

ROLE OF SMALL AND MEDIUM ENTERPRISES (SME'S) IN POVERTY ALLEVIATION IN SAARC COUNTRIES (AN ECONOMETRIC APPROACH)

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ABSTRACT

Small and Medium Enterprises plays a pivotal role in the development of both developed and developing countries¹. SME sector provides many opportunities in generation of economic activities in the transitional economies. Due to its economic significance, all the transitional economies are in their best strive to promote a strong SME sector. It is a general presumption that SME development is indispensable for social and economic development which may help in eradication of poverty. It is admitted fact that without economic and social development, no community can maintain its worth in terms of economic strength at international level. Following Beck, Kunt and Levine (2003), four measures of poverty has taken in this research.

This paper is an attempt to explore the role of SME's in eradication of poverty in SAARC countries. To achieve this objective, certain economic parameters like employment in industry, GDP growth, GDP Per Capita, manufacturing growth, value of exports in GDP, value of imports in GDP, share of manufacturing in GDP, Share of trade balance in GDP, Human Development Index (HDI), public expenditure on education as a percentage of GDP, public expenditure on health as a percentage of GDP, investment and social standard are selected to see the impact. An econometric model has been developed for the analysis in SAARC countries. The data covers past fifteen years (1990 to 2005) of SAARC Countries. The proposed results are that the promotion of SME's has positive impact on exports, investment, economic growth and employment generation. An increase in employment level in the economy would help to eradicate the poverty in SAARC countries.

Keywords: *SME, Poverty, Economic growth, Exports, SAARC*

INTRODUCTION

SME's are considered as driving force for economic development especially in the developing countries. SAARC countries, with a lot of potentials and capabilities are still deprived of essentials of life. Almost all human development indicators: health and education, access to drinking water, sanitation and other infrastructure services such as rural feeder roads, electricity are weak. These services are failing rural poor. Most of the indicators particularly education and health are still in poor conditions. According to SAARC regional poverty profile 2005-06, a certain proportion of the people are still living below poverty line in SAARC countries.

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Main objective of the formulation of SAARC is to eradicate the hunger poverty in this region and to make joint efforts for cooperation in social and economic sectors but according to the statistics², due to certain disparities in economic cooperation, may be political factors; the fruits are not integrated at threshold level for the nations of these countries.

Until 2008, 15 SAARC summits have been conducted and in every summit, the slogans of cooperation have been repeated with new dimensions. In 1990's, two main developments have been seen; the formation of WTO and Association of Southeast Asian Nations (ASEAN). But, in spite of all these efforts, the current low volume of trade in SAARC region is a main barrier of economic growth. SAARC trade remained dismally low at 4.0% as compared to the regional trade of APEC (73%), EU (61%), NAFTA (57%), ASEAN (23%).

According to Madan (1986), there are a lot of disparities among the SAARC countries, in the endowments of natural resources and level of socio-economic development, which, indicate a significant similarities in their economic structure and possible developments. Actually, this association provides a platform for the people of South Asia to strive their best to achieve the economic goals together with the spirit of friendship. Its main objective is to promote the welfare of the general public of this region and to improve their quality of life through accelerated economic growth, social progress and cultural development. The decade 2006 to 2015 is also declared as SAARC Decade for Poverty Alleviation.

In this paper, two main issues of the summits have been addressed; promotion of Small and Medium Enterprise and the impact of SME on poverty eradication. There are certain ways to link SME with Poverty eradication. According to a desktop study conducted by cfed (2002) SMEs are contributing in a substantial magnitude to national economies through employment generation and contribution to GDP. The role of SMEs, in employment generation, increases from low income to high income economies. However, studies report that SMEs account for approximately 65%-70% of GDP regardless of the development stage of the economy.

OBJECTIVE OF THE STUDY

There are two main objectives of the research which are as follows:

- (a) To analyze the role of SME's on economic growth of the SAARC countries
- (b) To explore the effect of strong SME's on poverty alleviation in SAARC

The above objectives are interlinked with each other. As the Small and Medium Enterprises are growing, it provides the raw material for the large scale industries which amplifies the production in the country. As production increases, it provides the options for the customers and a large number of varieties of products would be available in the market which creates a competitive environment in the country. In brief, according to national income account equation³ the consumption at domestic level increases which has direct relation with overall GDP (Gross Domestic Product) of the country.

ORGANIZATION OF THE RESEARCH

In section 1, introduction, significance and objectives of the research have been mentioned. In section 2, review of the literature has been presented. Section 3 consists of the construction

of data and methodology. In section 4, empirical analysis of the data is presented. In the last section, conclusion has been formulated in the light of empirical results. At the end, references have been mentioned.

II. LITERATURE REVIEW

2.1. SME's in Global Perspective

Generally, the Small & Medium Enterprises are based on smaller number of employees and depends on low volume of sales and other business activities. It does not portray any standardized definition but varies from culture to culture and country to country. Many researchers like Beck, Asli, Kunt, and Levine (2002) use criteria that are easy to measure the SME's based on employees, sales volume, physical assets, savings and profitability.

It is a general phenomena that Small and medium enterprises are an integral part of a nation's economic and social structure. In a global perspective, small enterprises have acquired a significant structure in the economic development of the country. Globalization has put the small enterprises in the limelight. Though, the definition of SME's varies from country to country based on its growth and development but normally concept is almost same. Some small companies can turn into big giant with in no time where the others remain small because of their volume. In the following paragraphs, the experiences of the different countries regarding SME's have been observed.

For instance, in Turkey, SMEs are functioning under the market economy mechanism. Turkey embarked a liberal international trade system based on free market competition and elimination of international trade barriers. Free floating exchange rate is prevailing to enhance domestic savings and flexible foreign investment policy. In Turkey, SME's are considered as an economic instrument of industrial growth. It is realized that by supporting small and medium scale industry where capital to manpower ratios are favorable to the economy, it would be in the interest of growth to support SME's and create more employment and utilize the resources more efficiently. To support the SME's, financially and technically in Turkey, an organization has been created⁴. There are drastic improvements in the establishment of Technology Parks and Business Incubators.

Chu (1997), has explored the reasons for foster growth of Taiwan's small industrial sector. According to him, there are many reasons for this rapid growth like the adoption of export-promotion policies, reliance on market mechanisms, and an active role of the state. One of the main contributors to this impressive growth is the bicycle industry of Taiwan. The significance of small and medium-sized enterprises (SMEs) is very vital in this regard. Many scholars have attributed Taiwan's success to its numerous SMEs because of their flexibility and competitiveness. This claim is used to support the argument that favors a free market.

There are certain strategies which have been adopted by the Taiwan's government to sustain this progress. The government is making less interference in those sectors of the economy where the SME's are dominant. For instance, Due to high demand of bicycle in USA, the industry of Taiwan has boosted drastically which is a cause to boost the SME Industry in Taiwan.

Mukerjee (1985) has highlighted the importance of Ancillary industries, small and medium enterprises. According to him, in the current phase of industrial life, small and medium enterprises (SMEs) play an important role in the recovery, restructuring and improvement of an economy. SMEs with large firms are usually regarded as activities with high investment potential. The author has covered the period of 1972-1985 for the performance of India's subsidiary industries and SME's. In his article, he has highlighted major constraints to the growth of ancillary industries in India like technological, financial and raw material problems. He has compared the performance of different countries and emphasized the globalization of SME's in the world. The crux of his article is that if the SME's are being established along with large scale industries that will amplify the employment generation and total factor productivity of the country.

Muranda (2003) has developed a relationship between firm characteristics and export constraints in SME exporters. The author has analyzed 124 manufacturing companies in Zimbabwe, involved in exporting all over the world, which was undertaken during the last quarter of 1999 and first quarter of 2000. The study concludes that Zimbabwe's exporters are, essentially, small to medium and that size, experience and risk aversion are the characteristics that strongly contribute to perceived constraints. It observes five constructs underpinning the current constraints to growth and competitiveness. These are inadequate experiential knowledge, inadequate technical skills, uncompetitive pricing, operational capacity and an unsupportive business environment.

The author has drawn a number of conclusions from the study. First is the observation that Zimbabwe's manufacturing exporters are essentially small to medium exporters. Their perception of export constraints is highly influenced by the size factor among other variables. Although 16.2% of the exporters are classified in this study as large, it is the export behavior of small to medium exporters in the sample that appears to define behavioral trends. Because the economy is currently depressed, response of the exporters to a non-performing domestic economy is observed in constricted growth and lack of product and price competitiveness.

Secondly, due to low experience, perception on constraints is also invariably influenced by the intervening variable on lack of export knowledge. Lack of experiential knowledge clusters more variable items than any other constructs observed in this study. This implies experiential knowledge should be analyzed as a multivariate concept. It is inadequate in terms of research to create a single variable labeled experiential knowledge to be measured on a single dimension. A compound measure appears more appropriate.

Thirdly, there is a high-risk aversion observed among Zimbabwe's manufacturing exporters. The tendency has constrained pursuit of exports leading to targeting of less lucrative and unsustainable developing markets. The same risk aversion tendency does not appear to be supported with adequate research and assessment of target markets thus leaving the exporters still exposed despite the risk consciousness. The issue of risk aversion is directly related to size and low export experience. Export prices charged by Zimbabwe's exporters are more exogenously than endogenously determined.

Beck and Kunt (1994) has pointed out a qualitative aspect of SME Sector through a note published by the World Bank. According to them, a new study finds no support to this concept

that SMEs promote higher growth and lower poverty but it does provide some support for the view that the quality of the business environment facing all firms, large and small, influences economic growth. They emphasized that donor agencies are mainly targeting to the small and medium enterprises. For instance, the World Bank has approved more than \$US 10 Billion for SME Development Programs in the developing economies during the last five years⁵.

According to Beck (2004), those people who advocate the pro-SME policy make three core arguments for its effectiveness. First, they argue that SMEs enhance competition, entrepreneurship and thus have economy wide benefits in efficiency, innovation, and productivity growth. So direct government support of SMEs can help countries reap social benefits. Second, proponents often claim that SMEs are generally more productive than large firms. Finally, some argue that the growth of SMEs boosts employment more than the growth of large firms because SMEs are more labor intensive. The study carries out an econometric analysis using two newly compiled indicators of the SME sector based on its share of manufacturing employment.

Lefebvre and Elisabeth (2001), has made a remarkable contribution in the field of SME's sector. They have analyzed the innovative capabilities of SME's as potential determinants of Exports performance and behavior. They have made an analysis of empirical data from a longitudinal survey of 3,032 manufacturing SMEs over a three-year period which indicates that these firms became increasingly active in foreign markets.

The authors have used the Tobit and Probit models for their analysis. The results show that innovative capabilities are strong determinants of export performance and behavior but their relative importance vary according to the knowledge intensity of the industrial sectors in which they are actively in operations. In high knowledge industries, all technological capabilities are significantly and positively related to export performance and behavior while commercial capabilities are more salient in low-knowledge industries. However, in low, medium or high-knowledge industries, Research & Development and knowledge intensity remain among the five strongest determinants. According to the paper, this suggests that international competition is indeed knowledge-based.

Beck, Kunt, and Levine (2002) has attempted to make a cross country analysis of small and medium enterprises, economic growth and its impact on poverty alleviation. By using a sample of 62 countries, they found a strong association between the importance of SMEs and GDP per capita growth. Commonly, a large SME sector is a characteristic of successful economies; the data do not confidently support the conclusions that SMEs exert a causal impact on growth. The study finds no evidence that SMEs alleviate poverty or decrease income inequality. Finally, the study finds qualified evidence that the overall business environment facing both large and small firms– as measured by the ease of firm entry and exit, sound property rights and contract enforcement influences economic growth.

2.2. SME and Poverty Scenario In Saarc Region

In eighth SAARC Summit in New Delhi 1995, it has been decided to establish a Three-tier mechanism to deal with poverty matters. The first-tier comprised the secretaries to the governments concerned with poverty eradication and social development in SAARC countries.

The second-tier comprised finance secretaries and the third-tier comprised finance ministers. By January 1996, the first round of meetings under the three-tier mechanism was completed.

The status of Small and Medium Enterprises (SME's) and poverty eradication efforts in SAARC region with special focus on Pakistan, India and Bangladesh have been discussed as below.

2.2.1. SME and Poverty Situation in Pakistan

Pakistan is an agrarian country with 162.3 million population. Total GDP (Gross Domestic Product) of Pakistan has amounted to US \$ 155 billion during 2008-09 with 2.0% growth rate. Current contribution of manufacturing sector in GDP has decreased to 18.2% from 19.2% as compare to last fiscal year, due to current recession in the globe. Large Scale Manufacturing share to GDP has also decreased from 13.4% to 12.1% during 2008-2009.⁶ Manufacturing sector consists of two main sectors; large scale manufacturing and small scale manufacturing. The contribution of SME in total manufacturing is 4.7% during 2008-09.

The contribution of SMEs to Pakistan's economy, employment and poverty reduction can be seen from the fact that 90% of all private sector manufacturing units employ less than 99 workers and the SMEs employ some 78% of non-agricultural labor force. They contribute about 30% to GDP, Rs.140 billion to exports, and generate 25% of exported manufacture.

According to SMEDA (Small and Medium Enterprises Development Authority) estimates, there are approximately 3.2 million business enterprises in Pakistan in 2006. Enterprises employing up to 99 persons constitute over 90% of all private enterprises in the industrial sector and employ nearly 78% of the non-agriculture labor force. They contribute over 30% to the GDP and account 25% of exports of manufactured goods besides sharing 35% in manufacturing value added. Due to its significance, promotion of SME's has become a focal point of Government's policies for economic revival, poverty alleviation and employment generation.

A fast growing SME's requires an innovative financing coupled with technical assistance to keep pace at national and international level. SME's are considered as the main hub of economic prosperity in any country. SME's are considered as an engine for economic growth through which a country can mobilize its resources and encourages taking the initiatives at gross root level. Through domestic resource mobilization, the government can reduce its dependency on donor agencies. To promote the SME's in Pakistan, government of Pakistan has formulated SME Policy Task Force in 2004 and they recommend that private sector led economic growth strategy should be primarily based on SME development.

In Pakistan, a vast majority of population belongs to country areas and they are engaged in small enterprises like fishing, primary education, fruit production, crops cultivation, garments, both knitting and hand made embroideries, cotton production, sugar cane, dates production, ginning, wood and many other areas which are the basic startups for many people. The current research explains the potentials of some areas and provides its link with overall growth performance and economic development of the country.

As well as poverty situation in Pakistan is concerned, the poverty estimates are highly sensitive due to a variety of factors. According to the statistics of Pakistan Social and Living

Standard Measurement Survey (PSLM), presented in table 1, the headcount ratio in urban areas of the country is low as compare to rural areas. The poverty gap is also following diminishing trend in both rural and urban areas. It means that middle class of the society is emerging with upper class. The following table 1 also depicts the same story of poverty situation in Pakistan.

Table 1
Trends in Poverty Indicators

Year	Head Count			Poverty Gap			Severity of Poverty		
	Urban	Rural	Pakistan	Urban	Rural	Pakistan	Urban	Rural	Pakistan
1998-99	20.9	34.7	30.6	4.3	7.6	6.4	1.3	2.4	2.0
2000-01	22.7	39.3	34.5	4.6	8.0	7.0	1.4	2.4	2.1
2004-05	14.9	28.1	23.9	2.9	5.6	4.8	0.8	1.8	1.5
2005-06	13.1	27.0	22.3	2.1	5.0	4.0	0.5	1.4	1.1

Source: PSLM

2.2.2. *SME and Poverty Situation In Bangladesh*

SME's are playing a significant role in Bangladesh economy. It is considered as main contributor to the GDP, manufacturing growth and job creation in Bangladesh. According to Asian Development Bank Review 2001, there are around 27,000 medium-sized enterprises and around 150,000 small-scale enterprises in the country. Comprising 80 percent of manufacturing establishments, SMEs account for 80 percent of the labor force and 50 percent of the output of the sector in 2001. In past decade (1990 to 2000), the SME's have contributed significantly in promotion of labor intensive growth and in reduction of poverty.

According to Economic and Social Survey of Asia & Pacific 2008, In Bangladesh, despite the uncertain political climate, GDP grew by 6.6% in 2007. The 2007 expansion was propelled by higher growth in the industrial and services sectors. Industrial growth was broadly led by continued domestic demand and buoyant external demand. Agriculture grew more slowly. The economy suffered losses from the severe floods of July-September 2007 which caused considerable human distress, damage to infrastructure and immediate economic dislocation.

A large proportion of population in Bangladesh is engaged with agriculture sector and government is striving its best to revitalize the agriculture sector to connect the poor to markets by improving rural infrastructure, improving availability and management of water, improving agricultural technology, increasing the capacity to adapt technologies, and speeding diversification and commercialization. It also requires improving the distribution of land and the access to agricultural credit and extension. The government should formulate macroeconomic policy friendlier to agriculture, enabling the poor to reduce the poverty by themselves.

2.2.3. *SME and Poverty in India*

The Micro and Small Enterprises (MSEs) constitute an important segment of the Indian economy, contributing around 39 per cent of the country's manufacturing output and 34 per cent of its exports in 2004-05. It provides employment to around 29.5 million people in the rural and urban areas of the country.

According to Economic and Social Survey of Asia & Pacific 2008, the economy of India appears to have moved on to a new phase of high growth, with an average growth rate of 8.8% over the last five years as investment in the economy has risen sharply. India's 9.6% GDP growth rate for 2006 reflected double-digit growth in the industrial and services sectors. India's continued high growth in 2007, estimated at 8.7%, Strong growth in the industrial and services sectors supported the high overall rate, more than compensating for an agricultural slowdown.

Like Bangladesh, in India, rural poor accounts for around 70% of the poor in the Asia-Pacific region and their main source of earning are contributed by the agriculture. There is a lot of income disparity among poor and rich and the trend is, the gap is widening. Agriculture appears neglected, even though it till provides jobs for 60% of the working population and generates about a quarter of the region's GDP. Agricultural labor productivity has a significant impact on poverty reduction in India. ESCAP estimates show that a 1% increase in agricultural productivity would lead to a 0.37% drop in poverty in the Asia-Pacific region.

III. DATA AND METHODOLOGY

3.1. Introduction

To see the impact of small and medium enterprises on the eradication of Poverty in SAARC Countries, an econometric model has been developed for each member country. The period of analysis consists of 1990 to 2005. Following Beck, Kunt and Levine (2004), the effect of SME on poverty has been seen through growth rate of Per capita GDP of the respective countries. As there is a significant improvement in SME in the country, it has positive effect on GDP per capita. Due to it, the share of poorest 20% in income distribution will increase. In other words, the poverty in the respective countries will decrease.

3.2. Choice of Variable

Due to lack of availability of the data, especially in developing countries and most particularly on small and medium enterprises, has made this analysis in fix. By following Beck, Kunt and Levine (2004), share of SME in GDP, SME or business environment parameters like public expenditure on health as percentage of GDP, inflation, value of exports as percentage of GDP, value of imports as percentage of GDP, public expenditure on education as percentage of GDP, trade deficit as percentage of GDP, openness Index have been selected for evaluating the impact of SME development on eradication of poverty in SAARC Countries. To see the impact of SME on poverty in SAARC countries, the people having lowest 20% share in income distribution are considered as poor. If their share is increasing due to SME development, it means that poverty is reducing.

The data have been collected from different international sources. Macroeconomic parameters like GDP Growth Rate per capita, GDP Growth rate, GDP Deflator, Inflation rate, value of exports as percentage of GDP, value of imports as percentage of GDP and value of trade balance a percentage of GDP have been collected from Asian Development Outlook 2008 and Key Indicators 2008. There are certain missing values in the data for 1995 and 1997 which have been generated through indirect method. The data gaps were filled up by estimating intermediate values for a given series. (Maddala, 1977, pp. 201–207)

The information about the SME share in manufacturing and GDP has been collected from the economic survey of respective countries. The share was available only for Pakistan and Bangladesh. The data on Poverty estimates like income distribution among poorest 20%, income distribution among richest 20%, Public expenditure on health as percentage of GDP, Public Expenditure on education as percentage of GDP and Human Development Index (HDI) have been gathered from Regional Poverty Profile 2006, SAARC Secretariat, Nepal, World Development Reports, World Bank Publication and Human Development Reports 1990 to 2008.

3.3. Methodology

To analyze the impact of SME on eradication of poverty, an econometric model has been developed. To estimate the regression parameters, a software; E. Views has been used. Simple OLS (Ordinary Least Square) Method has been used to see the relationships. The detail of formulation of regression equations has been explained as below.

There are five regression equations, in which the relationship between dependent and independent variables have been analyzed. Regression equation (3.1) is explaining the effect of SME Growth on GDP Per capita in SAARC Countries. The equations 3.2 and 3.3 have been formulated for the said relationship for Pakistan and Bangladesh respectively. Equation 3.4 and 3.5 highlights the effect of GDP per capita on poorest 20% income holder and on richest 20% income holder in SAARC Countries.

REGRESSION ANALYSIS FOR SAARC COUNTRIES

To explore the relationship between SME and its effect on poverty eradication the following econometric model has been used for each country.

$$GRPC = \alpha + \beta_1 SMEG + \beta_2 HDI + \beta_3 SXMG + \beta_4 INF + \varepsilon \quad (3.1)$$

Where

GRPC is Growth rate in Per capita GDP

SMEG is Share of SME in GDP

HDI is Human Development Index

SXMG shows share of trade Balance as percentage of GDP

INF represents Inflation rate

With an increase in share of SME as a percentage of GDP, GRPC must increase which shows that people's purchasing power has been increased and it is a strong indicator for the reduction of poverty. To see the impact of social standard of the inhabitants of the respective countries, Human Development Index has been included in the analysis. HDI consists of different economic and social parameters which depicts the true picture of current status of the inhabitants. The significance of trade balance is very vital in an economy.

Earlier studies like Constantin (1973), Paul (1995) Balassa (1983) and Karunatne (1994) have emphasized on the promotion of positive trade balance and its significant role in economic

growth of the country. As there is an improvement in GDP Growth, it would have positive impact on Per capita GDP drastically if population growth rate is less than growth rate in GDP. The effect of inflation has also been captured on growth rate in GDP per capita in the regression equations.

REGRESSION ANALYSIS FOR PAKISTAN

By using above regression equation (3.1), with the addition of OPI (Openness Index), the effect of SME on GDP Growth per capita has been analyzed.

$$GRPC = \alpha + \beta_1 SMEG + \beta_2 HDI + \beta_3 SXMG + \beta_4 INF + \beta_5 OPI + \varepsilon \quad (3.2)$$

The openness Index can be calculated by using the following formula

Openness Index = $(X + M)/GDP * 100$ where X = exports, M = Imports, GDP (Gross Domestic Product). To check the effect of openness on GDP Per capita, due to an increase in SME, it has been included in the regression equation.

REGRESSION ANALYSIS FOR BANGLADESH

The effect of SME on GDP Growth per capita has been analyzed;

$$GRPC = \alpha + \beta_1 SMEG + \beta_2 HDI + \beta_3 SXMG + \beta_4 INF + \varepsilon \quad (3.3)$$

REGRESSION ANALYSIS FOR SAARC (EFFECT OF GDP PER CAPITA ON POOREST 20% INCOME HOLDER)

In the light of regression model, the effects of GDP per capita on poorest 20% income holder for SAARC have been analyzed.

$$YP = \alpha + \beta_1 GRPC + \beta_2 HDI + \beta_3 SXMG + \beta_4 INF + \beta_5 SMEG + \varepsilon \quad (3.4)$$

Where YP shows income distribution among poorest 20% in SAARC

There is direct relationship between GDP per capita growth rate and income share of poorest 20%. As there is an increase in GDP Per capita Growth rate, the income share of poorest 20% should amplify. Similarly, with an improvement in HDI, Income share of poorest 20% people should increase which is also an indication of reducing poverty.

REGRESSION ANALYSIS FOR SAARC (EFFECT OF GDP PER CAPITA ON RICHEST 20% INCOME HOLDER)

In the light of regression model, the effect of GDP per capita on richest 20% income holder for SAARC has been analyzed.

$$YR = \alpha + \beta_1 GRPC + \beta_2 HDI + \beta_3 SXMG + \beta_4 IMF + \beta_5 OPI + \varepsilon \quad (3.5)$$

Where YR depicts Income distribution among richest 20% in SAARC Countries

It is expected that as there is an increase in GDP per capita, the income share of the richest (20%) people would come down because the income share would be distributed among the poorest. Similarly, if there is growth in SME it would have negative effect on the share of

richest 20% due to the decrease in income difference between middle class and elite class of society. The empirical results are mentioned in the next section.

IV. EMPIRICAL RESULTS AND ANALYSIS

The results for the analysis are discussed as follows.

Table 2
Results of Regression Analysis for SAARC Countries (Effect of SME on Growth of GDP Per capita)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>
Dependent Variable GRPC			
C	-8.308944	4.875705	-1.704152
SXMG	-0.256871	0.240910	-1.066255
SMEG	0.639424	0.302365	2.114743
INF	-0.016509	0.089624	-0.184202
HDI	12.66291	6.455569	1.961549
R-squared	0.781312	Adjusted R-squared	0.681530
Durbin-Watson stat	1.718240	F-statistic	2.348544

According to regression equation (3.1) there are certain variables which have significant positive impact on growth rate per capita. For instance if there is improvement in SME in SAARC countries, growth rate in GDP per capita would take positive effect of this increase. As it has been seen in the regression results that value of t-stat for SMEG is 2.12 which indicates merely significance. It is general perception that inflation has negative effect on the GDP per capita because due to increase in inflation, the purchasing power of the people are decreasing, they are demanding less and over all GDP due to decrease in consumption would fall. Keeping in view the national income identity equation, consumption has direct relation with GDP. As there is decrease in consumption, GDP would also decrease and GDP Per capita would also diminishes.

HDI is also contributing positive impact on GDP Per capita. In other words as there is improvement in HDI, it has significant impact in eradicating the poverty. The value of HDI is statically significant.

Table 3
Results of Regression Analysis for Pakistan (Effect of SME on Growth of GDP Per capita)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>
Dependent Variable GRPC			
C	-2.405671	3.518518	-0.683717
GDPG	0.714189	2.136487	5.232672
HDI	4.686292	6.472245	1.794060
INF	-0.036619	0.061393	-0.596463
OPI	-0.066516	0.077026	-0.863557
SMEG	0.237973	0.237312	2.002783
R-squared	0.876565		
Adjusted R-squared	0.595706		
F-statistic	8.367230		
Durbin-Watson stat	1.531253		

According to regression equation (3.2), there are certain variables, which have significant positive impact on growth rate per capita. For instance, if there were improvement in GDP of the country, growth rate in GDP Per capita would take positive effect of this increase. As it has been seen in the regression results that value of t-stat for GDPG is 5.23 which indicates high significance level. It means that GDPG has a significant impact on GDP per capita. The macro economic theory⁷ also supports the same relationship between GDP Growth and GDP Per capita with a condition that growth in GDP should be greater than growth in population. The effect of SME growth on GDP Per capita is positive and merely significant. In other words, the effect of SME Growth is positive but not highly significant.

The role of HDI is also significant in improving GDP Per capita in the country. The T. Stat value (1.79) shows a significant effect on GDP per Capita. With the passage of time, if there is an improvement in HDI then it represents the minimization of poverty in the country. An increase in inflation has negative impact on the GDP per capita R Square value shows a goodness of fit and the estimate shows that the difference between the RSS (residual Sum of Square) and ESS (Explained Sum of Square) is very small. Over all significance can be checked through F-Distribution. The value of F-stat is also very significant.

Table 4
Results of Regression Analysis for Bangladesh (Effect of SME on Growth of GDP Per capita)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>
Dependent Variable GRPC			
C	-5.952813	5.063425	-1.175650
HDI	12.93617	6.330359	2.043512
INF	0.022083	0.092022	-0.239976
SMEG	0.132685	0.466229	2.284592
SXMG	-0.151403	0.247724	-0.611176
R-squared	0.738338	Adjusted R-squared	0.694498
Durbin-Watson stat	1.759829	F-statistic	2.352190

The results of the regression equation 3.3 show that there are two independent variables, which are statistically significant; HDI and SMEG. In other words, if there is an increase in HDI or there is an improvement in SME in the country then Growth in GDP Per Capita would amplify significantly. The estimates of Inflation and share of trade balance are statistically giving negative values, which mean that if there is an increase in inflation, it has negative impact on Growth in GDP Per capita.

Table 5
Results of Regression for SAARC (Effect of GDP Per capita on Poorest 20% Income Holder)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>
Dependent Variable: YP			
C	0.495657	2.816207	0.176002
GRPC	0.136523	0.111357	2.225992
HDI	6.284626	3.793557	1.956658
INF	-0.090973	0.048928	-1.859324
SMEG	0.589445	0.179663	3.280837
SXMG	-0.167534	0.134502	-1.245593
R-squared	0.769	Adjusted R-squared	0.59
Durbin-Watson stat	1.78	F-statistic	9.30

In equation (3.4), YP shows the income share of poorest 20% and we want to analyze the impact of increase in GDP Per capita, HDI and Share of SME in GDP on Income distribution among poorest 20% in SAARC Countries. According to the estimates, GDP Per Capita, SMEG and HDI are statistically significant and have positive impact on income share of poorest 20%. In other words, the income levels of the poorest 20% quintile are increasing due to SME's improvements in the SAARC region.

Table 6
Results of Regression for SAARC (Effect of GDP Per capita on Richest 20% Income Holder)

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>
Dependent Variable YR			
C	60.90767	6.082928	10.01289
SMEG	-1.827628	0.388067	-4.709564
HDI	-6.418460	8.193976	-0.783314
GRPC	-0.359358	0.240528	-1.494037
INF	0.139135	0.105683	1.831653
SXMG	0.242066	0.290520	0.833218
R-squared	0.762867	Adjusted R-squared	0.711316
Durbin-Watson stat	0.699625	F-statistic	14.79837

In equation (3.5) YR indicates the income share of richest 20% in SAARC Countries. In which, the estimates show that there is inverse relationship between SMEG, GRPC and HDI with income share of the richest 20%. In other words, as there is an improvement in small and medium enterprises, the share of the richest 20% would come down because income will be shared among the middle class people. The T- Stat for SMEG is highly insignificant which indicates that due to drastic improvement in small and medium sector, we can eradicate poverty at grassroots level.

CONCLUSION

The paper is an attempt to explore the effect of Small and Medium Enterprises (SME) on poverty eradication in SAARC Countries. It is a general presumption that SME growth, which is considered as a backbone of any transitional economy, has significant effect on the economic growth of the country. Several evidences⁸ in the world also support this idea. Almost all South Asian countries are rich in natural resources and human resources. Due to lack of human resource management and in basic infrastructure, these countries are suffering from several economic and social problems like unemployment, low growth in national Income, low per capita income, hyperinflation, poor health facilities, poor education standard, poverty and weak institutional setup. If the strategies have been developed to make joint efforts against these problems, we can minimize the intensity and magnitude of these problems.

Main objective of the study is to see the impact of SME growth on poverty eradication. To achieve this objective, econometric models have been developed for SAARC countries, specifically for Pakistan and Bangladesh. Certain economic parameters like GDP per capita

growth, GDP Growth, share of SME in GDP, SME or business environment parameters like public expenditure on health as percentage of GDP, inflation, value of exports as percentage of GDP, value of imports as percentage of GDP, trade deficit as percentage of GDP, openness Index have been selected for evaluating the impact of SME development on eradication of poverty in SAARC Countries.

Certain social parameters like HDI (Human Development Index), Income share of poorest 20% and Income share of richest 20%, public expenditure on education as percentage of GDP are also included to check the effect of SME growth on Poverty. A Software “E. Views” has been used to do this analysis. The analysis is performed using annual data over the period 1990 to 2005. The main conclusions of the study are presented below.

One of the significant results is in favor of SME’s involvement in eradication of poverty. The estimates show that there is positive impact of SME growth on GDP Per capita. Following Beck, Kunt and Levine (2004), growth rate in GDP Per capita is a measure to indicate the poverty in the country. With an improvement in the SME Growth, there should be an increase in GDP Per Capita which indicates that poverty level is decreasing in the country. The current study also supports this concept.

There are certain other factors, which are causing to effect the growth in GDP Per capita like inflation, openness and share of trade balance in GDP. These variables have negative impact on GDP Per capita which means that as inflation is increasing the GDP Per capita would follow diminishing trend. Normally in the SAARC countries, there is deficit in trade balance which has a negative effect on poverty. As deficit in trade balance would increase poverty because most of the income would be spent on debt servicing. Overall income in the country would come down and Per Capita GDP would also decreases.

The equation 3.4 and 3.5 shows another interesting results in which the effect of GDP Per capita and SME has been seen on income distribution in poorest 20% and richest 20 % respectively. With an increase in GDP per capita and improvement in SME should raise the income share of poorest 20 % . The same theory has been proved that SME growth has significant effect on income share of poorest 20%. Similarly, the effect of GDP Per capita is also significant in improving income share of poorest 20%. In other words, SME growth and GDP per capita play a significant role in reducing poverty from the country.

Notes

1. For further detail see Hartungi (2007).
2. Regional poverty profile 2006 SAARC Secretariat, Nepal.
3. For further details see Branson (2000).
4. For further details, see Khan (2004).
5. For further detail see Beck and Kunt (1994).
6. Economic Survey of Pakistan 2008-09.
7. See Macroeconomics by Mankiw 5th edition.
8. For further studies see Salvato, Lassini, Wiklund (2006).

References

- Asian Development Outlook (2008), Asian Development Bank Publications.
- Balassa, B. (1983), "Exports Policy Choices and Economic Growth in Developing Countries after 1973 Oil Shocks" *The Johns Hopkins University, Baltimore, The World Bank*, Washington, USA.
- Branson, W. (2000), "*Macroeconomic Theory and Policy*", New York: McGraw-Hill Book Company, International Edition.
- Beck, Thorsten, Asli Demirgüç-Kunt, and Vojislav Maksimovic (2002), "Financial and Legal Constraints to Firm Growth: Does Size Matter?" World Bank Policy Research Paper 2784.
- Beck, Thorsten, Ross Levine, and Norman Loayza. (2000), "Finance and the Sources of Growth." *Journal of Financial Economics* 58, 261-300.
- Carlo Salvato, Ugo Lassini, Johan Wiklund (2006), "Dynamics of External Growth in SME", *Emerald Group Publishing Limited*, Vol. 9, pp. 229-266.
- Constantin S. Voivodas (1973), "Exports, Foreign Capital Inflow and Economic Growth" *Journal of International Economics*, New York.
- Chu, W. W. (1997), "Causes of Growth: A Study of Taiwan's Bicycle Industry", *Cambridge Journal of Economics* 1997, 21, 55-72.
- Human Development Reports (1992-2008)*, UNDP Publications, New York Oxford University Press.
- Hartungi, R. (2007), "Understanding the Success Factors of Micro-finance Institution in a Developing Country" *International Journal of Social Economics*, Vol. 34, No. 6, pp. 388-401.
- IMF. (2005), *International Financial Statistics*. International Monetary Fund.
- Élisabeth, L. and Lefebvre, L. A. (2001), "*Innovative Capabilities as Determinants of Export Performance and Behavior: A Longitudinal Study of Manufacturing SMEs*", Mac Millan Press), London.
- Karunaratne, Neil D. (1994), "Exogeneity Modeling of Growth and Trade", *Trade and Growth, Australian Publication*.
- Maddala, G. S. (1977), "*Econometrics*". New York, McGraw-Hill Book Company.
- Madan, B. K. (1986), *Towards Monetary Cooperation in South Asia*, Concept Publishing Company, New Delhi.
- Muranda, Z. (2003), "*Relationships between Firm Characteristics and Export Constraints in SME Exporters*", Business Studies Department, University of Zimbabwe, Zambezia (2003), XXX (i).
- Paul, S. (1995), "Export and Growth: Review of empirical evidence", *Trade and Growth, Australian Publication*.
- Pakistan Economic Survey (1990 to 2007-08)*, A Yearly Publication of Ministry of Finance, Government of Pakistan.
- Statistical Year Book (2005)*, A Yearly Publication of Federal Bureau of Statistics, Government of Pakistan
- State Bank Reports (1990 to 2008), Annual Publications of State Bank of Pakistan.
- Seguino, S. (2000), "The Effect of Structural Change and Economic Liberalization on Gender Wage Differential in South Korea and Taiwan", *Cambridge Journal of Economics*, Vol. 24, 437-459.
- Small and Medium Enterprises Development Authority (SMEDA) Annual Report (2007), Ministry of Industries and Special Initiatives, Government of Pakistan, Pakistan.
- Social Indicators of Development (1996), World Bank Publication.

Thorsten Beck, Asli Demirguc-Kunt, and Ross Levine (2002), "SMEs, Growth, and Poverty: Cross-Country Evidence", *First draft: November 2002*, World Bank Policy Research Paper.

Economic and Social Survey of Asia and Pacific (2008), *UN Economic and Social Commission for Asia and the Pacific*.

World Development Reports (1990 to 2008), *World Development Indicators*, World Bank Publications, Oxford University Press.



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