

MARKETING ORIENTATION AND FIRM PERFORMANCE IN THE SOFTWARE INDUSTRY: AN EXPLORATORY EMPIRICAL ANALYSIS

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ABSTRACT

The aim of this exploratory and primary data based research is to examine and evaluate the degree of marketing orientation of software firms in India. After extensive literature review, the researcher found that no study has so far been conducted on market orientation of software firms in Indian context. Partial Least Square (PLS) – Structural Equation Modelling (SEM) has been conducted using PLS 3 software. Three hypotheses were tested to know whether the most market-oriented firms with its innovative capacity are the best performers or not. Building on empirical data from 190 respondents from software firms in India, the results indicated that there is strong positive correlation between market orientated software firms and their performance. The study concluded that the marketing orientation must be coupled with innovative capability to shape the businesses' performances profitable and sustainable. These findings will help business identify beneficial elements of marketing orientation that could be implemented with the intention to improve business performance and position on the market.

Keywords: Marketing orientation; Software firms; Business Performance; PLS and SEM

INTRODUCTION

Market orientation is a central concept in the marketing literature and its effects on innovation and performance have been studied in detail (e.g., Hurley & Hult, 1998; Kumar, Jones, Venkatesan, & Leone, 2011; Wei, Frankwick, & Nguyen, 2012). It has emerged as a significant antecedent of performance and is presumed to contribute to long-term success. In today's highly competitive global markets, managers seek to improve organizational effectiveness by identifying organizational metrics linked to business performance. Market orientation is one such metric that has emerged as a significant predictor of performance and is presumed to contribute to long-term success (Deshpande & Farley, 1999). It is heavily influenced by the marketing concept (Drucker, 1954; McCarthy, 1960; McKitterick, 1957), and is the cornerstone of the marketing management and marketing strategy paradigms (Hunt, 2002). Market Orientation (MO) can be described as how successful an organization is in actualizing the marketing concept (Liao et al., 2011). In previous literatures, it has been found that there is a lack of guidance in the MO literature to organizations on how to become market-oriented (Greenly, 1995; Foley and Fahy, 2009). During the past two decades market orientation has been a focal construct in the marketing literature (Smirnova, Naudé, Henneberg, Mouzas, & Kouchtch, 2011). The work of Kohli and Jaworski (1990) and Narver and Slater (1990) spurred a substantial stream of research focusing on this construct's definition, measurement, antecedents and consequences. The vast majority of these studies investigate market orientation from either a behavioural or a cultural perspective. The behavioural perspective emphasizes specific activities relating to the generation and dissemination of and responsiveness to market intelligence (Kohli & Jaworski, 1990). The cultural perspective focuses on the organizational norms and values that encourage behaviors that are consistent with market orientation and consists of three components: customer orientation, competitor orientation, and inter functional coordination (Narver & Slater, 1990). Homburg and Pflesser (2000) expanded the cultural perspective by developing a multilayer conceptualization of market-oriented organizational culture, comprising of basic values, norms, artifacts, and behaviours. In a further study adopting a cultural perspective, Gebhardt, Carpenter, and Sherry (2006) identified a four-stage process through which organization change to adopt a higher level of market orientation. More recently, Zhou, Li, Zhou, and Su (2008) conceptualize market orientation as consisting of both cultural and behavioral elements, indicating that organizational-level market orientation culture affects unit-level market orientation behavior.

OBJECTIVE OF THE STUDY

The aim of this paper is to examine and evaluate the firms' degree of marketing orientation with its innovative practices or endeavours in its related businesses. This research paper highlights the degree of market orientation, innovation capability in the context of software firms' performances in India.

REVIEW OF LITERATURE

The term marketing orientation can be defined in various ways: as a set of beliefs that shapes particular attitudes and culture of business (Hooley et al., 1990, In: Avlonitis and Gounaris, 1997, p. 385) or as an implementation of marketing concept (McCarthy and Perreault, 1990). Narver and Slater (1990) support cultural approach in relation to basic characteristics of an organization. They identified the marketing orientation through the inclusion of three basic components, namely the customer orientation, the orientation on competition and the inter-functional coordination representing the importance of coordinating activities in all departments of an organization and also the coordinated utilization of resources for the purpose of creating greater value for customers (In: Panayides, 2004, p. 46-47). On the other hand, Kohli and Jaworski (1990) define marketing orientation from the behavioral perspective defining activities for the marketing oriented business, which are gaining information about market regarding current and future needs of customers, disseminating this information across all departments of an organization and organization's ability to respond this information.

➤ Marketing Orientation and Firm Performance

The notion that market orientation affects business performance is a matter of extensive research (e.g., Kohli & Jaworski, 1990; Matsuno & Mentzer, 2000; Narver & Slater, 1990). Although some studies suggest a negative or non-significant relationship, most findings indicate a positive relationship between market orientation and business performance (e.g., Deshpande & Farley, 1998; Matsuno & Mentzer, 2000; Slater & Narver, 2000). Furthermore, Doyle and Wong (1998) found market orientation to be the second most important driver, differential advantage being the first, of business performance. Accordingly:

H1. Market-Orientation will positively lead to firm performance in software firms.

➤ Marketing Orientation and Innovation Capability

Baker and Sinkula (2009) find that market orientation leads to successful developmental activities with respect to new product creation. Henard and Szymanski (2001) point out that market orientation has a statistically significant effect on new-product success rates. Targeting high-technology companies in the United States, Im and Workman (2004) show that market orientation plays an important part in firm innovation success. Therefore on the basis of this, we can argue that in the context of software companies in India, marketing orientation will also play a significant role in influencing firms' capability to innovate.

H2: Marketing orientation will positively lead to innovation capability in software firms.

➤ Innovation Capability and Firm Performance

Hult et al. (2004) rationalise innovativeness as a firm's capacity to introduce new processes, products, or ideas in the organisation. Burns and Stalker (1977) conceptualise innovativeness as the capacity to innovate. Therefore we can argue that firms' ability to create and sustain superior performance is strongly related to developing innovation capabilities.

H3: Innovation capability will positively lead to firm performance in software firms.

RESEARCH DESIGN

➤ Sample and Data collection

Data collection was carried out by using a sample design that follows the principle of convenience sampling. The key informant in this study is the top management, consultants, and other senior level management executives of software firms in India. We employed a questionnaire survey approach to collect data, and all items required five-point likert-style responses ranged from 1="strongly disagree," through 3="neutral," to 5="strongly agree." The research in this study was conducted by employing a quantitative technique. The convenient resource for this study is the primary resource. An online link of questionnaire was sent to 250 personalized e-mail addresses requesting their participation. During data collection, 24 declined participation or indicated a lack of time, resulting in an effective sampling frame of n=226. Out of which only 212 responses were collected but 22 were not usable because they were incomplete. Thus, the final usable sample contained 190 responses yielding an effective response rate of 84.07% (190/226).

➤ **Measures**

Marketing Orientation –The construct marketing orientation was measured by 18-item scale developed by Kohli et al. (1993), tapping the three dimensions of the construct: market intelligence generation, dissemination, and responsiveness.

Innovation Capability-was measured by two separate aspects or entities i.e. *managerial innovation* and *technological innovation* as proposed by several scholars (e.g. Damanpour 1991; Gatignon et al. 2002).

Firm Performance - As suggested by Clark, 1999; and Venkatraman&Ramanujam, 1986, the study is using the combination of both financial and non-financial measures to offer more comprehensive evaluation on firm performance.

➤ **Statistical Tools**

Structural equation modelling was used to assess the research model. The partial-leastsquares (PLS) method was chosen for its robustness, as it does not require a large sample or normally distributed multivariate data in comparison with other methods such as LISREL (Fornell and Bookstein, 1982). As recommended by Anderson and Gerbing (1988), the data were analysed in two steps. First, the validity of the research constructs was assessed from a separate estimation of the measurement model by confirmatory factor analyses. Second, the research model was tested by the simultaneous estimation of the measurement and theoretical (or structural) models.

FINDINGS AND ANALYSES

➤ **Measurement Assessment**

All constructs drew on a reflective measurement model in the study, because the indicators of each construct are correlated and interchangeable (Hair et al., 2013).The study conducted Stage 1 by assessing reliability and validity of constructs.

➤ **Reliability**

Reliability of the multi-item scale for each dimension was measured using Cronbach alphas and composite reliabilities measures.Both measures of reliability were above the recommended minimum standard of 0.60 (Bagozzi & Yi, 1988; Baker, Parasuraman,Grewal, & Voss, 2002; Nunnally, 1978).

	Cronbach's Alpha	Composite Reliability
Marketing Orientation	0.925	0.936
Innovation Capability	0.974	0.977
Firm Performance	0.958	0.966

➤ **Convergent Validity**

Table 2 shows all the values of AVE, the ratio of construct variance to the total variance among indicators, were above the recommended threshold of .50 (Hair et al. (2013), proving the convergent validity of each construct.

	AVE
Marketing Orientation	0.723
Innovation Capability	0.812
Firm Performance	0.826

➤ **Discriminant Validity**

As may be seen from Table 3, this condition for discriminant validity is also satisfied for all the constructs. In every construct, the percentage of variance extracted should exceed the construct's shared variance with every other construct (i.e., the square of the correlation) (Fornell & Larcker, 1981; Hult, Hurley, Giunipero, & Nichols, 2000).

	Firm Performance	Innovation Capability	Market Orientation
Firm Performance	0.909		
Innovation Capability	0.769	0.901	
Market Orientation	0.655	0.747	0.757

➤ **Collinearity**

Variance Inflation Factor (VIF) values were used to examine the collinearity. The result showed that VIF values ranged between 1.712 and 4.943, indicating that the results were not negatively affected by collinearity as they were all below or less than 5 (Hair et al., 2013).

➤ **Coefficient of Determination**

The R² value of each endogenous construct is a measure of the variance explained in each endogenous construct and the model's predictive accuracy. According to Hair et al. (2013) and Sarstedt et al. (2014), R² values of 0.75, 0.50 and 0.25 may be considered substantial, moderate and weak, respectively. Results for innovation capability and firm performance had moderate R² values of 0.558, and 0.605, respectively. However, considering the possibility of extrinsic factors and alternatives, their R² values are satisfactory.

➤ **The Path Coefficients**

The finding may add to the understanding that innovation capability is indeed necessary and may be linked to performance. After interpreting the results of a path model, we tested the significance of all structural model relationships using t values, p values and bootstrapping confidence intervals. The hypotheses were examined using PLS 3. Paths between constructs represent individual hypotheses, and each was assessed for statistical significance of the path coefficients. This study tested hypothesized relationships with a full model, and the PLS analysis of this model produced t statistics. The analysis provided support for all the three study's hypotheses which can be seen in following table 4.

	Path Coefficients	Standard Errors	T Statistics	Significance ^a (p<0.05)	Results
Marketing Orientation->Firm Performance	0.18	0.08	2.18	Yes	Supported
Marketing Orientation->Innovation Capability	0.74	0.03	19.12	Yes	Supported
Innovation Capability-> Firm Performance	0.63	0.07	8.42	Yes	Supported

As hypothesized, there is a positive relationship between marketing orientation and firm performance ($\beta_{11}=0.18, t=2.18$). Therefore, H1 is supported. Results uphold the proposition that the two concepts are indeed related and, therefore, support the conclusions, which postulate that marketing orientation is important to enhance firm performance. A positive relationship between marketing orientation and innovation capability is established ($\beta_{21}=0.74, t=19.12$). Therefore, H2 is supported. As scholars have postulated, perhaps the firms' capacity to innovate may be better served by adopting appropriate marketing orientation and innovation

capability. As predicted, there is a significantly positive relationship between innovation capability and firm performance ($\beta_{12}=0.63$, $t=8.42$). Therefore, H3 is supported. The analysis also provided support for the hypotheses which can be seen in following Figure 1.

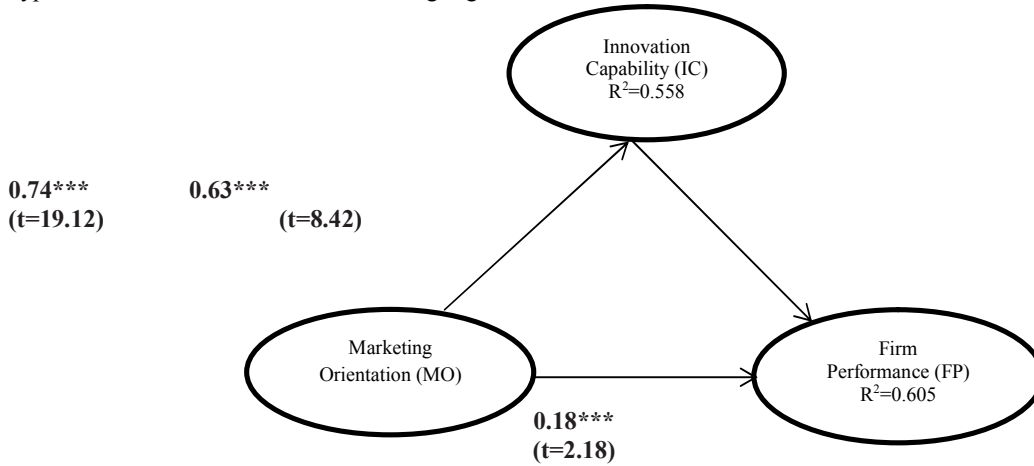


Figure 1 :PLS Path Coefficients and Bootstrapping Statistics

CONCLUSIONS

Market orientation is conceptualized as a multiplicative construct, indicating that market orientation is most effective when its three dimensions (generation, dissemination and responsiveness) are viewed as mutually dependent or multiplicative. To succeed in a new intense competitive environment, high tech software service firms have to be more creative and introduce new products in order to explore the recent and forthcoming trends, customers' preferences and probable new market opportunities rather than developing products based only on customers' wants. The study further concludes that marketing orientation has a positive impact on firm performance but only through the enhancement of its innovative capability.

SUGGESTIONS

From a practical point of view, the finding of the study suggests that managers should be aware of the importance of innovation capability in the link of marketing orientation and firm performance. For further researches, this analysis also can be expanded in taking into account of these considerations; the generality of this study's results is constrained by the high technology software firms in IT setting. The data are cross sectional, longitudinal data could be helpful to test the true causality of our model.

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