Research Article

Impact of Small and Medium Enterprises on Economic Growth: Evidence from Pakistan

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Abstract

In today economy the small and medium enterprises are consider the veritable tool for the economic growth of a country. Due to its vital importance in the contribution of GDP, all the developed and developing countries focusing on strengthen and development of SMEs sector. This research aims to know the effects of process innovation on SMEs Growth and to find the impact of SMEs on economic growth of Pakistan. A secondary data has been collected for the period from 1981 to 2013. Main economic variables are included in this research i.e. GDP growth rate, Trademark total, Public expenditure on education, Patent Applications, High Technology Exports, Share of export as percentage of GDP, Inflation rate for the analysis of the objectives. Two linear regression equations have been constructed. The findings conclude that there is positively significant impact found between process innovation and SMEs growth. Similarly, the strong correlation is estimated between SMEs performance and economic growth of Pakistan.

INTRODUCTION

The Pakistan economy is consider the economy of small and medium enterprises just because of 90% of businesses are engaged in the Small and medium enterprises which play intense role in boosting the economic growth. The Pakistan manufacturing sector has a greater contribution of 13.20% in the GDP of Pakistan through producing and delivering qualitative goods to foreign countries. Moreover, it provides a significant employment to labor force, which helps in improving the standard of living of the country peoples and brings prosperity in the national economy. According to SMEDA (Small and Medium Enterprises Development Authority) the SMEs in Pakistan are mostly engaged in the industrial sector which has frequent focus by the Government to boost up the economy and also have an important role through creation of employment and to bring the economic prosperity in the country. The SMEs also considering as a road map for the economic growth of Pakistan through its vital importance in the national economy.

Small and Medium enterprises plays an important role in the global economy through its significant contribution to the GDP and improving the people's standard of living. Mostly the developing countries occupy 90% of enterprises in SMEs sector and one of the major causes of economic growth. The industrial sector of SMEs plays a vital role in the global economy through export of domestic products to other countries. According to the United States International Trade Commission (2012) that American economy is also based on the existence of SMEs, which contributes 50% to 70% in the GDP of the country through employment creation and self-dependency. SMEs are considered as an important means of job creation and poverty reduction in the developing countries. The existence of SMEs brings the effective utilization of local resources and boosts up the economies all over the world. SMEs play a vital role in emerging the

economies through import and export of goods, which leads to global economic prosperity.

   SMEs sector are classified in to two major categories: (i) micro enterprises and (ii) Small and medium enterprises with respect to the number of employees and capital value. The Pakistan economy almost depends on the small and medium enterprises which have a great contribution in the GDP of Pakistan through export of manufactured goods to foreign countries. Small and medium enterprises leads to the creation of jobs, encouragement of entrepreneurs, improvement of living standards, effective utilization of country local resources, economy development etc. All the developing and developed countries economic growth are associated with the Small and medium enterprises. The Small and medium enterprises (SMEs) sectors have the leading role in the Pakistan economy through its major contribution to the GDP Pakistan. Easy access to finance has the significant importance in the development of SMEs sector which ultimately boost up the economy. The Pakistan economy is mostly depended on the productivity of SMEs sectors. The SMEs is considering an important means of poverty minimization in the country that brings prosperity in the country.

   Small and Medium Enterprise Development Authority (SMEDA) is the premier institution of Government Pakistan which works under the federal ministry of industries. SMEDA helps Small and medium enterprise for secure financing in the country. Conducting the workshop and training program to strengthen SMEs sector in Pakistan by improving knowledge and technical skills. Facilitating the Small and medium enterprise in getting the international standard certification for their qualitative product and processes. The SMEDA facilitate the development of industrial cluster in and enhances the SMEs efficiency in Pakistan.

Table 1. Definition of SMEs in Pakistan

Institution	Enterprise Category	Nature of Business	Number of Employees	Value of Capital (Pak Rs)
SMEDA	Small Scale	Production Sector	Up to 36	Up to 20 Million
	Medium Scale	Production Sector	Up to 99	Up to 40 Million
SME Bank	Small Scale	Service Sector	N/A	Less than 100 Million
	Medium Scale	Service Sector	N/A	More than 100 Million
Federal Bureau of Statistics	Small Scale	Service Sector	Less than 10	N/A
	Medium Scale	Service Sector	N/A	N/A
SBP	Small Scale	Manufacturing	Less than 250	Less than 100 Million
	Small Scale	Service Sector	Less than 250	Less than 50 Million
		Manufacturing	Less than 250	Less than 100 Million
	Medium Scale	Service Sector	Less than 50	Less than 50 Million
Sindh Industries Dept	Small scale	Manufacturing	N/A	Less than 10 Million
Punjab Industries	Small/Medium Scale	Manufacturing	N/A	Less than 10 Million
Punjab small Scale Corporation	Small/ Medium Scale	Manufacturing	N/A	Less than 20 Million

Source: Small and Medium Enterprise Reports

Objectives of the Research

The objectives of the research are as follows:
1) To know the effects of process innovation on SMEs Growth
2) To find the impact of SMEs on economic growth of Pakistan.
3) To suggest positive policy implications for SMEs development.

Research Hypothesis

H_1: Process innovation has a positive effect on growth of Small and Medium Enterprise
H_2: Small and Medium Enterprises has a positive impact on the economic growth in Pakistan.

REVIEW OF LITERATURE

Subhan et al. (2013) stated that small and medium enterprises recognized as an important part for the economic growth in the world. The SMEs has positive impact on the economic growth through employment creation, export of domestic goods, enhances income level of peoples that ultimately increased overall GDP in the country.

   Huq et al. (2013) argued that SMEs is the major cause of economic growth through creation of employment in the country. They also found the positive impact of SMEs on the economic development in the Bangladesh economy.

   Kraja (2013) stated that SMEs were considering an important factor in the Albanian economy through employment generation, poverty reduction. The small and medium enterprises were considering the means of national income and

sustainable growth in the developing countries.

Ali (2013) stated that a small and medium enterprise helped in the society and economy development in the country through employment creation and enhancing the income level of the country people. Hence he concluded that SMEs considered an important factor in the country economic development

Yusuf et al. (2012) stated that SMEs were considered the means of job opportunities, poverty reduction, utilization of domestic/local resources, betterment of people's living standard and economic prosperity. They also found that in Nigeria 97% enterprises are SMEs that provide 50% employment and its industrial sector provided 50% of the total output of Nigerian economy.

Johari (2012) stated that a small and medium enterprise has direct relationship with economic growth in Iran economy. The study found that in Iran economy 94% of industrial unit are engaged in SMEs sector, which contributed 43% of industrial employment in the country

Kadiri et al. (2012) stated that SMEs are the major cause of the country economic development through utilization of local resources and creation of jobs. The living standards of the peoples have been improved by the SMEs and having a great contribution in the economic growth through employment.

Syed et al. (2012) stated that SMEs are positively affected the economic growth of Pakistan through export earning and employment generation, poverty minimization, local resources utilization in the country.

Batool et al. (2011) stated that Small and medium enterprise is consider an important factor in the economic growth of Pakistan economy. The SMEs manufacturing industry has major contribution to the GDP through employment generation and self-employed environment in the country which positively affected the country economic growth.

Aremu and Adeyemi (2011) stated that Small and medium enterprises lead to the local resources utilization, Employment generation, wealth distribution, self-employment and rural development in the national economy. The study also examined that SMEs was the driving force for the economic growth through employment creation, poverty minimization and wealth distribution in the country.

Zaman et al. (2011) stated that SMEs played the leading role in the economy development of various countries by providing job opportunities at low cost and sustain economic prosperity. The inconsistent economic policies for the SMEs development are the major cause of poverty reduction and employment generation in the country.

Kongolo (2010) stated that SMEs are an important contributor to the economic development of many economies of the world. The study also pointed that SMEs produce more than half of the total country output in an African economy.

Gunu (2004) argued that SME is the mean of economic development activities through employment generation and export earnings in the country. The SMEs are considered as the driving force for the economic growth through entrepreneurship development, encouragement of innovative technologies in the country.

RESEARCH METHODOLOGY

The objectives of this research are to find the impact of small and medium enterprise on economic growth and the process innovation on the performance of SMEs. The period for the analysis has been taken from 1981 to 2013. Three main indicators for process innovation have been taken for this research (1) Number of Patent Applicants either resident or nonresident (2) Number of trade mark Applicants either resident or nonresident (3) High technology exports and high technology exports as percentage of manufacturing exports. While to analyze the performance of SMEs, the SMEs growth has been taken as standard indicator; real GDP per capita and growth of GDP have been selected as two economic parameters to access the economic performance (Subhan et al., 2013).

The secondary data have been gathered from various national and international sources. The values of variables like GDP growth rate, GDP growth rate per capita, Inflation rate, Exports as percentage of GDP, Imports as percentage of GDP and Trade balance as percentage of GDP, High technology exports, Public expenditure on education as percentage of GDP, Share of SMEs in GDP (growth rate as percentage of GDP) have been collected from Economic survey of Pakistan (several issues), Asian Development Bank Reports and World Bank Reports for the selected era.

Therefore, to measure the process innovation on the SMEs performance and the impact of SMEs performance on economic development, a log linear regression model has been applied (Subhan et al., 2013). Two log linear regression equations have been constructed as following

To know the effects of process innovation on SMEs growth

To know the effects of process innovation a following econometric equation has been constructed for analysis.

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$
$SMEG = \alpha + \beta_1 GDPC + \beta_2 PEXEDU + \beta_3 VEGDP + \beta_4 PAN + \beta_5 TMAT + \beta_6 HTEX + e$

Where;
SMEG = Share of Small and medium enterprises in GDP.
GDPC = GDP growth rate per capita
PEXEDU = Public expenditure on education as percentage of GDP
VEGDP = Volume of Export as percentage of GDP
PAN = Patent Applicant for Non residents
TMAT = Trademark Application Total
HTEX = High Technology Exports
β_1, β_2, β_3, β_4, β_5, β_6 are the coefficients of independent variables
e = Error term

To know the impact of SMEs on economic growth

The following simple linear regression model has been designed to know the impact of SMEs on economic growth.

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$
$GDPG = \alpha + \beta_1 SMEGR + \beta_2 PAN + \beta_3 INFR + \beta_4 HTEX + \beta_5 PEXPEDU + e$

Where;
GDPGR = Gross domestic product growth rate.
SMEG = Share of Small and medium enterprises in GDP.
PAN = Patent application for non-residents.
INFR = Inflation rate.
HTEX = High Technology Exports
PEXEDU = Public expenditure on education as percentage of GDP
β_1, β_2, β_3, β_4, β_5 are the coefficients of independent variables
e = Error term

EMPIRICAL RESULTS and DISCUSSION

The results of the data analysis are presented in the following tables.

Table 2. Results of Process Innovation on SMEs Performance

Variable	Coefficient	Std. Error	t-Stat
Constant	-1.202911	0.667183	-2.216712
GDPC	-0.008178	0.0295632	-0.264378
PEXEDU	0.384563	0.153452	2.557212
VEGDP	1.783491	0.296422	5. 963200
PAN	-0.254578	0.164371	-1.822459
TMAT	-0.174531	0.120256	-1.922561
HTEX	0.089921	0.095633	2.761134
Dependent Variable: SMEG			
R-Square: 0.672314			
F-Stat: 8.436143			
Prob (F-Stat):0.000218			
DW Stat: 1.839027			

Source: Authors own calculation

The above Table 2 presents the results of the effects of process innovation on SMEs growth. There are certain variables which are found positively significant on growth of SMEs share in GDP i.e. the volume of exports as percentage of GDP is showing improvement and contributing significant effect on SME sector with the t-value of 5.96. It means, if Pakistan will focus on exports then there is a change of economic restoration with the help of SMEs growth. Another two variables GDP per capita and patent application are found merely insignificant but presenting positive correlation among these variables with SMEG. The high technology exports are describing positive relationship with SMEs in GDP that means high exports may lead to the development of the country through the betterment of SMEs growth. The public expenditure on education as percentage of GDP has positive effect on share of SMEs in GDP with t-value of 2.55. This results shows that the education enhance skills and train the management staff effective and efficient towards the

attainment of organization's goals while technical education promotes the production efficiency of labor that really needs government attention towards education development.

Table 3. Results of SMEs on Economic Growth

Variables	Coefficient	Std. Error	t-Stat
Constant	4.781351	1.804421	2.778431
SMEG	-0.658401	0.603374	-1.147439
PAN	-1.258790	0.534531	-2.431170
INFR	-0.415631	0.203611	-2.338290
HTEX	0.095252	0.152806	0.100732
PEXEDU	0.905239	0.513722	1.874369
Dependent Variable: GDPG			
R-Square:0.427139			
F-Stat:2.950282			
Prob (F-Stat):0.029821			
DW Stat: 2.053491			

Source: Authors own calculation

The Table 3 shows the results of the impact of SMEs on economic growth of Pakistan. A number of independent variables are found positively significant on economic growth. The public expenditure on education as percentage of GDP has found significant with t-value of 1.87. It proves that the role of education is very important for the promotion of economic activities in the country with skilled labor and well-educated management. Educated workforce as an indicator of economic growth may lead to the development of country with its efficiency. Therefore, there is a dire need of government attention for the growth of SMEs the education is mandatory for the task and may become challenging for other developing nations like India, China and Malaysia etc. It is in general that inflation always creates a negative impact on the GDP because increase in inflation may reduce the purchasing power of the public. Therefore, the demand reduces the consumption which ultimately effects the growth of GDP to decline. The high technology exports are found positively significant on GDP growth with t-value of 0.10. This result discusses that a efficient potential is available in export sector but due the lack of advance technology in the country the overall proportion of high technology export is very nominal. If there is improvement brought up in this sector, it may surely amplify on the development of economy with the growth of SMEs. As developing country, Pakistan has very small number of patent applications of local resident as compare to nonresident. Therefore, the calculated value of PAN is found 2.43, indicate its impact on GDP but also require awareness for the promotion of innovated output factors (Patents). The value of Durbin Watson Statistics is found 2.05 showing no autocorrelation in the data analysis.

CONCLUSION

Pakistani land is very fertile with natural resources but lack of modern technology, innovation and especially mismanagement of recourses, as the result the economy of the country is going towards its death day by day. Therefore, to restore the economic strength, there is a dire need of giving attention by the government on the development of Small and Medium Enterprises. This paper attempts to know the effects of process innovation on SMEs growth and to know the impact of SMEs on economic growth of Pakistan by considering several parameters as independent and dependent variables. The above results conclude that there is a positive correlation found between process innovation and SMEs growth while the performance of SMEs has significant impact on economic growth and these finding ultimately accept the both alternatives hypothesis that there is a significant effect of process innovation on SMEs growth and there is a significant impact of SMEs on economic growth of Pakistan. With the improvement of process innovation, there would be an increase in the growth of SMEs which ultimately lead to development of the economy revival in the country. Education as percentage of GDP has been found positively significant on the dependent variables in both regression equations. This implies that the education is a vital indicator for economic development in the country as well as contributing positive role for the growth share of SMEs in GDP. Other certain variables like inflation, volume of exports as percentage of GDP are effecting the growth negatively. The patent application for non-resident and trademark total are the two main variables showing their significant impacts on SMEs growth and economic development as well.

POLICY IMPLICATIONS

- Government and other financial institutions should come forward and provide special loan facilities to the SMEs in obtaining modern technology.
- Time by time training facilities should be arranged by the government, SMEDA and other NGOs to increase the efficiency of labor force.
- Special schemes should be introduced to encourage the women entrepreneur of SMEs to come forwards and set up new small scale enterprises.
- Affordable transportation facility should be provides to SMEs for the smooth supply of goods.
- To retain existing labor force with this sector, government should introduce entrepreneurial career development to reduce uncertainty in SMEs Career.
- Introduce the proper legal framework should be introduce by SMEDA for the enforcement of law in SMEs Sector.
- All entrepreneurs should mainly focus on quality not the quantity.

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