

## New Technology Intervention in the Strategic Management: A Case Study of Small Medium Enterprises (SMEs) in Pakistan

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**Abstract:** The study aims new technology intervention in the strategic management and become one of the most important challenging issues in the SMEs and in developing countries to increase the access of societies. For this purpose, the primary data has been utilized and quantitative questionnaires was developed, dependent variable Employee performance and independent variables Human Resource practice, Institutional Practices and Environmental Factors were taking place. Regression estimates the study existence of statistically significant relationship between strategic management and new technology intervention. The results of regression show that, the Human Resource practices and Institutional Practices and Environmental Factors from sample were contacted and to discuss that they have recommended and positively and significantly correlated with dependent variables Employee Performance. This study indorses that Managers may understand the diversity to better manage their teams and be aware of their employee's behaviors. Furthermore, strategic management collectively effects the job performance in organisation, so the organizations have started spending huge amounts in training and development of their staff to overcome the HRM and team's management issues. The study provides specific evidence to policymakers that improve the further enhance the transparency and credibility of strategic management policy and formulation process.

**Key words:** New Technology Intervention; Strategic Management; Employee Performance; Regression analysis.

### Introduction

Small medium enterprises play a vital role in the economic development of a country (Kayanula and Quartey, 2000). In the late 1970s to early 1980s started a more innovative and elastic in the reducing costs, as well as increasingly efficient producing intermediate level goods to compare large organisation and firms, hence the contribution of economic activities in the country. SMEs are considered for being precious financial entity, which go to crashed down. Furthermore, enterprises are sometime categorised for producing low quality goods and shortly living products. In the developed countries SMEs are dependent on the life cycle of business and boom economy depend on the crisis of cycles (Farinha and Felix, 2015)

One of the largest and most important sectors of Pakistan's economy is small and medium enterprises (SMEs). By raising the quality of living of disadvantaged segments of society, SMEs play a key role in shaping national development strategies, creating jobs and social cohesion. SMEs represent more than 90 percent of all businesses in most countries and contribute significantly to inclusive economic development. To further strengthen efforts to strengthen the SME market, the Government has enacted the 2007 SME Policy; A policy aimed at providing a

long-term structure for the development of the small and medium-sized enterprises (SME) sector and a sound implementation mechanism that could provide an atmosphere conducive to the economic growth of the entire country. The scope of the policy includes areas such as easy financial accessibility, stimulated human growth, technical upgrading, and a stable business climate, all of which are directly linked to a booming SME sector that has unlimited potential to transform Pakistan's economy around (Shah, & Syed 2018).

The digitalization and globalization are combining dramatic effect on the organization and the people way of work. Demographic disruption and change in the society as well as focus on the inevitable environmental issues, and that will intensify the effect of the trends. The result of business executives around the world will be faced new challenges with models of business on the one hand and that will organizationally practice on other hand. Now this is great opportunity for the human resource scientists and information system and practitioners together work to improve understanding of technology will be utilized to make more efficient and inspiring organization.

In other words, for anyone who is interested in some of the most basic problems of society, the subject of innovation is relevant (Hage, 1999). Solving basic problems of the society is a way that brings changes to the traditional approach is the basic theme of innovation. Thus, Innovation in its various forms has long been recognized as critical to a firm's competitive advantage (Cooper, 2000; Damanpour and Gopalakrishnan, 2001; Scarborough and Zimmerer, 2002). In a more detail manner, Brogren (2011) stated that "research converts money into knowledge, while innovation converts knowledge into money". Consequently, it is important for every organization to innovate (Tidd et al., 2005, Albury 2005). In this regard innovation is not only required for financial gain and easier life, but it is also necessary to make our society healthier and more sustainable. Due to this changing business environment, SMEs are experiencing increased competition as foreign firms has gained access to local markets, and it is therefore crucial for SMEs to respond efficiently and sustain their competitiveness against both the local and international competitors (Huu and Nhu, 2009). In the present world economy, no market is safe from competition and no company can restrict to its home market. Thus, firms have only two basic functions; to know the market demand and to produce new (Innovation) commercially viable product and services.

### **Research Problem**

The role of Small Medium Enterprises in the economy of Pakistan, and the financial limitation had faced their problems in operating and technological intervention. These are the negative impact on the development and least potential drivers to the national economy. In the developing countries economy without the essential infrastructure and new technology to attract the large number business activities.

### **Objectives of the research**

- To examine the barriers of new technological intervention in strategic management
- To investigate the practitioner's policy in the organization

### **Research Questions**

1. What are the barriers of new technological intervention in the strategic management?
2. What is the practitioner's policy and strategy in the organization?

### **Significance of the research**

There is gap between required level of SMEs development and actual development through innovation and technology with strategic management. The commitment of government of Pakistan to development of SMEs sector and it has been become more important initiative effort with right policy and institutional development and that will make Pakistan SMEs industry competitive with international market and achieved the multiple plans for creation of employment development of enterprises, promotion of export and additional value contribution. The strategic management framework will develop the SMEs industry, through innovation and sustainability

besides the enabling situation for the existing SMEs. The government will be achieved result through new technology in the strategic management.

### **Literature Review**

The theory of technology is advocates to improve the driver of organization structure. Baum and Rowley (2005) suggest that: “the technical and greater complexity, the structure and the greater complexity, the technical and the greater uncertainty, the decentralization and the greater and lower formalization; the technical interdependence and the greater, the need of coordination and the greater.

Due to various skills, resources and expertise constraints faced by domestic SMEs, the need to learn about innovation and to develop new services and products for export is becoming more relevant (Taylor, 2013). As innovation is one of the key means of achieving economic growth, national innovation programs provide opportunities for economies to develop and prosper. Developing countries will find several obstacles to doing so while integrating innovation hubs as necessary for national and local development. A model that can include experienced inventors and development teams and government agencies as intermediaries to interact with SMEs to innovatively produce. Government often plays a key role in fostering innovation by offering roadmaps through its services, promoting innovation by introducing innovative policies and protecting innovation through laws (Yao, 2008).

The SMEs employ about 50% of workers in developing countries (Ayyagari, et, al., 2014) and two-thirds of formal non-agricultural private employment (World Trade Report 2016). One belief is that SMEs, which is a critical driving force of economies of developing countries, is one of the vulnerable sectors to economic globalization due to the competitiveness of the challenges (Asare, et al., 2015). The influence of large-scale companies—Multi-National Corporations (MNCs) and Transnational Corporations (TNCs) in particular—to the SMEs is critical because of the growing role of the MNCs and TNCs in the economies of developing countries with a high potential to face competitive challenges in the global market, as those companies produce mainly the price commander commodities to the global market (Asare, et al., 2015). The elimination of barriers to global trade and promotion of the concept of free trade under the WTO trade regime has also made a series of challenges to the sustainability of SMEs in developing countries, mainly due to the less ability the SMEs to face the competitive challenges (World Trade Report 2016), though it theoretically addresses the issue of limited market. The studies cited that a considerable percentage of micro and small industries in developing countries have closed within a very shorter period of commencement (Ahmedova, S. (2015). The literature also cited numerous social, economic, technological, cultural, environmental, and management-related causes that affect the failure of SMEs’ businesses within a shorter period [3,7,8]. Such reasons are the impeding causes of competitiveness of the SMEs in the globalized economy.

### **Methodology and Data**

A quantitative research methodology is implemented to investigate the unexplored field after a comprehensive literature review and due to the exploratory nature of the research. To attain the research objectives, the case study approach is implemented.

#### **Data collection**

Data collected through structured questionnaires from a sample of the respondents from SMEs (Electrical Appliances) in Gujranwala. Several tests will used to analyze the reliability and validity of the research instrument. Finally, multiple regression analysis will used to test the proposed research hypotheses. Moreover, that SMEs employees will select for this study. The CEO, Managing Director, General Managers, Owner, Managers, Assistant Manager, Technicians and Senior Staff will the targeted units of inquiry.

The Research Design provides the graphical representation, explaining the effect of strategy implementation practices on employee performance in organisation in Pakistan (Employee

Performance, Timeliness, Service delivery and Human Resource practices, Staffing, Remuneration, and Institutional Practices, Organizational Structure, Organization Culture, Environmental Factors, Resources, Stakeholder Commitment) take place. This study explored for other possible influences as well as the final consequences. The study was mainly depending on one type of primary data was conducted through questionnaire.



Figure 1: The conceptual framework

**Data collection technique**

This study data collected through Survey (Questionnaire) and target population was SMEs firms in district Gujranwala Pakistan. According to the Government of Pakistan, there are 6500 Small Medium Firms are working in the District Gujranwala. The one major SMEs firms in Gujranwala is Domestic Electrical appliances; (Govt of Pakistan) our target population contains 433 Domestic Electrical Appliances units. Units are scattered in 15 areas of Gujranwala, but we selected randomly 10 areas of Gujranwala. We have secondary information regarding the location of these firms; therefore, we used Convenience sampling technique, which is the non-probability sampling method and our responded was selected. Only entrepreneur or manager of the firm was interviewed at the premises of the firms through as well-structure and pre-tested questionnaire. Our selected sample was 100 and it is selected through weighted sample method. The given table showing selected sample.

Table 1: Distribution of Selected Sample Units

No	Area Name	Number of Units	Selected Sample Units
1	Pindi bypass	63	21
2	Kangniwala	38	13
3	Hafizabad Road	37	12
4	Shaheenabad	35	12
5	Sialkot Road	25	8
6	Sheikhupura Road	24	8
7	Gondalwala Road	24	8
8	Nowshera Sansi Road	23	8
9	GT Road	19	6
10	Jinnah Road	16	5
	<b>Total</b>	<b>304</b>	<b>100</b>

**Econometrics Model**

To measure the new technology intervention in the strategic management: a case study of small medium enterprises (SMEs) in Pakistan the following equation is used,

$$Y = \alpha_0 + \beta_1HRP + \beta_2IP + \beta_3EF + e \dots\dots\dots(i)$$

Where.

Y = Employee performance

$\beta_1$ HRP = Human Resource practice

$\beta_2$ IP = Institutional Practices

$\beta_3$ EP = Environmental Factors

e = error term

In order to examine the new technology intervention in the strategic management, this study has used various variables. These variables include dependent variable Employee performance and independent variables Human Resource practice, Institutional Practices and Environmental Factors.

**The Profile Analysis of the Respondents**

The own features and specific appearances of the participants play an energetic role in survey questionnaire data analysis. (Robson, 2002) called it profile analysis and indorsed that previously the actual survey analysis, the comprehensive description of the features of the participants could give an enhanced presentation of the collected data. This tool is known as descriptive statistical analysis as it transmits to the procedures of forming, summarizing, and presenting data in a helpful and practical way (Keller, 2003). In the subsequent section, a comprehensive description of the special characteristics of the participants has been given. Though stated before, the researcher used the SPSS program to attain all of these results. It is a very sophisticated software like all the other statistical programs where the data is imported into the program, then it is enough to give the commands and produce the results.

**Descriptive statistic**

This section deals with the descriptive statistic of data. The Descriptive statistics of the variable taken into consideration are presented below.

**Table 2: Profile Analysis of the Respondents**

Variables	Categories	Frequency	Percent
Religion	Islam	122	95.3
	Other	6	4.7
Gender	Male	107	83.6
	Female	21	16.4
Age Group	18-25 Years	15	11.7
	26-35 Years	33	25.8
	36-45 Years	47	36.7
	46-55 Years	24	18.8
	56-65 Years	9	7.0
Education Status	High	28	21.9
	Graduate	100	78.1
Monthly Average Income	Below 50,000	25	19.5
	Above 50,000	103	80.5
	<b>Total</b>	<b>128</b>	<b>100.0</b>

The table 2 of frequency consist of 2 major columns of summary measure. The column of the frequency shows categorical measure which comes in the same table. Total number of participants were 128 which are the residents of Pakistan.

### Reliability Analysis

In this analysis Cronbach's Alpha is the accurate measure of reliability scale (Field et al. 2010). The value of alpha must be greater than 0.60 which an acceptable range (Hajjar, S. T. (2018).

**Table 2: Reliability Analysis**

Variables	Average Variance Extracted from variables	Composite Reliability
<b>Employee Performance</b>	0.85	0.75
<b>Human Resource practices</b>	0.71	0.66
<b>Institutional Practices</b>	0.82	0.89
<b>Environmental Factors</b>	0.69	0.73

Cronbach's alpha at  $0.9 \leq \alpha$  is Excellent, at  $0.8 \leq \alpha < 0.90$  is Good at  $0.70 \leq \alpha < 0.80$  is Acceptable, at  $0.60 \leq \alpha < 0.70$  is Questionable, at  $0.5 \leq \alpha < 0.60$  is Poor, at  $\alpha < 0.50$  is Unacceptable.

Source: Elaborated by the authors.

### Regression Analysis

Regression analysis measures that how much independent variable is positively & significantly associate with dependent variable. In regression when we are aware how all the three variables used in this research are correlate with dependent variable, after that we can easily get the information about independent variables.

**Table 3: Regression Analysis**

Variables	$\beta$	$R^2$	t statistic	Sig.
<b>Human Resource practices</b>	0.563	0.317	9.859	0.004
<b>Institutional Practices</b>	0.012	0.250	1.057	0.000
<b>Environmental Factors</b>	0.285	0.349	2.741	0.0523

Note:  $N=100 = p < 0.01$ , \*\*\* =  $p < 0.05$ , \*\* =  $p < 0.10$ \*

The table 3 results of regression show that, the Human Resource practices and Institutional Practices, Environmental Factors from sample were contacted and to discuss that they have recommended and positively and significantly correlated with dependent variables Employee Performance, Timeliness, Service delivery. This study indorses that Managers may understand the diversity to better manage their teams and be aware of their employee's behaviors. Furthermore, strategic management collectively effects the job performance in organisation, so the organizations have started spending huge amounts in training and development of their staff to overcome the HRM and team's management issues. The companies' operations and the same is adopted for their strategic management policies, employees when not paid adequately, do not sometimes do not even care whether they are serving supervisor.

### Conclusion and Recommendations

The policies of strategic management must be reviewed in organisation through optical prism of strategic objective that instead organisation separate tone that will take based on micro approach. The land of Pakistan is full of natural resources but due to political in-stability and negligence less attention has been given to these natural resources. On the other hand, due to mismanagement form the government and non-government authorities and lack of new technology adoption and focusing on their way of doing business the economy is declining day by day. Therefore, to re-

establish their economic potential and to restore their loosed status it is recommended to make necessary steps on war putting basis for the innovative performance of SMEs.

In this regard, innovative activities of the observed SME have been derived from detail interview and highlight the main areas of innovation and improvements. In the preliminary results the authors look at innovative activities and to know the common characteristic of innovative SMEs in Pakistan. However, the result will be obtained from the detail analysis of the collected data and trusted, and tested characteristics of innovative SMEs of Pakistan will be derived. The targeted case (interview) is showing a detail of innovative activities and their success factor, which indicate a clear difference among the non-innovative SMEs. All the four different categories of innovation (Product, Process, Marketing and Organization) were investigating separately to know the exact innovative activities of the targeted SMEs. Therefore, the more focus has been found in the process innovation as compared to other categories of innovation. The firm considers their process innovation as their priority and the product innovation is their lowest priority, while marketing and organization innovation is linking with their financial position and availability of professionals.

This study indorses that Managers may understand the diversity to better manage their teams and be aware of their employee's behaviors. Furthermore, strategic management collectively effects the job performance in organisation, so the organizations have started spending huge amounts in training and development of their staff to overcome the HRM and team's management issues. The companies' operations and the same is adopted for their strategic management policies, employees when not paid adequately, do not sometimes do not even care whether they are serving supervisor.

### **Recommendations**

The study made the following recommendations from the research results; that according to the research findings and conclusion above.

The Pakistan government management should strive to better the working environment further and that the county strategic plan implementation should be designed and communicated to the implementing personnel in a way that is well understood and motivates them to carry on with their responsibilities towards successful implementation.

The county employees should be encouraged to be positive and committed towards the successful strategy implementation through the top-level management show and prove of commitment towards the strategy implementation. All variables that significantly influenced employee performance at the county should be encouraged by the county management to improve the performance of county employees.

### **References**

1. Ahmedova, S. (2015). Factors for increasing the competitiveness of small and medium-sized enterprises (SMEs) in Bulgaria. *Procedia-Social and Behavioral Sciences*, 195, 1104-1112.
2. Albury, D. (2005). Fostering innovation in public services. *Public money and management*, 25(1), 51-56.
3. Asare, R., Akuffobe, M., Quaye, W., & Atta-Antwi, K. (2015). Characteristics of micro, small and medium enterprises in Ghana: gender and implications for economic growth. *African Journal of Science, Technology, Innovation and Development*, 7(1), 26-35.
4. Ayyagari, M., Demirguc-Kunt, A., & Maksimovic, V. (2014). Who creates jobs in developing countries?. *Small Business Economics*, 43(1), 75-99.
5. Baum, J. A., Rowley, T. J., Shipilov, A. V., & Chuang, Y. T. (2005). Dancing with strangers: Aspiration performance and the search for underwriting syndicate partners. *Administrative science quarterly*, 50(4), 536-575.
6. Brogren, C. (2011). Malaysian SMETM the SME paper.
7. Cooper, R. G. (2000). Doing it right. *Ivey Business Journal*, 64(6), 54-60.

8. Dalitso, K., & Peter, Q. (2000). The policy environment for promoting small and medium-sized enterprises in Ghana and Malawi. University of Manchester.
9. Damanpour, F., & Gopalakrishnan, S. (2001). The dynamics of the adoption of product and process innovations in organizations. *Journal of management studies*, 38(1), 45-65.
10. Farinha, L., & Félix, S. (2015). Credit rationing for Portuguese SMEs. *Finance Research Letters*, 14, 167-177.
11. Farinha, L., & Félix, S. (2015). Credit rationing for Portuguese SMEs. *Finance Research Letters*, 14, 167-177.
12. Hage, J. T. (1999). Organizational innovation and organizational change. *Annual review of sociology*, 25(1), 597-622.
13. Kayanula, D., & Quartey, P. (2000). The policy environment for promoting small and medium-sized enterprises in Ghana and Malawi.
14. Keller, G. &. (2003). *Statistics for Management and Economics*. 591-594. Thomson Learning.
15. Le, N. H., & Nhu, D. (2009). Role of parent control of international joint venture in gaining competitive advantage. *International Journal of Economics and Finance*, 1(2), 60-68.
16. Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers*. Wiley-Blackwell.
17. Scarborough, N. M., & Zimmerer, T. W. (1996). *Effective small business management: An entrepreneurial approach*.
18. Shah, D. S., & Syed, A. (2018). Framework for SME sector development in Pakistan. Islamabad: Planning Commission of Pakistan, 1, 21-23.
19. Shah, D. S., & Syed, A. (2018). Framework for SME Sector Development in Pakistan. Islamabad: Planning Commission of Pakistan, 21-23.
20. Taylor, P. (2013). The effect of entrepreneurial orientation on the internationalization of SMEs in developing countries. *African Journal of Business Management*, 17, 19-21.
21. Tidd, J, Besant, J. R and Pavitt, K, (2001), *Managing Innovation: Integrating Technological, Market and Organizational Change*, Chichester: John Wiley
22. *World Trade Report 2016*; World Trade Organization: Geneva, Switzerland, 2016
23. Yao, J. (2008, December). Technological Innovation Management of Chinese Small and Medium Enterprises. In 2008 International Seminar on Business and Information Management (Vol. 2, pp. 413-416). IEEE.