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The Effect of Entrepreneurial Orientation and Organisational Culture on Firm Performance: The Mediating Role of Innovation

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This study is concerned with conceptual model development, which examines the innovation influence on the relationship of organisational culture, entrepreneurial orientation and performance of large manufacturing firms in Pakistan. A total of 399 questionnaires were distributed to large manufacturing firms in Pakistan to assess the relationships between organisational culture, entrepreneurial orientation, innovation, and firm performance. The findings reveal that entrepreneurial orientation significantly influences the performance of large manufacturing firms in Pakistan. Meanwhile, the results also indicated that other factors such as organisational culture do not significantly relate to the manufacturing firm's performance. Interestingly, the results had shown that the factor of innovation significantly mediated the relationships between organisational culture, entrepreneurial orientation and firm performance. Based on the results, it can be summarised that the mechanism used to enhance the innovative culture in the organisation will also contribute to the introduction, adoption and diffusion of innovations. Additionally, these factors would contribute to increased performance and achievement in the near future. Indeed, this statement is supported by numerous current and past studies conducted in Pakistan, where scholars found that innovation is the primary impetus of firm performance. However, there exists a very limited number of studies regarding the impact of innovation on organisational culture and entrepreneurial orientation in manufacturing firms in Pakistan. This study would lead to a significant contribution to

the prevailing literature by empirically examining the relationship between organisational culture, entrepreneurial orientation, innovation and firm performance.

Keywords: *Entrepreneurial Orientation, Organisational Culture, Innovation, Firm Performance and Pakistan Large Manufacturing firms.*

Introduction

The manufacturing industry is one of the economic sectors which offers multidimensional activities of various subsectors in Pakistan. Additionally, these industries bring various additional values and impact Pakistan's economic growth, such as by increasing the job opportunities and export activities. This sector is most vulnerable to factors such as government policies, infrastructure, trade agreements, workforce and R&D activities, innovations and access to energy supply. The manufacturing sectors include various industries ranging from textiles to agro-based industry, engineering goods, electrical goods and electronics, chemicals and small and medium enterprises. Surprisingly, since the last decade, these industries have experienced low-performance growth.

According to Daft (2000), performance can be defined as the firm's ability to obtain the company objectives by utilising all of its resources efficiently and effectively. In other studies by Ling and Hong (2010), organisational performance is understood as the total achievement of organisational goals, either specifically or overall within a stipulated time frame. Performance comes from doing what someone is hired to do. Performance increases when the person tries and succeeds in doing it quicker and better than they were instructed (Saif et al., 2020). Numerous studies have highlighted the significance of entrepreneurial orientation (EO) on firm performance (Miller, 1983; Zahra and Covin, 1995; Lumpkin and Dess, 2001; Wiklund and Shephard, 2005). Indeed, EO is known as a firm-level concept which is strongly related to strategic management and the decision-making process (Covin and Slevin, 1991; Lumpkin and Dess, 1996). On the other hand, past and current studies note that the increase of corporate entrepreneurship importance is due to numerous factors such as globalisation, profit-oriented firm performance, global competition and insufficiency of traditional managerial techniques due to the market conditions changes (Arshad & Arshad, 2018; Morris & Kuratko, 2002).

Even though there are numerous studies on the EO concept, the most widely used EO concept is the one introduced by Miller (1983). The EO concept is then, further developed by Covin and Slevin (1989) and several other researchers. In 1996, this concept is later enhanced by Lumpkin and Dess. Previous existing studies indicated that EO had brought significant influence to firm performance levels (Zahra and Covin, 1995). During the early introduction of the EO concept, it is reported that this concept derived from a combination of three elements

consisting of a firm's proactiveness, innovativeness and risk-taking. Collectively, these indicators of EO represent firm performance with respect to competition, business activities and technology (Miller, 1983). A more current study by Lechner and Gudmundsson (2012), suggested EO as the process, performance and business structure of a firm. In this case, firms with strong EO enable them to explore various new business opportunities. Therefore, it can be suggested that EO is one of the significant measures to business survival and its performance (Polat & Mutlu, 2012).

Besides EO, organisation culture (OC) is among the essential measures that influence an organisation and firm performance. Generally, an organisation or group is formed when at least two individuals join together to achieve similar objectives and several other similar aspects which bind them together. In particular, culture is known as the beliefs, values, norms, and assumptions shared by a group of people, which influence their behaviour within a particular time frame. Additionally, culture change occurs from one particular age group to another (Willcoxson and Millett, 2000; Hartnell, Ou, and Kinicki, 2011).

Numerous studies suggest that firm performance is significantly influenced by OC (Ahmad, 2012; Khan, Wafa, et al., 2020; Sokro, 2012). Other scholars stated that a firm's effectiveness and performance are strongly related to several factors such as innovative, adaptive and entrepreneurial culture, which serve as a source of competitive advantage to an organisation (Nazir & Lone, 2008; Rose, 2008). Additionally, OC helps to guide people's behaviour in organisational associates. It controls how an organisation incorporate together and the internal processes to react to the encounters posed by the external environment (Arshad & Arshad, 2019; Davidson et al., 2007; Ojo, 2005; Rashid et al., 2003; Sokro, 2012; Willcoxson & Millett, 2000). Particularly, this study focuses on analysing the relationship of innovation roles within the elements of OC, EO and firm performance. Based on previous literature discussions, this study suggests that innovation acts as a mediating role to the elements of OC and EO-firm performance relationship. The other part of this study will discuss the variables in the literature review, research hypotheses, research model and methodology, the empirical results, research analysis and finally the research conclusions.

Review of Literature and Hypothesis Development

By reviewing the literature in detail, the impact of entrepreneurial orientation and organisational culture has been acknowledged as innovation leading to outstanding firm performance and also highlights the relationship of entrepreneurial orientation, organisational culture, innovation and firm performance.

Theory

This study is underpinned by the Resource Based View (RBV) Theory. This theory posited that the unique resources of a firm generate competitive advantages that lead to the performance and sustainability of the firm in the industry (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984). Moreover, RBV places emphasis on a firms' competitive resources, especially on a firm's unique resources as they are crucial for growth. RBV consists of tangible and intangible capabilities. For this study, we focused on intangible capabilities namely entrepreneurial orientation, organisational culture and innovation.

Previous research conducted on EO (Wiklund and Shepherd, 2003; Ferreira, Azevedo, and Ortiz, 2011; Lee, Peris-Ortiz, and Fernández-Guerrero, 2011; Martins and Rialp, 2013), organisational culture (Hall, 1992; Zheng et al., 2010), and Innovation (Ahmad, 2015; Zafar et al., 2016) have made references to the theory of RBV. RBV postulates that there is a link between organisational resources, competitive advantage and organisational performance (Barney, 1991).

Entrepreneurial Orientation and Firm Performance

Several studies have found that high firm performance, growth and competitive advantage are strongly related to EO (Jogaratham and Tse, 2006; Lee et al., 2011; Kraus et al., 2012). Additionally, the contribution of EO to firm performance has been extensively proven in numerous studies within the established countries (Tang and Tang, 2012). Nowadays, the significance of entrepreneurship can be seen due to the benefits that it offers to sustainable competitive advantage and firm performance within various business environments (Wiklund and Shepherd, 2003; Zahra, 1986).

To date, numerous empirical research has confirmed that a positive and significant association exists between EO and firm performance (Abebe, 2014; Dada & Watson, 2013; Khan, Hassan, et al., 2020). On the contrary, other research has found a weaker correlation (Dimitratos et al., 2004) or that there is no significant association between EO and firm performance (George et al., 2001; H. Li et al., 2005; Smart & Conant, 1994; Walter et al., 2006). Based on the previous results of related studies, it can be suggested that more research is needed to confirm the consistency of results, particularly within different regions and locations. Therefore, the following hypothesis is developed to test the relationship between EO and firm performance in large Pakistan manufacturing firms:

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

Entrepreneurial Orientation and Innovation

Meanwhile, the previous study has suggested EO as an element that encourages an innovative, proactive and risk-taking environment in a firm (Lumpkin & Dess, 1996). Strong EO execution helps to enhance the social ties between companies and generates more information that could develop new innovation for the benefits of a particular firm (Zahra and George, 2002). According to Li, Huang, and Tsai (2009), EO offers knowledge that helps to support the development of new innovation and market opportunities. A knowledge-sharing ability is obtained within an entrepreneurial environment, which contribute to assist the different departments in a firm.

However, Schindehutte, Morris, and Kocak, (2008) argued that different types of EO would respond differently according to types of innovation. A lower level of EO is linked to incremental innovation, whereas a higher level of EO is identified to strongly related to radical innovation. Similarly, Zhou *et al.*, (2005) discovered that EO positively impacts breakthrough innovations. Hence, based on the earlier discussion, the suggested hypothesis developed is:

H2: There is a positive relationship between entrepreneurial orientation and innovation.

Organisational Culture and Firm Performance

Related empirical research has evidence that there exists a relationship between OC and firm performance. This statement is supported by the results of Duke II and Edet, (2012), where the study findings suggest that there is a positive link between OC and firm performance. In a study conducted by Kim, Nam, and Stimpert, (2004), the researcher had proof that culture plays a significant role in various stages of firm processes and performance. Meanwhile, Deal and Kennedy, (1982) evidenced that higher organisation performance is achieved with several situations. Firstly, when there is a strong organisational culture in a firm. Secondly, when the employee objectives are similar to the management goal.

On the contrary, several empirical types of research argue that there is no association between OC and firm performance (Yesil and Kaya, (2013). Even though there are several studies conducted to test the relationship of OC and firm performance in manufacturing firms (Su and Chen, 2013; Kull, Yan, Liu, and Wacker, 2014), service enterprises (Halkos and Tzeremes, 2011; Yesil and Kaya, 2013), and both industries (Tseng, 2010; Tidor, Gelmereanu, Baru, and Morar, 2012). However, these studies revealed inconsistent findings. Hence, it can be suggested that there is a need for this study to further investigate the relationship between OC and firm performance in developing countries, such as Pakistan. Based on the aforementioned discussion, the next hypothesis that can be drawn for this study is:

H3: There is a positive relationship between organisational culture and performance of large manufacturing firms in Pakistan.

Organisational Culture and Innovation

Generally, OC benefits an organisation by encouraging innovative behaviour among the employees. Hartmann (2006), stated that OC benefits the firm's action by influencing the employee's behaviour to produce new innovation to the company. Similarly, other studies found that OC is one of the significant factors in the innovation success of an organisation (Laforet, 2008; Tellis et al., 2009). However, the OC literature shows convergence in defining types of culture that support innovation. It is suggested in the previous study that when OC supports creative solutions, all of the issues encountered can be easily fixed in innovative ways (Lock & Kirkpatrick, 1995).

Indeed, past and current studies related to OC have identified that OC plays a significant measure in influencing the innovations of an organisation (Tushman and O'Reilly, 1997; Martins and Terblanche, 2003; Yang, 2007). Similarly, numerous researchers found a strong association between OC and innovation (Mumford, 2000; Martins and Terblanche, 2003; McLean, 2005; Menzel, Aaltio, and Ulijn, 2007). A study executed by Barney (1986), suggested that a source of competitive advantage is achieved when OC is anchored by an innovation.

Similarly, previous studies also suggested that firm innovation is the core element of OC (Tushman & O'Reilly, 1997). Based on the above discussion, this study suggested that an innovative culture benefits an organisation by identifying the issues encountered, at the same time providing an innovative solution for the company. Moreover, a culture supporting innovation helps in gaining a sustainable competitive advantage for a firm. Hence, the next hypothesis formed from the discussion is:

H4: There is a positive relationship between organisational culture and innovation.

Innovation and Firm performance

Several researchers suggested that innovative ability is the key to success for an organisation (Tushman and Nadler, 1986; Henderson and Clark, 1990; Utterback, 1994; Lieberman and Montgomery, 1998). Indeed, numerous studies have highlighted a strong association between innovation and firm performance in the context of various institutions, such as service organisations, public administration and industrial firms (Damanpour and Evan, 1984; Zahra, Belardino, and Boxx, 1988). According to the RBV theory, process innovation is known as a firm's ability to present variations and enhancements in production technologies, work

organisations and processes (Damanpour, 1991). Shefer and Frenkel, (2005) discovered that innovation results in increased productivity, market share enhancement, efficiency (please indicate what kind of efficiency that you are referring to, i.e. employee efficiency, productivity efficiency) and higher profits. Besides increasing productivity, innovation also benefits in obtaining distinguished products and increased firm performance.

Similar to Wang and Ahmed, (2004), Leiponen (2005), and Tang (2006), it is important to note that this study would also centre its focus on the most commonly employed set, which are product and process innovation. On the contrary, there are few studies that found a negative association between innovation and firm performance. According to Greve (2003), there is no significant connection between innovation and firm performance.

A quite recent study by Arshad & Arshad, (2018), suggested that higher innovative capabilities are required for a firm to boost firm performance. Hence, this study believes that it is essential to conduct similar studies but in the context of a developing nation, particularly Pakistan. Therefore, the hypothesis that can be drawn from the above discussion is:

H5: There is a positive relationship between innovation and performance of large manufacturing firms in Pakistan.

Innovation as a Mediator

According to the strategic management literature, innovation is one of the significant concepts that adds values and ensures sustainable competitive advantages for a firm that experiences a multifaceted and fast changing commercial environment (Madhavan and Grover, 1998). This statement is supported by Javier et al., (2004), who suggested that firms with advanced innovation are more capable of responding to various business conditions.

Meanwhile, numerous studies have evidence that the innovation process is highly related to EO (Schafer, 1990; Barringer and Bluedorn, 1999; Harms, Schulz, Kraus, and Fink, 2009). Additionally, Hult *et al.*, (2004) also narrated that innovation somehow mediates the link between EO and FP. Based on the literature discussed, it can be suggested that innovation is the key foundation of EO. Likewise, according to a study conducted by Zehir, Can and Karaboga, (2015), the results revealed that innovation performance mediates the impact of EO on firm performance.

Currently, numerous scholars have begun to focus research interest on the external and internal factors that mediate the link between EO and firm performance, instead of measuring the direct link between these two variables e.g. (Lumpkin and Dess, 1996; Zahra and Garvis, 2000; Wang, 2008; Alegre and Chiva, 2013). Therefore, this research would focus more on the

influence of innovation in determining the relationship between EO and the firm's performance. Hence, the next testable hypothesis formulated is:

H6: Innovation mediates the relationship between entrepreneurial orientation and performance of large manufacturing firms in Pakistan.

A recent study showed that innovation significantly mediates the association between OC and firm performance (Kwon Choi et al., 2013). Numerous research has been carried out to identify the importance of the culture element in innovation criteria (Jassawalla and Sashittal, 2002; Lau and Ngo, 2004; Jamrog, Vickers, and Bear, 2006) and the direct influence of innovation towards firm performance. However, a very limited study explores the mediating role of innovation criteria between OC and firm performance (Tseng, Kuo, and Chou, 2008). Based on this statement, it can be argued that OC influences the performance results via other mediating factors (Tseng, 2010; Zheng *et al.*, 2010).

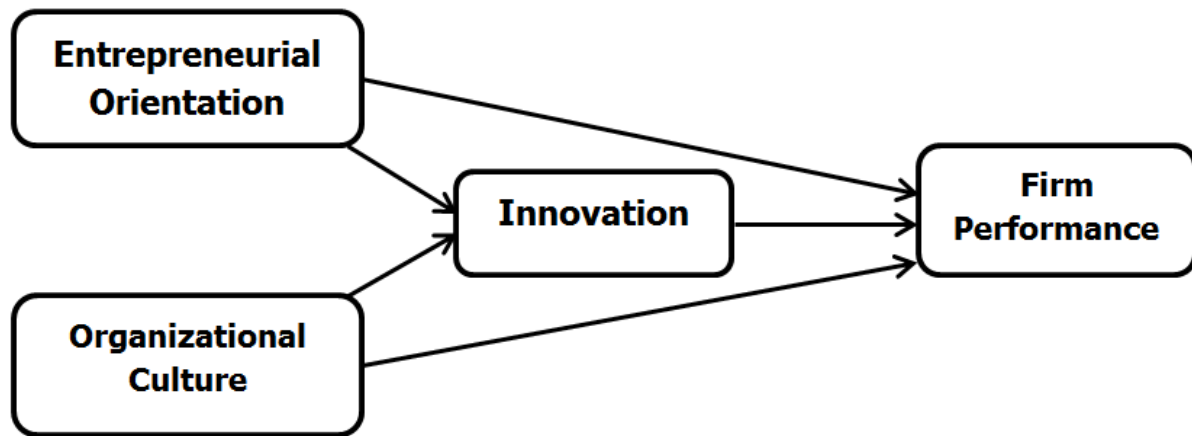
Nonetheless, there are very limited models and empirical studies conducted which examine the relationship between the elements of OC, innovation and firm performance (Deshpande *et al.*, 1993). Hence, this study is conducted to further investigate the mediating effect of innovation on OC and firm performance, particularly in large manufacturing firms in Pakistan. A testable hypothesis that can be formulated is:

H7: Innovation mediates the relationship between organisational culture and the performance of large manufacturing firms in Pakistan.

Theoretical Framework

Based on the conclusions from the review and discussions of previous studies, the following research framework is developed. The research framework in Figure 1 illustrates the associations that exist amongst the variables that have been studied in this study. The proposed framework (in Figure 1) has been underpinned by the RBV theory.

Figure 1. Proposed framework of the study



Methodology

Sample and Data Collection Instrument

The survey questionnaire is used as an instrument of the quantitative data collection of this study. As described by Zikmund (1994), the survey questionnaire method is used to explain a phenomenon and looks for the causes of any specific activity. Therefore, this study has adopted the current study method of self-administered surveys. This method is very popular and frequently employed by numerous business management studies particularly in quantitative research (Hair, Bush, and Ortinau, 2003). Hence, this method was chosen to obtain the required data for this research.

Dipping into the sample unit subjects, when the sample study units of the target population are limited, the researcher is required to select the whole population rather than taking a sample for the study (Zikmund, 2003). Since the population of this study involved large manufacturing firms in Pakistan, the list was obtained from the Pakistan stock exchange website. A total number of 399 survey questionnaires were distributed among large manufacturing firms listed in the Pakistan stock exchange. A total of 341 survey questionnaire were returned. Out of 341 surveys, 21 of the survey questionnaires were rejected due to incomplete answers, while the remaining 320 surveys were examined for the research findings.

Measurements

Independent variable: Following the vast majority of research conducted on EO that considered only three dimensions, namely proactiveness, innovativeness and risk-taking, this study employed the measure used by Covin and Slevin (1989) having a ten item scale. On the other hand, for organisational culture, a total of 24 items used were adopted from (Wallach,

1983) and numerous other researchers have adopted Wallach's items. Bureaucratic organisational culture, innovative organisational culture and supportive organisational culture are three dimensions of organisational culture developed by Wallach (1983).

Dependent variable: Meanwhile, the dependent variable tested for this study is FP. In this study, the items measure for FP are adopted from the previous works of (Valmohammadi, 2011); and (Jaworski & Kohli, 1993). This study has utilised 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.

Mediator variable: In this study, innovation was used as a mediator variable. Particularly, the two dimensions applied under innovation subjects are product and process innovation. Both types of innovation were examined using five and ten items, respectively. The dimension and measurement scale of innovation used for this study is the one developed by (Camisón & Villar López, 2010) from (OECD, 2005).

Measurement Scale: The Likert scale is one of the measurements used in the survey questionnaire to obtain the related data for this study. Based on the research objectives and the hypothesis formulated earlier, the Likert scale is found to be the most suitable measurement to provide all of the required information for this study (Alreck & Settle, 1995). Thus, this study applied the seven-point Likert scale to measure all of the variables, namely; 1= Strongly Doesn't Describe to 7= Strongly Describe (OC Wallach 1983), and 1= strongly disagree to 7= strongly agree (EO, innovation and FP).

A pilot study was carried out before the exact data collection process to test whether the researcher had possibly missed any important information during the exact data collection process later on. A total of 40 survey questionnaires were distributed among the respondents. Out of 40 surveys distributed, there were only 32 returned survey forms. However, out of 32 returned surveys, only 30 surveys were completed and used for the analysis. Based on the collected survey forms, the high response rate of 75% was obtained. The internal consistency of the data was measured by the coefficient of Cronbach's alpha. The results of Cronbach's Alpha for the survey questionnaire met the threshold values between 0.8 to 0.9. The Cronbach's alpha value for each variable tested is shown in Table x below (to make the information more legible please put the information in a table form).

Furthermore, this research has used the structural equation model (SEM) and applied partial least squares (PLS) using Smart PLS 3.2.7 to measure both measurements and the structural model. The initial step of this research focuses on the measurement model (construct reliability

and validity). Meanwhile, the next step is evaluating the structural associations among the latent constructs.

Results

Primary data analysis has been conducted to meet the assumption of the PLS-SEM. There are two essential approaches for Smart-PLS. The first step involves the evaluation of the measurement model. The second step is the structural model assessment.

Measurement Model Assessment

A study by Hair, Ringle, and Sarstedt (2013) and Hair et al. (2017) recommended a two-step processes in the assessment of PLS-SEM. This approach includes 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 firstly assessed the measurement model before the structural model. The results from this study revealed that the composite-reliability (CR) value for firm performance is 0.913. Meanwhile, the composite-reliability (CR) value for innovation is 0.928, followed by entrepreneur orientation with 0.899 and organisational culture with 0.968 as shown in Table 1. The Cronbach Alpha value for firm performance is 0.885 which indicates excellent internal consistency. Meanwhile, the Cronbach Alpha value for innovation is 0.915, which indicates good internal consistency. The Cronbach Alpha value for entrepreneur orientation is 0.850 which indicates internal consistency and 0.965 for organisational culture, which indicates excellent internal consistency (refers to Table 1 and Fig. 2).

Table 1: Reliability and Validity of the constructs

	CA	CR	AVE
EO	0.850	0.889	0.573
EOI	0.882	0.921	0.748
EOP	0.776	0.870	0.692
EOR	0.880	0.926	0.807
FP	0.885	0.913	0.638
INN	0.915	0.928	0.503
IPI	0.800	0.863	0.560
IPR	0.916	0.930	0.572
OCB	0.945	0.954	0.723
OCI	0.908	0.926	0.611
OCS	0.910	0.928	0.619
OC_	0.965	0.968	0.559

Note: EO = Entrepreneurial Orientation; EOI = Entrepreneurial Orientation (Innovativeness); EOP = Entrepreneurial Orientation (Proactiveness); EOR = Entrepreneurial Orientation (Risk Taking); FP = Firm Performance; INN=Innovation; IPI = Innovation (Product Innovation); IPR = Innovation (Process Innovation); OCB = Organisational Culture (Bureaucratic Organisational Culture); OCI = Organisational Culture (Innovative Organisational Culture); OCS = Organisational Culture (Supportive Organisational Culture)

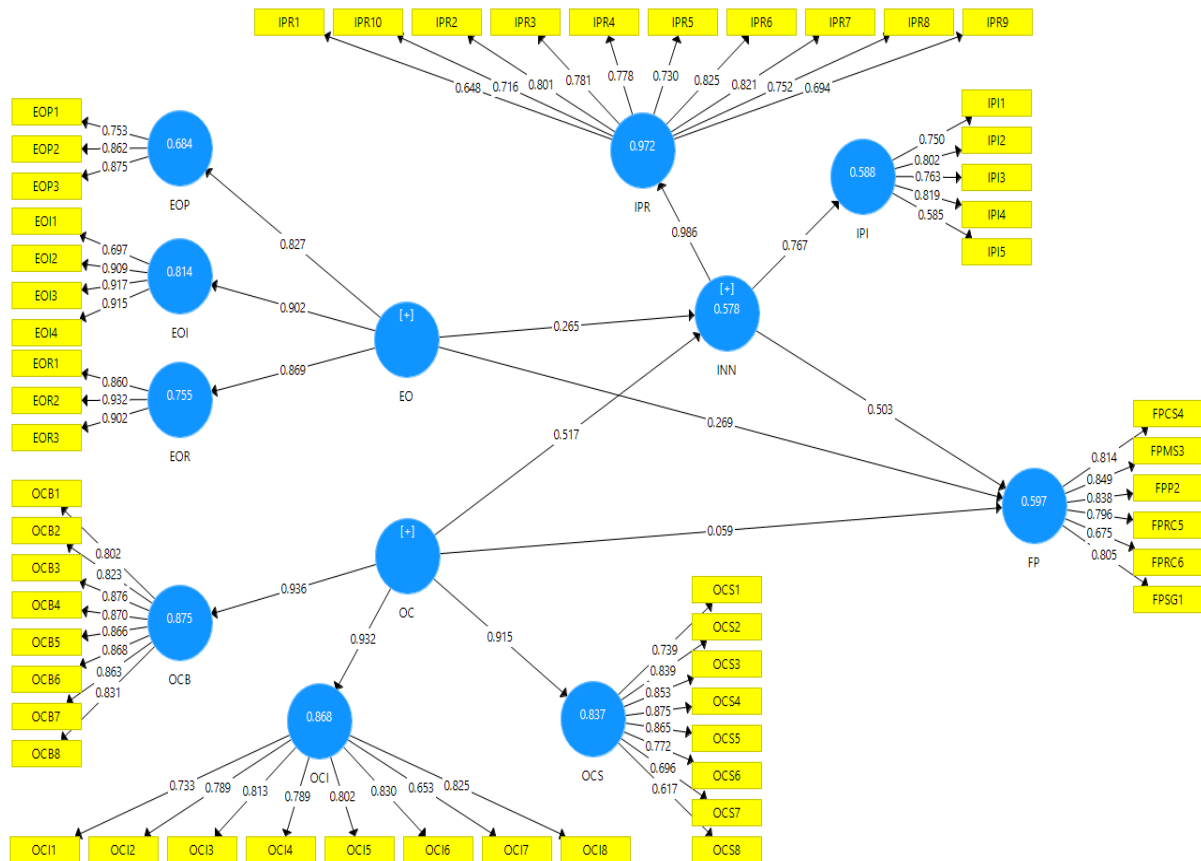
Convergent-validity assessed by AVE indicates the values of 0.638 for firm performance, followed by 0.503 for innovation, 0.573 for entrepreneur orientation, and 0.559 for organisational culture as shown in Table 1. Discriminant validity for this model has been measured using Fornell-Larcker Criterion (Hair et al., 2010) as shown in Table 2. The results indicate that the square root of AVE (diagonal) is higher than the correlations (off-diagonal) for all reflective constructs.

Table 2: Fornell-Larcker

	EO	FP	INN	OC_
EO	0.757			
FP	0.683	0.798		
INN	0.720	0.741	0.809	
OC_	0.680	0.673	0.750	0.848

Note: EO= Entrepreneurial Orientation, OC = Organisational Culture, INN = Innovation, FP = Firm Performance

Figure 2. PLS Algorithm



Note: EO= Entrepreneurial Orientation, OC = Organisational Culture, INN = Innovation, FP = Firm Performance

Structural Model Assessment

Once the reliability and validity have been achieved in the measurement model, we assessed the structural model. In the structural model we examined the path coefficient (Hypothesis testing) and coefficient of determination (R² value). The coefficient of determination (R² value) of this study was 59.7% and 55.7% in firm performance and innovation. For evaluating the path coefficient (hypotheses testing), we ran the bootstrapping in a Smart-PLS one-tailed test with a 5% level of significance to assess the P-Value, and T-statistics to test the significance or insignificance of the hypothesis. Kenny (1986) is used to test for any mediation effect of innovation on the relationship between organisational culture and firm performance and between entrepreneur orientation and firm performance. The results of the structural model, also known as the inner model, are presented in Table 3 below.

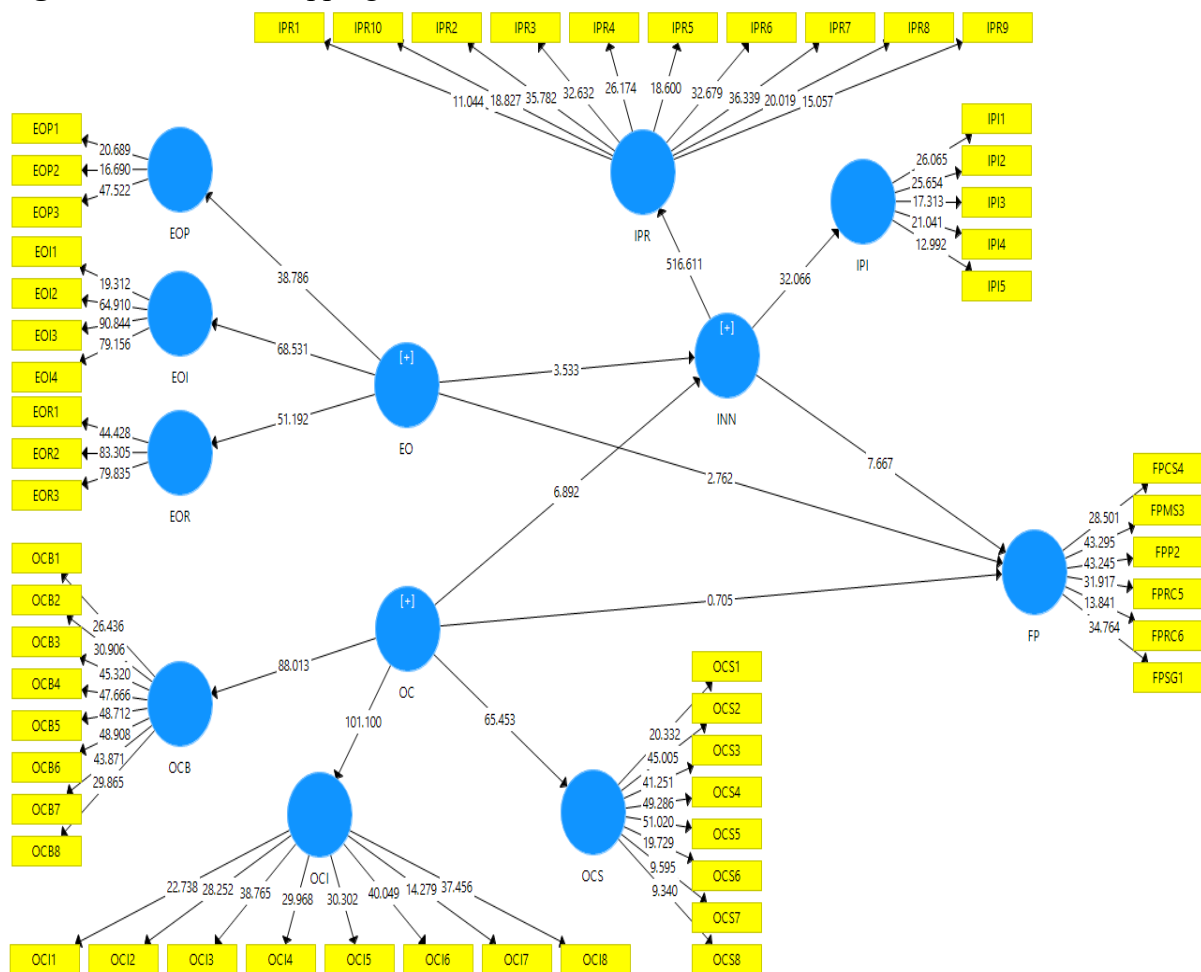
As per analysis, the first hypothesis of this study H1 (i.e., Entrepreneur orientation is significantly related with firm performance), proved to be supportive with a 0.01 level of significance ($\beta=0.269$, $t=2.762$, $p<0.01$). The second hypothesis of this study, H2, anticipated

a positive association between EO and innovation. As shown in Table 3, EO has a significant and positive relationship on innovation ($\beta = 0.265$; $t=3.533$; $p < 0.01$). Based on hypothesis 3 (H3), the results obtained show that **organisational culture is not significantly related to performance** ($\beta=0.059$, $t=0.705$, $p>0.05$), hence H3 is not supported. Meanwhile, in hypothesis 4 (H4), OC reported a positive relationship with innovation ($\beta = 0.517$; $t=6.892$; $p<0.01$). Hence H4 was supported. Further, hypothesis 5 (H5) hypothesised that innovation was positively related to firm performance. The results support H5 ($\beta = 0.503$; $t=6.667$; $p < 0.01$). Likewise, the sixth hypothesis (H6) (i.e., Innovation mediates the relationship between entrepreneur orientation and firm's performance) also proved to be supportive with a 0.01 level of significance ($\beta=0.133$, $t=3.132$, $p<0.01$). Finally, hypothesis 7 (H7) (i.e., Innovation mediates the relationship between organisational culture and firm's performance.) was also proved to be empirical with at 0.01 level of significance ($\beta=0.260$, $t=5.355$, $p<0.01$).

Table 3

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
EO -> FP	0.269	0.097	2.762	0.006
EO -> INN	0.265	0.075	3.533	0.000
OC_ -> FP	0.059	0.084	0.705	0.481
OC_ -> INN	0.517	0.075	6.892	0.000
INN -> FP	0.503	0.066	7.667	0.000
EO -> INN -> FP	0.133	0.043	3.132	0.002
OC_ -> INN -> FP	0.260	0.049	5.355	0.000

Figure 3. PLS Bootstrapping



Note: EO= Entrepreneurial Orientation, OC = Organisational Culture, INN = Innovation, FP = Firm Performance

Discussion and Conclusion

According to numerous studies, innovation is found to be one of the important means for firms to stay competitive and ensure continued performance. Based on the results generated, this study had proven the same where innovation plays an essential aspect of a firm's performance. As mentioned earlier, this research studied the relationships between the firm's entrepreneurial orientation, organisational culture, innovation and firm performance. The results obtained for this study are strictly applicable only to the large manufacturing industry within the context of Pakistan. However, the extensive literature review conducted earlier concluded that perhaps the results obtained are applicable to other manufacturing sectors with similar cultures as well. Nonetheless, this study believes that future research will be needed for such generalisability. As outlined earlier, the purpose of this study is to propose a framework that represents the determinants of organisational performance. Based on the result generated, this study

concludes that innovation is an important variable in the success of any organisation. Moreover, based on the proposed framework, it is suggested that innovation can be improved through the application of entrepreneurial orientation and organisational culture.

On the other hand, the findings also reveal that there is a positive relationship between organisational culture and firm performance and these findings are in line with previous the studies of (Lewis, 1994; Lim, 1995; Ray, 1986; Willmott, 1993; Yesil & Kaya, 2013). It is important to note that in Pakistan, the majority of businesses or firms are operated by family members. In addition, the results of this study show that organisational innovations play a mediating role between organisational culture and firm performance as well as entrepreneurial orientation and firm performance. Moreover, the results prove that innovation explains a significant amount of variance in firm performance. Next, the findings specify that innovation is highly encouraged in an innovative organisational culture. The implication that can be drawn from these findings is that the mechanism is one of the methods that helps foster an innovative culture in an organisation.

Therefore, the results drawn from this study suggest that the company owner or decision-maker should consider introducing entrepreneurial orientation and innovation for greater firm performance. In conclusion, based on the overall results discussed earlier, it is hoped that this research will make a significant contribution to both academic and practical dimensions, particularly in manufacturing industries. It can be suggested that the relevancy, practicality and adequacy of the proposed framework could be validated for future research. Testing the proposed framework empirically in other developing countries would provide beneficial information to future professionals.

REFERENCES

- Abebe, M. (2014). Electronic Commerce Adoption, Entrepreneurial Orientation and Small- and Medium-Sized Enterprise (SME) Performance. *Journal of Small Business and Enterprise Development*, 21(1), 100–116.
- Ahmad, M. S. (2012). Impact of Organisational Culture on Performance Management Practices in Pakistan. *Business Intelligence Journal*, 5(1), 50–55.
- Ahmad, N. A. (2015). *The Relationship Between Innovation and Information Technology on Organisational Performance*. University Utara Malaysia.
- Ahmed, P. K. (1998). Culture and climate for innovation. *European Journal of Innovation Management*, 1(1), 30–43.
- Alegre, J., & Chiva, R. (2013). Linking Entrepreneurial Orientation and Firm Performance: The Role of Organisational Learning Capability and Innovation Performance. *Journal of Small Business Management*, 51(4), 491–507.
- Alreck, P. L., & Settle, R. B. (1995). *The Survey Research Handbook: Guidelines and Strategies for Conducting a Survey (2nd ed.)*. New York, NY: McGraw Hill.
- Arshad, M. Z., & Arshad, D. (2018). Intellectual capital and SMEs performance in Pakistan: The role of environmental turbulence. *International Journal of Entrepreneurship*, 22(Specialissue).
- Arshad, M. Z., & Arshad, D. (2019). Internal capabilities and SMEs performance: A case of textile industry in Pakistan. *Management Science Letters*, 9(4), 621–628.
- Arshad, Z., & Arshad, D. (2018). Innovation Capability, Absorptive Capacity and SMEs Performance in Pakistan: The Moderating Effect of Business Strategy. *Journal of Technology and Operations Management*, 13(2), 1–11.
- Balkin, D. B., Markman, G. D., & Gomez-Mejia, L. R. (2000). Is Ceo Pay In High-Technology Firms Related to Innovation? *Academy of Management Journal*, 43(6).
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
- Barringer, B. R., & Bluedorn, A. C. (1999). The Relationship between Corporate Entrepreneurship and Strategic Management. *Strategic Management Journal*, 13, 363–380.

- Brannen, M. Y. (1991). Culture as the Critical Factor in Implementing Innovation. *Business Horizons*, 34(6), 59–67.
- Camisón, C., & Villar-López, A. (2012). On How Firms Located in an Industrial District Profit from Knowledge Spillovers: Adoption of an Organic Structure and Innovation Capabilities. *British Journal of Management*, 23(3), 361–382.
- Conceicao, P., Hamill, D., & Pinheiro, P. (2002). Innovative Science and Technology Commercialization Strategies at 3M: a Case Study. *Journal of Engineering & Technology Management*, 19(1), 25–38.
- Covin, J. G., & Slevin, D. P. (1986). *The Development and Testing of an Organisational Level Entrepreneurship Scale*. Wellesley, MA: Babson College.
- Covin, Jeffrey G., & Slevin, D. P. (1989). Strategic Management of Small Firms in Hostile and Benign Environments. *Strategic Management Journal*, 10(1), 75–87.
- Dada, O., & Watson, A. (2013). Entrepreneurial Orientation and the Franchise System Organisational Antecedents and Performance Outcomes. *European Journal of Marketing*, 47(5/6), 790–812.
- Daft, R. L. (2000). *Organisation Theory and Design*. 7th Edition. USA: South-Western College Publishing, Thomson Learning.
- Damanpour, F., & Evan, W. M. (1984). Organisational Innovation and Performance: The Problem of ‘Organisational Lag. *Administrative Science Quarterly*, 29(3), 392–409.
- Davidson, G., Coetzee, M., & Visser, D. (2007). Organisational Culture and Financial Performance in a South African Investment Bank. *SA Journal of Industrial Psychology*, 33(1), 38–48.
- Deal, T. E., & Kennedy, A. A. (1982). Corporate Cultures: The Rites and Rituals of Organisational Life. *Reading/T. Deal, A. Kennedy. Mass: Addison-Wesley*, 2, 98–103.
- Detert, J., Schroeder, R., & Mauriel, J. (2000). A Framework for Linking Culture and Improvement Initiatives in Organisations. *Academy of Management Review*, 25(4), 850–863.
- Dimitratos, P., Lioukas, S., & Carter, S. (2004). The Relationship Between Entrepreneurship and International Performance: the Importance of Domestic Environment. *International Business Review*, 13(1), 19–41.

- Duke II, J., & Edet, G. H. (2012). Organisational Culture as a Determinant of Non-Governmental Organisation Performance: Primer Evidence from Nigeria. *International Business and Management*, 4(1), 66–75.
- Ferreira, J., Azevedo, S. G., & Ortiz, R. F. (2011). Contribution of Resource-Based View and Entrepreneurial Orientation on Small Firm Growth. *Cuadernos de Gestión*, 11(1), 95–116.
- George, G., Wood JR, R. D., & Khan, R. (2001). Networking Strategy of Boards: Implications for Small and Medium-Sized Enterprises. *Entrepreneurship & Regional Development*, 13(1), 269–286.
- Greve, H. R. (2003). A Behavioral Theory Of R&D Expenditures And Innovations: Evidence From Shipbuilding. *Academy of Management Journal*, 46(6), 685–702.
- Hair, J. F., Bush, R. P., & Ortinau, D. J. (2003). *Marketing Research: Within a Changing Information Environment (2nd ed.)*. New York, USA: McGraw-Hill Irwin.
- Halkos, G. E., & Tzeremes, N. G. (2011). Modelling the Effect of National Culture on Multinational Banks' Performance: a Conditional Robust Nonparametric Frontier Analysis. *Economic Modelling*, 28(1–2), 515–525.
- Hall, R. (1992). The strategic analysis of intangible resources. *Strategic Management Journal*, 13(2), 135–144.
- Harms, R., Schulz, A., Kraus, S., & Fink, M. (2009). The Conceptualisation of “Opportunity” in Strategic Management Research. *International Journal of Entrepreneurial Venturing*, 1(1), 57.
- Hartmann, A. (2006). The Role of Organisational Culture in Motivating Innovative Work Behavior in Construction Organisations. *Construction Innovation*, 6(3), 159–172.
- Hartnell, C. A., Ou, A. Y., & Kinicki, A. (2011). Organisational Culture and Organisational Effectiveness: A Meta-Analytic Investigation of the Competing Values Framework's Theoretical Suppositions. *Journal of Applied Psychology*, 96(4), 677–694.
- Henderson, R. M., & Clark, K. B. (1990). Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms. *Administrative Science Quarterly*, 35(1), 9–30.
- Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: its Antecedents and Impact on Business Performance. *Industrial Marketing Management*, 33(5), 429–438.

- Jabeen, R. (2014). *Moderating Effect of External Enviroment on Performance of SMES in Pakistan Dctor of Philosophy Universiti Utara Malayasia* (Issue July). universiti utara malaysia.
- Jamrog, J., Vickers, M., & Bear, D. (2006). Building and Sustaining a Culture that Supports Innovation. *Human Resource Planning*, 29(3), 9–19.
- Jassawalla, A. R., & Sashittal, H. C. (2002). Cultures that Support Product Innovation Processes. *Academy of Management Executive*, 16, 42–53.
- Javier, F., Montes, L., Ruiz, A., Luis, M., Fernández, M. M., Moreno, A. R., Miguel, L., & Fernández, M. (2004). Assessing the Organisational Climate and Contractual Relationship for Perceptions of Support for Innovation. *International Journal of Manpower*, 25(8), 167–180.
- Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing*, Vol, 57(3), 53–70.
- Jogaratnam, G., & Tse, E. C. (2006). Entrepreneurial Orientation and the Structuring of Organisations: Performance Evidence from the Asian Hotel Industry. *International Journal of Contemporary Hospitality Management*, 18(6), 454–468.
- Kanter, R. M. (1983). *The Changemasters*. New York: Simon & Schuster.
- Khan, W. A., Hassan, A. R., Wafa, S. A., Arshad, M. Z., Kashif, U., & Nisar, A. (2020). An Examination of Firm's Entrepreneurial Orientation, Innovation and Performance of Large Manufacturing Firms in Pakistan. *Journal of The Asian Academy of Applied Business*.
- Khan, W. A., Wafa, S. A., Hassan, R. A., & Kashif, U. (2020). The mediating effect of innovation on the relationship between organisational culture and performance of large manufacturing firm in Pakistan. *Malaysian Journal of Business and Economics*.
- Kim, E., Nam, D., & Stimpert, J. L. (2004). Testing the Application of Porter's Generic Strategies in a Digital Age: A Study of Korean Cyber Malls. *Journal of Business Strategies*, 21(1), 9–43.
- Kraus, S., Rigtering, J. P. C., Hughes, M., & Hosman, V. (2012a). Entrepreneurial orientation and the business performance of SMEs: a quantitative study from the Netherlands. *Review of Managerial Science*, 6(2), 161–182.

- Kull, T. J., Yan, T., Liu, Z., & Wacker, J. G. (2014). The Moderation of Lean Manufacturing Effectiveness by Dimensions of National Culture: Testing Practice-Culture Congruence Hypotheses. *International Journal of Production Economics*, 153, 1–12.
- Laforet, S. (2008). Size, strategic, and Market Orientation Affects on Innovation. *Journal of Business Research*, 61(7), 753–764.
- Lau, C. M., & Ngo, H. Y. (2004). The HR System, Organisational Culture and Product Innovation. *International Business Review*, 13(6), 685–703.
- Lechner, C., & Gudmundsson, S. V. (2012). Entrepreneurial Orientation, Firm Strategy and Small Firm Performance. *International Small Business Journal*, 32(1), 36–60.
- Lee, S. M., Peris-Ortiz, M., & Fernández-Guerrero, R. (2011). Corporate Entrepreneurship and Human Resource Management: Theoretical Background and a Case Study. *International Journal of Manpower*, 32(1), 48–67.
- Leiponen, A. (2005). Skills and Innovation. *International Journal of Industrial Organisation*, 23(5–6), 303–223.
- Lewis, D. S. (1994). Organisational Change: Relationship Between Reactions Behaviour and Organisational Performance. *Journal of Organisational Change Management*, 7(5), 41–55.
- Li, H., Zhang, Y., & Chan, T. S. (2005). Entrepreneurial Strategy Making and Performance in China's New Technology Ventures: the Contingency Effect of Environments and Firm Competences. *Journal of High Technology Management Research*, 16(1), 37–57.
- Li, Y.-H., Huang, J.-W., & Tsai, M.-T. (2009). Entrepreneurial Orientation and Firm Performance: The Role of Knowledge Creation Process. *Industrial Marketing Management*, 38(4), 440–449.
- Lieberman, M. B., & Montgomery, D. B. (1998). *First-Mover (dis) Advantages: Retrospective and Link with the Resource-Based View*. Graduate School of Business, Stanford University.
- Lim, B. (1995). Examining the Links Between Organisational Culture and Organisational Performance. *Leadership and Organisational Development Journal*, 16(5), 16–21.
- Ling, Y. H., & Hong, L. (2010). How Intellectual Capital Management Affects Organisational Performance: Using Intellectual Capital as the Mediating Variable. *Human Resource Management Student Newspaper*, 10(1), 1–17.

- Lock, E. A., & Kirkpatrick, S. A. (1995). *Promoting Creativity in Organisations*. In C.M. Ford & D.A. Gioia (Eds.). *Creative Action in Organisations: Ivory Tower Visions and Real World Voices*. London: Sage.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking it to Performance. *Academy Of Management Review*, 21(1), 135–172.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle. *Journal of Business Venturing*, 16(5), 429–451.
- Madhavan, R., & Grover, R. (1998). From Embedded Knowledge to Embodied Knowledge: New Product Development as Knowledge Management. *The Journal of Marketing*.
- Martins, I., & Rialp, A. (2013). Entrepreneurial Orientation, Environmental Hostility and SME profitability: A Contingency Approach. *Cuadernos de Gestion*, 13(2), 67–88.
- McLean, L. D. (2005). Organisational Culture's Influence on Creativity and Innovation: A Review of the Literature and Implications for Human Resource Development. *Advances in Developing Human Resources*, 7(2), 226–246.
- Menzel, H. C., Aaltio, I., & Ulijn, J. M. (2007). On the Way to Creativity: Engineers as Intrapreneurs in Organisations. *Technovation*, 27(12), 732–743.
- Morris, M., & Kuratko, D. (2002). *Corporate entrepreneurship: Entrepreneurial development within organisations*.
- Mumford, M. D. (2000). Managing Creative People: Strategies and Tactics for Innovation. *Human Resource Management Review*, 10(3), 313–351.
- Nazir, N. A., & Lone, M. A. (2008). Validation of Denison's Model of Organisational Culture and Effectiveness in the Indian C ontext. *Re Journal of Business Perspective*, 12(1), 49–58.
- Neuman, W. L. (1997). *Social Research Methods. Qualitative and Quantitative Approaches (3rd ed.)*. MA: Allyn & Baco.
- OECD. (2005). *Oslo manual. Oslo*. Retrieved from <http://www.oecd.org/sti/inno/2367580.pdf>.
- Ojo, O. (2005). Organisational Culture and Corporate Performance: Empirical Evidence from Nigeria. *Journal of Business Systems, Governance and Ethics*, 5(2), 1–13.

- Oke, A., Burke, G., & Myers, A. (2007). Innovation Types and Performance in Growing UK SMEs. *International Journal of Operations & Production Management*, 27(7), 735–753.
- Peteraf, M. (1993). The cornerstones of competitive advantage: a resource-based view. *Strategic Management Journal*, 14, 179–191.
- Polat, İ., & Mutlu, H. M. (2012). The Impacts of Market Orientation, Entrepreneurial Orientation, Environmental Uncertainty and Internationalization Speed on Firm Performance. *European Researcher*, 27(8–2), 1248–1254.
- Rashid, A. Z., Sambasivan, M., & Johari, J. (2003). The Influence of Corporate Culture and Organisational Commitment on Performance. *Journal of Management Development*, 22(8), 708–728.
- Ray, C. A. (1986). Corporate Culture: The Last Frontier of Control. *Journal of Management Studies*, 23(3), 251–97.
- Rehman, S. U., Shahzad, M., Farooq, M. S., & Javaid, M. U. (2020). Impact of leadership behavior of a project manager on his/her subordinate's job-attitudes and job-outcomes. *Asia Pacific Management Review*.
- Rose, R. C. (2008). Organisational Culture as a Root of Performance improvement: Research and Recommendations. *Contemporary Management Research*, 4(1), 43–56.
- Saffold, G. S. I. (1988). Culture Traits, Strength and Organisational Performance: Moving Beyond “Strong” Culture. *Academy of Management Review*, 13(4), 546–58.
- Schafer, D. S. (1990). Level of Entrepreneurship as Scanning Source Usage in very Small Businesses. *Entrepreneurship Theory and Practice*, 15(2), 9–31.
- Schindehutte, M., Morris, M. H., & Kocak, A. (2008). Understanding Market-Driving Behavior: the Role of Entrepreneurship. *Journal of Small Business Management*, 46(1), 4–26.
- Shefer, D., & Frenkel, A. (2005). R&D, Firm Size and Innovation: an Empirical Analysis. *Technovation*, 25(1), 25–32.
- Slater, S. F., & Narver, J. C. (2000). The Positive Effect of a Market Orientation on Business Profitability: A Balanced Replication. *Journal of Business Research*, 48(1), 69–73.
- Smart, D. T., & Conant, J. S. (1994). Entrepreneurial Orientation (EO), Distinctive Marketing Competencies and Organisational Performance. *Journal of Applied Business Research*, 10(3), 28–38.

- Su, H. C., & Chen, Y. S. (2013). Unpacking the Relationships Between Learning Mechanisms, Culture Types, and Plant Performance. *Int. J. Production Economics*, 146(2), 728–737.
- Syrett, M., & Lammiman, J. (1997). The Art of Conjuring Ideas. *Director*, 50(9), 48–54.
- Tang, J. (2006). Competition and Innovation Behavior. *Research Policy*, 35(1), 68–82.
- Tang, Z., & Tang, J. (2012). Entrepreneurial Orientation and SME Performance in China's Changing Environment: The Moderating Effects of Strategies. *Asia Pacific Journal of Management*, 29(2), 409–431.
- Tellis, G. J., Prabhu, J. C., & Chandy, R. K. (2009). Radical Innovation Across Nations: The Preeminence of Corporate Culture. *Journal of Marketing*, 73(1), 3–23.
- Tidor, A., Gelmereanu, C., Baru, P., & Morar, L. (2012). Diagnosing Organisational Culture for SME Performance. *Procedia Economics and Finance*, 3, 710–715.
- Tseng, C. Y., Kuo, H. Y., & Chou, S. S. (2008). Configuration of Innovation and Performance in the Service Industry: Evidence from the Taiwanese Hotel Industry. *The Service Industries Journal*, 28(7), 1015–1028.
- Tseng, S.-M. (2010). The Correlation Between Organisational Culture and Knowledge Conversion on Corporate Performance. *Journal of Knowledge Management*, 14(2), 269–284.
- Tushman, M. L., & Nadler, D. A. (1986). Organizing for Innovation. *California Management Review*, 28(3), 74–92.
- Tushman, M. L., & O'Reilly, C. A. (1997). *Winning through Innovation: A Practical Guide to Leading Organisational Change and Renewal*. Boston, MA: Harvard University Press.
- Utterback, J. M. (1994). *Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change*. Harvard Business School Press, Boston, MA.
- Valmohammadi, C. (2011). The Impact of TQM Implementation on the Organisational Performance of Iranian Manufacturing SMEs. *The TQM Journal*, 23(5), 496–509.
- Walter, A., Auer, M., & Ritter, T. (2006). The Impact of Network Capabilities and Entrepreneurial Orientation on University Spin-off Performance. *Journal of Business Venturing*, 21(4), 541–567.

- Wang, C. L. (2008). Entrepreneurial Orientation, Learning Orientation, and Firm Performance. *Entrepreneurship Theory and Practice*, 32(4), 635–657.
- Wernerfelt, B. (1984). A Resource-Based View of the Firm. *Strategic Management Journal*, 5(2), 171–180.
- Wiklund, J., & Shepherd, D. (2003). Knowledge-Based Resources, Entrepreneurial Orientation, and the Performance of Small and Medium sized Businesses. *Strategic Management Journal*, 24(13), 1307–1314.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial Orientation and Small business Performance: A Configurational Approach. *Journal of Business Venturing*, 20(1), 71–91.
- Willcoxson, L., & Millett, B. (2000). The Management of Organisational Culture. *Australian Journal of Management & Organisational Behaviour*, 3(2), 91–99.
- Willmott, H. (1993). Strength is Ignorance: Slavery is Freedom: Managing Culture in Modern Organisations. *Journal of Management Studies*, 30(4), 515–51.
- Yang, J. T. (2007). Knowledge Sharing: Investigating Appropriate Leadership Roles and Collaborative Culture. *Tourism Management*, 28(2), 530–543.
- Yesil, S., & Kaya, A. (2013). The Effect of Organisational Culture on Firm Financial Performance: Evidence from a Developing Country. *Procedia - Social and Behavioral Sciences*, 81, 428–437.
- Zafar, H., Hafeez, M. H., & Shariff, M. N. M. (2016). Mediating impact of innovation on relationship between market orientation, organisational learning, organisational culture and organisational performance. *South East Asia J Ournal of Contemporary Business, Economics and Law*, 9(2), 40–56.
- Zahra, S. A. (1986). A Canonical Analysis of Corporate Entrepreneurship Antecedents and Impact on Performance. *Academy of Management Proceedings*, 1986(1), 71–75.
- Zahra, S., Belardino, S., & Boxx, W. (1988). Organisational Innovation: Its Correlates and its Implications for Financial Performance. *International Journal of Management*, 5, 133–142.
- Zahra, S., & Garvis, D. (2000). “International Corporate Entrepreneurship and Firm Performance: The Moderating Effect of International Environmental Hostility. *Journal Of Business Venturing*, 15(5), 469.

- Zahra, Shaker A., & Covin, J. G. (1995). Contextual Influences on the Corporate Entrepreneurship-Performance Relationship: A Longitudinal Analysis. *Journal of Business Venturing*, 10(1), 43–58.
- Zahra, Shaker A., & George, G. (2002). Absorptive Capacity: A Review, Reconceptualization, and Extension. *Academy of Management Review*, 27(2), 185–203.
- Zaltman, G., Duncan, R., & Holbek, J. (1973). Innovations and organisations. *New York Wiley. Organisational Change and Innovation: Perspectives and Practices in Europe. London: Routledge*, 20(3746), 193–210.
- Zehir, C., Can, E., & Karaboga, T. (2015). Linking Entrepreneurial Orientation to Firm Performance: The Role of Differentiation Strategy and Innovation Performance. *Procedia - Social and Behavioral Sciences*, 210, 358–367.
- Zheng, W., Yang, B., & McLean, G. N. (2010). Linking Organisational Culture, Structure, Strategy, and Organisational Effectiveness: Mediating Role of Knowledge Management. *Journal of Business Research*, 63(7), 763–771.
- Zhou, H., Tan, S., & Uhlaner, L. M. (2007). *Knowledge Management, Innovation Orientation and Innovation Performance. SCALES*.
- Zhou, K. Z., Yim, C. K., & Tse, D. K. (2005). The Effects of Strategic Orientations on Technology and Market Based Breakthrough Innovations. *Journal of Marketing*, 69(2), 42–60.
- Zikmund, W. G. (1994). *Exploring Marketing Research (5th ed.)*. TX: The Dryden Press.
- Zikmund, W. G. (2003). *Business Research Methods*. Cincinnati, OH : Thomson/South-Western