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# Effect of Market Orientation on Innovative Performance

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*Market orientation (MO) starts with the research in markets, newly formed small businesses might find short-term success with a sales-oriented approach to marketing, but an innovative product-oriented strategy with the implementation of intellectual capital (IC) can increase the likelihood of long-term success. The purposes of this research paper envelope: (i) to find whether, MO impacts organizational IC; (ii) to find whether, IC impact innovative performance, and also (iii) to verify whether IC acts as a mediator between MO and innovative job performance. Target population of this study was Pakistan but considering the time and resource constraints the population was restricted to Lahore. Accordingly, by employing convenience sampling technique data was collected from various departments of manufacturing and service sector organizations.*

*This study has used Preacher and Hayes (2008) multiple mediation (indirect) analysis to test the mediating role of IC between the MO and innovative performance. The results of this study partially supported the proposed model of this essay, importantly it has been found that Human Capital fully mediate the relationship between market orientation and innovative performance. On the other hand, surprisingly the results of this study did not support the intervening role of structural capital between market orientation and innovative performance instead, it was revealed that market orientation impact innovative performance. So this study showed that human capital is off more importance than structural capital in creating high value products. However, before making any inference the academicians and practitioners should consider sampling method and size of this study.*

*Keywords:* Market orientation, Intellectual capital management, Human capital.

## INTRODUCTION

The market orientation (MO) of a business is a vital performance factor. In majority of current empirical studies, MO is linked to other single measure; studies that have connected MO to multiple performance measures are scare (Slater & Narver, 1994a). Several scholars have strived to clarify the association between MO and competitive success (Baker & Sinkula, 1999b; Ruekert, 1992). However, issues relating to the link between MO and construct (i.e., innovative performance) remained relatively overlooked (Narver, Slater, & MacLachlan, 2004; Slater & Narver, 1994b). Moreover, resource-based view [RBV] by Barney (1996) that has elucidated the organization as a collection of skills backed by their assets, Deshpandé and Farley (1998) proposed that

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an MO demands a synergy between outside-in and inside-out capabilities and also, Siguaw, Simpson, and Baker (1998) argued that the internal assets (resource) with an industry act as a source of competitive advantage. The RBV predicts that organization's resources are the source of its competitive advantage. When unpredictable prevails in environment, it's become even more vital for organizations to optimally use its internal resources. Many studies have also argued that capabilities and internal resources within an industry are pivotal in determining the future strategy directions, and can prove a major source of inducement for the industry (Atuahene-Gima & Ko, 2001; Baker & Sinkula, 1999a). Whereas, due to short product life cycles, stiff competition in market has exuberated the emphasis on innovative performance (new product development compare to competitors) (Lund Vinding, 2006). Some writings have pinpointed the intervening role of innovation performance on the IC and overall firm performance linkage (Nesta & Saviotti, 2005). Studies that have also examined how MO or IC influence the new product development has done so on an individual basis (Berchicci, 2013). However, current studies have strived to connect IC and MO, tested the relative importance of behaviors viz., automatic and conscious knowledge on learning culture and its effects on MO. Since composite of IC measures were used but the specific nature of this mediation was remained unexplored (Subramaniam & Youndt, 2005). As such, it is effective and essential to consider the impact of MO and IC in terms of new product development. Therefore, whether every single IC measure namely human capital [HC] and structure capital [SC] mediates between MO and innovative performance remains elusive. The current essay aims to extend prior research by combing the internal and external views to test the impact of MO and IC on innovative job performance (Bontis, 1998). More precise the purposes of this paper envelope: (i) to find whether, MO impacts organizational IC; (ii) to find whether, IC impact innovative performance, and also (iii) to verify whether IC acts as a mediator between MO and innovative job performance.

## LITERATURE REVIEW

### *Market orientation*

Prior studies have acknowledged role of MO for firms in terms of aiding them to focus on gathering information pertaining to competitor capabilities and customer needs , and then using this information to generate superior value for its customers (Hult, Ketchen, & Slater, 2005). However, many researchers hold different judgment of MO. For example, Grewal and Tansuhaj (2001) considered MO as set specific behaviors of marketing personnel towards its consumer, competitors and marketing and Selnes, Jaworski, and Kohli (1996) thought it to be a resource. Similar, other researchers have conceptualized MO as a decision-making basis embedded in an organizational culture (Diamantopoulos & Hart, 1993; Matsuno & Mentzer, 2000). Despite the fact that different scholars have delineated MO in a different ways but majority of empirical investigation has viewed MO as a description of organizational environment that develops over a time and delineated it as organization wide generation, dissemination, and responsiveness to market intelligence (Pulendran, Speed, & Widing, 2015).

### *Intellectual Capital*

The notion of IC stems from RBV. The RBV focuses on resource collection of firm-related capabilities. Crucial resources make easier for firms to carry out their strategies in order to meet its customer needs and to be beneficial for firms in their struggle to achieve sustainable competitive advantage. These resources incorporate IC along with capabilities implanted in the business (Dumay & Garanina, 2013). In current knowledge base economy IC including both knowledge and human capital are vital for organization success (Dumay, 2014). Scholarships have suggested various delineation of IC (Edvinsson & Sullivan, 1996; Meyer, Skaggs, & Youndt, 2015). Such as, Bontis (1998) defined IC as the collection of intangible resources and their flows. Moreover, problem in delineation of IC for the purpose of this study is sufficed to be considered any resource determinates which contributes towards value generating processes of a firm. Edvinsson and Sullivan (1996) proposed that IC can be segregated into HC and SC. Precisely, HC is the collection of intangible resources which are implanted in organizational cogs (members) and SC is the knowledge

inculcated within organizational routines and procedures. Accordingly, this study will adhere the two dimensional model of IC.

***Conceptual Framework***

This study is based on MO and RBV theory to examine the linkage between MO and IC along with their impact on innovative performance. In a study by (Subramaniam & Youndt, 2005) showed that organization striving to optimize its economic value in the long run should have to consider customers' needs, instead of sole emphasis on selling and production of products. Thus, business functions should incorporate the needs of its target and potential customers so as to understand and follow applicable market cues (Zucker, Darby, & Brewer, 1994). While, MO is an asset/resource and capabilities are combination of specific procedures, processes and skills and only resources are not enough to generate competitive advantage (Hunt & Morgan, 1995). Moreover, in study by (Calabrese, Costa, & Menichini, 2013) suggested that in contrast to tangible assets, IC can facilitate enhanced performance of firm. Similarly, in another study authors have proposed that IC engender organizational innovation (Jablonski, Schmit, Minner, & Kay, 2016). Therefore, it is argued that in order to enable the MO to function effectively, organizations should have to acquire resources and capabilities inevitable for them to respond to the requirement of current market trends that will ultimately induce them to be innovative in term of product development that best cater the needs of its customer better than its competitors.

**FIGURE 1 HERE**

***Market orientation and intellectual capital***

There are few studies that have studied the linkage between MO and IC. Although, studies which have pursued in this direction, supported the affirmative relationship between MO and IC (Subramaniam & Youndt, 2005). In a study by Hagedoorn and Cloodt (2003) in service industry proposed that MO benefited firms via generating capital based on its market and also, suggested the firm to invest specially in IC in order to achieve competitive advantage. Moreover, an interviewed based study of four training based organization in Taiwan, it was revealed that firms use their strategy to maintain current market edge over its competitors and different organizational strategies were employed for new markets to meet the demand and product successes, in context of human resource utilization and reward (Jantunen, 2005). Relying on above scholarships of MO and IC, organizations and its members need to continuously update their resource based knowledge. Thus, H1 is posited:

H1 (a): Market orientation will positively impact the Human capital.

H1 (b): Market orientation will positively impact the Structural capital.

***Intellectual capital and Innovative Performance***

Over last few decades the notion that IC may be a source of competitive advantage has appealed several researchers and practitioners (Jablonski et al., 2016). Prior study proposed capabilities and internal resources of a firm represents a strategic policy towards bottom line and it shows firm a sense of optimal orient for future operations. Further author focused that resource has to be novel to sustain competitive edge to incorporate new product development (Dumay & Garanina, 2013). Moreover, studies have also argued that IC namely HC, SC and customer capital can influence performance (Bontis, 1998, 2001).Similarly, study showed that a unique capabilities are a type of intangible asset therefore; when IC is high firms were better off in term of innovative capabilities that transformed into the success of new products development (Jablonski et al., 2016). Further, another study by (Rossi, Cricelli, Grimaldi, & Greco, 2016) reported that employees who have professional knowledge, creativity, R&D and abilities were able to maintain good relationships with customers and positively related to innovative performance when compared with their immediate competitors. Lastly, in a cross sectional study by (Rossi et al., 2016) proposed that components enveloping experienced leaders and talented staff that can employ their technological abilities and skills and at the same time, can comprehend customer requirement were able to better contribute towards performance of firm via new product development. Thus its propose H2

H2 (a): Human capital will positively impact the Innovative performance.

H2 (b): Structural capital will positively impact Innovative performance.

***Mediating Role of Intellectual Capital***

Meyer et al. (2015) indicated intellectual and relational within-outside resources and capabilities should be combined with MO to provide sustainable competitive edge. Moreover, a study argued that IC is vital particular to service based firm and also suggested that IC like service quality might act as intervening variable with a significant impact on performance (Meyer et al., 2015). More precise, a study by (Jablonski et al., 2016) proposed that IC plays a mediating role in connecting market orientation to organizational value and further argued that MO is beneficial in creating resource that might enable organization to create value via IC. Similar, a study found learning culture to be a mediator of impact of an individual's knowledge on MO. In nut shell, it can be inferred based on above mentioned suggestions and arguments by prior studies that awareness of marketing department about changing trends in market and then sharing of such information across department act as a catalyst to strength its IC in term of the needs of their target customers and resultantly IC might be able to produce new products that best suited with the requirements of its customers. Hence, H3 is posited:

H3 (a): Human Capital will mediate the relationship between Market orientation and innovative performance.

H3 (b): Structural Capital will mediate the relationship between Market orientation and innovative performance.

**Research Design**

Target population of this study was Pakistan but considering the time and resource constraints the population was restricted to Lahore. Accordingly, by employing convenience sampling technique data was collected from various departments (e.g., marketing, finance and human resource) in four Information Technology [IT] companies comprising less than 200 employees. Overall researcher has distributed 155 questionnaires and only 114 responses were received which constituted a response rate of almost 74%. Out of received questionnaires 112 were used for further data analysis.

***Measure***

All scales employed in this study to measure key variables were previously tested by scholars in term of their psychometric properties(e.g., Chien, 2010; Han & Li, 2015) . These scales enveloped various items that were answered by employees on five point's liker-like scale ranging from strongly disagree (1) to strongly agree (5).

***Market Orientation***

This viable was measured by using 9 items scale developed by Chien (2010). The items included statement like 'company set goals based on customer demands' and 'information on customers is transparent within the company'.

***Intellectual Capital***

IC was measured by using 8 items scale; 4 for each dimension (i.e., SC and HC). The items enveloped statements: 'employees have relevant knowledge and skills in the industry' and 'The Company maintains close relationships with its alliances' etc. (Chien, 2010, p. 390).

***Innovative Performance***

This variable was measured by using 4 items scale developed by Han and Li (2015) The items enveloped statements like 'compare with our competitors…faster speed of new product launching' and 'compare with our competitors...increasingly higher new product market share'.

**CONCLUSION AND DISCUSSION**

This study has used correlation (See-table1) and Preacher and Hayes (2008) multiple mediation (indirect) analysis to test the mediating (See-table) role of IC between the MO and innovative performance. However, before the test of correlation reliability for each scale was calculated using Cronbach alpha coefficients which were well

above 0.70 as shown in the table of correlation matrix in parenthesis.

**TABLE 1 HERE**

Results of correlation analysis revealed significant moderate +ve correlation between MO and IP ($r= 0.29$, $p < 0.01$), significant relationship was found between MO-HC ($r= 0.47$, $p< 0.001$) but

Association between MO-SC ($r= 0.18$, $p > 0.05$) was not significant.

**TABLE 2 HERE**

The results of mediation analysis in table-2 revealed that only indirect effect was significant and R2 was 25% (F-value=19.22). Furthermore, the Confidence Interval [CI=.13 to .71] also did not include zero value which means that the effect of MO on IP was fully transmitted through HC. Consequently, 3(a) hypothesis of this study was accepted. Additionally, the results of MO to HC and HC to IP as predicted in 1(a) and 2(a) hypothesis were supported [($\beta = 0.56$, $p < 0.01$) and ($\beta = 0.71$, $p < 0.01$) respectively].

**TABLE 3 HERE**

The results of mediation analysis in table-3 showed that only direct effect was significant and R2 was 10% (F-value=5.22). Furthermore, the Confidence Interval [CI= -.10 to .18] did include zero value which means that the MO has direct impact on IP. Consequently, 3(b) hypothesis of this study was not accepted and 1(b) was supported. Additionally, the results of MO to SC and SC to IP as predicted in 1(b) hypothesis was supported ($\beta = 0.56$, $p < 0.01$) but 2(b) prediction of this study did not get support from study results ($\beta = 0.05$, $p > 0.05$).

***Discussion***

The results of this study partially supported the proposed model of this essay, importantly it has been found that HC fully mediate the relationship between market orientation and innovative performance, it means that the external capabilities unless and until not fitted with internal resource (i.e., human capital) would not be converted into products which capture the need target customers better than its competitors. This finding is in agreement with prospective RBV, the resource that are adapted to the needs of external environment provide (first adopter) a competitive advantage to a firm in industry (Dumay, 2014). On the other hand, surprisingly the results of this study did not support the intervening role of structural capital between market orientation and innovative performance instead, it was revealed that market orientation impact innovative performance. The possible explanation of this direct effect can be drawn from a study that have tested importance of various combination of three component model of IC (clusters) on performance and found integration of IC component have varying level of significance, notably this study provided slim evidence that some organizations focus more on human capital than any other type of capital (Joshi, Cahill, Sidhu, & Kansal, 2013). Accordingly, this may be the case in this study that selected organizations might focus more towards the development of human capital compare to structural capital. Another possible reason might be small size of selected organizations in which employee might relied on employer's prompt instructions instead of well-structured way of information sharing information.

***Conclusion***

Based on this study results it has been concluded that without skilled and experienced human resource organization market based actives would not been able to create value for its customers

therefore, in order to bounce on opportunities and convert the threats into competitive advantage valuable resource should be spent to those developments that are valued by its target and potentials customers. Moreover, this study also showed that human capital is off more importance than structural capital in creating high value products. However, before making any inference the academicians and practitioners should consider sampling method and size of this study.

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# APPENDIX

**FIGURE 1**

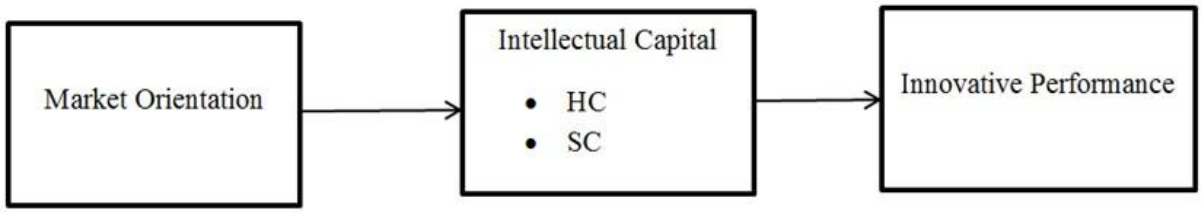


Figure1. Conceptual model of this study

**TABLE 1**

**Table-1: Inter-correlation Matrix for Key Variables**

| Variables | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|
| 1. HC | 1 | (.93) | | | |
| 2. SC | .49*** | 1 | (.82) | | |
| 3. MO | .67*** | .47*** | 1 | (.97) | |
| 4. IP | .57*** | .18 | .29** | 1 | (.96) |

Note: HC=Human Capital, SC=Structural Capital, MO=Market Orientation, IP=Innovative Performance,*p < 0.05, **p < 0.01 and * **p < 0.001.

**TABLE 2**

**Table-2: Mediation: Linking of MO to IP through HC**

| Description of Indirect Path | (β) | S.E | Z-value | p-value |
|---|---|---|---|---|
| **(MO → HC → IP)** | .40 | .01 | 4.52 | .000 |

Note: MO=Market Orientation, HC=Human Capital and IP=Innovative Performance; 95% bootstrap confidence intervals.

**Table-3: Mediation Link of MO to IP through SC**

| Description of Indirect Path | (β) | S.E | Z-value | p-value |
|---|---|---|---|---|
| **(MO → SC → IP)** | .03 | .05 | .51 | .608 |

Note: MO=Market orientation, SC=Structural Capital and IP=Innovative Performance; 95% bias-corrected bootstrap confidence intervals based on 10000 bootstrap samples.