

AN EXAMINATION OF FIRM'S ENTREPRENEURIAL ORIENTATION, INNOVATION AND PERFORMANCE OF LARGE MANUFACTURING FIRMS IN PAKISTAN

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ABSTRACT

The purpose of this paper is to extend the understanding of relationships between entrepreneurial orientation, and performance of large manufacturing firms in Pakistan and to examine the role of innovation as a mediator of the above relationship. The paper presents a review of studies containing empirical research incorporating entrepreneurial orientation, innovation and firm performance. On the basis of literature, a model of the relationship of variables has been developed. In total, 320 owners/managers of manufacturing firms in Pakistan completed the survey questionnaire and the data was analyzed using PLS-SEM. The study found a negative relationship between entrepreneurial orientation and performance, however, further reveals that innovation mediates the relationship between entrepreneurial orientation and performance. The major contribution of this paper is to explore the mediating impact of innovation on the relationship between entrepreneurial orientation, and

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performance of large manufacturing firms in Pakistan. The originality of this paper is that it provides useful implication for different types of organizations to understand the relationship of entrepreneurial orientation, and innovation to introduce innovative products and processes and to improve a firm's performance.

Keywords: entrepreneurial orientation, innovation, firm performance, large manufacturing firms of Pakistan

INTRODUCTION

The role played by the manufacturing sector in income generation, poverty alleviation and job creation have been documented worldwide (Zindiye, 2008). Similarly, the manufacturing sector has been always a catalyst for improving the economy of Pakistan. Its progress boosts high benefits on both external and domestic fronts. According to evaluations, keeping all other aspects constant, a roughly 2.37 per cent rise in the growth of manufacturing sector would raise gross domestic product (GDP) progress of Pakistan by one per cent (Karachi Chamber of Commerce & Industry, 2015). It has been shown that GDP has frequently grown up synchronously with the progress in manufacturing firms/sectors. Furthermore, the manufacturing sector is the second major sector of the economy of Pakistan accounting for 13.6 per cent of GDP (Pakistan Economic Survey, 2015).

The potential success of a business is determined by its firm performance, which means its ability to excellently implement strategies to achieve its objectives (Randeree & Al Youha, 2009). Performance has been a topic of research to scholars over the years (Daud, Remli, & Muhammad, 2013; Kennerley & Neely, 2003). Nevertheless, despite the attention the concept of organizational performance has "enjoyed", researchers still find it difficult to measure and define (Murphy, Trailer, & Hill, 1996; Odumeru, 2013). As stated by Daft (2000) performance is the firm's capacity and ability to accomplish and achieve its goals by utilizing all the firm's resources effectively and efficiently.

Whereas, few researchers look at organizational performance from the perspective of values an organization creates for their stakeholders while others look at it from the perspective of the accomplishment of stated organizational objectives (Carton, 2004). Performance is a core concern for the firm that refers to the firm's success and the attainment of its goals. Some scholars studied the predictors of firm performance and Some tried to investigate the ways of improving the firm performance (Mahmood & Hanafi, 2013). According to March and Sutton (1997) and Rogers and Wright (1998) in most of the organization research, performance has extensively been studied as a dependent variable.

In literature, different researchers have defined entrepreneurial orientation (EO) i.e. Miller (1983) and Covin and Slevin (1989) on one side whereas Lumpkin and Dess, (1996) on the other side. Covin and Slevin's (1989) classification is based on three factors of EO namely,

innovativeness, proactiveness and risk-taking. While Lumpkin and Dess (1996) described EO as the tendency of a firm to act autonomously, aggressively, try to innovate, take risks and act proactively to explore the market opportunities.

Firms with strong EO can discover and use new market opportunities. Hence, it has a paramount significance for both the survival of a business and their performance (Polat & Mutlu, 2012). The most prevalent views of entrepreneurship encompass the uncertainty, risk-taking and efforts on the part of the entrepreneur who strives to convert visions into business activities. Entrepreneurship focuses to identify new business opportunities and introduce new ideas in the marketplace (Eisenhardt & Martin, 2000; Eisenhardt & Brown, 1998; McCline, Bhat, & Baj, 2000). EO has been examined in various types of organizations including small to large organizations and with different categories of ownership structures (Covin & Wales, 2010). Scholars argued that entrepreneurial behaviour has a considerable influence on the success of firm regardless of size (Miller, 1983; Covin & Slevin, 1988; Lumpkin & Dess, 1996). Wiklund (1999) considered EO as a possible positive force to utilize emerging opportunities and take first-mover advantage. Due to turbulent business environment, cutthroat competition, firms have to look for new opportunities continuously to address the increasing customer's expectations and demands for products and services (Hamel, 2000; Rauch, Wiklund, Lumpkin, & Frese, 2009). Firms should focus on EO because EO is regarded as being associated with superior FP (Kraus & Kauranen, 2009; Rauch et al., 2009).

Importantly, recent studies on innovation suggest that organizational innovation plays a key role on firm performance and competitiveness (Baker & Sinkula, 2002; Damanpour, 1991; Farley, Hoenig, & Ismail, 2008; Jimenez-Jimenez & Sanz-Valle, 2011; Luk et al., 2008). We believe that innovation and firm performance are critical characteristics which can contribute to a developing economy's growth and competitiveness (Kelly & Kumar, 2009). Firms that have higher innovation capabilities are more successful in responding to changing conditions and developing new capabilities to adopt changes and as a result achieve better performance (Arshad & Arshad, 2018; Javier et al., 2004). Innovation is related to organizations' adoption of a new idea or behaviour (Zaltman, Duncan, & Holbek, 1973). Innovation orientation is a strategic behaviour that reflects an openness to new ideas as well as the active seeking of such ideas (Olson, Slater, & Hult, 2005). The strategic orientation supports risk-taking and enhances the possibility of designing and developing completely new and innovative products (Olson et al., 2005).

This paper reviews literature on the EO, innovation and firm performance then a conceptual framework has developed. Secondly, this paper is underpinned by a famous theory i.e. Resource-Based View. Lastly, there will be a summated discussion and recommendations for future research.

REVIEW OF LITERATURE

By reviewing the literature in detail, the impact of EO has been acknowledged on innovation leading to outstanding firm performance and also highlights the relationship of EO, innovation and firm performance.

Entrepreneurial Orientation and Firm Performance

Fairoz, Hirobuni, and Tanaka, (2010) studied EO and firm performance of the Hambantota district of Sri Lanka. They employed quantitative and qualitative methods through multiple regressions for data analysis. The outcome proved a strong association between the EO and performance. Several studies conducted have used EO in its association with firm performance (Lumpkin & Dess, 2001; Yang, 2008; Fairoz et al., 2010; Madhoushi, Sadati, Delavari, Mehdivand, & Mihandost, 2011; Mehrdad, Abdolrahim, & Hamidreza, 2011; Sharma & Dave, 2011; Zhang & Zhang, 2012).

In contrast, Anderson (2010) in his important study employed a sample of 172 firms from the manufacturing division in Sweden. The result of their study indicated a negative association between EO to firm performance in terms of growth and profitability. Tang, Tang, Marino, Zhang, and Li (2008) described an inverted U-shape association between EO and firm performance relationship among Chinese ventures. Furthermore, Su, Xie, and Li (2011) research confirmed a mixed curvilinear EO to firm performance results. The link between EOs to firm performance is found to be an inverse U-shape in new ventures, however, such association was found to be positive in developed firms. The study of Filser and Eggers (2014) which examined EO and firm performance using multiple regression method for data analysis. The outcome from this study reported a mixed finding, the link between innovativeness and risk-taking to firm performance was found to be significant, while proactiveness relationship to firm performance was negatively associated. Based on the above arguments, this study seeks further to find out the relationship between EO and firm performance in the context of large manufacturing firms in Pakistan. Hence, a testable hypothesis can be formulated:

H1: *There is a positive link between entrepreneurial orientation and performance of large manufacturing firms in Pakistan.*

Entrepreneurial Orientation and Innovation

Damanpour (1991) exhibited that types of innovation are according to their purposes, for example, technical or administrative. Technical innovation involves the adoption of new technologies and administrative innovation involves the adoption of new policies for example (Evan, 1966; Hage, 1980; Normann, 1971; Tushman & Nadler, 1986). Firms that incorporate technical and managerial innovations in the structures of their organizations can face

challenges of the competitive environment and show superior performance. If organizations want to show superior organizational performance then they must enhance their innovative capabilities (Liu, 2013).

EO refers to strategic activities of an organization and depicts the way firms exploit and discover new opportunities (Wiklund & Shepherd, 2003; Teng, 2007). EO defines an inclination of the firm towards involvement in hunting market opportunities and reviewing operational fields (Hult & Ketchen, 2001). EO recommends a firm to create an innovative, proactive, and risk-taking climate in the firms (Lumpkin & Dess, 1996). By implementing a strong EO and helping social ties between companies, a firm could encourage the required knowledge to create innovation (Arshad & Arshad, 2019; Zahra & George, 2002). EO offers the latest knowledge that supports in exploiting innovative and new market opportunities (Li, Huang, & Tsai, 2009). An entrepreneurial environment could create a knowledge-sharing ability in the firm and this, in turn, would assist different departments of the firm to determine new opportunities as well as drive it towards becoming innovative in time to come (Li, Liu, & Zhao, 2006).

Moreover, research done by Hisrich and Peters (1989) claims that entrepreneurship in itself is a practical manner leading towards innovation and new venture establishment by assuming higher risks and rewards linked to the new venture. Additionally, Hult, Hurley, and Knight (2004) also narrated that innovation partially mediates the link between EO and FP. Based on the literature, it can be said with assurance that innovation is a function of EO.

Likewise, according to a study conducted by Zehir, Can, and Karaboga (2015) indicated that innovation performance mediates the impact of EO on firm performance. Research by Kocak, Carsrud, and Oflazoglu (2017) showed that EO impacts performance directly and indirectly via innovation. Similarly, Zhou, Yim, and Tse (2005) find EO positively impact breakthrough innovations. According to literature, a testable hypothesis can be developed to test in the context of a large manufacturing firm in Pakistan:

- H2: *Entrepreneurial orientation is positively related to innovation.*
- H3: *Innovation mediates the link between entrepreneurial orientation and performance of a large manufacturing firm in Pakistan.*

Conceptual Framework

This section of the paper presents a proposed framework that includes all the themes covered in the review of the literature, which concluded that entrepreneurial orientation, and innovation influence overall firm performance. Moreover, entrepreneurial orientation has a significant influence on innovation, which influences the overall performance of any organization (Figure 1).



Figure 1 Proposed conceptual framework

METHODOLOGY

Sample and Data Collection Instrument

According to Zikmund (1994), survey method seeks to elaborate a phenomenon and looks for the causes of any specific activity. As discussed by Neuman (1997), the survey method is quite useful as it facilitates the researcher to gather data from a large number of respondents in order to measure multiple variables and testify many hypotheses. Therefore, the current study has employed the self-administered survey method as survey method is very popular and is quite frequently employed for conducting quantitative research in the field of business and management (Hair, Bush, & Ortinau, 2003; Cooper & Schindler, 2006). The advantages of self-administered survey method include access to a large number of respondents, less costly to administer, and is free from interviewer bias (Sekaran & Bougie, 2010; Bryman & Bell, 2003). Thus, it was quite appropriate to employ the self-administered survey method for conducting this study.

As far as the sample is concerned, when the sample units in the target population under study are limited, the researcher may select the whole population rather than taking a sample for the study (Zikmund, 2003). There are different views of researchers to determine sample size. Sample size which is less than 500 and larger than 30 are usually considered appropriate to conduct the research study (Roscoe, 1975). The population of this study is large manufacturing firms in Pakistan and the list was obtained from the Pakistan stock exchange website. Hence, survey questionnaires were distributed to 399 large manufacturing firms listed in Pakistan stock exchange and 341 of them were returned. 21 of the returned questionnaires were eliminated due to insufficient data and the remaining 320 surveys were analyzed for research findings.

Measurements

Independent Variable

The first scale established to measure the EO was introduced by (Khandwalla, 1977) followed by the five-item scale suggested by (Miller & Friesen, 1983). After that, many studies have been conducted by the number of scholars to develop these measures such as the work of (Covin & Slevin, 1986; Smart & Conant, 1994). Following the vast majority of research conducted on EO that considered only the three dimensions namely proactiveness, innovativeness, and risk-taking, this study employed the measure used recommended by Covin and Slevin (1989) having ten-item scale.

Dependent Variable

The dependent variable in this research is FP, thus in this study items of subjective measures for performance have been adopted from Jabeen (2014) who adapted from previous works of (Valmohammadi, 2011) and (Jaworski & Kohli, 1993) to measure FP. This study has utilized six items, sales growth rate, profitability, market share, customer satisfaction, the overall performance of firms relative to competitors and overall FP to measure the performance of large manufacturing firms in Pakistan. Respondents were asked to report their satisfaction and assessment regarding the firm's performance.

Mediator Variable

In this study, innovation was used as a mediator variable and two main dimensions have been used to measure innovation namely, product and process innovation. Product and process innovation dimensions were measured by five and ten items, respectively. To define the dimensions for innovation and the measurement scale, we referred to a scale developed by (Camisón & Villar López, 2010) process, and organizational based on (OECD, 2005) guidelines and adopted from (Camisón & Villar-López, 2012) diffusion of shared competences is not as easy and free as postulated in the literature. Using the resource-based view, we study whether clustered firms perform better than non-clustered firms, by providing empirical evidence that location of firms in an industrial district does not directly create innovation capabilities or economic rents. This research question is important because it enables us to better understand how firms benefit from this external knowledge flow, both to create advantages in technological innovation and to obtain superior organizational performance. To stand out in capabilities that are often localized at the centre of the same industrial district, a firm needs to develop a learning internal micro-environment capable of better absorbing localized knowledge spillovers. In particular, the organic form is revealed as a configuration well suited to combining structural flexibility with the productive flexibility offered by the district and to strengthening technological innovation capabilities, thus improving organizational performance. [ABSTRACT FROM AUTHOR], "author": [{"dropping-particle": "", "family": "Camisón", "given": "César", "non-dropping-particle": "", "parse-names": false, "suffix": ""}], [{"dropping-particle": "", "family": "Villar-López", "given": "Ana", "non-dropping-particle": "", "parse-names": false, "suffix": ""}], "container-title": "British Journal of Management", "id": "ITEM-1", "issue": "3", "issued": {"date-parts": [{"2012"}]}, "page": "361-382", "title": "On How Firms Located in an Industrial District Profit from Knowledge Spillovers: Adoption of an Organic

Structure and Innovation Capabilities”, ”type”:”article-journal”, ”volume”:”23”}, ”uris”:[”http://www.mendeley.com/documents/?uuid=fddb8be0-ea89-48ba-838f-47ae69db14d8”]}, ”mendeley”:{”formattedCitation”:(Camisón & Villar-López, 2012.

Measurement Scale

The Likert scale is found to be more appropriate for this study due to the nature of the respondents and the information they are required to provide (Alreck & Settle, 1995). Additionally, Krosnick and Fabrigar, (1997) stated that a scale between five and seven points is more reliable than higher or lower scales and a scale with no midpoint may increase the measurement error. Additionally, psychometricians have recommended using a seven or nine-point scale because they produce slightly higher mean scores relative to the highest possible attainable score with greater variance adequacy (Dawes, 2008). Thus, this study has used a seven-point Likert scale to measure all variables from 1 = strongly disagree to 7 = strongly agree (EO, innovation and FP).

Before proceeding the collection of complete data, a pilot study was conducted. The questionnaires were distributed among 40 respondents out of the distributed questionnaires, 32 were collected and 2 were not properly completed but only 30 responses were considered for analysis. The high response rate of about 75% was achieved due to the distribution and collection of questionnaires personally. The reliability coefficient of Cronbach’s alpha was used to assess the consistency of the scale. All the variables met the threshold value of Cronbach’s alpha (i.e. 0.7). The Cronbach’s alpha value of EO, innovation, and FP were 0.891, 0.914 and 0.885 respectively. The study used structural equation modelling (SEM) and applied partial least squares (PLS) using Smart PLS 3.2.7 to assess the measurement model and the structural model. The first step in this study focuses on construct reliability and validity (Measurement Model), whereas the second step tests structural relationships among the latent constructs (Structural Model).

RESULTS

Primarily data analysis has been conducted to meet the assumption of running the PLS-SEM. After that measurement model and structural model have been assessed by PLS-SEM.

Measurement Model Assessment

Hair, Ringle, and Sarstedt (2013) and Hair, Hult, Ringle, Sarstedt and Thiele (2017)”mendeley”:{”formattedCitation”:(2017 recommended a two-step process in the assessment of PLS-SEM. The approach involves the determination of the measurement model and the structural model. According to Henseler, Ringle, and Sinkovics (2009), testing the structural model may be meaningless unless the measurement model has been evaluated. Therefore, the present study assessed the measurement model before the structural model to determine the extent to which the data collected fits the model.

The results from this study revealed that composite-reliability (CR) values are 0.913 (FP), 0.928 (innovation), and 0.913 (EO) as shown in Table 1. The Cronbach Alpha values are and 0.885 (FP), 0.914 (innovation), 0.891 (EO) as shown in Table 1 and Figure 1.

Table 1 Reliability and validity

	Cronbach's Alpha	rho_A	CR	AVE
EO	0.891	0.896	0.913	0.570
EOI	0.882	0.885	0.922	0.748
EOP	0.776	0.791	0.870	0.692
EOR	0.880	0.881	0.926	0.807
FP	0.885	0.890	0.913	0.638
INO	0.914	0.918	0.928	0.521
IPI	0.800	0.795	0.861	0.556
IPR	0.916	0.920	0.930	0.572

Convergent-validity assessed by AVE which values are 0.638 (FP), 0.521 (Innovation), and 0.570 (EO) as shown in Table 1. However, discriminant validity for this model has been measured by Fornell-Larcker Criterion (Hair, Black, Babin, & Anderson, 2010) as shown in Table 2. It indicates that the square root of AVE (diagonal) is higher than the correlations (off-diagonal) for all reflective constructs.

Table 2 Fornel-Larcker Criterion

	EO	EOI	EOP	EOR	FP	INO	IPI	IPR
EO	0.955							
EOI	0.703	0.865						
EOP	0.745	0.665	0.832					
EOR	0.688	0.797	0.548	0.898				
FP	0.665	0.623	0.521	0.618	0.798			
INO	0.751	0.694	0.632	0.658	0.747	0.822		
IPI	0.705	0.665	0.600	0.599	0.529	0.772	0.796	
IPR	0.710	0.650	0.609	0.618	0.656	0.583	0.673	0.756

Note: EO = Entrepreneurial Orientation, INO = Innovation, FP = Firm Performance

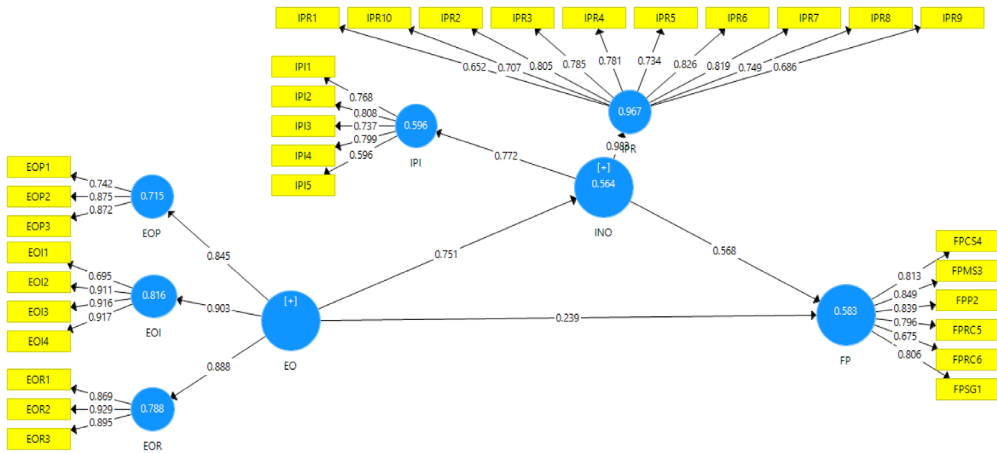


Figure 2 Measurement model

Note: EO = Entrepreneurial Orientation, INO = Innovation, FP = Firm Performance

Structural Model Assessment

Once the reliability and validity have been achieved in the measurement model, we have assessed the structural model. In the structural model, we have examined the path coefficient (hypothesis testing), Coefficient of determination (R2 value). The coefficient of determination (R2 value) of this study is 58.3% and 56.4% in FP and innovation. For evaluating the path coefficient (hypotheses testing), we run the bootstrapping in Smart-PLS. one-tailed test with 5% level of significance to assess the *P*-value and *T*-statistics to test the significance or insignificance of hypothesis. Baron and Kenny (1986) are used to test for mediation effect of innovation on the relationship between EO and FP. This method proposed that an explanatory variable (which is EO in this study) must be related independently to both a mediator variable (which is innovation) and dependent variable (which is FP). In our regression analyses, EO was included as an independent variable while innovation was included as both independent and mediator variable. The premise that EO is related to both innovation and FP is based on our analysis of the correlation results. The results of the structural model, also known as the inner model, are presented in Table 3 below. The first hypothesis H1 (i.e., EO is significantly related to FP) proved to be supportive at 0.05 level of significance ($\beta = 0.239, t = 3.536, p < 0.05$). Based on hypothesis 2 (H2), the results obtained show that EO is significantly related to innovation ($\beta = 0.751, t = 25.284, p < 0.01$). Likewise, third hypothesis H3 (i.e., Innovation mediates the relationship between EO and firm’s performance.) was also proved to be empirically at 0.01 level of significance ($\beta = 0.426, t = 7.846, p < 0.01$).

Table 3 Results of the structural model path coefficient hypothesis testing

Direct Hypothesis testing				
	Mean (Beta)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
EO -> FP	0.239	0.068	3.536	0.000
EO -> INO	0.751	0.03	25.284	0.000
Mediating Hypothesis Testing				
	Mean (Beta)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
EO -> INO -> FP	0.426	0.054	7.846	0.000

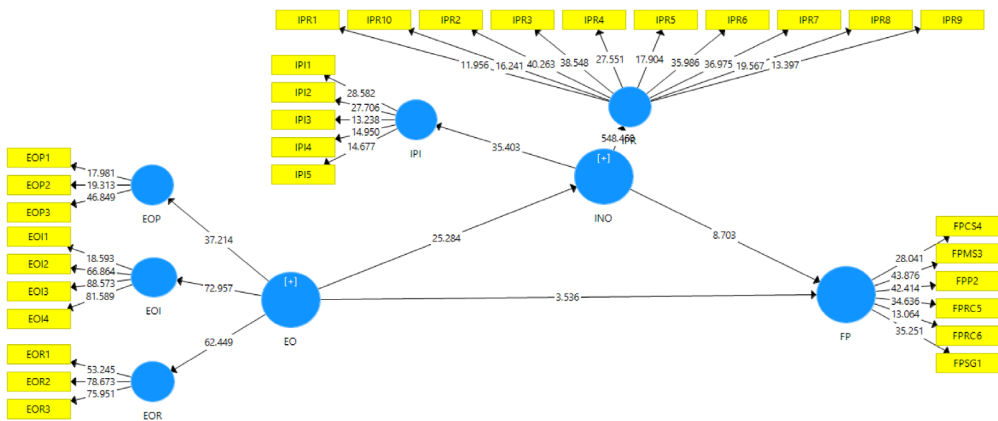


Figure 3 Structural model

Note: EO = Entrepreneurial Orientation, INO = Innovation, FP = Firm Performance

DISCUSSION AND CONCLUSION

The result of this research revealed that EO affects the performance of large manufacturing firms in Pakistan. For this research, the link between EO and firm's performance appears to be significant, which indicated that managers/owners of firms believe that EO influence performance. Therefore, H1 is supported. Despite the extensive studies reported in entrepreneurship literature soliciting that EO helps improve performance. In other words, any improvement in EO may result in a substantial impact on the performance of large manufacturing firms in Pakistan. These significant findings are consistent with the previous studies on EO and firm performance link i.e. (Lumpkin & Dess, 2001; Yang, 2008; Fairouz et al., 2010; Madhoushi et al., 2011; Mehrdad et al., 2011; Sharma & Dave, 2011; Zhang & Zhang, 2012).

The analysis outcome of this study discovered that EO has a positive effect on the innovation of large manufacturing firms in Pakistan. For this study, EO appears to be significant to the innovation of large manufacturing firms in Pakistan which indicates that owners/senior managers of large manufacturing firms believe that their firm has better innovation with the implementation of EO. H2 anticipated a positive link between EO and innovation. As proved by analysis, EO has a positive association on innovation, therefore, H2 is supported. EO makes a company create an innovative, proactive, and risk-taking climate in the organization (Lumpkin & Dess, 1996). By adopting a strong EO and facilitating social ties between companies, an organization could promote the required knowledge to create innovation (Zahra & George, 2002). The finding of this research is in line with the previous recent researchers who examined the EO and innovation relation (Khalili, Nejadhussein, & Fazel, 2013; Zehir et al., 2015).

Finally, this study developed a proposition that innovation mediates the relationship between EO and firm performance, which is confirmed by analysis of this study therefore, H3 is supported. Moreover, a study carried out by (Zehir et al., 2015) indicated that innovation performance mediates the impact of EO on firm performance. Additionally, (Hult et al., 2004) also confirmed that innovation partially mediates the connection between EO and performance. Research done by (Kocak et al., 2017) showed that EO impacts performance indirectly via innovation. The finding of this research is similar to earlier studies therefore, H3 is supported.

This research entails understanding the different measures of success in an organization by testing the proposed framework, which might show that some factors may be omitted or added to the model to enhance its efficacy. In addition to this, it will be interesting to know whether the proposed framework differs in organizations of different contexts. Therefore, a comparison of the proposed framework in different countries and organizations may yield insights about different factors that contribute to organizational performance. Thus, the framework can be further developed based on insights in different contexts. Additionally, this paper would encourage leader/ owners to consider entrepreneurial orientation, and innovation to boost their firm performance. Moreover, it can be beneficial to the decision-makers (owner/ manager) of the firms. Hence, this research is expected to make a significant contribution to both academic and practical dimensions.

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