

Factors Contributing to SMEs Innovative Culture in Punjab, Pakistan: A Pilot Study

Rabia Salman

Universiti Utara Malaysia
Email: aarabiala@gmail.com

Dr. Darwina Arshad

Senior Lecturer, School of Business Management
Universiti Utara Malaysia.
Email: darwina@uum.edu.my

Dr. Lily Julianti Abu Bakar

Senior Lecturer, School of Business Management
Universiti Utara Malaysia.
Email: julianti@uum.edu.my

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Abstract: The objective of this research is to measure the reliability and validity of SMEs innovative culture and its construct developed by Rao & Weintraub (2013). 60 questionnaires were used to collect the responses from SMEs' CEOs and senior top executives in Punjab, Pakistan. The study adopted the simple random sampling method for data collection. The reliability and validity of the instrument were assessed through experts from academia and industry and also from small sample of the data. Results provide the evidence of validity and reliability of the instrument. This study will help to identify the factors contributing for innovative culture in SMEs Pakistan.

Keywords: SMEs, Innovation, Culture, and pilot study.

1. Introduction

The term innovation is not new in all aspects of innovation management and management field at large. Over the past half century, scholars around the world have produced a vast body of academic work on the innovation, the innovation techniques, and how to bring the innovation in an organization for enhancing the organizations' performance (Abouzeedan, Klofsten, & Hedner, 2012; Abouzeedan, 2011; Chesbrough & Rosenbloom, 2002). This work has spotted that innovativeness is required for pleading the business in a thriving way and also identified the factors contributing to generate an innovative culture in SMEs. Different theories and studies emphasized on the strong relationship of culture and the level of the innovativeness in SMEs (Courtright & Smudde, 2009; Martins & Martins, 2002; Mone, McKinley, & Barker, 1998).

These studies state that if the culture of an organization pressurizes the innovative aspect then the organizations gain competitive advantage (Abdi & Senin, 2014; Claver, Llopis, Garcia, & Molina, 2000; Yeşil & Kaya, 2012).

Studies reveal that an organization's culture which is enriched with the innovation is called as the innovative culture (Maladzhi, Yan, & Makinde, 2012; March-Chorda & Moser, 2008; Pharaon, 2010; Samanta, 2000; Sarros, Cooper, & Santora, 2008). This innovative culture is based upon the employees of the organization who is working innovatively for the success, victory, and triumph of the organization (Abdi & Senin, 2014; Abouzeedan et al., 2012; Abouzeedan, 2011; Claver et al., 2000; Tellis, Prabhu, & Chandy, 2008; Yeşil & Kaya, 2012). Innovative culture works best in a climate or environment that is supportive to individual creativity (Jantan, 2003).

However, many studies have shown that innovation might occur anywhere (Rose, 2008). But the permanent innovation occurs when the distinct setting or environment of SME is packed in the culture of innovation which must be deliberately reinforced, purposefully nurtured, thoughtfully measured, and funded (Gronda, Ware, & Vitis, 2013; Martins & Martins, 2002; Tellis et al., 2008). In addition, scholars explained that a culture which comprises innovation and includes such behavior like creativity, values, risk compelling, autonomous, teamwork, value enhancing, solutions learned, communicative, quick on taking decisions, and so on, such type of culture is termed as Innovative culture (Martins & Martins, 2002). Everyone desire and expect these behaviors and also demand that these behaviors of culture must be incorporated in SMEs (Abouzeedan, 2011; Hafeez, 2012; Maladzhi et al., 2012).

This research study comprised of a pilot assessment to determine the validity and reliability of the instrument used for the main research stream. Sekaran and Bougie (2010) explained validity as the degree to which an instrument is assessing what it should be measuring, while the reliability measures the instrument's ability to depict consistent and error free results (Sekaran & Bougie, 2010). Keeping in view, this research study produced results of a pilot study about factors contributing for SMEs innovative culture in Pakistani context based on Punjab province, the biggest populated province of Pakistan (Ahmad, 2012). This study will not only remove the doubts about reliability and validity but will also provide the bases to conduct a final study. The study also aims to get an insight of the possibilities of the impact assessment, which will enable the researchers and practitioners of the area to predict prospective issues and take corrective actions while conducting the actual research.

2. Literature Review

SMEs are vibrant and dynamic, and are titled as to create the opportunities for the employment in a country (Ismail, Mokhtar, Ali, & Rahman, 2014; Kee-luen, Thiam-yong, & Seng-fook, 2013; Kraus, Reiche, & Reschke, 2007; Muller et al., 2014; Oke, Burke, & Myers, 2007; Wang, Walker, & Redmond, 2007). SMEs help to earn extraneous exchange, elevate the work force quality, increase the businesses in a country and the management skills, diffuse the technological education and the information throughout any country (Kee-luen et al., 2013; Zulkiffliia and Pererab, 2007). SMEs create the synergic effect in a country (Oke et al., 2007).

Like the developed nations, Pakistan as a developing country is putting a lot of effort to enhance the number of SMEs because it plays a vital role in the nation's triumph and the growth (Kraus et al., 2007). In Pakistan, SMEs participate 30% in GDP which is a huge share and identifies its existence and need for the promotion (Jasra, Khan, Hunjra, Rehman, 2011). SMEs assist the sources to move them from the domestic sources towards productive usages which otherwise surely have continued as the idle and unutilized (Hitt, Gimeno, & Hoskisson, 1998; Soto-acosta, Popa, Palacios-marqués, Popa, & Palacios-marqués, 2015). Therefore, Pakistan has felt the need and importance of SMEs to remove the unemployment, increase the output and productivity day by day (Abouzeedan, 2011). New era's challenges are to create the competitive edges in the SMEs sector (Dobni, 2010).

Every country has its own definition of SME through which the country's legislative authorities deal with SMEs accordingly (Skokan, Pawliczek, & Piszczur, 2013). According to State bank of Pakistan 2013's prudential rules and regulations report SME has been defined as a sector, a sector which means any private economic establishment involved in manufacturing or trading or services which is having the range of employees maximum up to 250 and annual sales turnover maximum rupees 400 million (Bhutta, Rana, & Asad, 2008; Qureshi, 2012; Seyal, Awais, Shamail, & Abbas, 2004; Syed, Ahmadani, Shaikh, & shaikh, 2012).

Though for enhancing the success of SMEs in Pakistan, the individual skills and culture for the personal growth is important for the current and for the forthcoming entrepreneurs which can only be done with the raise of the innovation in SMEs (Bosma, Wennekers, & Amorós, 2012; Hafeez, 2012; Seyal, Awais, Shamail, & Abbas, 2004; Subhan, Mahmood, & Sattar, 2014; Subhan, Mehmood, & Sattar, 2013). Studies have revealed that if the culture of an organization has the innovative aspect in it then the organization gains competitive advantage (Abdi & Senin, 2014). An organization whose culture is enriched and filled with the innovation is called as the innovative culture (Claver et al., 2000; Laegreid, Roness, & Verhoest, 2011; Rao & Weintraub, 2013). Innovative culture is based upon the employees of the organization who are working innovatively for the success, victory, and triumph of the organization (Lavoro, Eni, & Mattei, 2007; Sacramento & West, 2006; Tellis et al., 2008). In short, innovation cannot work alone. In any organization, innovation always need a support of the culture to strengthen its roots for the long term (Nnanna, 2009).

Different tools and indexes are used to define and measure the innovative culture but in this study innovation quotient index is used (Rao & Weintraub, 2013). Why this quotient index is chosen because it has all the accurate dimensions, factors, and elements of the culture and innovation for measuring the innovative culture. The dimensions of the culture are: values, behavior, processes, resources, success, and climate (Weintraub, and Rao, 2014). The factors of the innovation are the learning in the

organizations, entrepreneurial traits, creativity in the organization, engagement of the employees, capability of innovation, energized employees, simplicity of the organization, collaboration of the employees, safety (in respect of the values, and conventional and non-conventional ideas), systems of the organization's values, people (which means champions, talents and experts' innovation), shaping the processes of the organization based on: prototyping, iteration between the customers and the organization and the predefined smart failing, projects based on the time, finance and the space, capture based on the flexibility, market oriented and the market initiatives, ideation in the organization, external situation, enterprise's innovation, and individual's satisfaction, growth and reward (Rao & Weintraub, 2013). In today's world, innovation is the main point for leading in the industry (Seyal, Awais, Shamail, & Abbas, 2004). Innovation is also a tool to success, grow, and perform the best in the industry (Chandrasekhar, 2005; Lee et al., 2009; Śledzik, 1942). As, this tool is based on the innovation.

Numerous studies have been conducted separately on the innovation and culture but the current study provides a ground for the new dimensions in the areas of the innovative and culture with respect to SMEs. Through this work, employers can identify that how they can have an innovative culture by using these factors. Ultimately, it will support to enhance the profitability of the organization. This study is valuable for the SMEs' CEOs, owners, and senior managerial staff for enhancing the innovative culture in their SMEs.

3. Methodology

This study entails of a pilot test conducted to assess the validity and reliability of the instrument. Pilot study is commonly used in detecting any deficiencies in the instrument. According to Sekaran and Bougie (2010), validity refers the extent to which an instrument is measuring what it should be measuring, whereas the reliability measures the instrument's ability to produce consistent results and free from error. The study also aims to get view of the conditions of the impact assessment, which enables the researchers to foresee potential problems and modify when conducting the actual research.

The study is mainly focused on measuring validity and reliability of SMEs innovative culture developed by Rao & Weintraub (2013). Survey research method helps to describe the phenomenon for the causes of any activity (Butler, Martin, Perryman, & Upson, 2012; Hamann, Schiemann, Bellora, & Guenther, 2013). Survey research is a useful method to facilitate the researcher to gather data from a large number of respondents in order to measure multiple variables and testify many hypotheses (Butler et al., 2012; Seyal et al., 2004). There are many benefits of survey method which comprise access to large number of respondents, inexpensive to administer, and more specifically free from interviewer biasedness (Sekaran & Bougie, 2010). Thus, survey design was adopted in this study.

This study was a quantitative, descriptive, and explanatory study. In this work, the cross-sectional mode of data was used. This study used the quantitative mode of research which comprehended the questionnaire survey method combined with the quantitative analysis.

Different statisticians have suggested that sample size for pilot study ranges from twenty-five to seventy five (Bartlett, Kotrlik, & Higgins, 2001; Hayes & Bennett, 1999). So accordingly, total of 60 questionnaires were randomly distributed personally to SMEs employees in Punjab, Pakistan, as Punjab is enriched with SMEs (Subhan, Mehmood, & Sattar, 2013). The individuals of SMEs who participated in this study was the person who directly involved on influencing the SMEs culture. They were the CEOs, founders, top management executives and strategists of SMEs. Time duration for collecting the data from the respondents was the period of one month. Although one week was given to every respondent for responding out the questionnaire. Questionnaire which was distributed, based on 54 questions of innovative culture, 5 for demographics, and 4 were for respondents. SPSS 20.0 was used to analyze the data.

4. Results

4.1 Validity Test

A panel of experts and the potential respondents from the different industries of SMEs in Pakistan were selected and were given the questionnaires for the critical analysis to validate it. Specialists which were consulted for validating include assistant professors, associate professors and professors in the Department of Business Administration, Islamic International University Islamabad, and Leads Business School, Lahore Leads University, as well as some professionals from leading SMEs in Pakistan and were asked to assess and give their input on relevance, contents and appropriateness of the items adapted to measure the constructs. Before conducting the pilot study, corrections were made on the basis of the given recommendations in the questionnaire.

4.2 Reliability Test

The results of reliability tests provide evidence of high reliability values ranging from 0.830 to 0.884. The acceptable range for the Cronbach's alpha value is 0.60 and above. Higher values show higher reliability of an instrument and shows more inter-item consistency (Sekaran & Bougie, 2010). Results of the pilot test shows that the values of Cronbach's alpha for the studied constructs are all above 0.80. However, the desired threshold value is 0.7. Therefore, it can be said that the selected construct of SMEs innovative culture is reliable. Hence, there was no need to remove any item.

Table 3.1: Reliability Test Construct

Construct	No of Items	Cronbach's Alpha
Values	9	0.881
Behaviors	9	0.884
Climate	9	0.869
Processes	9	0.83
Resources	9	0.871
Success	9	0.851

Likewise, Table 3.2 demonstrates the descriptive analysis that 61.7% respondents were CEOs, 10% were strategists, and others were 16.1%. SMEs years of been into existence who participated are: for less than 1 year of operation was 1.7%, for 1-3years are 31.7%, for 4-7 years 28.3%, for 8-11 years 28.3, for 12-15 years 5%, and for more than 15 years 5%. So trend of SMEs of medium sized is lesser and for the smaller sized is more in Pakistan. Gender analysis shows that 54% in the selected SMEs are males and 3% are females.

In the selected SMEs the number of employees %age distribution says that those SMEs who have less than 10 employees are 33.3%, SMEs carrying 10-20 employees are 25.3%, 21-50 employees are 25.3, and the SMEs having employees less than 100 were 8.2%. This indicates that SMEs of smaller size are more and SMEs having more number of employees are less in Pakistan. Henceforward, table 3.2 also indicates that selected SMEs of Punjab, Pakistan on the basis of the equity type/ownership indicates that SMEs based on sole proprietor ship are 53.3%, based on the partnership are 21.7%, joint venture's based are 10.0%, based on the limited company are 6.7%, based on the joint stock are 0%, and based on the corporation are 5.0%. These results are for the pilot study based on the sample of 60 selected SMEs.

Table 3.2 Descriptive Analysis Results

Item	Frequency	Percent
Position		
CEO	37	61.7
Strategist	6	10
Others	10	16.1
Operating years		
less than 1	1	1.7
One-three	19	31.7
four-Seven	17	28.3
Eight- Eleven	17	28.3
Twelve-Fifteen	3	5
More than 15 years	3	5
Gender		
Male	54	90
Female	3	5
Number of Employees		
less than 10	20	33.3
ten- twenty	15	25.3
twenty one- fifty	15	25.3
fifty one - hundred	5	8.2
Ownership/Equity type		
Sole proprietor ship	32	53.3
partnership	13	21.7
Joint Venture	6	10
Limited Company	4	6.7
Joint Stock	0	0
Corporation	3	5

5. Conclusion

The main aim of this paper was to conduct a pilot study and having the pre-test analysis to check the validity and reliability of the items measuring the SMEs innovative culture's construct for the main study. This study helped in detecting errors in the instrument, ambiguous sentences, and removing useless items. As the results of this pilot study reveal that all constructs are above 0.70. Hence, it was concluded that all the constructs of SMEs innovative culture are reliable, and subsequently there was not a single item to be removed. So, this study can be used to measure the innovative culture for SMEs keeping in view the regional constraints.

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