

## **Innovation as a mediator between Innovative Culture, Transformational Leadership, Knowledge Management, Learning Orientation, and Performance**

*Hina Zafar<sup>1</sup>*  
*Khawaja Khalid Mehmood<sup>2</sup>*

### **ABSTRACT**

*It is believed that for small and medium-sized enterprises (SMEs), innovation is most important to deliver performance. Literature indicates that the most significant antecedents of innovation are learning orientation, transformational leadership, knowledge management, and innovative culture. Further, a research gap exists regarding the mediating effect of innovation for the relationships among these antecedents and SMEs performance in the Pakistan context. The scope of research is limited to SMEs and is novel and significant in this regard that it examines the mediatory role of innovation for the relationships between learning orientation, transformation leadership, knowledge management, innovative culture, and performance for Pakistani SMEs. This research employed quantitative research design and collected primary data from 150 SMEs (including retailers, hotels, restaurants, and boutiques) of Southern Punjab region. Area sampling technique was used wherein areas were selected randomly. Respondents were top managers/owners of SMEs. This research concludes that innovation does play a mediatory role. It contributes and strengthens transformational leadership theory, resource-based theory, theory of the growth of firms, and dynamic capabilities perspective. The study also contributes by providing practical implications and suggestions to the policy makers and managers of SMEs. It suggests that managers must develop an innovative culture to promote innovation and attain high performance. Further, effective knowledge management guarantees innovation and superior performance of the organization. Regarding, learning orientation, it suggests that information must be obtained from and communicated to all the employees for fostering innovation and high performance. Finally, the transformational leadership style must be used by leaders for enhancing the creativity of employees and improving SME performance.*

**JEL Classification:** M1, M14, M59

**Keywords:** Innovation, innovative culture, knowledge management, learning orientation, organization performance, Pakistani SMEs, transformational leadership.

### **INTRODUCTION**

An organization's performance is its ability to attain its goals efficiently and effectively, and if it does so, it could become successful in achieving long term competitive advantage (Ricardo & Wade, 2001). Tidd (2001) argues that companies could better exploit market opportunities by adopting innovation. Other scholars have majorly concluded that amongst others, innovation has been an important contributory factor for organizations performance in multiple contexts (Gault, 2018; Mehmood, Sonia, & Umar, 2016; Rajapathirana & Hui, 2018). For instance, Zahra, Belardino, and Boxx (1988), Damanpour and Evan (1984) have found a

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<sup>1</sup> & <sup>2</sup>- Institute of Management Sciences, Bahauddin Zakariya University Multan. (khawjakhalid@bzu.edu.pk)

positive effect of innovation on organization performance in various industries including service-based and administrative organizations. In a more recent study conducted in the context of transitional economy in South-Eastern Europe, Turulja and Bajgoric (2019) suggested that product innovation and process innovation, both positively affected performance of the various type of firms.

Innovation could be determined by certain important strategic factors. For instance, learning orientation is supposed to be concerned with getting a high level of organizational performance through the use of new knowledge for developing new offerings (Hurley & Hult, 1998). Further, organization culture contains the ability to foster innovation and performance (Hartmann, 2006). Empirical researches have also suggested the positive nature of the association between culture, innovation and company performance (Gallagher, 2008; Miron, Erez, & Naveh, 2004). Similarly, knowledge management is critical in fostering innovation and enhancing performance (Gloet & Terziowski, 2004; Parlbly & Taylor, 2000). Also, transformational leadership is supposed to motivate human resources for getting innovative products and achieving better performance (Elkins & Keller, 2003; Seaver, 2010). Importantly, several scholars have suggested that variables like learning, transformational leadership, knowledge management, and innovation have been significant for stimulating SMEs' growth and development (Bessant & Tidd, 2007; Hogen & Coote, 2013; Nunes, Annansingh, & Eaglestone, 2006; Tajasom, Hung, Nikbin, & Hyun, 2015).

#### **Problem statement & research significance**

Hence, in this area, the critical literature review indicates that although innovation has been studied in the past by numerous scholars but its antecedents and performance consequences are still knotty questions. Especially, innovation's intervening nature of effect between innovative culture, knowledge management, transformational leadership, learning orientation and performance of SMEs has not been studied earlier in one research design which is a significant research gap. Specifically, the information about how and to what extent SMEs need to focus on building an innovative culture, fostering learning, encouraging transformation leadership, and facilitating knowledge management processes for addressing innovation and boosting performance is lacking. Furthermore, this kind of investigation for Pakistani SMEs working in diverse sectors is also deficient which further signifies the research gap and the need for this study as it highlights the absence of significant information in this regard. The study takes into account the SME sector of Pakistan because it is quite significant in terms of its contribution to the country's growth and development. The findings of this study are supposed to contribute to resource-based theory, the theory of the growth of firms, dynamic capabilities perspective, and transformational leadership theory; as well as the findings, guide SMEs about how they could be more innovative and competitive in the world place.

## **LITERATURE REVIEW**

### **Innovative culture, innovation, and performance**

It is suggested that an innovative culture fosters the production of new products and services and helps in adopting innovative ideas (Skilbeck, 2017). Key features of innovative culture are adaptability among employees, entrepreneurship, risk-taking, and creativity (Carrillat, Jaramillo, & Locander, 2004). Martins and Terblanche (2003) suggested that innovative culture was one of the critical success factors for achieving superior organizational

performance. Innovative culture enhances creativity, and freedom and helps employees in achieving a superior level of performance (McLean, 2005). Further, innovation contains the ability to lead to high levels of firm performance (Abouzeedan, 2011). Although certain past scholars disaffirmed this relation (Tidd, Bessant, & Pavitt, 2002; Kaufmann & Tödtling, 2001), others have argued in favor of positive innovation's impact on firm performance (Oncioiu, 2013; Rajapathirana & Hui, 2018). For instance, Kumarasinghe (2018) reported a positive effect of innovation on the performance of Sri Lankan SMEs. This research argues that an organization could build innovation and attain high performance by well exploiting its intangible resources like innovative culture and knowledge (Amit & Schoemaker, 1993; Kostis, Kafka, & Petrakis, 2018) and hence contributes to resource-based view. Hence, the discussion leads to the following hypothesis:

**H1:** The relationship between innovative culture and organization performance is mediated by innovation.

### **Transformational leadership, innovation, and performance**

TL is used for motivating human resources by use of intellectual stimulation, charisma, and motivation (Seaver, 2010). Studies have demonstrated that transformational leadership played a significant role in enhancing job satisfaction and SMEs' performance (Ghosh, Liang, Meng, & Chan, 2001; Hanaysha et al., 2012). Further, transformational leaders play a significant role in creating innovative climate through motivating employees by their charismatic speech (Jung & Sosik, 2002) and their behavior acts as the driving force behind employee creativity (Bass & Avolio, 1995). In their study of Iraq's Higher Education Institutions, Al-Husseini & Elbeltagi (2016) reported that transformational leadership played a significant role in improving product and process innovation in public as well as the private sector. This research builds its hypothesis on the basis of transformational leadership theory (Burns, 1978) as well as linking transformational leadership with creativity and performance (Akbari, Younesi, & Zohoori, 2017). So, it could be hypothesized that:

**H2:** Innovation mediates the relationship between transformational leadership and organizational performance.

### **Knowledge management, innovation, and performance**

Knowledge management concerns interdependent activities and processes such as valuation of knowledge, its creation, distribution, and storage (Gonzalez & Martins, 2017). Baddi and Sharif (2003) suggest that knowledge management provides easy access to expertise for searching new capabilities and knowledge, thus contributing to a high level of performance. Nunes et al. (2006) research for South Yorkshire SMEs found if knowledge was managed effectively, it could lead to higher innovation and performance. Cavusgil, Calantone, and Zhao (2003) assert that organizations which actively pursue knowledge management are often more efficient in producing innovative products and services and become successful in achieving high performance. In their study of 1139 Taiwanese high-tech companies, Hung, Lien, Fang, and Mclean (2010) suggested that knowledge management was positively related to innovation and TQM performance. So, on the basis of these, it is hypothesized as:

**H3:** The relationship between knowledge management and organization performance is mediated by innovation.

### **Learning orientation, innovation, and performance**

It is believed that learning orientation helps in achieving better performance (Baker & Sinkula, 2009). Learning orientation positively affects innovation and strongly supports new ideas (Kharabsheh, Ensour, & Bogolybov, 2017) as it challenges old concepts and methods. Many researchers established a positive impact of learning orientation on innovation (Baker & Sinkula, 1999; Liao, Chang, Hu, & Yueh, 2012). For instance, the positive effect of learning orientation and innovation on SMEs performance was discovered in the context of Yemen (Jabeen et al., 2013). The present study supports dynamic capability perspective-DCP (Teece, Pisano, & Shuen, 1997) and suggests that learning orientation leads to better exploitation of knowledge for operating in fast moving competitive forces and environment. Similarly, it strengthens RBV (Amit & Schoemaker, 1993) as well as Penrose's (1959) theory of the growth of firms as it suggests that a learning-oriented organization could lead to a higher degree of innovation thus leading towards higher performance. Hence, finally, it is hypothesized that:

**H4:** Innovation mediates the relationship between learning orientation and organization performance.

### **Conclusion**

Thus, hypotheses H1 to H4 are developed to address the central research question of how important factors including learning orientation, transformational leadership, knowledge management, and innovative culture affect innovation and performance of SMEs. It is noteworthy that in spite of the availability of certain past studies on the topic, innovation and performance relationship is still a perplexing and complicated question as evident through certain researches conducted most recently on the topic (see for instance, Kneipp, Gomes, Bichueti, Frizzo, & Perlin, 2019; Turulja & Bajgoric, 2019; Wang, 2019). The perspectives and objectives of these researches are different yet they all lend support for complex nature of the phenomena; as well as for studying these relationships for different sectors, in different contexts, and using new perspectives.

Importantly, a recent study of Manzoor et al. (2019) on transformational leadership, performance, and corporate social responsibility in the context of Pakistan's SMEs suggested using mediators in the relationships for better knowledge formation. Another recent study by Waheed, Miao, Waheed, Ahmad, and Majeed (2019) conducted on New HRM practices, innovation, innovative climate, and performance of IT-based companies in Pakistan also suggested conducting further studies in other sectors and collecting more evidence to enrich the understanding on concerned variables. Another study (Hussain, Shah, Rahman, & Khan, 2018) accomplished for manufacturing based SMEs suggested doing further research on learning orientation, entrepreneurial orientation, and performance for Pakistan based SMEs working in other sectors such as hospitality and food. Hence, it is believed that with the help of its research framework and design, this study pays a genuine contribution towards the understanding of different relationships for Pakistan based SMEs as well as contributes to knowledge up gradation for significant theories.

### **METHODOLOGY**

Two hundred and fifty SMEs of Southern Punjab region were selected for this study. Most of the SMEs were hotels, restaurants, shoe retailers, and boutiques, etc. Questionnaires were sent

to managers, owners, senior executives, and supervisors. Area sampling technique was utilized for this research. 250 questionnaires were sent to concerned SMEs and 150 were obtained in return (response rate: 60%) among which 125 were valid responses. Among 125, 110 were male respondents. The questionnaire was developed using past studies' research instruments. Table 1 shows sources from where items for various constructs were acquired.

**Table 1.** Sources for Measurement Scale

Variables	No. of Items	Source
Innovation	10	Calantone, Cavusgil, and Zhao (2002)
Organization Performance	6	Felício, Couto, and Caiado (2014)
Innovative Culture	5	Skervlavaj, Song, and Lee (2010)
Transformational Leadership	5	Podsakoff, Mackenzie, and Bommer (1996)
Knowledge Management	7	Rasula, Vuksic, and Stemberger (2012)
Learning Orientation	5	Sheng and Chien (2016).

As provided in the table, different studies were referred to selecting the most suitable set of items for different constructs. In addition, the items were adopted from the past studies and they were tested for their reliability and validity as discussed in the analyses.

## ANALYSES, RESULTS, AND CONCLUSIONS

The analyses were conducted using Smart PLS3.0. A measurement model and the structural model were run. The measurement model showed satisfactory results for validity and reliability of scales. For instance, consider Table 2 for factor loadings. All item loadings are greater than 0.70 that indicate convergent validity (Henseler, Ringle, & Sarstedt, 2012).

**Table 2.** Factor Loadings

Construct	Items	Loadings	Construct	Items	Loadings
<b>Transformational Leadership (TL)</b>	TL1	0.823	<b>Learning Orientation (LO)</b>	LO3	0.835
	TL2	0.859		LO4	0.823
	TL3	0.821		LO5	0.842
	TL4	0.821		OP1	0.844
	TL5	0.811		OP2	0.858
<b>Knowledge Management (KM)</b>	KM1	0.760	<b>Organization Performance (OP)</b>	OP3	0.811
	KM2	0.787		OP4	0.822
	KM3	0.724		OP5	0.845
	KM4	0.768		OP6	0.868
	KM5	0.808		INN1	0.748
	KM6	0.789		INN2	0.795
	KM7	0.775		INN4	0.759
<b>Innovative Culture (IC)</b>	IC1	0.850	<b>Innovation (INN)</b>	INN5	0.814
	IC2	0.838		INN6	0.787
	IC4	0.795		INN7	0.750
<b>Learning Orientation (LO)</b>	IC5	0.834		INN8	0.794
	LO1	0.732		INN9	0.802
	LO2	0.884		INN10	0.823

Further, convergent validity was also established as composite reliability (Table 3) was higher than 0.7 (Daskalakis & Mantas, 2008). Reliability was also ensured because Cronbach's alpha (Table 3) was greater than 0.70 for all constructs (Nunnally, 1978). For all, Heterotrait-Monotrait ratio was less than 1.00, so the condition for discriminant validity was also satisfied (Henseler, Ringle, & Sarstedt, 2015). Variance Inflation Factor (VIF) for all constructs was less than 0.5 that showed no multicollinearity (Garson, 2016) between the constructs. The model fit condition was satisfied as SRMR was 0.072 (<0.08) (Hock & Ringle, 2006).

**Table 3.** Composite Reliability and Cronbach's Alpha

Variable	Cronbach's Alpha	Composite Reliability
INN	0.923	0.936
OP	0.918	0.936
IC	0.849	0.898
TL	0.885	0.916
KM	0.889	0.912
LO	0.882	0.914

Next, figure 1 presents the measurement model. It shows that learning orientation, transformational leadership, knowledge management, and innovative culture are independent variables. Innovation is the mediating variable, while organization performance is the dependent variable. The final items loaded onto their respective constructs are shown in rectangular boxes. The loadings reaffirm findings of Table 2 that as they are all greater than 0.7, so they confirm convergent validity. The numbers on the arrows from IVs to DVs are direct path coefficients. As they are all positive, so they show a positive nature of the effect.

**Figure 1.** Measurement Model

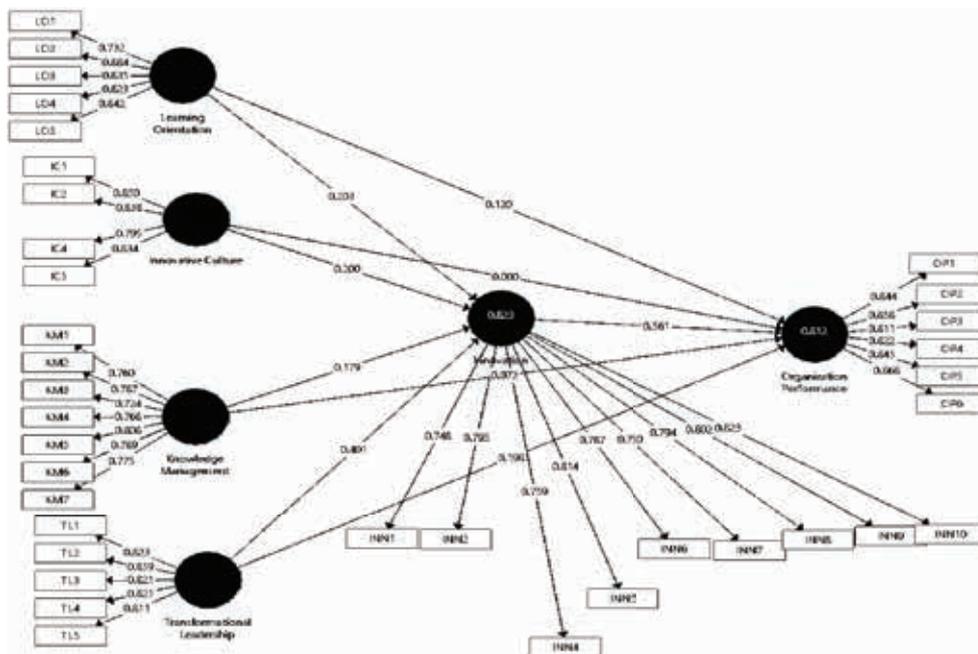


Table 4 represents hypotheses test results. Initially, relationships were studied using the PLS algorithm and later bootstrapping was run using 1000 subsamples to reveal significance between the variables. For mediator analysis, the direct and indirect effects were studied using Preacher and Hayes method (2008). The detail and discussion of the results are given below.

**Table 4.** Composite Reliability and Cronbach's Alpha

Impact	Path Coefficient (Direct)	Direct Effect		Indirect Effect		Biased Corrected Confidence Interval	
		<i>t-value</i>	<i>p-value</i>	<i>t-value</i>	<i>p-value</i>	2.5%	97.5%
INN → OP	0.561	5.332	0.000			0.349	0.760
IC → OP	0.000	0.003	0.998	2.379	0.018	-.103	0.325
IC → INN	0.200	2.468	0.014			0.054	0.359
TL → OP	0.198	1.994	0.046	3.470	0.001	0.250	0.607
TL → INN	0.401	4.573	0.000			0.225	0.573
KM → OP	0.072	1.122	0.262	2.539	0.011	0.053	0.329
KM → INN	0.179	3.084	0.002			0.072	0.302
LO → OP	0.120	1.173	0.241	2.018	0.044	0.005	0.425
LO → INN	0.203	2.334	0.020			0.019	0.376

#### **Innovation as a mediator between the innovative culture and performance**

Consult table 4. Findings indicate that p-value of the innovative culture's direct impact on organization performance is 0.998 whereas, t-value = 0.003. But for indirect impact, the p-value is 0.018, and t-value is 2.379. Therefore, the results suggest that between the innovative culture and performance, innovation acts as a full mediator. This results in accepting Hypothesis H1. All concerned path coefficients are also positive which indicate positive nature of relationships. However, caution must be applied in this result as 2.5% confidence interval is marginally negative. Thus, future researchers could study this relationship in other contexts to explore it further.

#### **Innovation as a mediator between transformational leadership and organization performance**

Table 4 shows that p-value for transformational leadership's direct impact on performance is 0.046, whereas t-value = 1.994. But for indirect impact, the p-value is 0.001 and t-value is 3.470. These results show an insignificant direct effect of transformational leadership on performance, while a significant indirect effect and lead to the conclusion that innovation plays the role of a full mediator variable for this relationship. This results in accepting Hypothesis H2. Table 4.3 also includes statistics regarding bias-corrected confidence intervals. The lower limit of the confidence interval for transformational leadership and performance relationship is 0.250 while the upper limit is 0.607. The other concerned confidence intervals also have satisfactory statistics and all concerned coefficients are also positive that indicate the positive type of relationships.

#### **Innovation as a mediator for the knowledge management and performance relationship**

Table 4 shows that for the direct impact of knowledge management on organization performance, the p-value is 0.262 and t-value is 1.122. But the p-value is 0.011 and t-value is 2.539 for the indirect effect of KM on OP. These results show knowledge management's

insignificant direct effect on performance whereas a significant indirect effect. This concludes that between knowledge management and organization performance, innovation acts as a full mediator. Hence, Hypothesis H3 is accepted. Table 4 also indicates that the concerned statistics for confidence intervals are also satisfactory. The path coefficients for effect of knowledge management on performance (0.072), the effect of knowledge management on innovation (0.179), and for effect of innovation on performance (0.561) are all positive that show the positive type of relationship.

#### **Innovation as mediator between learning orientation and organization performance**

Finally, table 4 shows that for the direct impact of learning orientation on organization performance, the p-value 0.241 and t-value is 1.173. But the p-value is 0.044 and t-value is 2.018 for the indirect effect of LO on OP. Hence, the results conclude that between learning orientation and organization performance, innovation acts as a full mediator. Hence, H4 is also accepted. All concerned confidence interval limits are satisfactory and all concerned coefficients have positive values as well.

### **DISCUSSIONS**

#### **Innovation as a mediator between the innovative culture and performance**

For Pakistan based SMEs, this research provides a genuine contribution and understanding of the phenomena. It highlights how certain factors contribute to innovation and SMEs performance. Firstly, the results support H1 about innovation's mediating role in the relationship between innovative culture and performance. Certain past researchers also supported this role (Hogan & Coote, 2014; Salman, Arshad, & Bakar, 2016; Subhan, Mehmood, & Sattar, 2013). Innovative culture could successfully bring innovation which would result in superior performance (Kostis et al., 2018; Rajapathirana & Hui, 2018; Subhan et al., 2013). This research strengthens resource-based view (Amit & Schoemaker, 1993), which asserts that companies which make better utilization of their knowledge and culture as a resource possess the capability to attain higher levels of innovation and produce better results.

The results support that innovative culture significantly affects SMEs performance. Innovative culture enhances the capability of SMEs to innovative that finally leads to the superior performance of SMEs (Halim et al., 2015). The results also support the positive effect of innovative culture on innovation. Innovative culture serves as the source of introducing innovative offerings. Certain other researchers also supported the positive effect of innovative culture on firm innovation (Filipescu, 2007; Naranjo-Valencia, 2010). The results also indicate that innovation positively impacts SMEs performance. Numerous past researches also indicate the positive effect of innovation on performance (Damanpour & Evan, 1984; Wheelright & Clark, 1992). Subramanian and Nilakanta (1996) suggest that innovative SMEs produce innovative products and services more quickly, thus cause an increase in sales and performance. Hence, SMEs in emerging countries like Pakistan should create an innovative culture in order to bring innovation in their services and products for meeting changing needs that could lead to superior performance.

### **Innovation as a mediator between the transformational leadership and performance**

Findings lead towards accepting H2 about innovation's mediating role for the relationship between transformational leadership and performance. This study strengthens transformational leadership theory (Burns, 1978), according to which managers using transformational leadership style have the ability to motivate employees through charismatic speech and intellectual stimulation for developing innovative thinking among employees that could help them in demonstrating better performance. Researchers have thus, highlighted the positive impact of transformational leadership on performance (Bass, 1985; Bass & Avolio, 1995; Gardner & Stough, 2002) and numerous scholars have supported intervening role of innovation between transformational leadership and firm performance (Jung, 2001; Robbins & Coulter, 2005; Yang, 2008).

Similarly, scholars argue that transformational leaders boost the confidence of employees through charismatic speech and intellectual stimulation for involving them in innovative activities and motivate them for hard work (Akbari et al., 2017; Matzler, Schwarz, Deutinger, & Harms, 2008). Transformational leaders work for instilling creativity and innovation in the organization. Arham's study (2014) on Malaysian SMEs reported that transformational leadership style was related to innovation. Other researchers have also supported the positive impact of transformational leadership on innovation (Bass & Avolio, 1995; Denning, 2005; Gardner & Stough, 2002).

### **Innovation as a mediator between The knowledge management and performance**

Next, findings also lead towards accepting H3 contributing and supporting RBV which assets that enterprises which are better in managing their knowledge flow could become successful in enhancing innovative capability and achieve a high level of performance. Certain past researchers also revealed similar results (Gloet & Terziovski, 2004; Wong & Aspinwall, 2005).

Several pieces of research have argued about the positive influence of knowledge management on performance (Baddi & Sharif, 2003; Liu & Abdalla, 2013). Duhon (1998) argued that knowledge management was much necessary condition for achieving sustainable competitive advantage and superior performance in organizations. Similarly, knowledge management ensures proper flow of knowledge and upgrades organizational tendency for innovation (Quintas, 2002). Therefore, several past researchers have highlighted the positive impact of knowledge management on innovation (Cavusgil et al., 2003; Edvardsson, 2009).

### **Innovation as a mediator between the learning orientation and performance**

Finally, findings lead to accepting H4. Thus, this study strengthens the theory of the growth of firms and highlights that learning-oriented SMEs can achieve high levels of innovation that could lead to higher performance. Empirical research recently conducted by Serna, Martínez, and Martínez (2016) for Mexican SMEs reported that the relationship between learning orientation and performance was positively mediated by innovation. Others also supported this mediating role by reporting similar findings in the context of SMEs (Baker & Sinkula, 1999, 2009).

The results reveal learning orientation's positive impact on SMEs performance. Thus, this study highlights DCP according to which organizations should be learning oriented for

attaining better performance. An empirical research by Liao et al. (2012) on banking and insurance companies in Taiwan concluded that learning orientation was significantly related to the performance of SMEs. Furthermore, scholars suggest that learning-oriented SMEs adopt innovative procedures for improving quality of work, operational efficiency and innovative ideas and address competitive issues in a better way in contrast to those that are not learning oriented (Liao et al., 2012).

This study suggests SMEs working in Pakistan to focus on developing and using a transformational style in their firms and develop learning orientated culture. Further, it recommends those SMEs to use knowledge management systems and develop an innovative culture in their organizations so that their organizations could attain high performance through innovation. As SMEs are relatively small size setups compared to large public limited companies, therefore, it is normally easier to share knowledge and promote learning in the culture. Further, it feels more practical to share ideas and develop an innovative culture in SMEs because of low staff levels. Exercising transformational leadership might too feel easy because of lower level cultural complexities and politics.

#### **LIMITATIONS AND FUTURE RESEARCH**

One of the limitations of this research is that it was conducted only in Southern Punjab region of Pakistan. So researchers can conduct research in other regions of Pakistan also to enrich the findings. Another limitation is that this study could end up studying SMEs operating in certain sectors. So, future research could consider other SMEs like visa operators, educational institutions, chemical industries, transport companies, etc. This would help in generalizing the findings across further sectors. Moreover, this research studied innovation construct as a unidimensional variable, and therefore, further research can study mediating effect of the different aspect of innovation (e.g. product innovation, process innovation) between various variables pertaining to SMEs. Future research could also study SMEs with respect to their competitive advantage and business strategies as well.

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