we use resource based view for developing theoretical background and to propose hypotheses. This RBV depicts how financial performance influenced through firm's resources and capabilities (Wernerfelt, 1984).

This paper is organized in a sequence like it will begin with review of literature related to the main constructs of research model and their relationships in order to propose hypotheses. Then, discuss the method utilized in this paper. Thereafter, present the findings and at the last, we conclude the article with research implications, limitations and future research scope.

2. Theoretical background and hypotheses development

This section presents the proposed conceptual framework based on RBV theory and organized as follows. First, describe a brief overview of RBV in the context of resources, capabilities and firm performance. After that, the both functional capabilities, namely marketing and operations were described. The section also depicts the research model and proposed hypotheses.

Resource based view of a firm conjectures that competitive advantage derives from a business's diverse and firmexplicit resources (Barney, 1991). RBV also believes that resources and capabilities are dissimilar (Teece *et al.*, 1997). Capabilities are primary to the success of the firm and as an organization process's resource are converting into values, which contribute to the competitive advantage (Dierickx and Cool, 1989).

The firm uses a competitive advantage modification like a yardstick of outcome (Day and Wensley, 1988). Pricing capability makes able to a firm utilizes pricing strategies to respond to changes. New product development capability enables a firm to produce new products and services so to fulfil customer's requirements. Firm with Communication capability utilize marketing communication to convince customers regarding positive perception about products. Thus, all these marketing capabilities facilitate competitive advantage and increase performance. Consequently, we hypothesize that marketing capabilities and performance linkage is mediated by competitive advantage.

H1: Competitive advantages mediate the influence of marketing capabilities on firm's financial performance.

Various studies have revealed a linkage among product design, development and supply chain management (McGinnis and Vallopra, 1999; Randall et al., 2003). Capability to product development and design prove to yield various advantages for example synergies of operations (Palepu, 1985), generation of inimitable resources (Barney, 1991), and financial synergies. Gunasekaran and McGaughey (2003) have investigated linkage between supply chain and total quality management for instance operational flexibility and measurement of performance. Escrig Tena et al. (2001) proposed that "the relationship is the result of the unique resources and competencies generated by the implementation of total quality management. These competencies are viewed as sources of sustainable competitive advantage and therefore contribute to improved performance".

Tan et al. (1998) investigated the linkage between operational practices, supply chain management and performance

of the firm. Based on above arguments and outcomes of above-mentioned empirical researches, we proposed that operations capabilities facilitate SCM which in turn increase outcomes. Consequently, we hypothesize that operations capabilities and performance linkage is mediated by supply chain management practices and therefore, we carry on with the following hypothesis.

H2: Supply chain management practices mediate the influence of operations capability on firm's financial performance.

2.1 Resource-based view and capability

The RBV believed that firm is a package of valuable resources as well as capabilities also (Wernerfelt, 1984). It argues that a firm comprises varying resources and various levels of capabilities. Survival of a firm based on its capacity to generate fresh resources, develop its capabilities and make it unique to gain competitive advantage (Peteraf, 1993). The RBV provides a framework that how with a firm's resources and capabilities, competitive advantage can be gained (Corbett and Claridge, 2002). A growing number of studies have established a significant linkage between firm performance and these functional capabilities (Dutta *et al.*, 1999; Krasnikov and Jayachandran, 2008; Terjesena *et al.*, 2011; Yu *et al.*, 2014).

Additionally, the RBV argued that firm performance variation is the result of resource ownership that has varied productivity (Makadok, 2001). Day (1994) proposed that "it is not possible to enumerate all possible capabilities, because every business develops its own configuration of capabilities that is rooted in the realities of its competitive market, past commitments, and anticipated requirements". In this research, an attempt is made to focus on marketing and operations capabilities as a two vital organization's functional capability (Song *et al.*, 2007) and find their influence on firm's financial performance. Considering this RBV, in this study, we propose a conceptual model which examining, how firms utilize their significant capabilities in the area of marketing and operations to enhance financial performance.

2.2 Marketing capability

Marketing capability, refer as "the integrative process of utilizing a firm resources (tangible and intangible) to recognize the specific needs of consumers, attain competitive product differentiation and to realize superior brand equity" (Day, 1994). Once these capabilities develop, becomes complex for competitors to copy (Day, 1994). Therefore, marketing capability viewed as one of the main capability, which facilitates competitive advantage (Nath *et al.*, 2010). The literature in the area of marketing reveals that the capabilities utilize by firms to convert resources into productivity related to the performance of their firm (Vorhies and Morgan, 2003). There are various studies that have explored a significant association in marketing capability and firm's financial performance (Nath *et al.*, 2010; Vorhies and Morgan, 2005). Nath *et al.* (2010) realized that marketing capabilities significantly affects firm's performance. Based on above arguments and outcomes of above-mentioned empirical researches, we proposed that marketing capability will influence financial performance and therefore, we continue with the subsequent hypothesis.

H3: Marketing capability have a constructive impact on financial performance.

2.3 Operations capability

Operation capability refers as the combination of complex activities performed by firms to improve their productivity by the use of their production capabilities, material flow and technology (Hayes *et al.*, 1988). Operational capability is the basic proficiency which, allow a firm to accomplish its production goals like superior product quality, product and volume flexibility, speedy delivery and cost reduction (Terjesena *et al.*, 2011). It suggests that competitive advantage can be achieved through management of superior material flow process, distribution of efficient process knowledge and suspicious usage of the firm's assets (Tan *et al.*, 2007). There are a number of studies that have found the significant influence of operational capability on firm performance (Nath *et al.*, 2010; Rosenzweig *et al.*, 2003; Terjesena *et al.*, 2011; Yu et al., 2014). Nath *et al.* (2010), conduct a study by using 102 logistics firms of UK and found that operations capability significantly affects firm's profitability.

on above arguments and outcomes of above-mentioned empirical researches, we proposed that operations capability will influence financial performance and therefore, we carry on with the following hypothesis.

H4: Operations capability have a positive influence on financial performance.

2.4 Marketing and operations capability

The interrelation between marketing and manufacturing broadly identified in previous researches (St John and Hall, 1991), with several those who recognize a strong complementary in both operations and marketing capability (Dutta *et al.*, 1999). Hill (1994) argued, "The links between design, manufacturing, and markets are the very essence of a business and Customer needs to generate the product's functional specification, which in turn generates the product specification". Therefore, marketing capability as its antecedent improve a firm's ability to build up new operations processes

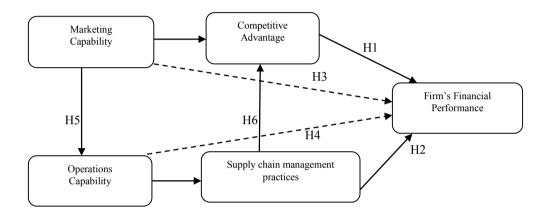


Figure 1: Conceptual model and hypothesized relationships

Marketing capability covers processes, which are set up in the firms to translate the course of customers' needs with efficient information possession, organization, and utilization (Krasnikov and Jayachandran, 2008). Operations capability can depict on marketing capability towards its goals (Dutta *et al.*, 1999). The development of operations capability based on marketing capability. The time lags take place in marketing and operations decisions, especially in marketing decisions are an input source for the operations decisions (O'Leary-Kelly and Flores, 2002). Vollmann *et al.* (1997) argued that in a marketing to operations cycle, marketing decisions play as an important input into the operations decisions. Therefore, it is argued that operations and marketing along with proper align to competitive advantage, treating marketing as a vital contributor for influencing operations capability. Based on above arguments and outcomes of above-mentioned empirical researches, we proposed that operations capability will be influenced by marketing capability and therefore, we carry on with the following hypothesis.

H5: Marketing capability have a significant influence on the firm's operations capability.

2.5 Competitive advantage and supply chain management practices

Supply chain management practices along with the firm's performance influence competitive advantage also. These practices are considered to enhance firm's competitive advantage through the product innovation, flexible delivery system, and time to market, price and quality. Previous studies have identified that the different aspects of supply chain management practices like a supplier partnership have an influence on competitive advantage like price or cost. For instance, increased supplier performance and reduction in time to market the results of the strategic supplier partnership (Ragatz et al., 1997) and facilitates satisfaction and customer responsiveness level (Power et al.,

2001). Both information quality and sharing positively contribute towards customer satisfaction (Spekman et al., 1998) and partnership quality (Lee and Kim, 1999). The postponement strategy leads to improve supply chain flexibility, along with balancing overall efficiency, customer responsiveness and supplier involvement (Van Hoek et al., 1999). Based on above arguments and outcomes of above-mentioned empirical researches, we proposed that firm's competitive advantage will be influenced by supply chain management practices and therefore, we carry on with the following hypothesis.

H6: Supply chain management practices will have a significant influence on competitive advantage.

3. Methods

3.1 Sampling and data collection

The manufacturing and services companies taken as sampling frame from the list of Forbes India. The key informants for this article includes marketing, manufacturing and project managers. Managers as a key informants were taken in some other studies in the same field (Li and Calantone, 1998) as they provide more consistent data (Zahra and Covin, 1993). Whereas, in some other studies, researchers have taken the views of multiple informants (Barnes, 1984). A structured questionnaire was used to collect data. It was based on a five point Likert scale and informants consents regarding each items were asked to respond. In the beginning 650 questionnaires were distributed. After two months only 69 responses were received. Thus, the process was continued with a follow up mail which results in the generation of 58 more responses. In total 127 responses were received. The response rate was 25%. Managers of various companies in multi industries, namely telecommunications; pharmaceuticals; insurance services; banking; restaurants and retail services were given their responses. The non-response bias also checked through comparing the sampling firms with entire population considered (Armstrong and Overton, 1977). T-test for the two samples was used to it that show insignificant difference among respondents with nonrespondents. As the responses were collected from the individuals that results in the elimination of chances regarding common method bias. After that Harman's single factor test was applied to know the chances of common method bias. It was applied through factor analysis with principal component on all variables. The test was resulted into seven different factors and no factor was described with variance. Therefore, in this study having no problem regarding common method variance.

3.2 Measurement of constructs

The multi item scales were used to measure theoretical constructs of the conceptual model. The detail of all these were mentioned below.

Marketing capabilities (MC) were evaluated using a scale adapted from Vorhies and Morgan (2005). The respondents were asked to respond regarding their firm performance of marketing mix activities in relation to competitors.

We have used Tan et al. (2004) scale to measure operations capability (OC). The three main dimensions of operations capability include new product design and development, JIT and TQM capability.

Supply chain management (SCM) was measured using a scale adapted from Li et al. (2006). The five main components of SCM practices involve strategic supplier partnership, the level of information sharing, postponement, customer relationship and quality of information sharing.

Instruments to measure the competitive advantage (CA) were adopted from Li et al. (2006). It is based on the dimensions like: price, product innovation, quality, time to market and delivery dependability.

Financial performance (FP) was measured by a subjective instrument constructed on the bases of firm managerial self-evaluation with respect to their competitors. A scale to measure financial performance were adapted from Moorman and Rust (1999).

4. Data analysis and results

In this study, data analyzed at different levels; firstly, confirmatory factor analysis (CFA) were applied for the validity and the reliability of constructs. Thereafter, structural model was developed, then mediation test was

conducted and lastly, developed hypotheses were checked through structural model. The acceptable values of CFI, GFI and RMSEA that are depicted in table 1.

Table 1: Measurement model's	goodness of fit index.						
Goodness of fit index	CMIN/DF	CFI	NFI	IFI	GFI	TLI	RMSEA
Calculated values	1.327	0.962	0.864	0.963	0.842	0.955	0.05

The factor loading for all items lying 0.55 to 0.90 with p value 0.01. The measurement model depicted acceptable convergent validity, reliability and discriminant validity. As Individual item, reliability is believed satisfactory only when the item has a factor loading greater than 0.7 on its corresponding construct (Tortosa *et al.*, 2009). The Cronbach's alpha value for each item was greater than 0.7, which is acceptable for the reliability (Nunnally and Bernstein, 1994). In addition, the convergent validity was checked through average variance extracted (AVE) that was greater than 0.50 for all seven factors. Whereas, under discriminant validity, all constructs reliability was greater than their corresponding correlations (Gaski, 1984). Descriptive statistics and correlation among constructs described in table 2.

Table 2:	Correlation	and d	escriptive	statistics.

Variables	MC	OC	SCM	CA	FP	
MC	1.000					
OC	.294**	1.000				
SCM	.036	.086	1.000			
CA	.426**	.267**	.303**	1.000		
FP	216*	175*	.718**	093	1.000	
Mean	2.392	4.093	3.746	2.998	4.081	
SD	.83	.58	.43	.85	.59	

*p<.05, **p<.01

In this study, to test the proposed hypothesis, we considered a two-step method of Anderson and Gerbing (1988). After the development of the measurement model at an earlier point, the structural equation model generated using AMOS 20.0. After that, all hypothesis related to the constructs are tested through this model. The resulting values of hypothesis testing are presented in table 3, 4 and 5.

Table 3: Structural model result of marketing capabilities, competitive advantage and firm financial performance.

	Model-1 (MC-FP)	Model-2 (MC	C-CA-FP)	
	FP	CA	FP	
MC	.462 (5.855)*	.409 (5.070)**	.296 (3.727)*	
CA			.393 (4.942)*	
Model Fit				
Model 1: χ2 (7.4	45), CMIN/DF = 2.482, p<.00; GF	= .977, NFI = .930, RFI = .868, IFI = .95	57, TLI = .847, CFI = 954; RMSEA = 05.	
Model 2: χ2 (4.9	92), CMIN/DF = 1.640, p<.00; GF	= .985, NFI = .954, RFI = .847, IFI = .98	82, TLI = .934, CFI = .980; RMSEA = .050.	
*Statistically sig	gnificant α =.05, ** Statistically sig	nificant $\alpha = .01$		

Baron and Kenny (1986) analysis was applied for finding out the mediating impact of competitive advantage and supply chain management practices. For this, a chronological sequence of SEM models was generated that are depicted in Tables 3, 4 and 5. The results in table 3 show that in model 1 marketing capabilities has a positive significant impact on financial performance ($\beta = .462$, p<.05).

Table 4: Structural model result for operations capabilities, supply chain management and firm financial performance

	Model-3 (OC-FP)	Model-4 (OC-S	CM-FP)
	FP	SCM	FP
OC	.154 (1.895)*	174 (-1.985)	.148 (1.902)
SCM			.022 (.283)**
Model Fit			
Model 3: χ2 (3.	.04), CMIN/DF = 1.954 , p<.00; GF	= .988, NFI = .963, RFI = .817, IFI = .9	82, TLI = .902, CFI = .980; RMSEA = .050.
Model 4: χ^2 (3.	83), CMIN/DF = 3.021, p<.00; GF	= .988, NFI = .964, RFI = .842, IFI = .9	73, TLI = .887, CFI = .971; RMSEA = .050.
*Statistically si	gnificant $\alpha = 05$, ** Statistically sig	nificant $\alpha = .01$	

Whereas in model 2 when competitive advantage is added into the model, it depicts that marketing capabilities has significant impact on competitive advantage ($\beta = .409$, p <.01). Moreover, when competitive advantage was introduced, it has a significant impact on financial performance ($\beta = .393$, p < .05) but the impact of marketing capabilities on financial performance becomes weaker ($\beta = .296$, p < .05). Therefore, the linkage from marketing capabilities to financial performance is indirect and mediated by marketing capabilities, which support H1.

Likewise, table 4 show results regarding the mediating role of SCM between operations capabilities and financial performance. In this, model 3 depicts the direct significant impact of operations capabilities on financial performance ($\beta = .154$, p <.05). Moreover, when supply chain management practices as a mediator introduced in model 4 thus as a result financial performance loses its significance with $\beta = .148$ (Non-significant). Whereas, supply chain management practices has a positive significant impact on financial performance in this model ($\beta = .022$, p<.01). Thus, as expected, supply chain management practice partially mediates the impact of operations capabilities on financial performance, and partially supporting H2. Table 5 depicts that marketing ($\beta = .291$, p<.05) and operations capabilities ($\beta = .149$, p <.01) have positive, significant impact on operations capabilities ($\beta = .294$, p<.05), which supports H5. Similarly, supply chain management practices has a positive significant influence on competitive advantage ($\beta = .288$, p<.05) that supports H6.

Table 5	Structural	model	result for	overall	model
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		Model	-5 (MC-OC-SCM-CA-FP)		
	MC	OC	SCM	CA	FP
С		.294(3.457)*		.416(5.430)*	.291(1.50)*
2			.086(.968)**		.149(2.688)**
CM				.288(3.762)*	.815(4.616)*
A					261(-4.249)
del Fit					
del 5: χ2 (2	.75), CMIN/DF = 1	.378, p<.00; GFI = .991, NF	I = .985, RFI = .926, IFI = .	.996, TLI = .979, CFI = .99	96; RMSEA = .050.

*Statistically significant $\alpha = .05$, ** Statistically significant $\alpha = .01$

5. Discussion, implications and conclusion

The structural model strongly supports H1 and H2. Thus marketing capabilities have significant influence on competitive advantage, which in turn positively affect financial performance. However, when competitive advantage is introduced in the structural model the influence of marketing capabilities on financial performance becomes weaker. This result suggests that competitive advantage is playing a mediating role in marketing capabilities and connection performance, and fully mediates the aforementioned linkage. The results are consistent with existing study like Murray et al. (2011). Whereas, when supply chain management practices as a mediator introduced in the model thus as a result, financial performance loses its significance, and influence of operations capabilities on financial performance becomes weaker. This finding suggests that supply chain management practices contribute as a mediator between operations capabilities and financial performance relationship, and partially mediates the aforestated linkage.

The results show that both capabilities significantly have a positive influence on financial performance. The impact of marketing capabilities is higher as compare to operations capabilities on financial performance. Therefore, overall financial performance is dominated by marketing capabilities. The results are consistent with existing studies such as Krasnikov and Jayachandran, (2008), Nath et al. (2010), Song et al. (2005), Terjesena et al. (2011, Yu et al. (2014). The market driven firm facilitates superior marketing capabilities and leads to create better performance also.

Marketing capabilities based on firm ability to understand the needs of customers and to create long run relations. The empirical results hold up the conceptually build arguments of various researchers that the functional capabilities (marketing and operations) have significant influence on performance (Roth & van der Velde, 1991; Wheelwright & Hayes, 1985). Thus, there is a need to incorporate functional departments so to gain financial benefits from the

functional capability development.

5.1 Theoretical implications

This research fills a gap in literature, as the limited work has been done to incorporate both capabilities, namely marketing and operations to investigate their roles in increasing financial performance. This study contributes in the area of marketing as well as operations in numerous ways. First, based on RBV theory, presents a conceptual framework that helps to examine the relationship between functional capabilities (marketing and operations) with their influence on performance. Therefore, this study along with empirically studies the relationships among these three key constructs holistically, also clarify competitive advantage and supply chain management practices contribution as a mediator.

5.2 Managerial implications

For the managers also, this study contributes in a several ways. First, as per RBV, for a firm to gain competitive advantage and superior performance, it is necessary to invest in their functional capabilities namely, marketing and operations. Second, it is essential for the managers know the linkage between these two functional capabilities. This study findings show that there is a significant relation exist between marketing and operations capabilities of a firm. Thus, it is believed that this can provide a new way for managers to understand the linkage in functional capabilities and its influence on operational efficiency. Finally, marketing capabilities as an antecedents of operations capabilities should not be ignored.

6. Limitations and directions for future research

There are a few limitations of this study like others. These can be used as a guide for conducting further researches. This study is based on primary data using survey approach, thus it is more subjective rather objective one. A further researcher may use secondary data for financial measures, and combine it with managerial perception for capabilities, competitive advantage and supply chain management measures to make them more specific to the industry. Another stream of research can be conducted by considering both financial and non-financial performance of the firm. The data used in this study was cross sectional, thus it may be broadened using longitudinal data to understand how experiential learning contributes in performance and acquisition of knowledge building capacity takes place in a firm. Moreover, in this study only two functional capabilities (marketing and operations) conceptualized. However, as per RBV, there is a distinctive set of capabilities and resources (Day, 1990; Song et al., 2007). Thus, further research can stress on another functional capabilities such as IT, production, R&D, innovation. Finally, some researchers (e.g. Dutta et al., 1999) reveals that interactions in functional capabilities lead to significant drivers of competitive advantage. Therefore, a further research can be conducted in context with the interactive effect of different functional capabilities. Another stream of research may extend our research model by exploring the mediating impact of operations capabilities between marketing capabilities and firm performance. Lastly, the moderating role of firm efficiency can also be tested in the research model under this study.

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