An Empirical Analysis of SMEs Growth and its Contribution in Poverty Reduction of Pakistan

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PAPER INFO	ABSTRACT
	This study establishes a linkage between small and medium enterprises (SMEs), economic growth and poverty reduction. The small enterprises are main tools for social integration, innovation, employment generation, and poverty reduction. The information and dataset for study was from the period of 1980 to 2020 and it was collected from different reliable national and international organizations. The multiple regression model have been used for data analysis. The empirical results showed a strong inverse relationship between SMEs growth level and poverty level. The results confirm a strong and positive relationship exist between gross domestic product and SMEs development. This relationship was justifiable because establishing more small and medium enterprises can be helpful in employment generation, local production sector, contribute in economic growth and poverty alleviation of Pakistan. The economic policy makers may focus to subsidize the small enterprises as a policy tool. Financial markets may facilitate the potential SMEs by providing them ease in commercial transactions and capital flow.

1.   Introduction

Small and Medium Enterprises (SMEs) are considered as the source of process innovation, job creation and systematic development in many progressive industrial sectors and this linkage of SMEs ultimately contribute in economic growth of a country. According to Bolton Committee (1971) a SME is an independent firm which is managed by the owners themselves personally and has relatively small share of its market place. SMEs are major contributors of livelihood and public welfare for the poor class. SMEs serve as driver for structural change and play a complementary role in industrialization of an economy. Small and Medium Enterprise Development Authority (SMEDA) is the head foundation of Government of Pakistan which works for SMEs growth and development. The SMEDA facilitates small and medium firms in feasibility studies, process innovation, planning the business activities and availability of bank loan. It likewise encourage the small and medium venture in getting the all-inclusive standard affirmation for their subjective matters and techniques. The SMEDA supports advancement of mechanical group in and re-designs the SMEs efficiency in Pakistan (Ahmed & Raziq, 2017).

In Pakistan, the SMEDA describes the SMEs on following criteria such as:

- Micro-Enterprises: Less than ten people (Investment limit Rs. 2 million)

- Small-Enterprises: In the middle of 10-35 people in employment (Investment limit Rs.20 million)

- Medium-Enterprises: In between 36-99 people in employment (Investment limit Rs. 40million).

The meaning of the word "Poverty" has become more understated today than what it was a couple of years back. Poverty is a stipulation in which individuals are unable to satisfy basic financial requirements of life. Poverty is a social phenomenon in which basic necessities of life are not sufficiently fulfilled. Low income level, scarcity of employment and business opportunities are main causes of poverty. Poverty is not handiest a curse for people however it brings dynamic impacts on developing economies. The most widely recognized way to deal with the meaning of poverty is an income or consumption focused method. As indicated by this method, the poor are distinguished as the individuals who order levels of salary that are insufficient to give a minimum way of living (Rahmato, 1992; Balkin, 1989).

SME programs and projects can alleviate poverty and improve the living conditions of underdeveloped communities. SME utilized the idle resources of a country efficiently and effectively. SME business offer goods & services and prepare capable workers and professionals. SME increases rural and urban growth of the country. Three arguments of SME are advocated for its effectiveness. First is that SMEs increase efficiency, innovation and productivity growth to reap social benefits. Secondly the SMEs are more productive than large firms and it assist to economic growth and development. Finally, as the SMEs are more labor intensive and it boosts employment more than large firms (Meghana et al., 2003).

Poverty is always a subject of interest for policymakers and social scientists. It restricts the access of people to basic requirements of life such as meals, safety and clothing and generates a sense of need amongst them. It contradicts their basic power to act and decided easily which they would enjoy if poor not. People who are poor are frequently shown to the manipulation by state and society. They need political power and they have less respond in the decision making process and had direct influence on their beings. They are further exposed to economic shocks i.e. variations in the economic growing and unusual increase in the inflation. In any economic disasters situation and casualties situations. They suffer too and spend greater values than the people who are rich while, in good spells of economic wealth, they generally get less as related to rich. Poverty is probably the most serious issue which gravely upsetting the Pakistan growth rate. The overall objectives of this research are to achieve the following:

1. To analyze the impact of SME growth on Poverty reduction in Pakistan.

2. T identify appropriate policies for decreasing obstacles of SME growth in Pakistan.

2.   Review of Literature

Many researchers (Daniels, 1999; Duncombe and Heeks, 2002; Thomas et al., 2004; Qureshi, 2005; Kotelnokov, 2007; Adera et al., 2014) presented various evidences on the importance of small and medium enterprises for economic growth in developing nations. These studies argued that SMEs have potential role for income generation, increased self-confidence, increased women participation and diversified the benefits of social benefits.

Kimambo (2005) carried out a study on the status of SME sector, poverty reduction and economic growth in Tanzania. The research highlighted achievements obtained through this nexus. SME showed a high potential for business and technology incubation as well as it reduce unemployment.

Large scale enterprise are capital intensive industries whereas SMEs are greater labor intensive industries so they can play a fantastic position to decrease poverty from the economy.

Amjad (2005) conducted a study in Pakistan for the poverty reduction and employment related issues. He recognized medium term development framework as the most effective tool for creation of productive and remunerative employment. The study analyzed the historical context of growth-employment nexus and labor market development. The study also reviewed the efforts undertaken to reduce deteriorating labor market situation.

Beck et al. (2005) studied the importance of SMEs growth and GDP relationship. The study was conducted for a sample of 45 countries, although the study could find enough evidence of the poverty alleviation. The absorption of rural labor surplus in these SMEs helped developing economies to reduce income equality. SMEs promote the growth of unskilled labor-intensive sectors and equal distribution of income. SME sector remained a major concern for the policy makers for attainment of growth objectives in developing nations (Audretsch, 2000).

Soraino and Dobon (2009) studied that to restore the economic strengths of an economy, small and medium enterprises (SMEs) are considered as backbone for domestic resource mobilization. SMEs are supposed to generate employ possibilities for fiscal growth, and warfare to allow the bad and poor people of Pakistan. Moreover SMEs are focusing in labor intensive techniques while manufacturing process so they focal point extra on rural areas the place greater labor is without difficulty accessible (Cyprian, 2007). On the different hand, in West Virginia, it has been found that indices of poverty and improvement of small scale business are strongly and negatively correlated (Gebremariam et al., 2004).

Ganbold (2008) studied that the SMEs bring new ways to initiate main traders of transitional items and raw material for small and large-scale industries. Similarly SMEs also playing vital role as mediators for the distribution of finished products of large scale enterprises and grant possibilities for the growth of domestic services and technological know-how attainment via adaptation which ultimately helps to decrease the poverty from the economy. Mani (2013) in his study concluded that poverty arrives when individuals have much less financial opportunities and SMEs assist to reap socioeconomic targets to alleviate poverty via developing employment possibilities at gross root level.

Mbuyisa and Leonard (2017) reviewed the relationship between poverty reduction, small and medium enterprises (SMEs) and information and communication technology (ICT). This study meticulously captured important research gaps and proposed the novel future directions. The study concluded that ICTs and SMEs played important role for socio-economic development and poverty reduction.

Abisuga et al. (2020) studied the SMEs sustainable development and its role in poverty reduction and employment generation in sub-Saharan Africa. The study found that despite the high failure rate of poverty reduction programs, some strived with excellent results and projected the signs of growth, innovation and sustainability. The study found that SMEs role is significant in job creation and sustainable employment in Africa. The study recommended that the SMEs should be included as a tool in policy formulation, business operation and sustainable growth programs.

Hayat et al. (2021) examined the impact of social overhead capital development on poverty reduction. The overhead capital used large material resources that can be used to alleviate the poverty level in SAARC countries. The study used the fixed effect model to estimate the impact of infrastructure development on poverty reduction. The findings of study showed that electricity access, telecommunication and transportation sectors have negative effect on poverty while fertility rate has positive relationship with poverty.

The review of previous literatures showed that various studied have already been conducted in different regions with wide dimensions. However, literature is lacking for these dimension in case of Pakistan. Therefore this study is an attempt to verify the previous findings and conclusion in context of Pakistan.

3.   Research Methodology

The study is exploratory in nature and have explored the causal relationship between SMEs growth and poverty reduction. The study employed a quantitative research approach and its methodology satisfy all of the study research objectives.

3.1 Theoretical Framework

In Pakistan the role of SMEs is very certain. The SME is expected to have the greatest effect economic growth, reducing the unemployment and thus reducing the poverty. It also assists in maintaining the balance of payments by exports.
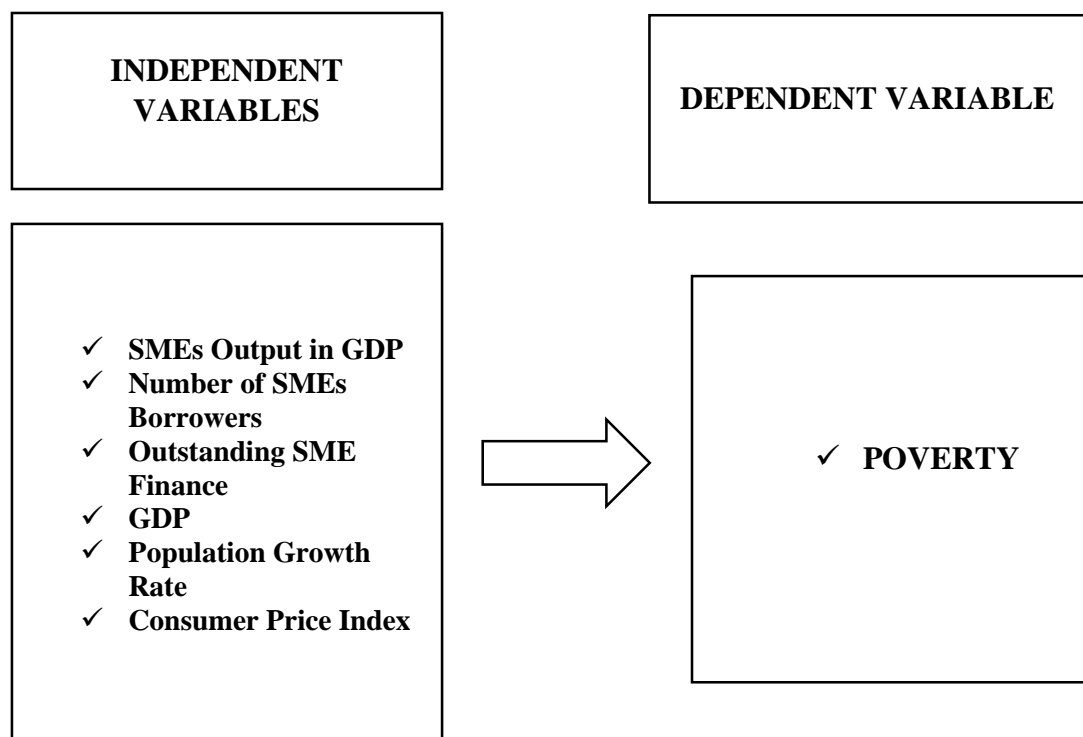

Figure 1

Methodological Famework

3.3 Hypothesis

The following hypothesis have been developed in line of economic theories:

H₁=   SME growth has positive impact on poverty reduction.

H₂=   Number of borrowers has positive influence on poverty reduction of Pakistan.

H₃=   Outstanding SME Finance has positive impact on poverty reduction.

H₄=   GDP has positive impact on poverty reduction.

H₅=   *Population growth has positive impact on poverty*

H₆=   *Inflation has positive impact on poverty*

3.4 Data Source

Target population of this research is SME sectors and Banks. This research used the information and data of all banks consolidated dealing with SMEs. This research used the online resources as tool for data collection from various reliable sources such as World Development Indicators (WDIs), Economic survey of Pakistan, Small and Medium Enterprise Development Authority (SMEDA), and State Bank of Pakistan etc. The period of data was from 1980 to 2020.

3.5 Data Analysis Tools

Data analysis concise the whole data that we collected. Interpretation of data is included which is gathered by the usage of analytical and logical reasoning to examine the relationships. (Research Guide: Data analysis and findings, 2020). After collection of data we started to analyse the data. For the analysis of data we use both descriptive and inferential tools. The software we use to the data analysis is E-views.

3.5.1 Descriptive analysis

Descriptive analysis is a method to explain the characteristics of the data. It is helpful and useful to assess and make sense of data. Outlier is the data point that is significantly smaller and bigger data point of other. Descriptive statistics has use to find the overall summary of data of the variables: SMEs output share as percentage of GDP, Number of SME borrowers, Outstanding SME finance, GDP, Population growth rate, and Consumer price index. Mean is most common statistics of the position which can easily understand and calculate. Median is very useful due to its robustness. Mode is rarely use in central tendency measure. Shape of the data is measured by two common statistics: Skewness and kurtosis. Skewness describes the data is distributed symmetrically around the mean. Zero value of skewness means perfect symmetry. Kurtosis measures the peakness of the shape. In depreciative analysis, the frequency distribution table and percentage had been used to summarize the data and central tendency measurements like mean, median, maximum, minimum etc., has also been checked.

3.5.2 Correlation Analysis

Correlation analysis is used to compute the strength and direction of linear relationship between two variables (NJ Gogtay, 2017). Correlation coefficient quantify how much one variable change due to change in other variable. The Spearman correlation, as it checks the interdependency of the variables reflected in the model. The correlation can be used to make prediction before the actual measurement of variables based on the data.

3.5.3 Econometric Analysis

In this study, the Poverty is taken function of SMEs output as percentage share of GDP, number of borrowers of SMEs, Outstanding SME Finance, GDP, population growth rate and consumer price index. The following multiple linear regression model had been used for analysis.

Economic functional form of model is specified as below:

Poverty Head Count Ratio= f (SMEOP, SMEBR, SMEOF, GDP, PGR, and CPI)   equation.1

The econometric model equation is:

$$\hat{Y}_t = \alpha + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t}\ \beta_4 X_{4t}\ \beta_5 X_{5t}\ \beta_6 X_{6t} \qquad \text{equation.2}$$

Where:

$\hat{Y}_t$= Poverty rate

X_{1t}= SMEs output as percentage share of GDP

X_{2t}= Number of SMEs borrowers

X_{3t}= Outstanding SME Finance

X_{4t}= Annual GDP

X_{5t}= Population growth rate

X_{6t}= Consumer price index

α = Constant

β = Regression Coefficient

μ = Error term

4.   Results and Discussion

Descriptive Analysis

The results of descriptive analysis are discussed as follow.

Table1

Results of Descriptive Statistics

	Poverty Rate	SMEs Output share in GDP	Number Of Borrowers	Outstanding SME Finance (Rs. Billion)	GDP	Population Growth Rate	CPI
Mean	30.43	25.96	128,770	481. 78	5.46	2.6	8.95
Median	23.52	21.45	126,560	436.25	4.74	2.4	7.85
Maximum	38.30	31.78	133,478	582.364	7.23	3.1	27.23
Minimum	17.32	20.76	98,456	2.356	1.90	2.1	2.90
Std. Dev.	8.135	6.654	32192.56	147.358	4.293	0.42	6.33
Skewness	1.693	1.843	1.732	1.254	0.52	0.56	1.76
Kurtosis	2.388	3.256	4.356	2.689	2.07	2.689	3.12
Jarque-Bera	7.763	11.63	32.69	176.496	2.365	1.496	31.25
Probability	0.054	0.021	0.00	0.021	0.01	0.021	0.00
Observations	40	40	40	40	40	40	40

Source: Authors' calculation estimates, 2021

The results in Table 1 showed that mean value of poverty rate is around 30.43 percent, SME output share in GDP is 25.96 percent, number of SME borrowers, GDP remained in range of 5.46, population growth rate 2.6 and consumer price index (CPI) is 8.95. The results showed that all variables showed positive skewness. SMEs output as percentage of GDP is more skewed. Poverty rate positive skewness value 1.693. A proportion of whether the information is heavy tailed or light tailed comparative with normal distribution is Kurtosis. In high kurtosis in the data set is an indicator that information has heavy tails. Poverty has kurtosis value of 2.388, SMEs Output share in GDP is 3.256,

Outstanding SME Finance (billion) is 2.689 and CPI is 3.12. Kurtosis values of poverty rate, SMEs output as percentage of GDP, number of SME borrowers, Outstanding SME finance, Gross domestic products, population growth rate and CPI are normal and within the range i.e. -3 to +3.

Correlation Analysis

To check the relationship or link among the variables, the "Spearman Correlation" test is used.

Table 2

Result of Correlation Analysis

	Poverty Rate	SMEs Output share in GDP	Number of Borrowers	Outstanding SME Finance (Rs. Billion)	GDP	Population Growth Rate	CPI
Poverty Rate	1	-0.77	-0.48	0.61	0.44	-0.29	-0.23
SMEs Output share in GDP	-0.77	1	0.35	0.26	0.76	0.16	0.31
Number Of Borrowers	-0.48	0.35	1	0.46	0.36	0.16	0.41
Outstanding SME Finance (Rs. Billion)	0.61	0.26	0.46	1	0.13	0.12	-026
GDP	0.44	0.76	0.36	0.13	1	-0.49	0.47
Population Growth Rate	-0.29	0.16	0.16	0.12	-0.49	1	0.80
CPI	-0.23	0.31	0.41	-0.26	0.47	0.80	1

Source: Author's calculations, 2021

The correlation outcomes are reported in Table 2 which showed that SMEs growth and poverty; SMEs output percentage share in GDP and population growth are negatively associated. SMEs output as percentage share of GDP is positively associated with outstanding SME finance, number of borrowers and outstanding SME finance are also positively correlated.

Results of Regression Analysis

The impact of SMEs growth on poverty reduction has been estimated. The results have been reported in Table 3. The value of R-squared and adjusted R-squared is 0.87 and 0.85 respectively. This explain that approximately 85 percent variation in model is explained by the proposed explanatory variables. The F-statistics is also significant at 1 percent level. The presence of autocorrelation in error term have been checked by H-statistics which was 1.06 implies that there is no autocorrelation problem. The serial correlation have been estimated through Durbin-Watson statistics. The outcome 2.596 showed that there was no serial correlation.

Table 3

Results of Regression Analysis

Variables	Coefficients	Std. Error	t-statistics	Prob.
C	0.759***	0.356	2.130	0.002
SMEOP	-0.295***	0.077	3.801	0.051
SMEBR	-0.451**	0.206	2.184	0.067
SMEOF	0.078**	0.033	2.361	0.034
GDP	-0.167***	0.042	3.976	0.000
PGR	0.091*	0.045	2.022	0.081
CPI	0.245***	0.070	3.451	0.000
R-squared	0.87	Mean dependent var		30.43
Adjusted R-squared	0.85	S.D. dependent var		8.135
F-statistic	118.38	Akaike info criterion		-3.0094
Prob(F-statistic)	0	Schwarz criterion		-2.8278
h-statistic	1.06	Durbin-Watson stat		2.59659

Note: ***, **, *, significant at 1%, 5% and 10% level of significance

First hypothesis was, there is a positive relationship between the SMEs output share in GDP and poverty rate. But the results of model in Table 3 showed that there is a negative relation between SMEs output share in GDP and poverty rate i.e. (-0.295) because growth of SMEs decreases the poverty. The growth of SMEs can be powerful force to reduce poverty. Increase in growth of SMEs increases the per capita income of the country increases, so the poverty rate falls.

It was also supposed in hypothesis that there will be a positive association in between number of borrowers and poverty. The coefficient value -0.451 was significant at 5 percent level (Table 3) and positive relationship may be justified as, when more and more individuals are engaged in SME enterprises, it promotes economic activities, more output and more employment opportunities. This phenomenon helps to reduce the poverty rate.

The results of model in Table 3 showed that there is a positive link between outstanding SME finance and poverty rate i.e. (0.078). The logic behind may be that as more and more SME loan is outstanding, that capital have been used in the non-productive activities for longer period of time. This inappropriate utilization of funds may reduce SMEs Output share in GDP and hence the poverty rise in country. People do not have knowledge and expertise for the better utilization of funds.

The analysis results showed that there is a positive relationship between GDP and poverty rate i.e. (-0.167). In developing nations, financing more SME business activities will decrease unemployment and increase the GDP. Higher the amount of finance is obtained by the SMEs means that the more capital will be invested in the businesses and the expansion of business directly affects the poverty. When the number of businesses or the size of businesses will be higher, more people will get employed and thus reduce the poverty.

The results of model also proved the relationship between population growth rate and poverty i.e. (0.091), however this result was significant at 10 percent level. The relationship between inflation factor i.e. CPI and poverty was positively associated and it was significant at 1 percent significance

level, Table 3. As inflation increases, it reduce the disposable income of individual and thus rise poverty level.

5.   Conclusions and Recommendations

This study estimated the impact of SMEs growth on poverty reduction. Theoretical framework was developed under consideration of economic theories. The study also reviewed the empirical results of previous studies in the field of small scale enterprises and poverty. Multiple regression model was employed and the hypothesis were tested for validation. The variables used to measure the SMEs growth were as percentage share of SME output in GDP, number of borrowers and outstanding SME finance. The results showed that SME growth have significant impact on poverty reduction. Increase in GDP and SME output level and poverty level have been found to be negatively related. This relationship was justifiable because as more and small and medium enterprises play an important role in employment generation, initiate local production sector, contribute in economic growth and poverty alleviation of Pakistan.

The results of this study imply that a strong base of SME enhance economic growth and reduce poverty level, therefore following policy recommendation may be provided:

1. Formal financial markets with simplified lending procedures should be established to overcome the financial constraints faced by small scale enterprises.

2. More educated and technically skilled labor force would accelerate the growth of SMEs and poverty reduction process.

3. In developing economies, SMEs face difficulty to survive and compete in global market, therefore international aid agencies should provide technical assistance and grants to SMEs for their stability and to accelerate economic growth and poverty reduction.

4. As SMEs are more labor intensive, government should subsidized SMEs to boost employment, economic growth and reduce poverty.

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