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Determinants of Rural Household Poverty: The Role of Household Socioeconomic Empowerment

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Abstract: This study examines the factors affecting rural household poverty in district Bahawalpur (Pakistan) by using primary data collected through rural household survey. Through multistage random sampling technique 600 households from two tehsils of district Bahawalpur are selected for data collection. Socioeconomic empowerment index is generated by using principle component analysis to use it as a proxy of socioeconomic empowerment of the household. To control the land holding, only the rural households having 4 to 5 hectors have been included in the survey. It attempts to see the impact of socioeconomic empowerment along with supporting variables on rural household poverty. The results show that socioeconomic empowerment, only agriculture occupation, experience of the household in agriculture, remittances, female to male ratio, employment ratio, household size and sewerage system have significant impact on rural household poverty. It is proposed that as a part of policy formation, socioeconomic empowerment needs attention of the policy makers. Furthermore, the demographic factors also require improvement for the poverty reduction in rural areas.

JEL Classification: C31, O12, O18, P32.
Key words: Socioeconomic empowerment · Household economics · Female to male ratio · Remittances · Household size

INTRODUCTION

Poverty Is a Multi-Dimensional Concept: It is hunger, lack of shelter, being sick and not able to see a doctor, not having access to school, not knowing how to read, not having a job, fear for the future living even for one day, losing a child to illness brought about by unclean water, powerlessness, lack of representation and freedom. Well-being can be termed as coming out of poverty. It may be defined as ability to function in the society in order to achieve certain functioning of beings and doings [1]. Poverty, on the other hand is described as a state of continuous deprivation or a lack of basics of life. It is also lack of specific consumptions, for instance, food, housing, access to social services and leisure. Another aspect of poverty is lack of opportunities, powerlessness and vulnerability. Material poverty is in fact income poverty or consumption poverty. The non-material poverty is measured in terms of poor health, low education or illiteracy, social exclusion, insecurity and lack of freedom and empowerment.

Trends of Poverty in Pakistan: Pakistan is among the low income economies, having $1250 per-capita GDP. Government of Pakistan launched a number of policies during the last three decades in line with poverty reduction strategy (PRSP) to catch up with Millennium Development Goals (MDG). Government of Pakistan has been pursuing its poverty reduction strategy by focusing on the acceleration of economic growth and maintenance of macroeconomic stability, investment in human capital, expansion of social safety nets and improvement of governance.

To examine poverty and its related issues, studies have employed conventional and Islamic approaches [2,3]. Islamic S*hariah* (jurisprudence) based studies[1] recommend *Zakat* and *Ushr* as the main source of poverty alleviation. Some of these studies referred to just marginal

[1]See [9,10,11,12].

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impact of existing system of *Zakat* on poverty. Therefore, institution of *Zakat* alone is not breathtaking for the poor masses. There is need to explore some other compassionate measures in addition to *Zakat* and *Ushr*. Naseem [4] conducted one of the pioneering studies on poverty in Pakistan by choosing an arbitrary poverty line in terms of per-capita expenditure and per-capita income. A number of studies found an increasing trend of poverty in rural and urban areas during 1970s. For the period of 1980s, Malik proved increasing poverty in the rural areas of Pakistan [5]. Nevertheless, all studies revealed increasing poverty in the urban areas during 1970's. Ercelawn, covering the period 1970-79, showed that both rural as well as urban poverty diminished in the country [6]. Interestingly, Akhtar's [7] results are similar to those given by Naseem [4]. All these studies used conventional methodologies of calculating poverty lines based on calorie intake, income and expenditure approaches.

During the period of 1980s when the Islamic redistributive institutions of *Zakat* and *Ushr (Religious levy on agricultural produce)* were functioning, poverty seems to have declined[2] in Pakistan and that declining trend continued until 1991. However, *Zakat* system remained insufficient to eliminate poverty as *zakat* was received in rural areas by an insignificant number of households [8]. *Infaq* has a moderate effect on poverty alleviation in Pakistan. Even it has comparatively higher effect in urban areas as compare to rural ones. In the recent past poverty as measured by the official methodology declined considerably by 10.56 percent from 34.5 percent to 23.9 percent between 2001-02 and 2004-05. A framework for analyzing the impact of community-based enterprises (CBEs) on poverty of households in northern Thailand was developed by Teerakul, et. al. [13]. They used principal component analysis technique for this frame work. Akerele, et al. [14] investigated the influence of socioeconomic factors on household poverty and poverty was measured by using the Foster Greer-Thorbecke (FGT) poverty rate [15]. The impact of the socioeconomic characteristics of the household on incidence and poverty gap was estimated with the help of Tobit regression analysis. The findings revealed that poverty incidence and poverty gap were adversely affected by educational status of household head, household assets and increasing number of dependents.

Household Empowerment and Poverty Reduction: It is generally recognized that the decisions and actions of the poor households may bring sustainable improvement in their lives and livelihood. Inequitable power relations particularly in rural areas exclude poor households from decision-making and prevent them taking action. Empowerment of those living in poverty is a critical driver and an important measure of poverty reduction. Poor households need to gain and exert influence over the political, economic and social processes that constrain their livelihood opportunities. Sustainable poverty reduction needs poor households to be both the agents and beneficiaries of economic growth. Strengthening poor households, institutions, providing them with more control over assets and promoting their influence in economic governance improve their terms which engage them in the market. This type of economic empowerment combined with similar advances in political and social empowerment make economic growth much more effective in reducing poverty.

Calculating Poverty Line: Due to the diversification of consumer choice in all countries, the international poverty line is not useful to estimate poverty within a nation. Thus countries develop their individual national poverty lines. In Pakistan the poverty line is Rs.1140.05 (for the year 2006)[3]. This poverty line is adjusted against CPI inflation for the year 2011-12 and is becomes Rs.1390.86 per month per-capita consumption expenditures. The households having consumption expenses under the local poverty line were considered poor in the current analysis.

MATERIALS AND METHODS

The Data Used in this Paper Is Based on Primary Source: Through multi-stage random sampling survey 600 rural household of district Bahawalpur (excluding the urban peripheral and Cholistan) are selected for analysis. The urban peripheral has specific characteristics like market access and cultivation of vegetables while the Cholistan is characterized by desert areas along with lack of infrastructure for the clusters of the population. The population of the study is comprised of the households engaged in agricultural farming and having landholding in between 4 to 5 hectares. All these households have subsistence level of landholding. The land holding category is selected keeping in view the same level of

[2]See for details, [5, 16].

[3]It is official poverty line developed by Planning Commission of Pakistan.

wealth and technology adaptation by the household but socioeconomic empowerment may vary. For example a bigger landholding household may have more probability to participate in *Panchait* (the informal village committee for decisions regarding village and disputes of the households) or avail the support prices offered by government. So we have controlled the land holding. The sample is selected in four steps. At first, two tehsils (i.e. Bahawalpur and Hasilpur) were randomly selected from Bahawalpur district. In the second step, we randomly selected two union councils from each tehsil. In the third step, from each union council two villages were selected for sample. In the fourth and last step, almost identical number of households were selected in each village to obtain information. A structured questionnaire was used to gather data on personal, family and community characteristics, etc. The households whose per-capita consumption per month was below the national poverty line were considered poor and assigned value 1 and households whose per-capita consumption was above the national poverty line were considered as non-poor and assigned the value 0. Socioeconomic empowerment, agriculture occupation, experience of agriculture, remittances, female-male ratio and employment ratio were taken as explanatory variables. Binary logistic regression is employed to the data. The parameters of this model are estimated through the method of maximum likelihood.

Socioeconomic Empowerment Index: The socioeconomic empowerment index is generated through the indicators of average education of the household, access to child schooling, availability of health-care services, access to formal source of credit, participation in *punchiate*, relation with local governance, access to support prices of output set by government[4] and access to announced price of inputs by government[5]. We used principle component analysis to allocate weights to indicators. This method first standardizes the indicator variables (calculating z-scores); then factor coefficient scores (factor loadings) are calculated and at last for every household the indicator values are multiplied by the factor loadings and summed to generate the socioeconomic empowerment index.

Determinants of Poverty: In order to determine correlates of poverty a probability model, i.e. binary logistic model is used.

Mathematical form of the model is:

$$Yi = \beta X i + \mu i \quad (1)$$

Where: Y_i is dependent variable that indices the measure of household poverty, X_i is independent variables, β is the parameter to be estimated and u_i is the stochastic error term. In this model, the response variable was binary; taking values 1 or 0. The probability of being poor is estimated by using the binary logistic regression model given as:

$$(HPOV),\ L = Ln\ (Po / 1\text{-}Po) = \beta o + \beta 1\ EMP + \beta 2\ AGR + \beta 3 EXP + \beta 4\ REM + \beta 5\ FMR + \beta 6\ EMP + \beta 7\ HSIZE + \mu i \quad (2)$$

The operational definitions of the variables included in the model are defined as follows:

HPOV: Household poverty calculated through national poverty line. The household lies below the poverty line considered poor and we assigned value 1, otherwise 0.

EMP: Socioeconomic empowerment index generated by principle component analysis.

AGR: Agriculture occupation taken as binary variable. If head of household's occupation is only agriculture we assigned the value 1, otherwise 0.

EXP: Experience of agriculture measured in number of years.

REM: Remittances are taken as binary variable. If household gets remittances, we assigned the value 1, otherwise 0.

FMR: Female to male ratio calculated. Number of females divided by number of males in the household.

EMPL: Employment rate calculated as number of employed persons in the household divided by total labor force in the household.

HSIZE: Household size represented by number of household members in the household

RESULTS AND DISCUSSION

The maximum likelihood results have been shown in Table 1 with proper statistical specifications. In our analysis 127 household are observed living below poverty line out of sample of 600 households which depicts 21.2 percent poverty rate in the sample area.

[4]Sport price of output, i.e. government set support price of wheat, sugar, cotton, etc.

[5]Government set prices of fertilizer, pesticide, etc.

Table 1: ML - Binary Logit Analysis Results

Variables	β	t-values
EMP	-0.068 9	-5.667*
AGR	-1.632	-3.372**
EXP	-0.027	-.090
REM	-2.276	4.123*
FMR	0.410	2.85**
EMPL	-0.007	-1.00
HSIZE	0.248	3.492*
Constant	0.783	1.015
Nagelkerke R Square = 0.417		DF = 8
Cox & snell R Square = 0.266		P = 0.000
LR Statistics = 183.984		N = 600

* represents the 5 percent and ** represents the 10 percent level of significance

Socioeconomic Empowerment: In this analysis the socioeconomic empowerment has been taken as a determinant of household poverty. The results explain that socioeconomic empowerment causes to reduce the household poverty. The results are supported by Khan and Bibi [17]. The explanation may be that for the rural labor force involved in the agriculture sector the problem arises due to lack of inputs for agriculture production and then selling out the production. An agrarian household, if becomes able to purchase the input like fertilizer, etc. at fixed price and at proper time and sell the product at support prices, the income of the household increases and likelihood of incidence of poverty decreases. This phenomenon is linked with the participation in local governance and ultimately makes the programs of the public sector materialized. Similarly the access to the formal sector financing enables the farmer to enhance the income. Lastly the education of the household is a component of the socioeconomic empowerment. It increases the information, awareness and knowledge about the proper utilization of resources and increase in production. Education also enhances the adoptability of the modern technology in agriculture. Collectively all these factors are called socioeconomic empowerment. It is the power or support for having the public sector policies implemented. It is linked with decision making at the local level and mobility within the community.

Only Agriculture Occupation and Household Poverty: Theoretically the agriculture occupation is assumed an important factor which positively contributes to per-capita income of the household and reduces poverty. In rural areas majority of household are directly or indirectly related with agriculture occupation. Our results have shown that the households having only agriculture occupation reduces the probability of poverty. The variable was included to analyze, whether the households engaged in only agriculture are more likely to fall in poverty or the households who are involved in agriculture as well as some other economic activity[6]. It is generally assumed that the households where in the members are involved in agricultural activities along with other income supporting activities have the probability of not living in poverty. It is based on the fact that economic activity other than agriculture supports the household budget and decreases the disguised employment at the household farm. Our results negate this assumption and explain that the households with the members engaged in other activities are more likely to fall in poverty. It shows that the productivity at the household farm remains so low that push the members outside the household farm employment. The wages from outside employment are so low that keep the household in poverty. The productivity of the household members outside the farm households may be much lower due to mass illiteracy and non-skilled labor supply. Furthermore the possibility may be that within the household there is to much surplus of labor force that makes some members unemployed and send them to out of household farm for employment. In the market the wages remained lower keeping the household poor. For such households there are two types of disadvantage, first one is that productivity at the household farm remains low and second one is that wages outside in the rural labor market are low. The phenomenon is attached with the joint family system in rural areas of Pakistan. Under this system larger families depend upon the same inherited piece of land which has too much lower per-capital landholding.

Remittances: The literature evidenced that remittances affect the per-capita income of the household positively and reduces the incidence of household poverty. In Pakistan remittances have changed the life in both urban and rural areas. Our results have shown that probability of the households to fall in poverty decreases by having the remittances. It is supported by the findings of Hashmi [18]. The explanation is that remittances increase the household income and as a result poverty is decreased. From the policy point of view, the finding is very important. In the previous results of the study it has been shown that employment outside the household farm increases the poverty. But the employment resulting into

[6]Other activities may include the employment or business other than agriculture and out of the household farm.

having remittances decreases the poverty. So there exists a huge difference between wages and remittances income. Public sector policy should focus on the increase in remittances of rural households along with increase in wages, that may be through rural industrialization.

Male to Female Ratio: Generally the male members of the household are considered the bread-winners of the household and females are considered responsible for household management like cleaning the house, cooking and caring the children. In the rural households the women also participate in economic activities, particularly in agriculture chores like cotton picking, weeding, animal breeding, etc. In our sample where the households have landholding of 4 to 5 hectares, the women are assumed to participate in economic activities. So the variable of female to male ratio in the household is included in the analysis to see its effect on poverty. It is hypothesized that if male members are less than females the dependents increase and probability of poverty increases. On the other hand it may be speculated that the composition of male and female does not matters as females in these households also participate in the economic activity. Our results have shown that probability of poverty increases with the increase in female to male ratio in the household. It explains that females are dependent in the household. Even if they are participating in the economic activity the productivity and wages are to much lower that keep them economically dependent.

Household Size: Household size may be an important determent of household poverty as it dilutes the per-capita income of the household. Our estimates have shown that increase in number of household members increases the probability of that household being poor. The result is supported by the findings of Rodriguez [19] and Sabir, et. al. [20]. The household size has a complex mechanism in poverty status of the rural households. In our sample of households having subsistence level of landholding it becomes more perplex. On the one hand, in these households if all the members of the households participate in economic activity their contribution may pull the household out of poverty. On the other hand the surplus of labor supply from these households slide down the marginal productivity and disguised unemployment is generated. It may push the household into poverty. Our results have shown the later phenomenon. The larger households have more dependents and disguised unemployment individuals which increase the burden on household budget.

CONCLUSIONS AND POLICY RECOMMENDATIONS

This study explores a number of factors determining rural household poverty in Bahawalpur district as a case study. Our principle explanatory variable was socioeconomic empowerment of the household. It is empirically proved that socioeconomic empowerment reduces the household poverty, government should develop the polices which enhance the socioeconomic empowerment of rural households. In the recent policy options for reducing rural household poverty a variety of the options have been offered by the government. One of them was the implementation of *usher* and *zakat* system. The other was the electrification and infrastructure development of the rural area (five point program). Similarly, the subsidized construction of drainage system and streets was one of such type of programs. Recently the biogas subsidy and green tractor schemes have been introduced. Our results support the notion that socioeconomic empowerment of the rural households is needed not only to eliminate rural household poverty but proper implementation of all above mentioned schemes. It may have spillover effects like proper implementation of rural support programs and rural health schemes. The socioeconomic empowerment may be increased through education, training and awareness at the gross root level. In the presence of basic democratic system and local government, the union councils, tehsil councils and district councils may be helpful for enhancing the rural households empowerment. These policy options can successfully work in the long run provided that implementation of these policies is consistently pursued.

The study concludes that remittances have played an enviable role in reducing rural household poverty. An important policy recommendation is in connection may be that government should focus on the income from remittances.

Study significantly accepts the general belief that an increase in female to male ratio in the household increases household poverty. Head of household who has agriculture occupation increases the probability of being poor. Household size also increases household poverty. Study strongly recommends policy makers to increase employment opportunities for rural households.

This policy is supported by the results of positive impact of remittances on poverty reduction, negative impact of the variables like household employed in only agriculture, the female to male ratio and finally the household size. From these results it may be conferred that more employment opportunities should be provided to the rural labor force other than agriculture. One of the options may be small scale industry. It will increase the productivity of the workers and eliminate the disguised unemployment.

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