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Poverty Status and Factors Affecting Household Poverty in Southern Punjab: An Empirical Analysis

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ABSTRACT

The strategies expected to mitigate poverty tend to identify factors that are closely related to poverty and that could have influenced the policy implications. A household level data was collected to examine the poverty status and factors affecting poverty in Southern Punjab. A logistic regression technique was employed for the present analyses. The findings show that age and education of the household head, own house, spouse participation, remittances, number of earners in the household and physical assets reduces the probability of being poor in Southern Punjab. However, large household size, occupation in the primary sector, high dependency ratio and mental disability are associated with an increased probability of being poor in Southern Punjab. Government should adopt effective policy measures to generate employment and encourage the attainment of education for the poor households for the mitigation of poverty in this region.

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1. Introduction

All the countries across the world have acknowledged that poverty alleviation has to be of critical importance among the objectives of the economic development. To pursue the poverty reduction goal, socio economic, demographic, human development factors should be interlinked for better quality of life and overall economic progress of the poor countries. The present study focuses on Southern Punjab, which comprises of 3 divisions. It is a mainly a developing and backward region of the Punjab. It constitutes mostly on small cities, vast rural and desert areas. Considering the problem of rising poverty in Southern Punjab, have been focused to analyze the factors Affecting poverty. These divisions have

received very minute prosperity both at the policy and empirical level.

Keeping in view the above discussion, this paper is structured as follows. The section 2, presents the brief overview of existing literature. The section 3 offers data and methodology. The section 4 explains the empirical findings. The section 5 provides the concluding remarks.

2. The Literature Review

Various strands of literature are found on poverty. Moreover, it is generally considered as a plague and extremely serious matter to ponder across the world.

Rodriguez and Smith (1994) found that poverty prevails in those households headed by persons having lower education attainment. Poverty can be addressed through developing opportunities, entitlements and capabilities [Sen (1981, 1985)]. Coulombe and McKay (1996) found that the household living in a rural area, low education, and a high dependency ratio certainly increase the likelihood of being poor. Ravallion (1998) contended the importance of education that led to generate economic growth of developing countries.

Datt and Jolieffe (1999) had scrutinized the major causes of poverty in Egypt for the year 1997. The authors had collected secondary data, using multivariate analysis. The study revealed that education can play a vital role in alleviating poverty. If the adult average years of schooling were improved, this would result in a better standard of living of households. An investment in education can raise human capital resources and thus lower the poverty incidence for long term. The policy implication suggested that the better irrigation facilities can be helpful in generating employment opportunities thus reducing the rate of unemployment but also an increase the productivity of agriculture sector in Egypt.

A study by Chaudhry et al. (2006) uncovered rural poverty, employing multivariate regression analysis. Their results interpreted that rural poverty is pervasive and spreading across the rural areas of Pakistan. The poverty correlates were less during the seventies and eighties but again showed a rising trend during the nineties. As majority of the rural population heavily linked with agriculture sector directly or indirectly are more vulnerable to poverty incidence. While comparing economic performance with India, the authors concluded that Pakistan has better macroeconomic performance. The major cause of persistent rural poverty was low per capita income, inflation and high unemployment rates of the household.

Rupasingha and Goetz (2007) analyzed the determinants of poverty in United States of America and collected secondary data from households during the year 2000. The authors have divided the study into numerous economical structural, demographic social and political characteristics. The study found that counties in metro regions were less likely to be poor as compared to the counties in the non-metro regions. Counties having high rates of education, more female labor force participation, high employment rates, and higher level of social capital have less poverty during the year 1999. However, counties with high unequal distribution of income, high population of young adults, high ethnic diversity have high level of poverty rate.

Awopeju (2014) discussed the determinants of poverty in Nigeria, during the year 2009-2010 using Foster Greer Thorbecke index (FGT) index to measure the poverty profile. The independent variables were various regional and socioeconomic economic factors. The study showed that 50.4 percent of sample data population was poor at national level and 18.9 percent were poorest. In rural areas, at sub national level, 53.5 percent of population was poor and 32.7 percent of population in the urban areas. The policy implications were that government should play an effective role to enhance the conditions of rural areas and encourage the women empowerment.

The logit regression technique was employed by Edoumiekumo et al. (2014) to discuss the causes of household poverty in geopolitical region of Nigeria. The author collected the data from national living standard survey during the period 2009-10. The study revealed that in rural area the poverty was chronic

issue and effects households in the agricultural sectors. These study had suggested that opportunities, quality education should be provided to the household besides focusing on either its urban or rural. Family size should not be exceeded beyond five members.

Cheema and Sial (2014) studied the concept of poverty and its determinants in Pakistan. The author collected the secondary data from PSLM data for the households during the year 2010-11, using OLS regression. In this study the dependent variable was log of real expenditure per capita. The results revealed that household size, dependency ratio have negative relation with expenditure. Education, education square, urban, shop commercial building, residential building and animal for transportation were positively related to real expenditure per capita. Poverty level was extreme in Balochistan and less in Sindh. The study recommends that free education, reduction in dependency ratio helps in reduction of poverty.

Chen and Wang (2015) examined the poverty status of the household belonging to different 23 cities for Taiwan. The authors had collected secondary data for the year 2006 using hierarchical generalized linear model also known as multi-level logistic regression technique. The study concluded that poverty varies across regions. People living in higher income inequality, lower job quality and higher spatial mismatch are more likely to live in poverty. Employment to population ratio, employment in the service and employment in the industry ratio increased then poverty would be reduced.

Biyase and Zwane (2018) studied various indicators affecting poverty in South Africa. The authors had collected secondary data for the year 2006 using random effect probit estimation technique. The study concluded that education and race of the head of household, dependency ratio, employment status, gender and marital status are essential indicators to mitigate poverty. Households living in urban areas are less prone to poverty, however rural areas are still suffering from poverty in South Africa.

Stems from various studies that majority of people in developing countries are unable to meet their ends and suffering from chronic poverty. The denial of employment opportunities, low infrastructure, lack of education and physical assets and limited access to market have forced poor countries to remain deprived and underdeveloped. This study presents an analysis of indicators that are strongly associated with the poverty status of the household. The next section will present the data and methodology.

3. Data and Methodology

The primary data has been collected through a household survey in Southern Punjab comprising of three divisions during the year 2019. The size of the sample consists of 1068 observations, adopted simple random and stratified sampling.

Measurement of Poverty

FGT is labelled as Foster, Greer and Thorbecke, thoroughly employed in countless theoretical and empirical literature of poverty.

FGT Poverty Index

In 1984, these indices were introduced by, [Joel Greer](#), [James Foster](#), and [Erik Thorbecke](#). It is the most widely used index as it gives more weight on the poverty of the poor individuals. It can be written as:

$$P_{\alpha}(y; z) = \frac{1}{n} \sum_{i=1}^q \left[\frac{g_i}{z} \right]^{\alpha}$$

where z is the [poverty line](#), g is the poor, N is the sum of people and y_i is the income of each individual i . The lower the value of α then all the individuals having income below poverty line are more or less same. If the value of α is higher, the greater will be poverty among individuals across the country

Head Count Poverty Ratio

It helps to construct and analyze the incidence of poverty. The headcount ratio explains the proportion of the people that is poor. But fails to explain the intensity of the poverty i.e. how much poorer are the poor individuals.

$$H = P_0(y; z) = \frac{1}{n} \sum_{i=1}^q \left[\frac{Z - y_i}{Z} \right]^0$$

Poverty Line Calculations

The National Poverty line (2019), measured by employing the national poverty line of 2015-16, amounting to Rs.3250.28, as mentioned in National Poverty Report (2015-16) by Planning Commission of Pakistan. In 2015-16, poverty line was inflated to calculate the poverty line for the year 2019-20, amounting to Rs. 4225.25 per month. According to World Bank (2015), the international estimates for poverty line is 1.90 \$. International Poverty line estimated is about \$1.90 or less a day in 2015 as mentioned by the world bank and estimated i.e. \$1 = Rs. 155.01 for the year 2019, amounting to Rs. 294.5 each day and Rs. 8835.0 each month in Pakistan.

Regression Model

The study used a binomial logistic regression having dependent variable of dichotomous nature. The logistic regression model can be explained through the equation:

$$Y^* = \beta_1 + \beta_2 X_{2i} + \beta_3 X_{3i} + \dots + \beta_k X_{ki} + \epsilon_i$$

Y* is the dependent variable representing the Households’ level of poverty and Xs are the various household level socioeconomic and demographic indicators that determine the household level poverty determinants Being a dummy or a dichotomous variable Y can be written in the form of

$$Y_i = 1, \quad \text{if } Y_i^* < 0; \quad Y_i = 0$$

Thus, logistic equation can be written as

$$F(-\sum X_i' \beta) = \frac{e^{-\sum X_i' \beta}}{1 + e^{-\sum X_i' \beta}} = \frac{1}{1 + e^{\sum X_i' \beta}}$$

Table 1: Variables Utilized for Binomial Logit Regression Estimates of Poverty

Variables	Description of the Variables	
Dependent Variable for Binomial Logit Model		
Y	Poverty	= 1 if per capita income is lower than \$1.90/day then household is Poor = 0 if per capita income more than \$1.90/day then household is Non Poor
Independent Variables		
Demographic Variables		
HAGE	Age of Household head	Complete years of respondent 's age
HSIZE	Household 's Size	The total person in a household
DR	Dependency Ratio	Total dependents divided by total household size.
Economic Variables		
OCC	Occupation of Household Head	= 1 if household head working in primary sector = 0 if household head not working in primary sector
NOEIH	Number of Earners	The household comprising of total earners
LNVLPA	Physical Assets	The natural log of value of physical assets own by the household
OH	Own House	= 1 if household has own house = 0 if household not own house
REM	Remittances	= 1 if household receive remittances = 0 if household not receive remittances
SP	Spouse's Participation	= 1 if the Spouse participate in labor force = 0 if the Spouse not participate in labor force
CRD	Access to Credit	= 1 if household have an access to credit = 0 if household have not access to credit
Social variables		
MI	Mental Disease	= 1 if a person in a family is mentally ill = 0 if a person in a family is not mentally ill
PD	Physical Disability	= 1 if any member of household is physically disable = 0 if any member of household is not physically disable
HEDU	Education of the Household Head	Total years of education

Poverty model

$$Y = f \left(\begin{array}{l} HAGE, HSIZE, HEDU, DRATIO, OCC, NOEIH, PHYASSETS, OH, \\ REM, SPART, CREDIT, MENTD, PHYD \end{array} \right)$$

The above model in econometric form as:

$$Y = f \left(\begin{array}{l} \beta_0 + \beta_1 HAGE + \beta_2 HSIZE + \beta_3 HEDU + \beta_4 DRATIO + \beta_5 OCC + \beta_6 NOEIH \\ + \beta_7 PHYASSETS + \beta_8 OH + \beta_9 REM + \beta_{10} SPART + \beta_{11} CREDIT \\ + \beta_{12} MENTD + \beta_{13} PHYD + \beta_i \end{array} \right)$$

4. Empirical Findings

This section begins by analyzing and examining the factors Affecting poverty of the households in Southern Punjab in the Table 4. With the increase in the household head age by one year, the probability of poverty reduces by 0.9 percent [Rodriguez, 2002; Gang et al.,2004; Arif and Farooq, 2014]. If the size of household increases by one person, there is 8.6 percent probability of increasing poverty [Arif and Bilquess,2007; Litchfield and McGregor, 2009; Arif and Farooq, 2014]. If the household head is one year more educated, the probability of poverty declines by 5.5 percent [Bundervoet (2006), Zuluaga (2007)]. There is 17.8 percent likelihood of increasing poverty level, if the occupation of the respondent is associated with the primary sector [Agenor and Montiel, 1996; Carruth and Oswald1981; Kar and Marjit, 2001]. Due to the increase in dependency ratio there is 12.3 percent probability of increasing poverty of the household [Dreze and Srinivasan, 1997; Hashmi et al., 2008]

With the increase in mental disability of any person in the household, the probability of poverty increases by 66.2 percent [[Yeo and Moore\(2003\)](#), [Kessler et al., \(2005\)](#) and [Hoogeveen, 2005](#)].Moreover, its 7.3 percent probability of increasing poverty if any member of the household is suffering from physical disability [Sikander and Ahmed (2008), Rahman (2013), Arif and Farooq (2014)]. The 42.9 percent probability of declining poverty if the household have their own house [Arif and Bilquees (2007), Ahmad and Sadaqat (2016)]. If there is an increase in spouse's participation, almost 28.9 percent probability of reducing poverty of the household. These results support the studies by Mincer (1962), Kozel and Alderman (1990). With the increase in remittances received by the household, the probability of poverty reduces, by 32.1 percent. These results support the studies by Inoue (2018) and Vacaflor (2018). The probability of poverty declines by 7.5 percent, if the household have the access to credit or availability of credit facilities. [Pitt and Khandker (1998), Remenyi and Benjamin (2000), Coleman (2002), Khandker (2003) and Quach et al., (2005)].

The probability of poverty decreases by 6.6 percent if the number of earners in the household increases by one person [Sikander and Ahmed (2008), Ahmed and Sadaqat (2016)]. There is 3.3 percent probability of reducing poverty, with the increase in the value of the physical assets of the household [Ravallion & Jalan, (1998), Sackey (2005), Bigsten and Shimeles (2008)].

Table 2: Descriptive Analysis of Poverty in Southern Punjab.

Variables	Mean	Standard Deviation
Poverty	0.40	0.49
Mental Disability	0.09	0.29
Value Of Physical Assets	4834496	11281889
Number Of Earners in the Household	2.04	1.08
Occupation	0.57	0.50
Own House	0.90	0.30
Remittances	0.12	0.32
Spouse's Participation	0.16	0.37
Household Size	6.34	2.55
Education of Household Head	8.29	5.56
Age of the Household Head	48.18	12.76
Dependency Ratio	0.75	0.73
Access to Credit	0.12	0.33
Physical Disability	0.11	0.31

Source: Survey data, 2019

Table 3: Correlation Analysis of Poverty and its Correlates in Southern Punjab

Probability	Y	HAGE	HSIZE	HEDU	OCC	DR	MI	PD	OH	SP	REM	CRD	NOEIH	PHYASSET
Y	1.000													
HAGE	-0.111 (0.000)	1.000												
HSIZE	0.237 (0.000)	0.322 (0.000)	1.000											
HEDU	-0.578 (0.000)	-0.056 (0.066)	-0.146 (0.000)	1.000										
OCC	0.470 (0.000)	-0.020 (0.514)	0.089 (0.004)	-0.600 (0.000)	1.000									
DR	0.329 (0.000)	-0.135 (0.000)	0.195 (0.000)	-0.184 (0.000)	0.181 (0.000)	1.000								
MI	0.334 (0.000)	-0.058 (0.059)	0.066 (0.031)	-0.254 (0.000)	0.252 (0.000)	0.068 (0.026)	1.000							
PD	0.153 (0.000)	0.153 (0.000)	0.104 (0.001)	-0.146 (0.000)	0.150 (0.000)	0.043 (0.157)	0.048 (0.116)	1.000						
OH	-0.284 (0.000)	0.146 (0.000)	0.020 (0.513)	0.183 (0.000)	-0.131 (0.000)	0.033 (0.284)	-0.146 (0.000)	-0.084 (0.006)	1.000					
SP	-0.237 (0.000)	0.144 (0.000)	0.085 (0.005)	0.127 (0.000)	-0.146 (0.000)	-0.199 (0.000)	-0.060 (0.049)	-0.009 (0.768)	0.081 (0.008)	1.000				
REM	-0.216 (0.000)	0.020 (0.512)	0.010 (0.740)	0.133 (0.000)	-0.118 (0.000)	-0.148 (0.000)	-0.063 (0.040)	0.005 (0.871)	0.121 (0.000)	0.194 (0.000)	1.000			
CRD	-0.008 (0.790)	-0.006 (0.840)	0.020 (0.508)	-0.003 (0.923)	0.066 (0.031)	0.018 (0.560)	0.031 (0.309)	0.079 (0.010)	0.012 (0.705)	0.010 (0.755)	0.050 (0.100)	1.000		
NOEIH	-0.182 (0.000)	0.356 (0.000)	0.469 (0.000)	0.089 (0.004)	-0.090 (0.003)	-0.391 (0.000)	-0.095 (0.002)	0.020 (0.523)	0.144 (0.000)	0.369 (0.000)	0.227 (0.000)	0.072 (0.018)	1.000	
PHYASSET	-0.059 (0.054)	0.035 (0.259)	-0.030 (0.323)	0.016 (0.597)	-0.076 (0.013)	0.032 (0.293)	-0.039 (0.207)	0.005 (0.860)	0.041 (0.180)	0.060 (0.051)	0.073 (0.017)	-0.038 (0.217)	0.000 (1.000)	1.000

Source: Survey data, 2019; probabilities in brackets.

Table 4: Results of the Factors Affecting Poverty in Southern Punjab

Dependent Variable: Poverty (if Poverty = 1 , Otherwise = 0)					
Variable	Marginal Effects	Coefficients	Standard Errors	z-Statistic	Probability
C	---	4.123	0.826	4.992	0.000
Household Head Age	-0.009	-0.037	0.008	-4.525	0.000
Household Size	0.086	0.370	0.056	6.566	0.000
Education of Household Head	-0.055	-0.231	0.023	-10.176	0.000
Occupation	0.178	0.745	0.228	3.269	0.001
Dependency Ratio	0.123	0.514	0.159	3.229	0.001
Mental Disability	0.662	2.765	0.564	4.898	0.000
Physical Disability	0.073	0.308	0.317	0.972	0.331
Own House	-0.429	-1.790	0.356	-5.035	0.000
Spouse 's Participation	-0.289	-1.209	0.329	-3.672	0.000
Remittances	-0.321	-1.341	0.392	-3.420	0.001
Access to Credit	-0.075	-0.314	0.292	-1.075	0.282
Number of earners in Household	-0.066	-0.277	0.129	-2.143	0.032
Value of Physical Assets	-0.033	-0.136	0.048	-2.847	0.004
McFadden R-squared		0.498	Mean dependent var		0.397
LR statistic		715.128	Prob. (LR statistic)		0.000

Source: Survey data, 2019

Table 5 presents the binomial logistic regression results of the factors affecting poverty in Multan

Division. If there is an incline in the age of the household head by one year, the probability of poverty reduces by 1.1 percent. [Datt and Jolliffe (1999)]. If the size of household increases by one person, there is 9.12 percent probability of increasing poverty, noted significant values at 1 percent level [Sikander and Ahmed (2008)]. If the household heads are one year more educated, the probability of poverty declines by 5.7 percent [Sen (1981), Arif and Farooq (2014), Ahmed and Sadaqat, (2016)]. There is 18.6 percent probability of increasing poverty if the occupation of the household head is attached with the primary sector [Mukherjee and Benson, 1998)].

An increase of dependency ratio of the family, it leads to 13.3 percent probability of increasing poverty of the household [Jamal (2005)]. With an increase of mental illness of any member in the household, the probability of poverty increases by 71.6 percent. There is 5.11 percent probability of increasing poverty of the household, if any member of the household is suffering from physical disability [Neilson et al., (2008)]. The econometric results of the own house of the household, the 43.25 percent probability of declining poverty if the household have their own house. There is 32.17 percent probability of lesser poverty of the household, if spouse's participation increases in economic activities [Mincer (1962), With the increase in remittances by one unit received by the household, the probability of poverty reduces by 39.9 percent [Ranathunga et al., (2010)]. With the increase in the access to credit or availability of credit facilities by the household, the probability of poverty declines by 5.8 percent. The probability of poverty decreases by 5.18 percent if the number of earners in the household increases by one person. There is 0.5 percent probability of reducing poverty, with the increase in the value of the physical assets of the household [Hashmi et al., (2008) and Neilson at al., (2008)].

Table 5: Results of the Factors Affecting Poverty in Multan Division

Dependent Variable : Poverty (if Poverty = 1 , Otherwise = 0)					
Variable	Marginal Effects	Coefficients	Standard Errors	z-Statistic	Probability
C	---	2.463	1.489	1.654	0.098
Household Head Age	-0.011	-0.047	0.015	-3.116	0.002
Household Size	0.091	0.394	0.097	4.059	0.000
Education of Household Head	-0.057	-0.247	0.042	-5.920	0.000
Occupation	0.187	0.814	0.445	1.830	0.067
Dependency Ratio	0.134	0.581	0.284	2.047	0.041
Mental Disability	0.716	3.117	1.043	2.989	0.003
Physical Disability	0.051	0.224	0.556	0.402	0.688
Own House	-0.433	-1.883	0.612	-3.075	0.002
Spouse 's Participation	-0.322	-1.400	0.640	-2.189	0.029
Remittances	-0.399	-1.734	0.754	-2.300	0.021
Access to Credit	-0.058	-0.252	0.525	-0.480	0.631
Number of earners in Household	-0.051	-0.224	0.250	-0.897	0.370
Value of Physical Assets	-0.005	-0.020	0.083	-0.237	0.813
McFadden R-squared		0.546	Mean dependent var		0.358
LR statistic		268.565	Prob. (LR statistic)		0.00

Source: Survey data, 2019

Table 6 presents the binomial logistic regression results of the factors affecting poverty in Bahawalpur division. With an increase in household head age by one year, the probability of poverty reduces by 1.1 percent. If the size of household increases by one person, there is 7.5 percent probability of increasing poverty [Gang et al., (2008) and Hashmi et al., (2008)]. If the household head is one year more educated,

the probability of poverty declines by 6.1 percent. [Datt and Jolliffe (1999)]. There is 12.2 percent probability of increasing poverty if the occupation of the respondent is associated with the primary sector. Due to the increase in dependency ratio there is 16.2 percent probability of increasing poverty of the household. [Hashmi et al., (2008)]. With the presence of mental disability of any member in the household, the probability of poverty increases by 82.6 percent. There is 2.7 percent probability of increasing poverty if any member of the household is suffering from physical disability. There is 32.4 percent probability of declining poverty if the household have their own house. If there is spouse's participation in economic activities, there is 41.8 percent probability of declining poverty of the household. With the increase in remittances received by the household, the probability of poverty reduces by 21.5 percent. The probability of poverty declines by 20.4 percent, if the household have the access to credit or availability of credit facilities. The probability of poverty decreases by 3.3 percent if the number of earners in the household increases by one person. There is 8.1 percent probability of reducing poverty, with the increase in the value of the physical assets own by the household.

Table 7 presents the binomial logistic regression results of the factors affecting poverty in D.G. Khan division. With the increase in the household head age by one year, the probability of poverty reduces by 0.7 percent. If the size of household rise by one member, there is 11.9 percent probability of increasing poverty. If the household head is one year more educated, the probability of poverty declines by 5.9 percent [Arif and Bilquess (2007)]. There is, 19.8 percent probability of increasing poverty if the occupation of the respondent is associated with the primary sector [Kar and Marjit, (2001)]. Due to the increase in dependency ratio, lead to 7.3 percent probability of increasing poverty of the household. [Dreze and Srinivasan (1997)]. With the increase in mental disability of any member in the household, the probability of poverty increases by 48.2 percent. There is 19.2 percent probability of increasing poverty, if any member of the household is suffering from physical disability. This shows that its 49.5 percent probability of declining poverty if the household have their own house. If there is spouse's participation in economic activities, there is 5.5 percent probability of lowering poverty of the household. An increase in remittances received by the household, the probability of poverty reduces by 45.8 percent [Arif and Bilquees (2007); Hashmi et al., (2008)]. The probability of poverty declines by 9 percent, if the household have the access to credit or availability of credit facilities. However, the probability of poverty decreases by 12.6 percent if the number of earners in the household increases by one person. There is 3.4 percent probability of reducing poverty, with the increase in the value of the physical assets of the household [Ahmed and Sadaqat (2016)].

Table 6: Results of the Factors Affecting Poverty in Bahawalpur Division

Dependent Variable: Poverty (if Poverty =1, Otherwise = 0)					
Variable	Marginal Effects	Coefficients	Standard Errors	z-Statistic	Probability
C	---	7.168	1.644	4.359	0.000
Household Head Age	-0.011	-0.046	0.015	-2.996	0.003
Household Size	0.075	0.316	0.102	3.086	0.002
Education of Household Head	-0.061	-0.258	0.045	-5.762	0.000
Occupation	0.122	0.511	0.438	1.166	0.244
Dependency Ratio	0.162	0.681	0.309	2.203	0.028
Mental Disability	0.826	3.467	1.306	2.655	0.008
Physical Disability	0.027	0.115	0.580	0.198	0.843
Own House	-0.324	-1.362	0.629	-2.164	0.031
Spouse 's Participation	-0.418	-1.756	0.675	-2.600	0.009
Remittances	-0.215	-0.905	0.676	-1.338	0.181
Access to Credit	-0.204	-0.857	0.773	-1.108	0.268
Number of earners in Household	-0.033	-0.140	0.239	-0.585	0.558
Value of Physical Assets	-0.081	-0.340	0.099	-3.425	0.001
McFadden R-squared		0.550	Mean dependent var		0.391
LR statistic		260.720	Prob. (LR statistic)		0.000

Source: Survey data, 2019

Table 7: Results of the Factors Affecting Poverty in D.G. Khan Division

Dependent Variable: Poverty (if Poverty = 1 , Otherwise = 0)					
Variable	Marginal Effects	Coefficients	Standard Errors	z-Statistic	Probability
C	---	4.402	1.526	2.885	0.004
Household Head Age	-0.007	-0.030	0.014	-2.138	0.033
Household Size	0.119	0.483	0.109	4.423	0.000
Education of Household Head	-0.059	-0.239	0.040	-5.906	0.000
Occupation	0.198	0.802	0.366	2.194	0.028
Dependency Ratio	0.073	0.294	0.269	1.092	0.275
Mental Disability	0.482	1.950	0.859	2.271	0.023
Physical Disability	0.192	0.777	0.592	1.312	0.190
Own House	-0.495	-2.003	0.715	-2.799	0.005
Spouse 's Participation	-0.055	-0.222	0.529	-0.421	0.674
Remittances	-0.458	-1.851	0.838	-2.210	0.027
Access to Credit	-0.090	-0.364	0.452	-0.806	0.420
Number of earners in Household	-0.126	-0.509	0.227	-2.237	0.025
Value of Physical Assets	-0.034	-0.137	0.088	-1.552	0.121
McFadden R-squared		0.468	Mean dependent var		0.447
LR statistic		217.183	Prob. (LR statistic)		0.00

Source: Survey data, 2019

Table 8 presents the comparative analysis of the econometric results of the factors affecting poverty in Southern Punjab and its division,

Table 8: Comparative Analysis of Factors Affecting Poverty in Southern Punjab and its Division

Dependent Variable: Poverty (if Poverty = 1 , Otherwise = 0)				
Variable	Marginal Effects Multan Division	Marginal Effects Bahawalpur Division	Marginal Effects D.G. Khan Division	Marginal Effects Southern Punjab
C	---	---	---	---
Household Head Age	-0.011 (0.015)	-0.011 (0.015)	-0.007 (0.014)	-0.009 (0.008)
Household Size	0.091 (0.097)	0.075 (0.102)	0.119 (0.109)	0.086 (0.056)
Education of Household Head	-0.057 (0.042)	-0.061 (0.045)	-0.059 (0.040)	-0.055 (0.023)
Occupation	0.187 (0.445)	0.122 (0.438)	0.198 (0.366)	0.178 (0.228)
Dependency Ratio	0.134 (0.284)	0.162 (0.309)	0.073 (0.269)	0.123 (0.159)
Mental Disability	0.716 (1.043)	0.826 (1.306)	0.482 (0.859)	0.662 (0.564)
Physical Disability	0.051 (0.556)	0.027 (0.580)	0.192 (0.592)	0.073 (0.317)
Own House	-0.433 (0.612)	-0.324 (0.629)	-0.495 (0.715)	-0.429 (0.356)
Spouse's Participation	-0.322 (0.640)	-0.418 (0.675)	-0.055 (0.529)	-0.289 (0.329)
Remittances	-0.399 (0.754)	-0.215 (0.676)	-0.458 (0.838)	-0.321 (0.392)
Access to Credit	-0.058 (0.525)	-0.204 (0.773)	-0.090 (0.452)	-0.075 (0.292)
Number of Earners in Household	-0.051 (0.250)	-0.033 (0.239)	-0.126 (0.227)	-0.066 (0.129)
Value of Physical Assets	-0.005 (0.083)	-0.081 (0.099)	-0.034 (0.088)	-0.033 (0.048)
McFadden R-squared	0.546	0.550	0.468	0.498
LR statistic	268.56	260.72	217.18	715.12
Mean dependent var	0.358	0.391	0.447	0.397
Prob. (LR statistic)	0.000	0.000	0.000	0.000

Source: Survey data, 2019; Standard errors in brackets.

Table 9: Poverty Status at National Poverty line

Regions	Location	Poor	Non Poor	Total Households	Poverty Incidence (%)	Poverty Gap (%)	Squared Poverty Gap (%)
Southern Punjab	Total	299	769	1068	27.99	10.55	5.06
	Rural	272	552	824	33.00	12.78	6.20
	Urban	27	217	244	11.06	3.03	1.20
Multan Division	Total	101	276	377	26.79	10.14	4.84
	Rural	90	193	283	31.80	12.44	6.01
	Urban	11	83	94	11.70	3.21	1.29
Bahawalpur Division	Total	98	255	353	27.76	10.61	5.03
	Rural	87	177	264	32.95	12.8	6.16
	Urban	11	78	89	14.10	4.01	1.29
D.G. Khan Division	Total	100	238	338	29.58	10.95	5.33
	Rural	95	182	277	34.29	13.07	6.43
	Urban	5	56	61	8.19	1.33	0.31

Source: Survey data, 2019

Table 10: Poverty Status at International Poverty line

Regions	Location	Poor	Non-Poor	Total Households	Poverty Incidence (%)	Poverty Gap (%)	Squared Poverty Gap (%)
Southern Punjab	Total	425	643	1068	39.79	22.93	15.31
	Rural	348	476	824	42.23	26.30	18.04
	Urban	77	167	244	31.15	11.52	6.11
Multan Division	Total	135	242	377	35.80	21.87	14.72
	Rural	109	174	283	38.51	25.53	17.60
	Urban	26	68	94	27.65	10.83	6.05
Bahawalpur Division	Total	138	215	353	39.90	22.86	15.32
	Rural	110	154	264	41.16	26.40	18.12
	Urban	28	61	89	31.46	12.34	6.99
D.G. Khan Division	Total	151	187	338	44.67	24.18	15.97
	Rural	129	148	277	46.57	27.00	18.41
	Urban	22	39	61	36.06	11.38	4.91

Source: Survey data, 2019

5. Concluding Remarks

This paper explains the poverty status and factors Affecting poverty in Southern Punjab, consisting of three divisions which are Multan, Bahawalpur and D.G. Khan division. The study consisting of 1068 observations, using Binomial Logit regression is used for empirical analysis. The poverty status is measured with the help of head count poverty ratio and after comparative analysis, hence concluded that D.G Khan division is the poorest division (29.58%) based on national and (44.67 %) at international poverty line in Southern Punjab, Pakistan.

The finding concludes that house hold size, occupation of the household head in the primary sector, dependency ratio, physical disability and mental disability shows a positive correlation with poverty of the household in Southern Punjab. However, the education of the household head, remittances, spouse's participation, number of earners in the household, access to credit, own house and value of physical assets shows a negative correlation with poverty in Southern Punjab.

The analysis discussed above assist the policy makers to clearly identify the factors for poverty alleviation in Southern Punjab. Poverty can only be reduced by generating employment opportunities for the people in the country. Government should establish different scientific, technical training, and skill development schools and institutes for both male and female workers to increase their productivity so they can collectively contribute in raising the real GDP of the poor countries like Pakistan.

Moreover, provision of educational facilities are crucial equally for males and females in the society. As drawn from the conclusion that spouse participation mitigates the poverty, therefore suggested that educational attainment for females are likewise mandatory and essential. Government should develop strategies to encourage and support female participation in economic activities so they not only become financially strong but also contribute in the growth and development of the poor countries like Pakistan.

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