The Impact of Globalization on Rural Poverty in Pakistan

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Abstract

Globalization can contribute very much to reduce poverty both directly and by accelerating growth. However, its impact to reduce poverty in developing countries is very limited because of domestic policy failures. For an economist study of relationship between globalization and rural poverty is very important that how much the role of globalization on rural poverty is supporting for its reduction. To know about its impact a study was conducted on the basis of time series secondary data. After the research it is found that impact of globalization on rural poverty was insignificant whereas there was positive relationship between agricultural product, literacy rate and globalization. Along with these, agricultural product and literacy rate were highly correlated but there exists very weak relationship between globalization and rural poverty. It is also found that impact of agriculture products and literacy rate to reduce rural poverty was significant. In the end it is concluded that impact of globalization to reduce rural poverty is still insignificant but its impact to improve agricultural products and literacy rate is very much striking. So during the formulation and execution of different policies it is necessary for authorities to capture the most of benefits of trade with this global world to wipe out poverty from the country.

Keywords: Globalization, Rural Poverty, Agriculture Product, Literacy Rate.

Introduction

In developing countries consistent increase in poverty has become a critical international issue for the attention of world's donor agencies. The prevalence of poverty has been seen more in developing countries as compared to developed countries. Thirty percent of the starving people live in South Asia. This is general understanding that due to injustice distribution of financial resources the gap between different income levels of the people are increasing especially in developing countries. It is also noted that share of developing countries in poverty has declined from 28.3 percent in 1987 to 24 percent in 1998 based on $1 per day and from 61 percent in 1987 to 56 percent in 1998 based on $2 per day, excluding Sub Saharan Africa, Eastern Europe and Central Asia (Government of Pakistan, 2004).

Within Asia and the Pacific Region, the progress in poverty reduction has varied widely. The headcount ratio dropped dramatically for East Asia and the Pacific, from a high of 29.4 percent in 1990 to 14.5 percent in 2000, but the decline was more modest in South Asia 41.5 percent to 31.9 percent where the economy grew more slowly and population growth had been more rapid. Poverty as measured by the headcount ratio was higher in South Asia than in any other region of the world, except Sub-Saharan Africa. Poverty is basically a rural problem in South Asia. In all countries of this sub-region, poverty is disproportionately concentrated in rural areas. The headcount ratio is also higher for rural areas. Rural poverty trends vary considerably by country. In several South Asian countries, the gap between rural and urban poverty is widening over time. These countries include India, Bangladesh, and Pakistan (Thapa, 2004).

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Poverty headcount percentage was 36.3 for rural areas and 22.4 for urban areas in 1998-99 as calculated by Federal Bureau of Statistics during Pakistan integrated household survey. Poverty also depends upon on the family size and numbers of earning persons in the family. On average there are five members of a poor family less than 18 years of their age whereas in non-poor families number is three. Average number of births among poor woman of age 15-49 is nearly five whereas number is four for non-poor families. More than one third of the poor households are headed by aged persons who are dependent on transfer incomes. Important factor which separate the poor from the non-poor is education, in poor household percentage of literate heads is 27 while for non-poor households it is 52 and percentage of poor households with no lavatory is 76 compared to 53 percent of non-poor. Poverty is higher in those families in which head is unskilled agricultural workers like heads engaged in transport, service, production and sales occupation (Government of Pakistan, 2001).

In India 44.2 percent of its population is living below \$1 a day and 86.2 percent is living below \$2 a day from the total of 1010 million peoples whereas in Pakistan 31percent of its population is living below the \$1 a day and 84.7 percent is living below \$2 a day from the total of 138 million peoples. Poverty gap at \$1 in India is 12 and in Pakistan it is 6.2 whereas at \$2 in India poverty gap is 41.4 and in Pakistan

It is very important question that how poverty can be reduced and what force can be much fruitful for the alleviation of poverty. It is also important to think about this one because more than 80% of all the poverty groups in fewer developing countries live in the rural areas. So it is need to formulate ways and means of bringing the benefits of development to the rural poverty groups (Gudgeon, 2001).

According to Rural Poverty Report 2001, it is estimated that 1.2 billion people are under the poverty line i.e. \$1 per day and from these 75 percent are rural. On one side entrance of rural Poor's to assets, technology and institutions is major factor behind poverty reduction, on the other side market integration is playing an integral role in rural poverty reduction (International Fund for Agricultural Development, 2001).

Poverty can be alleviated only if a country use 50 percent of its total public investment for rural sector such as for agriculture and agro-based industry, irrigation, rural infrastructure etc consistently for the 10 years and within 6 year country will be in position to get fruitful results regarding poverty alleviation under the era of globalization (Janaiah, 2006).

One of the most disturbing global trends of last two decades was that a number of countries with around 2 billion people are in danger of becoming irrelevant to the world economy. Incomes in these countries have been falling, poverty has been rising, and they participate less in trade today than they did 20 years ago. Developing countries exports of primary goods have been shifted to manufactures and services. This change support to poverty reduction which was found in Chinese provinces, Indian states, Bangladesh and Vietnam but it is also found that integration would not have been feasible without a wide range of domestic reforms covering governance, the investment climate, and social service provision (World Bank, 2002).

The more important impact of globalization was indirect by increasing employment opportunities in the non-farm non-tradable sectors. The net direct impact on employment opportunities in the tradable sectors has been positive, as the new opportunities have balanced the job losses that unavoidably occurred through structural changes brought about by globalization. Public policies ensure sufficient safety for the workers displaced by the structural changes associated with globalization and also to enable poor people to take better advantage of new employment opportunities opened up by globalization. Instead of globalization forces ability of globalization to alleviate poverty depends upon the resource mobilization and public expenditure (Osmani, 2005).

It is difficult for poor to get benefits from the integration of economies due to poor access to health and education. Due to globalization it is possible to increase the inequality within a country. The numbers of poor is more in agricultural and related sectors as compare to the other sectors. Trade and investment policies alone can't achieve the target of poverty alleviation. Other policies like good governance, well functioning bureaucracies and regulation contract enforcement and protection of property rights can also be used for this purpose. Role of globalization to reduce poverty in Pakistan is still insignificant even after the globalization (Malik, 2006).

From above discussion it is clear that poverty is more in rural areas as compare to urban areas which also vary from region to region and even within a country it also vary between different provinces. The study is related to the impact of globalization on rural poverty because more of population is living in rural areas with fewer facilities for the poor as compare to urban areas. Role of globalization to reduce poverty is not significant which is against its objectives. On one side we see that world is more advance with reference to its views about life style, profession, and people have more things for choice as compare to some decade earlier but on the other side poverty is still increasing and every coming day bring more rigorous conditions for the poor.   Variables that will be discussed in the study are agricultural product and literacy rate to know all about the causes of low living standard of the rural community and to check this one that why the role of globalization to reduce poverty is not significant. The proposed study will be focused on the relationship of these variables with poverty and globalization.

Materials and Methods

Methodological techniques of data collection and analyzing the observations play a significant role in research whereas the methodology refers as the logic to scientific procedure. This study is confined to the rural area of Punjab because not only Pakistan for its exports depends upon Punjab but also other provinces for their livelihood depend upon this large agricultural territory. It is also important because more than half of the population lived in Punjab and among these more population lived in rural areas. In this study time series secondary data covering the period 1985-86 to 2010-11 is used for quantitative analysis that is collected from different government, semi government organizations and from internet.

Methods of Analysis

In evaluating the quantitative effects of globalization on rural poverty, the data is analyzed statistically and is reported in the form of tables. Standard statistical techniques like multiple regression and t-test are employed. Separate procedures to achieve the objectives are used.

- For objective no. 1, significance of globalization is checked through different statistical techniques like standard error test, F test, t statistics, R square and p value.
- For objective no.2, the relationship between the explanatory variables will be checked and high level of correlation between these will prove the betterment in their lives.

The selected variables for the analysis are agricultural product in metric tons of four major crops i.e. wheat, rice, cotton, and sugarcane, and literacy rate. Agricultural product of major crops is selected because these crops are cultivated in most of the area and only small part of land is used for the cultivation of other crops whereas knowledge of new methods of cultivation and technology is important for more production with least possible cost. So due to this reason variable of literacy rate is selected.

The model specified for the analysis is as under:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \mu_i$

Where

Y = Rural poverty headcount index

X_1 = Agricultural product (000 metric tons) of four major crops i.e. Wheat, Rice, Cotton, Sugarcane

X2 = literacy rate (percentages) μ_i = Random error or disturbance term.

Whereas β_0, β_1, β_2 are parameter values which point out the relationship between dependent variable and independent variables. Among these parameters β_0 is known as intercept or poverty level which is not affected by the independent variables and β_1, β_2 are regression coefficients that indicate the change in dependent variable due to unit change in independent variables. Standard error test of least square estimates is used to check the significance of the parameters.

Null Hypothesis H_0: $\beta_i = 0$, Estimates are not statistically significant. It means that contact of independent variables like agricultural product and literacy rate on rural poverty is not considerable and insignificant.

Alternative Hypothesis H_1: $\beta_i \neq 0$, Estimates are statistically significant. It means that contact of independent variables like agricultural product and literacy rate on rural poverty is considerable and significant

During this study 5 percent level of significance is used for the statistical analysis. Method used for the acceptance or rejection of the hypothesis is as under.

If S.E $(\beta_i) > \frac{1}{2}(\beta_i)$ then we accept the null hypothesis that the estimate are not statistically significant and vice versa. To check the multicollinearity problem, coefficient of correlation is calculated by using the following formula.

$r = (n\Sigma X1X2 - \Sigma X1\Sigma X2) / \sqrt{\{n\Sigma X1^2 - (\Sigma X1)^2\}\ \{n\Sigma X2^2 - (\Sigma X2)^2\}}$

Multicollinearity problem arises when the explanatory variables are not independent of each other or it arises when there is some sort of relationship two or more explanatory variables and in the presence of this problem we cannot estimate the true value of β_1 and β_2.

Dummy Variable

It is common observation that in regression analysis dependent variable is influenced both by quantitative and qualitative variables. So like quantitative variables, qualitative variables should also be included among the explanatory variables. For this purpose, we construct an artificial variable in which one indicates the presence of that attributes whereas zero indicates the absence of that quality.

According to the officials of planning division Pakistan year 1990-91 can be considered as the starting year for the globalization. So we introduce a dummy variable with numerical value 0 for the absence and 1 for presence of globalization and in this way model is as under.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 D1 + \mu_i$

Here

D1 is a dummy Variable with values 0 and 1 whereas β_3 indicate the impact of globalization on rural poverty.

Results and Discussion

The primary objective of this study was to determine the impact of globalization on rural poverty where as secondary objective was to know about the improvement in living standard of the rural community.

Table 1: Estimated Values of Rural Poverty, Agricultural Product and Literacy Rate with Dummy Variable (Globalization)

	Coefficients	Standard Error	t-Stat	P-Value
β_0	18.6774	4.8429	3.8566	0.0013
β_1	0.0007	0.0002	2.8582	0.0109
β_2	-0.5602	0.3440	-1.6286	0.1218
β_3	-1.9836	2.6934	-0.7364	0.4715

Tables 1 present the analysis of rural poverty, agricultural product, literacy rate and dummy variable globalization in which standard error test indicate the significance of agricultural product and insignificance of literacy rate and dummy variable globalization. Low p value in case of β_1 is less than 0.05 and high in case of β_2 and β_3 also verify the results. F and t-statistics also support the results. It means that the Impact of literacy rate and globalization on rural poverty was insignificant but there was significant relationship between rural poverty and agricultural product. Low value of adjusted R square i.e. 0.36 indicates that 36 percent variation in rural poverty was due to agricultural product, literacy rate and globalization whereas 64 percent variation in rural poverty was due to other variables that are not included in the model like lack of health, educational facilities, lack of employment opportunities, lack of industry etc.

Table 2: Estimated Values of Rural Poverty and Dummy Variable (Globalization)

	Coefficients	Standard Error	t-Stat	P-Value
β_0	28.0860	2.0557	13.6626	0.0000
β_3	3.3096	2.3551	1.4053	0.1761

This table present the analysis of rural poverty and dummy variable globalization in which value of adjusted R square is very low i.e. 0.046. So it indicates statistically insignificance of the dummy variable that the impact of globalization on rural poverty was insignificant. Value of standard error statistics is greater than the half of its coefficient value and high value of p i.e. 0.17 also support the results. F and t test also support the same results. So we accept the null hypothesis that the impact of globalization on rural poverty is insignificant. Here value of adjusted R square is very much low that is 0.0465, it means that only 5 percent variation in rural poverty was due to globalization whereas around 95 percent variation was due to the factors other than the globalization. This also verifies the above results that the impact of globalization on rural poverty was insignificant.

Table 3: Estimated values of Agricultural Product, Dummy Variable (Globalization) and Rural Poverty

	Coefficients	Standard Error	t-Stat	P-Value
β_0	15.7881	4.7086	3.3530	0.0035
β_1	0.0003	0.0001	2.8158	0.0114
β_3	-2.2055	2.8108	-0.7846	0.4428

Table 3 present the analysis of agricultural product, globalization and rural poverty. Here according to correlation value 0.69 both the variables i.e. agricultural products and globalization are significantly correlated with each other which is positive sign for improvement in the living standard of the rural community. The impact of agricultural product on rural poverty was significant as it is clear from the results that the standard error of agricultural product is less than the half of its coefficient value and p value is also small i.e.0.01 which is less than 0.05 but impact of globalization on rural poverty was still insignificant because in this case standard error test, t test and p value support the result to

accept the null hypothesis. Here value of adjusted R square is 0.3012; it means that only 30 percent variation in rural poverty was due to agricultural product and globalization whereas remaining was due to other factors.

Table 4: Estimated values of Literacy Rate, Dummy Variable (Globalization) and Rural Poverty

	Coefficients	Standard Error	t-Stat	P-Value
β_0	20.0877	5.6969	3.5260	0.0024
β_2	0.2977	0.1986	1.4984	0.1513
β_3	0.2933	3.0425	0.0964	0.9242

Table 4 present the analysis of literacy rate, globalization and rural poverty. Here according to correlation value 0.66 both the variables i.e. literacy rate and globalization are significantly correlated with each other whereas impact of literacy rate on rural poverty was insignificant as it is clear from the results that the standard error of literacy rate is greater the half of its coefficient value and p value is also large i.e.0.15 which is greater than 0.05 and impact of variable 2 i.e. globalization on rural poverty was also insignificant because standard error test, t test, and p value support the acceptance of null hypothesis that the variables are statistically insignificant.

Table 5: Estimated values of Dummy Variable (Globalization) and Agricultural Product

	Coefficients	Standard Error	t-Stat	P-Value
β_0	31140.8240	2878.5171	10.818	0.0000
β_3	13965.6716	3297.7556	4.2349	0.0004

Table 5 present the analysis of dummy variable Globalization and agricultural product in which at 0.05 and 0.01 level of significance calculated values of t-test lies in critical region whereas calculated value of F statistic that is 17.93 also lies in critical region at 0.05 and 0.01 level of significance. So we reject the null hypothesis and accept the alternative hypothesis that the model is statistically significant. Standard error test and low p value also support the results that there is significant impact of globalization on agricultural product. Value of adjusted R square is 0.4585; it means that around 46 percent variation in agricultural product was due to globalization whereas remaining variation in dependent variable was due to the factors other than the globalization.

Table 6: Estimated values of Dummy Variable (Globalization) and Literacy Rate

	Coefficients	Standard Error	t-Stat	P-Value
β_0	26.8640	2.2994	11.6829	0.0000
β_3	10.1310	2.6343	3.8458	0.0011

Table 6 present the analysis of dummy variable Globalization and literacy rate in which value of adjusted R square is 0.4081 and at 0.05 level of significance t-test and F ratio indicates the significance of the independent variable whereas standard error test and low p value also support the results that there is significance impact of globalization on literacy rate and if we consider 0.01 as level of significance then also all the test verify the above results that there is significance impact of globalization on literacy rate.

From whole of this analysis it is clear that the impact of globalization on rural poverty was insignificant which also support the study done by Malik (2006) and Anwar (2003) but its impact on agricultural product and literacy rate was significant. Here correlation between globalization and agricultural product is 0.69 whereas between globalization and literacy rate it is 0.66 but correlation between agricultural product and literacy rate is very high i.e. 0.93

which is positive indication for the improvement in the living standard of rural community. Weak relationship between globalization and rural poverty i.e. 0.31 also support the results that the impact of globalization on rural poverty was insignificant.

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