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Linking Entrepreneurial Orientation and Business Performance: Mediating Role of Knowledge Management Orientation

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Abstract

Entrepreneurial orientation (EO) is a higher-order construct with innovativeness, proactiveness, and risk-taking as its dimensions. The objective of the study is to study the mediating role of knowledge management orientation (KMO) in the relationship between entrepreneurial orientation (EO) and business performance (BP). The personal survey was administered to senior level managers in decision making role (key informants) in 276 listed firms (both from manufacturing and service sector) from North Indian States and Union Territories [including Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttaranchal, Uttar Pradesh, Rajasthan, Chandigarh and National Capital Region (NCR)]. Two respondents each from these 400 firms were approached. The relative performance of the organization compared to the major competitor for the last three years has been considered as the measure of business performance (BP). The scales were validated using exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and structural equation modeling (SEM). The findings suggest that entrepreneurial orientation positively affects business performance and knowledge management orientation mediates the relationship between entrepreneurial orientation and business performance. Implications of the study for practicing managers have been discussed.

Keywords: Entrepreneurial Orientation, Knowledge Management Orientation, Knowledge Sharing Orientation, Learning Orientation, IT Orientation and Business Performance.

Introduction

Entrepreneurial orientation is defined as the tendency to act autonomously, being innovative, take risks and perform proactively when confronted with market opportunities (Richard et al., 2004). Entrepreneurial Orientation (EO) has emerged as a major construct within the strategic management and entrepreneurship literature. Entrepreneurial orientation is defined as the strategy-making practices that organizations use to recognize and launch corporate venture (Dess and Lumpkin, 2005). EO can be viewed as a characteristic of organizations, which can be measured by looking at top management's entrepreneurial style, as evidenced by the firms' strategic decisions and operating management philosophy (Miller, 1983). Research on entrepreneurial orientation is advancing fast as many researchers and academicians consider it as a critical success factor for gaining competitive advantage and organizational survival (Kaya and Agca,

2009).The EO construct arose from research that investigated how certain postures interacted with the environment to affect firm performance (Stambaugh et al., 2017).

The development of entrepreneurial orientation requires organizational members to engage in intensive knowledge activities. From the perspective of resource-advantage theory, knowledge is not easily transferred and dispersed due to its characteristics of tacitness and immobility (Li et al., 2009).Knowledge management orientation can help new ventures especially entrepreneurial firms in creating a good learning culture, facilitating knowledge sharing and codifying the existing knowledge. A firm can actualize entrepreneurial orientation into practical action and embody knowledge into valuable assets to advance new product development or marketing activities.

Business performance is normally defined as the degree to which the organization is able to meet the needs of its stakeholders and its own needs for survival. Business performance is considered as a complex multidimensional construct. The measure of performance may be objective (available in financial statements) or perceived/subjective. The use of subjective measure is a common practice in strategy-related research when financial statement data is unavailable or they do not allow for accurate comparisons among the firms (Vij and Farooq, 2014a; 2014b).

Emphasizing the role of knowledge as a resource, the present study endeavors to explore the mediating effect of knowledge management orientation on the relationship between entrepreneurial orientation and business performance. This paper is structured as follows. It gives a brief introduction about different constructs viz. entrepreneurial orientation (EO), knowledge management orientation (KMO) and business performance (BP), followed by the literature review and formulation of hypotheses. The next sections empirically test the measurement model, structural model and mediating role of knowledge management orientation. Finally, the paper concludes with the discussion of findings and suggestions for researchers and practitioners.

Literature Review and Formulation of Hypotheses

Entrepreneurial orientation (EO) has been addressed by various researchers both as multi-dimensional as well as uni-dimensional construct (Covin and Slevin, 1989; Lumpkin and Dess, 1996) although there is a lack of consensus among the researchers as to which component of entrepreneurial orientation (EO) falls under the arena of entrepreneurial orientation (EO).

Chadwick et al. (2008) indicated that application and dimensionality of entrepreneurial orientation both as a construct as well as a scale are debatable. Covin and Slevin (1991) described the theoretical model of entrepreneurship with risk-taking, innovativeness, and Proactiveness as the major co-factors. Consequently, the three-dimensional construct developed by Covin and Slevin (1991) was later broadened by Lumpkin and Dess (1996) by including two more components i.e. competitive aggressiveness and autonomy.

Covin and Slevin (1989) stated that entrepreneurial orientation (EO) is reflected by three components i.e. risk-taking, innovativeness and proactiveness which are uni-dimensional in nature. Whereas, Lumpkin and Dess (1996) claimed that components of entrepreneurial orientation (EO) are multi-dimensional in nature rather than uni-dimensional.Each component is necessary and while they can operate independently, each is not sufficient without the other two components (Morris et al., 2007). According to Vij and Bedi (2012), entrepreneurial orientation is a multi-dimensional construct with innovativeness, risk-taking, proactiveness, autonomy and competitive aggressiveness as its dimensions.

Gonzalez-Benito et al. (2009) define innovativeness as the process of creating new ideas, experiences, and creativity that will result in the development of technology as well as different products and services. Innovativeness refers to the search for creative, unusual or novel solutions to problems and needs (Adegbite et al., 2008). Innovativeness seeks creative, extraordinary or strange solutions to problems and needs (Ullah et al., 2011).Innovativeness represents a basic willingness to depart from existing technologies or practices and venture beyond the current state of the art (Soininen et al., 2011). Innovativeness stands for the tendency to explore for creative, unusual or novel solutions to problems and needs (Adegbite et al., 2008). Frank et al. (2010) define innovativeness as the aspect of a firm's strategic posture that refers to the firm's willingness and ability to question – and abandon – existing or given circumstances, and to create room for creativity, new ideas, and experiments. Chadwick et al (2008) define innovativeness as a firm's propensity to develop new products, services or technological processes through novel solutions to challenges.

Risk-taking is the way of supporting projects with a calculated probability of failure (Gonzalez-Benito et al., 2009). Risk-taking involves taking bold actions by venturing into the unknown, borrowing heavily and committing significant resources to ventures in uncertain environments (Rauch et al., 2009). According to Frank et al.(2010), "The risk-taking dimension represents the aspect of a firm's strategic posture that refers to the firm's willingness and ability to devote increased resources to projects whose outcome is difficult to predict". Chadwick et al.(2008) define risk-taking as the extent to which top managers are inclined to take business-related with regard to investment decisions strategic actions in the face of uncertainty.

Proactiveness refers to the exploring behavior to face contingencies in future (Gonzalez-Benito et al., 2009). Conceptually, proactiveness is more strongly related to how an owner works with his or her chosen strategy, rather than to why he or she chooses a certain strategy (Freseet al., 2002). Chadwick et al. (2008) define proactiveness as a proclivity to pursue new opportunities by anticipating and acting on future needs by being the first to market with new products or services. Proactiveness is an opportunity seeking, forward-looking perspective - involving introducing new products or services ahead of the competition and acting in anticipation of future demand - to create, change and shape the environment (Lumpkin and Dess, 1996; Kreiser et al., 2002). Proactiveness is manifested in aggressive behavior directed at rival firms and the organizational pursuit of favorable business opportunities. Proactiveness simply is the ability to take the initiative, whenever the situation demands. Porter (1985) suggests that, in certain situations, the firms could utilize proactive behavior in order to increase their competitive position in relation to other firms.

Proactiveness is concerned with the first mover and other actions aimed at seeking to secure and protect market share; and with a forward-looking perspective reflected in actions taken in anticipation of future demand (Venkatraman, 1989; Lee and Penning 2001; Dimitratos et al., 2004). Kreiser and Davis (2010) define proactiveness as the processes aimed at anticipating and acting on future needs by seeking new opportunities which may or may not be related to the present line of operations, introduction of new products and brands ahead of competition, strategically eliminating operations which are in the mature or declining stages of life cycle. Thus, proactiveness pertains to a willingness to initiate to which competitors then respond.

Competitive aggressiveness refers to a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position, that is, to outperform industry rivals in the marketplace (Vij and Bedi, 2012). Autonomy refers to the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion (Vij and Bedi, 2012). EO and BP relationship seems to be fragmented due to various conceptualizations and meanings.

Entrepreneurial orientation is the significant predictor of business performance (Vij and Bedi, 2012). However, the relationship between an entrepreneurial orientation and performance is different for different types of businesses(Wiklund and Shepherd, 2005). Entrepreneurial orientation positively affects business performance only when a dynamic environment is combined with greater access to financial capital and stable environment is combined with low access to financial capital (Frank et al., 2010). Lumpkin and Dess (1996) have suggested a contingency model of entrepreneurial orientation (EO) and business performance (BP) relationship; with organizational and environmental components as defining factors. Based on above observations, we propose the following hypothesis:

H1: Entrepreneurial orientation is directly and positively related to business performance.

Knowledge management orientation may be viewed as the capability to create the effective learning culture, promote knowledge sharing and store knowledge. According to Lin (2015), "Knowledge management orientation is defined as the relative propensity of an organization to share, assimilate and be receptive to new knowledge". Wang et al. (2009) define KMO as the propensity to build on its achieved wisdom, to share knowledge, assimilate and be receptive to new wisdom

Knowledge management orientation is conceptualized as a multidimensional construct with learning orientation, knowledge sharing orientation and information technology orientation as its dimensions. Learning orientation stands for the tendency of the organization to create and apply knowledge in the organization. Knowledge sharing orientation stands for the tendency in the organization to facilitate, encourage and reward knowledge exchange with a motive of capturing tacit and explicit learning gained by the employees. Information Technology (IT) orientation is defined as the tendency of the organization to provide for and use IT to support communication, capture and share knowledge and increase the speed of learning, measures the firm's capability to effectively manage and use information (Vij and Farooq, 2014a; 2014b; 2015; 2016). Lin (2015) conceptualized knowledge management orientation as a higher-order construct with organizational memory, knowledge sharing, knowledge absorption, and knowledge receptivity as its dimensions.

Organizations with good knowledge management orientation know where to look for the opportunities, can accurately measure the value of possible opportunities, and are better equipped to extract value from these opportunities. A firm well gifted with knowledge, skills, and abilities will perform even better if it has entrepreneurial orientation. Learning capabilities, knowledge sharing mindset and technical infrastructure with good decision-making skills that encourage a willingness to capitalize on its knowledge-based resources by engaging in entrepreneurial activities (Wiklund and Shepherd, 2003). Li et al. (2009) suggest that knowledge creation process mediates the relationship between entrepreneurial orientation and firm performance. While entrepreneurial orientation provides basic elements for achieving benefits in the relationship, knowledge creation process converts entrepreneurial orientation into knowledge assets shared by

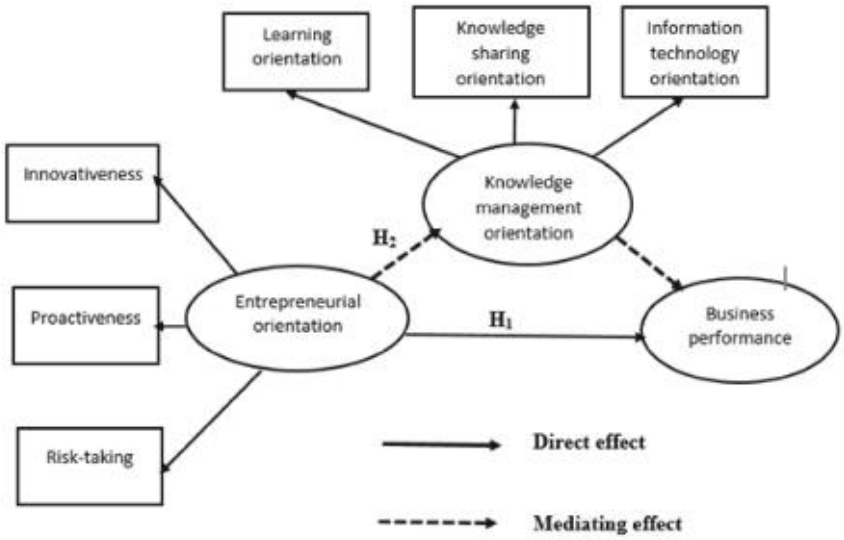
organizational members to achieve firm performance. Therefore, we propose the following hypothesis:

H2: Knowledge management orientation mediates the relationship between entrepreneurial orientation and business performance.

Methodology

This study endeavors to test the following conceptual model.

Figure-1: Conceptual Framework



The questionnaire method has been used for measuring the variables in the conceptualized model (Figure-1). The questionnaire included Likert-type scales for measuring learning orientation (LO) adopted from (Vij and Farooq, 2015), information technology orientation (ITO) adopted from (Vij and Farooq, 2016), knowledge sharing orientation (KSO) adopted from (Vij and Farooq, 2014b) and business performance (BP) adopted from (Vij and Bedi, 2016). Entrepreneurial orientation (EO) adopted from Covin and Slevin (1989). The Annexure-I shows the items in various scales used for this study. The dependent variable - business performance -has been measured using subjective performance of the firm relative to the major competitor for the past three years. The BP scale measures the relative performance on different dimensions related to all functional areas as suggested by balanced scorecard approach (Kaplan and Norton, 1992). As shown in the conceptualized model, knowledge management orientation 'KMO' has been proposed as a higher order latent construct reflected in KSO, LO, and ITO. Entrepreneurial orientation (EO) has been measured as a second order latent construct measured in terms of innovativeness, proactiveness, and risk-taking. Scales used for measuring the constructs were validated before further use for analysis as per the procedure suggested by Churchill (1979).

This is a firm-level study. The personal survey wasadministered to senior level managers in decision making role (key informants) in 400 listed firms(both from manufacturing and service sector) from North Indian States and Union Territories [including Punjab, Haryana, Himachal Pradesh, Jammu and Kashmir, Uttaranchal, Uttar Pradesh, Rajasthan, Chandigarh and National Capital Region (NCR)]. Two respondents each from these 400 firms were approached. In the final analysis, the average response of respondents from 276 firms was used for data analyses and interpretation. As such, a response rate of 69% was achieved.

Validation of Scales

Entrepreneurial orientation scale was measured with nine items adopted from Covin and Slevin (1989). Exploratory factor analysis was applied to study the dimensional structure of entrepreneurial orientation construct which revealed three factors including innovativeness, risk-taking, and proactiveness. On applying the confirmatory factor analysis on the scale, the model fit indices indicated a good fit (see Table-1). Therefore, entrepreneurial orientation scale was validated.

Knowledge management orientation (KMO)is a higher-order construct with knowledge sharing orientation (KSO), learning orientation (LO) and information technology orientation (ITO) as its dimensions.The KSO, LO and ITO scales were separately validated with good model fit as indicated in Table-1. A composite score of all the three dimensions was calculated to measure the knowledge management orientation construct. On applying the CFA on business performance construct, the results indicated a good fit as shown in Table-1, which validated the business performance construct.

Table -1 Model Fit Indices for Entrepreneurial Orientation (EO) Scale

CFA Default Model	RMR	GFI	AGFI	CFI	RMSEA	.	df	p-value	χ2/df
Entrepreneurial Orientation (EO) Scale	0.021	0.974	0.931	0.973	0.079	21.576	8	0.000	2.697
Knowledge Sharing Orientation (KSO) Scale	0.011	0.959	0.931	0.976	0.062	55.792	27	0.001	2.066
Learning orientation (LO) Scale	0.013	0.984	0.953	0.990	0.068	11.401	5	0.044	2.280
Information Technology Orientation (ITO) Scale	0.012	0.961	0.917	0.978	0.084	38.472	13	0.000	2.959
Business Performance (BP) Scale	0.013	0.960	0.925	0.966	0.066	52.649	24	0.000	2.194

Measurement Model

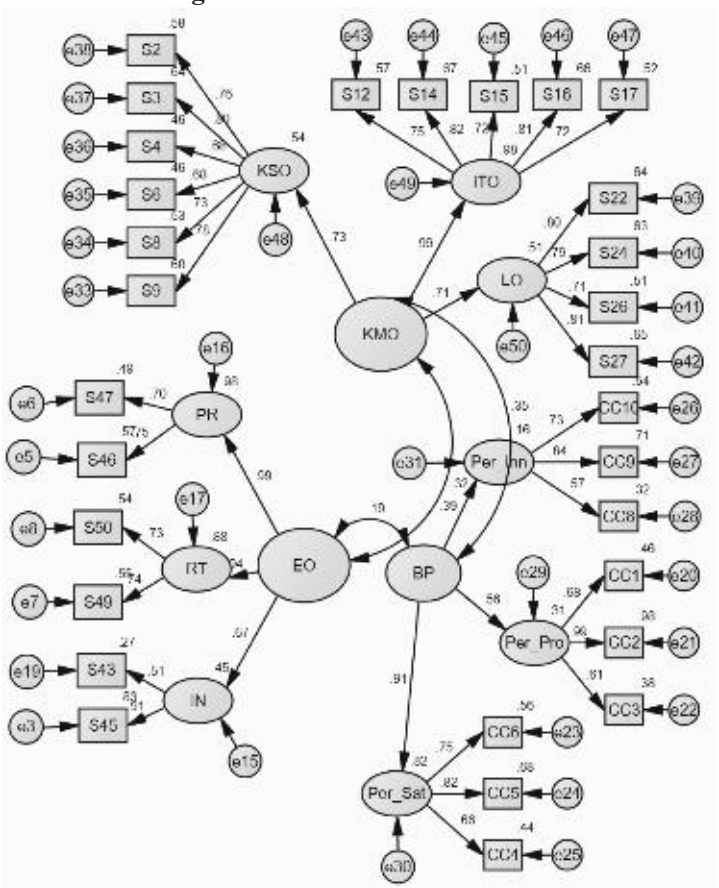
Measurement model (Figure-1) was fitted to test the convergent validity, composite reliability and discriminant validity of entrepreneurial orientation, knowledge management orientation, and business performance constructs. The model fit indices indicated a good fit as shown in Table-2.

Table-2 Model Fit Indices for Measurement Model

CFA Default Model	RMR	GFI	AGFI	CFI	RMSEA	χ2	df	p-value	χ2/df
I	0.024	0.909	0.878	0.927	0.061	258.419	128	0.000	0.061

The validity of the constructs entrepreneurial orientation, knowledge management orientation and business performance constructs was calculated based on Average variance extracted (AVE) and composite reliability as suggested by Fornell and Larcker (1981). AVE of entrepreneurial orientation and knowledge management orientation was above the threshold level suggested by Fornell and Larcker (1981). However, AVE of business performance was found to be 0.425 as shown in Table-3, which is close to the threshold level of 0.5.

Figure-2 Measurement Model



Therefore, convergent validity of all the constructs was ensured which validated the measurement model theory. Composite reliability of entrepreneurial orientation, knowledge management orientation, and business performance was above the threshold level. Discriminant validity was calculated based on AVE and squared multiple correlations between entrepreneurial orientation, knowledge management orientation, and business performance to know the extent to which these constructs differ from each other. The values of AVE estimates were greater than inter-construct correlations which ensure the discriminant validity of the entrepreneurial orientation, knowledge management orientation, and business performance constructs.

Table-3 Average variance extracted and Co mposite reliability

Construct	AVE	CR
Entrepreneurial orientation	0.773	0.909
Knowledge management orientation	0.609	0.822
Business performance	0.425	0.666

Hypothesis Testing

To test the first hypothesis that entrepreneurial orientation is directly and positively related to business performance, a structural model was tested for probable relationships between EO and BP constructs. The psychometric properties of the structural model indicated a good fit as shown Table-4.

Table-4 Model Fit Indices for EO→ BP Relationship

CFA Default Model	RMR	GFI	AGFI	CFI	RMSEA	$\chi 2$	df	p-value	$\chi 2$/df
I	0.022	0.928	0.899	0.943	0.059	165.122	85	0.000	0.061

The standardized estimate for path EO? BP was 0.20, significant at 1% level. Therefore, the first hypothesis H1is supported.

To test the second hypothesis ,we followed a systematic procedure to test the mediation suggested by Baron and Kenny (1986) using bootstrapping method suggested by Preacher and Hayes (2004), to statistically test the mediating effect of knowledge management orientation on the relationship between entrepreneurial orientation (EO) and business performance .

In the first step ,the direct effect was studied between entrepreneurial orientation (EO) and business performance (BP) (β=0 20) In the next step ,knowledge management orientation (KMO) was added as a mediator in the model , which resulted in an insignificant path between entrepreneurial orientation (EO) and business performance (BP) (β0=097 n s . and; a significant path between EO and BP through KMO (EO ? KMO ? BP) (β=0 098)Thus ,the previously significant relationship between EO ? BP is reduced insignificant , when knowledge management orientation is introduced into the equation and another indirect effect through KMO is indicated ,showing full mediation (see Table 5) .

Table-5 Mediation Analysis (EO→KMO→BP)

Hypotheses	Direct without mediator	Direct with mediator	Indirect effect	Mediation type observed
EO_KMO_BP	0.20*	0.097**	0.098*	Full mediation

*Sig at 0.05 level, ** (not significant)

Therefore, the first hypothesis H_2 is supported.

Discussion and Conclusion

The study finds a direct and positive relationship between entrepreneurial orientation (EO) and business performance (BP). Knowledge management orientation (KMO) significantly mediates the EO BP relationship. The results also show that, in the Indian context, proactiveness is the most significant determinant of entrepreneurial orientation, followed by risk-taking and innovativeness. The findings of the study are in line with the previous studies (e.g. Wiklund and Shepherd, 2003; Li et al., 2009).

Firms seeking to improve the business performance should focus more on proactively assessing the market opportunities, pre-empting competitors' moves and adapting to rapidly changing business environment. These endeavors involve risk-taking and venturing into unchartered territories. Of course, innovativeness of the firm supports better adaptation to environmental uncertainties. Organizations with good knowledge management orientation know where to look for opportunities and how to exploit these opportunities.

As revealed in this study, knowledge management orientation mediates the entrepreneurial orientation and business performance relationship. Managers can enhance the business performance by adopting an entrepreneurial posture which is supported by higher knowledge management orientation in terms of an excellent learning culture, organization-wide knowledge sharing and storing information technology orientation of top management. The entrepreneurial firms, especially new ventures, should develop a good learning culture, facilitate knowledge sharing across all levels of management and codify the existing knowledge for future use.

The study was limited to north-Indian firms and does not claim generalization beyond North India. However, the findings of the study throw a good light on causality between entrepreneurial orientation and business performance; especially revealing the indirect effect of entrepreneurial orientation on business performance through knowledge management orientation.

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Annexure I

Details of Items and Sources of Various Scales (KSO, LO, ITO, EO and BP)

Construct/ Scale	Statements in Scale	Source
Knowledge Sharing Orientation (KSO)	A climate of openness and trust permeates my organization	**Vij and Farooq (2014b)**
	In our organization, everyone speaks up if they have an opinion or idea to offer	
	We do not share ideas with other people of similar interest, especially, when they are based in different departments*	
	Knowledge sharing behavior is built into the performance appraisal system in my organization	
	Our company culture welcomes debates and stimulates discussions	
	There is no restriction for employees if they want to talk to anyone in organization including top management	
	In my organization, relatively more committed employees are more willing to share their learning and experiences with others	
	Top managers provide most of the necessary help and resources to enable employees to share knowledge	
	My organization's culture encourages and facilitates knowledge sharing	
	Top managers do not support and encourage employees to share their knowledge with colleagues*	
Learning Orientation (LO)	We have specific mechanisms for sharing lessons learned in organization activities from department to department	**Vij and Farooq (2015)**
	There is total agreement on our organizational vision across all levels, functions, and divisions	
	In our organization, employee learning is an investment, not an expense	
	Our business unit's ability to learn is the key to our competitive advantage	
	My colleagues are always ready for new learning and our organization provides enough opportunities for learning	
	We continually judge the quality of our activities and decisions taken over time	
	We actively encourage employees and customers to let us know if we are going wrong in the way we do things and to let us know how we can improve	
Information Technology Orientation (ITO)	Extranet exists in my organization to improve Knowledge sharing with external partners	**Vij and Farooq (2016)**
	Intranet exists in my organization to improve Knowledge sharing within the organization	
	Technology brings my organization closer to its customers	
	Technology links all members of my organization to one another and to relevant external public	

	In my firm, information technology is the key enabler in ensuring that the right information is available to the right people at the right time	
	IT facilitates the processes of capturing, categorizing, storing and retrieving knowledge and ideas in our company	
	In our organization, we use information technology to facilitate communications effectively when face-to-face communications are not convenient	
Entrepreneurial Orientation (EO)	In general, the top managers of my firm favors a strong emphasis on R&D, technological leadership, and innovations	**Covin and Slevin (1989)**
	How many new lines of products or services has your firm marketed in the past 5 years?	
	Changes in product or service lines have usually been quite dramatic	
	In dealing with its competitors, my firm Typically initiates actions to which competitors then respond	
	In dealing with its competitors, my firm Is very often the first to introduce new products/services, administrative techniques, operating technologies, etc	
	In dealing with its competitors, my firm Typically adopts a very competitive, "undo-the competitors" posture	
	In general, the top managers of my firm believe that owing to the nature of the environment, bold, wide-ranging acts are necessary to achieve the firm's objectives	
	In general, the top managers of my firm have a strong proclivity for high-risk projects (with chances of very high returns)	
	When confronted with decision-making situations involving uncertainty, my firm typically adopts a bold, aggressive posture in order to maximize the profitability of exploiting potential opportunities	
Business Performance (BP)	Compared to the major competitor in your industry, in the last three years, how has your business performed on the following parameters?	**Vij and Bedi (2016)**
	Sales Growth	
	Return on Investment	
	Market share	
	Service Quality	
	Customer Satisfaction	
	Employee Satisfaction	
	Employee Turnover	
	Product innovation	
	Process innovation	
	Product Quality	

*Items reverse scored