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The effect of innovative cultural processes on performance of small and medium size enterprises

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ABSTRACT

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The purpose of this study is to identify the influence of innovative cultural processes (ICP) on SMEs performance in Punjab, Pakistan. Data was collected through survey method. 60 usable questionnaires were used for collecting the information from SMEs CEOs/owners/senior managers from Punjab, Pakistan. Research design was consisted on developing the hypothetical framework with innovative cultural processes set as an independent variable to test SMEs performance as a dependent variable. Validity and reliability of the scale were assessed by experts and also a small set of the data was used for analysis through SPSS version 20.0 and PLS-SEM 3.0 for analyzing the effect. The results of the research confirmed the validity and reliability of the instrument used in this study. The findings of this study also validate the empirical linkage between capturing ICP and SMEs performance in Punjab, Pakistan. This study has some practical implications especially for SMEs in Pakistan and recommendations to have ICP for enhancing the performance of SMEs.

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1. Introduction

Small and medium enterprises (SMEs) are considered as the most influencing business unit in any country's progress because SMEs utilize the raw resources in every country and convert these resources into a productive way (Honig & Samuelsson, 2011). SMEs participate in the country's success because it drives the individual of a country to work from a smaller margin and move towards a bigger scale which ultimately generates a synergy (Brunswicker & Vanhaverbeke, 2015; Salehi & Arbatani, 2013; van de Vrande, de Jong, Vanhaverbeke, & de Rochemont, 2009). These SMEs may increase the gross domestic product (GDP) of any country (Oke et al., 2007; Imran et al., 2017, 2019). While looking over the GDPs of the emerging and emergent economies, the effects of SMEs are obvious. In the same way, in a country like Pakistan, SMEs play a substantial role in the GDP. No doubt, Pakistan is an under developing country but SMEs contribute 30% share in the GDP of Pakistan, which identifies its significance (Syed et al., 2012).

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Pakistan's GDP highlights the effects of SMEs on the economy of Pakistan. For achieving this purpose, Pakistani government and small and medium enterprises development authorities (SMEDA) of Pakistan and directorate of industries are deliberately working and putting more efforts to generate the better performance of SMEs (Mahmood et al., 2015). However, academicians are also working for stimulating the better performance of SMEs (Kee-luen et al., 2013; Khurram S. Bhutta et al., 2008; Syed et al., 2012; Wasim & Khan, 2014). For the better performance of SMEs, SMEDA is implementing several strategies and conducting more and more workshops for the individuals of SMEs to enhance their performance (Salman et al., 2016; Khan & Khalique, 2014; Hoque, 2018).

Several factors are identified which reinforce SMEs performance (Batool & Zulfiqar, 2011; Hafeez et al., 2012; Ismail & King, 2014; Salman et al., 2016; Ab Rahman & Ramli, 2014). During the last two decades, the academicians and the practitioners have identified innovation as an important factor for increasing SMEs performance (Maladzhi et al., 2012; Oke et al., 2007; Salman et al., 2016; Palacios-marqués et al., 2016). Many other factors are also considered in generating SMEs performance like innovation enriched environment or culture, creativity, learning organizations for the better outputs and yield of SMEs (Hadjimanolis, 1999; Keskin, 2006; Oke et al., 2007; Soto-acosta et al., 2015). Scholars endorsed that the organizations with the high intensities of innovation always could yield better organizational consequences and they could improve the performance of the organizations (Murphy & Callaway, 2004; Cantwell, 2001). However, this theory with respect to the smaller enterprises vary from situation to situation because SMEs are having the usage of more raw, crude, and basic items of a country; and if the innovative culture processes is embedded in those smaller SMEs then the output generated from those raw affluences will be more different, unique, distinctive, exclusive, rare, and matchless (Bougrain & Haudeville, 2002; Hadjimanolis, 1999; Hall et al., 2009; Xie et al., 2010; Zhu et al., 2012). For this purpose, this study was conducted; focusing more on building up the innovative cultural processes in increasing the SMEs performance working in Pakistan.

2. Literature Review:

2.1. Performance of SMEs in Pakistan

Performance is always kept as the central of every organization. Performance is described in multiple ways but some authors have titled performance as a deliberate, strategic and a unified way to deliver the continual achievements to organizations by refining the productivities of the people who work in them (Dharmadasa, 2009; Mahmood & Hanafi, 2013). The purpose of organizational performance studies is to understand the better and improved effect of converting the raw potential of human resource into output by removing intermediary obstacles as well as motivating and refreshing the human resources (Honig & Samuelsson, 2011; Martin & Rose, 2008; Henning et al., 2004). For gaining the competitive edge, these enterprises must focus on the strong people, effective management and the development of the people which is in crux the real performance management (Martin & Rose, 2008).

Many scholars believe that almost every organization either large or small organizations define performance differently (Morgan & Strong, 2003). Performance of the organization is the capability of an organization to deal with all the four systematic procedures (input process, output process, transformation process, and feedback effects) which is relative to its goal seeking behavior (Ogbonna & Harris, 2000). An organization which performs well always achieve its major tasks efficiently and carries out its organizational objectives and the organizational adapting functions effectively (Kraus et al., 2007). The organizational adapting function requires that as the environmental changes, the structure and the processes of the organization which go through the change to meet the new environmental situations (Courtright & Smudde, 2009; Veskaisri et al., 2007). Innovative organizations tend to do more in favor of the organization (Ayiecha & A. Senaji, 2014; Homer et al., 2014). They not only adapt to the environmental change,

but also use their resources and skills to create new environmental conditions, e.g., by introducing new products or services never offered before (Subhan et al., 2014).

SMEs performance in Pakistan is the major concern of this study. As SMEs play a significant role in the economic spine of the country which is obvious from GDP of many other countries like China (Zhu et al., 2012). In Pakistan, SMEs are also in major focus because of their role in the GDP which is more than 30% (Syed et al., 2012). Getting the worth of SMEs, the main emphasis is not only to support SMEs but also to enrich the performance of SMEs in a constructive way which can be performed through many ways (Beck & Demirguc-Kunt, 2006). Therefore, SMEs performance is the key to success for every country (Courtright & Smudde, 2009; Dobni, 2010). Many ways have been adopted to increase SMEs performance in Punjab, Pakistan such as gigantic governmental support, through the trainings of SMEDA, directorate of industries of every province in Pakistan, trade shows and through many other ways in which the major focus is to promote, sustain and to mainly improve the performance of SMEs (Saeed et al., 2015; Wasim & Khan, 2014). This study is a step towards on how to increase the SMEs performance in Pakistan through the role of innovation.

2.2. Innovative Cultural Processes

Many authors have endorsed different means to increase SMEs performance in Pakistan (Batool, 2011; Mahmood & Hanafi, 2013; Kurien & Qureshi, 2011; Syed et al., 2012; Shabbir, 2009; Shabbir et al., 2017; Shabbir et al., 2016). Like many other governments, Pakistani government has also recognized the worth of SMEs in a country. For achieving this purpose the government and directorate of industries are having the major focus on supporting not only the existence of SMEs but also to boost the SMEs performance (Ismail & King, 2014). Studies have manifested that SMEs performance increases when innovation is introduced in them (Bougrain & Haudeville, 2002; Hadjimanolis, 1999; Oke et al., 2007; Salehi & Roshandel Arbatani, 2013; Soto-acosta et al., 2015; Xie et al., 2010; Zhu et al., 2012). Innovation is the tool for enhancing the performance (Sarros et al., 2008; Zhu et al., 2012). Innovative SMEs use their resources and skills to create new environmental conditions, e.g., by introducing new products or services never offered previously. Innovations are means of providing these internal or external changes and are, therefore, means of maintaining or improving organizational performance (Ab Rahman & Ramli, 2014; Batool & Zulfiqar, 2011; Veskaisri et al., 2007).

Innovation influences SMEs performance and the aim of this study is to examine this issue. Innovative cultural processes in an organization means an organization filled with such cultural traits of innovation where every employee becomes creative unit, a good learner, a curious for creativity, ready to take positive decisions, an optimistic one, and so on but all this is achieved through a mean like processes (Rao & Weintraub, 2013). Processes are considered as a way of achieving the innovative cultural processes in a SME for enhancing their performance.

Processes for SMEs based on innovative culture processes are defined, as the processes are the routes that innovation follow as they are developed (Rao & Weintraub, 2013). Innovative cultural processes of SMEs are represented in their activities (Hall et al., 2009; Beck & Demirguc-Kunt, 2006). Process innovation as a culture in an organization is signified in three forms: entrepreneurial values, creativity as a value, and learning as well (Rao & Weintraub, 2014). Innovative cultural value is defined as the value of a total or relative or ethical one. For studying the relationship between SMEs performance and innovative culture processes, this study states that:

H_1 = Innovative cultural processes has a positive influence on SMEs performance in Pakistan.

H_{1a} = Ideation as an innovative cultural process has a positive effect on SMEs performance in Pakistan.

H_{1b} = Shape as an innovative cultural process has an effect on SMEs performance in Pakistan.

H_{1c} = Capture as an innovative cultural process has a positive influence on SMEs performance in Pakistan.

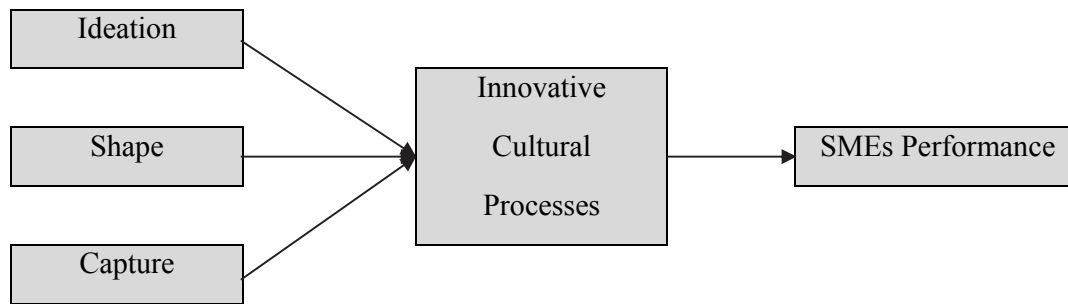


Fig. 1. The framework of the proposed study of this paper

3. Methodology

The present Current study is accomplished to analyze the relationship between the innovative cultural processes and SMEs performance in Pakistan. The measurements were adapted from different authors to use in this study (Churchill et al., 2012). Measurements were adapted on the innovative cultural processes from Rao and Weintraub (2013), and SMEs performance from Murphy and Callaway (2004). It is a quantitative, descriptive, and explanatory study. Cross-sectional data was used for this study. Questionnaire survey method was comprehended. Authors suggest that sample size for pilot study can range from twenty-five to seventy five (Bartlett et al., 2001; Hayes & Bennett, 1999). Therefore, 60 questionnaires were randomly distributed personally in Punjab's SMEs. Province Punjab of Pakistan is enriched with SMEs that's why it was selected for this study (Saeed et al., 2015; SMEDA, 2011). Individuals of SMEs were the sample i.e., senior managerial staff, strategists, and the owners/CEOs of SMEs. Only those individuals were involved in the study who could manipulate and influence the SMEs culture. One week was given to every respondent for responding out the questionnaire. Likert Scale 5 point was used ranging from strongly disagree to strongly agree. Analysis were run through Partial linear square modeling (PLS-3.0) and factor analysis on SPSS 20V.

4. Results

4.1. Assessment of the model

First of all, biasedness was assessed using Hermann's single factor (Hamann et al., 2013). The result for the factor analysis of all the items of the variables indicate that it was more than one factor measuring for the variance. The problem of the common method bias is not likely to be an issue as argued by Podsakoff et al. (2003) that common method bias exists only when single factor is explaining more than 50% of the variance. Moreover, reliability and validity are the two most important criteria used in PLS-SEM analysis to evaluate the outer model (Hair et al., 2009). Reliability is assessed using composite reliability (CR) while validity is measured through convergent validity average variance extracted (AVE), and discriminant validity using Fornell-Lacker criterion and indicator's outer loadings. As Fig. 2 and the Table 1 indicates composite reliability (CR) value in this study is between 0.77 and 0.93, which shows adequate internal consistency (Hair et al., 2009). Additionally, all CR values are above the recommended threshold value of 0.70 (Cornwell, 2001).

For convergent validity (CV), all values of AVE are shown in the Table 1, carrying the threshold value of 0.50 which indicates that CV of all the variables in this study are accepted (Hair et al., 2013). Two popular approaches were used for measuring the discriminant validity of the constructs which includes examination of cross loadings and Fornell and Larcker (1981) criterion (Hair et al., 2013). Table 2 indicates that square root of each construct's AVE is higher than its correlation with all other variables.

Moreover, the result also indicates that none of the loaded item is higher than any other contrasting construct. Empirical evidence of both approaches shows that the constructs have a good discriminant validity (Hair et al., 2013; Henseler et al., 2009).

Table 1
Loadings, Cronbach alpha, Composite reliability, and AVE

Constructs	Items	Loadings	Cronbach Alpha	Composite Reliability	AVE
Ideate	Q1	0.86	0.51	0.71	0.8
	Q2	0.64			
	Q3	0.77			
Capture	Q4	0.71	0.73	0.83	0.77
	Q5	0.69			
	Q6	0.65			
Shape	Q7	0.71	0.88	0.92	0.65
	Q8	0.75			
	Q9	0.83			
SMEs Performance	Q10	0.71	0.91	0.93	0.46
	Q11	0.77			
	Q12	0.75			
	Q13	0.68			
	Q14	0.69			
	Q15	0.61			
	Q16	0.91			
	Q17	0.83			
	Q18	0.86			
	Q19	0.81			
	Q20	0.83			
	Q21	0.72			
	Q22	0.69			
	Q23	0.84			
Q24	0.81				
Q25	0.85				
Q26	0.77				
Q27	0.79				

Table 2
Discriminant Validity

	Discriminant validity			
	Ideate	Shape	Capture	SMEs Performance
Ideate	0.88			
Shape	0.55	0.77		
Capture	0.81	0.8	0.88	
SMEs Performance	0.69	0.846	0.675	0.67

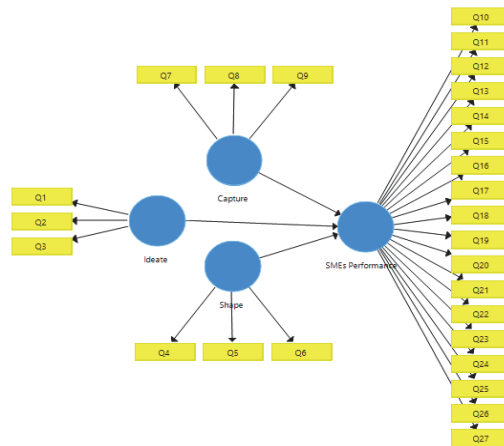


Fig. 2. Measurement Model

4.2 Assessment of Structural Model

According to Hair Jr. et al. (2013), assessment of the structural model includes the collinearity check, measuring the significance, relevance of the structural model relationships (R^2), effect size (f^2) and the predictive relevance (Q^2). Therefore, firstly the collinearity of the variables was checked then the structural model was assessed. Table 3 indicates clearly that no multicollinearity problem exists amongst the variables. VIF values must be below 5 as per Hair Jr. et al. (2013) and this is the case in Table 3.

Table 3
Collinearity (VIF)

Constructs	VIF
Ideate	1.87
Shape	1.76
Capture	1.93

On the basis of collinearity results, the structural model was assessed. SEM was used for this study. This included PLS-SEM Algorithm which measured the coefficient and PLS-SEM bootstrapping for assessing the significance of the relationship. Smart PLS version 3.0 was used. Original sample was used as the number of cases for the PLS-SEM algorithm. But for bootstrapping procedure the original sample was increased up to 5000 (Hair et al., 2011, 2012, 2013). Table 4 and Fig. 3 show the outputs of the PLS-SEM analysis between the dependent variables and independent variable of this study. Explicitly, the outcome of the structural model demonstrates that there was a significant positive relationship between ideate and SMEs performance. Therefore, H1 was accepted. Results also indicate that shape also had a significant positive relationship with SMEs performance too. Furthermore, the result also specifies the significant positive relationship between capture and SMEs performance. Thus, the findings of all the accepted hypotheses show that ICP had a significant positive relationship with SMEs performance. Therefore, H1, H1a, H1b, and H1c are accepted.

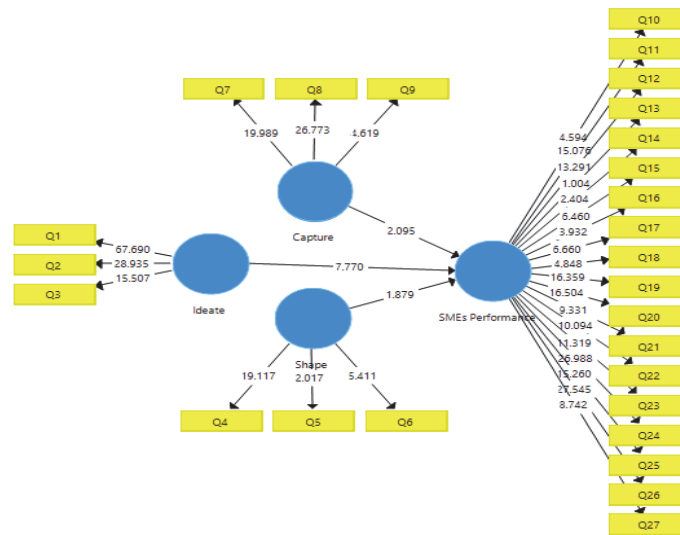


Fig. 3. Structural model

Table 4
Results of hypotheses testing

Hypothesis	Path Coefficients	Standard Error	t-statistics	P-value	Decision
ICP → PF(H1)	0.35	0.037	2.1	0.1	Supported
ID → PF(H1a)	0.62	0.075	2.45	0.1	Supported
CP → PF(H1b)	0.19	0.08	3.1	0.11	Supported
SH → PF(H1c)	0.17	0.07	4.86	0	Supported

R^2 is central criterion which is used for the structural model's assessment. This relationship has a good acceptable R^2 value which is 0.25 (Cohen, 1988). The effect size (f^2) value shows that ID had a value of 0.01, CP had a value of 0.02, and SH had a value of 0.02. All of these values are considered as the small ones. Though, Chin et al. (2003) strained that regardless of the smallest value of f^2 , it must not be ignored because f^2 can stimulate the endogenous variable in different ways. Lastly, after running the blindfolding procedure (Hair et al., 2013; Henseler et al. 2009), Q2 value of 0.15 directs the predictive relevance of the model.

5. Discussion and Conclusion

The primary objective of this work was to inspect the relationships between the three independent ICP's variables and their effects with SMEs Performance. First of all, H1 says that a positive relationship exists between ICP and SMEs performance in Pakistan. Result strongly has exhibited that there was a positive relationship between ICP and SMEs performance. Thus, this finding reveals that SMEs performance would enhance if innovative culture processes existed. This study also reveals that for having higher SMEs performance we need to have an ICP. Thus, the finding is a surprising one because SMEs in Pakistan have not focused on ICP.

Second hypothesis H1a was supported as the regression result indicates that there was a positive relationship between ideate and SMEs performance. Ideation includes generation, filtration, and the prioritization of the products and the services (Rao & Weintraub, 2013). This results of this hypothesis indicate that when SMEs have the continuous generation of the ideas, their filtration on them is good and prioritization of the ideas must be arranged. Results indicate that this ideation is the most important factor to enhance SMEs performance. These findings are consistent with findings of Kurien, & Qureshi, (2011), Maladzhi et al. (2012), van de Vrande et al. (2009).

Third hypothesis H1b states that shaping of ICP, which are prototyping, smartly, and feedback, has positive effect on SMEs performance. SMEs must include smartness of the product and service. Feedback is no doubt very important for the ICP of an SME. Thus, this study indicates that if SMEs wants to enhance their performance then they must have shape as an ICP in them.

Last hypothesis H1c states that capture of ICP has a positive effect on SMEs performance. Capture of ICP includes the flexibilities of the ideas, launching them on time, and scaling of the ideas (Rao & Weintraub, 2013; Sarros et al., 2008; Harrison & Wicks, 2013). Results show another important finding that there is a positive significant relationship between capturing and SMEs performance. Therefore, this result validates the empirical linkage between capturing of ICP and SMEs performance. Hence, H1d is supported. At the end, this study recommends SMEs in Pakistan should have ICP to enhance the performance of SMEs.

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