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Analysis of Poverty Determinants in Pakistan: Insights from Household-Level Data

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ABSTRACT

The study identifies different household-level determinants of poverty in Pakistan. The study makes use of PSLM (Pakistan Social and Living Standard Measurement) data for the year 2019–2020. By evaluating the Logit and Probit Regression model, this study identifies economic factors that contribute to poverty. According to the findings, poverty is positively correlated with the dependence ratio and the number of people with disabilities. In addition, households with literate household heads have lower rates of poverty. Similarly, household heads, urban residents are more likely to have lower levels of poverty than rural residents. Moreover, Sindh has the highest level of poverty whereas KP has the lowest. Therefore, poverty may be decreased by offering free education, job opportunities, and good planning for population expansion. Because family size has a direct impact on dependence ratio, governmental efforts to reduce household size must be encouraged. In a similar manner, rehabilitation programs should be created, and monthly transfer payments should be provided to people with disabilities. Therefore, initiatives must be taken to reduce the disparities in the country's infrastructure, health, and education.

1 Introduction

Many researchers interpret poverty differently because it is multidimensional. The most generally used definition, however, is the poverty line, which assesses the lack of income (or the corresponding spending and consumption) required to satisfy necessities. (Manjengwa et al., 2016). Suppa (2016) defines poverty as a lack of necessities, inadequate income, and spending, all of which have a variety of negative consequences on people's life. Lack of material resources and inadequate wages are the usual definitions of poverty (Bossert et al., 2013). People who live in poverty and lack the means to meet their basic needs have a level of living that is below what is the poverty line in terms of either consumption or income (Ullah & Routray, 2007; Akinbobola & Saibu, 2004).

According to estimates from the World Bank, more than two million people in Pakistan are now considered to be living below the poverty line, increasing the country's poverty rate from 4.4% to 5.4% in 2020. The WB forecast that Pakistan's poverty rate was 39.3% in 2020–21, would stay at 39.2% in 2021–22, and might drop to 37.9% by 2022–23 using the lower-middle income poverty rate, according to The News International. Furthermore, using the upper-middle-income poverty rate, the global financial institution calculated that poverty stood at 78.4 percent in 2020-21, 78.3 percent in 2021-22, and is anticipated to fall to 77.5 percent in 2022-23. According to the World Bank, 40% of

Pakistani families experienced moderate to severe food insecurity. In 2014, around 40% of the total population of Pakistan experienced multidimensional poverty while in 2018 the poverty headcount ratio of Pakistan, at the international 1.90 US$ per person per day poverty line, was around 4.4% (World Bank, 2020). Moreover, the poverty scenario in Pakistan can also be understood from the statistic that in 2016 around 44% (22.8 million) of Pakistan's child population within the age cohort of 5–16 years were estimated to be unable to join school due to poverty UNICEF (2017). Furthermore, as many as 75 out of every 1000 infants in Pakistan before the age of five due to inadequate health facilities (World Bank, 2020). These numbers show that poverty is, in fact, a problem for a developing economy like Pakistan, hence it is important to investigate the macroeconomic factors that contribute to poverty in this nation.

According to UNDP (2020), Pakistan's population had a poverty rate of 23% in 1987–1988, 28% in 1996–1997, 30% in 1998–1999, 33% in 2004–2005, 38% in 2010–2011, 38% in 2015–2016, and 37% in 2018–2019. Fig. 1 provides a visual explanation of this pattern of poverty.

Fig 1: Population below Poverty line in Pakistan

Table 1

Population Below Poverty Line

Years	1987-1988	1996-97	1998-99	2004-2005	2010-2011	2015-2016	2018-019
Poverty trend in PK	23%	28%	30%	33%	38%	38%	37%

Note: Calculated by author

Approximately 902 million of the population live below the poverty line in the world; however, the ratio of Poverty is varied from country to country and from region to region, i.e. the highest poverty is recorded at 32.2% in Sub-Saharan Africa, 13.5 % in South Asia, 6.6% in Latin America, and 4.1 % in East Asia Pacific. Accordingly, 37% of the population is living below the poverty line in Pakistan. Although 12.5 % of the poor are living in Urban areas while 30.5 % of the poor population living in rural areas. The provincial-level poverty statistics are, 32.5% in Punjab, 43% in Sindh, 50% in KPK and, 71% in Baluchistan (GOP, 2017-2018). Due to the Covid-19 pandemic, 150 million more people in the world fall into extreme poverty. A report published by UNDP (2020, Jun) stated that Pakistan suffers 2.45% additionally from food insecurity during COVID-19.

Most of the research on household poverty in Pakistan so far has only been done in a few locations (Waheed et al., 2020; Khan et al., 2020; Guriro et al., 2019; Cheema & Sail 2014). This research highlighted the critical role that socioeconomic and demographic variables have in identifying household poverty levels in certain regions. By summarizing the factors that contribute to poverty among Pakistan's general population, this article will fill the gap. Additionally, this study will use a comprehensive framework to encompass all aspects of factors that determine poverty, including social capital, demographic factors, and factors related to human capital and disability. To investigate functional limitations (disability) in Pakistani households. This study will conclude with some policy recommendations for social safety net programs. Moreover, to analyze the varied impacts of the factors throughout the poverty spectrum, Logit and Probit regression are used to examine the determinants of poverty status.

2 Literature Review

Three types of theoretical approaches to understanding the causes of poverty have been offered over the past few decades: macro or structural level, micro or individual level (Bradshaw, 2007). Rapid technical advancements or fundamental economic changes that are accompanied by a significant number of unemployment and displacement might lead to poverty (Teitz & Chapple 1998). People's

varying investments in education and training result in a proportional return in the job market, and human capital is the stock of productive skills, talents, health, and knowledge ingrained in the labor force (Becker 1964). According to the human capital hypothesis, poverty is caused by "inadequate human capital of the labor force, which results in reduced productivity and incapacity to compete for work in the rising sector that pays sufficient salaries" (Teitz & Chapple 1998). Unlike labor economists, who ascribe poverty to differences in human capital investment and hence its return in the labor market, sociologists offer the idea of "social capital" and are increasingly focusing on how a lack of social capital leads to the prevalence of poverty. Bourdieu (2011) defines social capital as "the accumulation of real potential resources that are connected to ownership of a more or less formalized network of mutual acquaintance or recognition". By offering various types of social support (Vu 2010) and leveraging resources, ideas, and information beyond the regular community connection (Knack 1999), social capital can act as a coping function in the face of poverty. The idea of status attainment focuses on how one's place in society is influenced by both accomplished and assigned traits such as parental background, age, race, gender, and handicap (Blau & Duncan 1967). Poverty, a negative economic consequence, is unequally distributed among educational levels, age groups, gender groups, and ethnicity groups. A life event argument, which sees poverty as a life cycle risk connected with particular life events, has questioned the social stratification approach's permanent and hierarchical structure of poverty (Leisering & Leibfried, 2003; , 2011). The emergence of the life event approach in the study of poverty is related with an increase in "new social risk" as a result of labor market and family formation changes in the post-industrial eras (Taylor-Gooby 2004).

According to Islam et al., 2017, neither gender nor religion significantly affects whether a household in Bangladesh is in poverty. The main determinants of poor status, however, include age, rural-urban distribution, education, married status, handicap, remittance, and regional difference. The most effective way to lower the prevalence of poverty is via education and training. Older and larger households are more likely to become impoverished. According to Lekobane and Seleka (2017), family size, dependence ratio, and household age all have a positive link with poverty. Households with working heads and higher educational levels are less likely to be impoverished. Households that have never married and are widowed, as well as those who live in rural areas, are more likely to be impoverished in Botswana. Male-headed households, married households, family size, self-employment, and government work vs wage employment all raise the likelihood of falling into poverty in Punjab, but educational attainment decreases the likelihood of falling into poverty (Iqbal et al., 2020). According to Shaukat et al. (2019), household size, dependence ratio, gender, and age of the household head all have a substantial impact on poverty status. Higher education reduces the chance of poverty, whereas the dependence ratio has the reverse effect. According to the findings of Sekhampu (2013), employment status, age of the head of the home, and household size are all important predictors of poverty. The age and work status of the head of family lower the likelihood of being poor, however bigger households were related with a higher likelihood of being poor. A high dependence ratio, as well as household engagement in firewood-selling activities, enhanced the chance of poverty.

To investigate the link between livelihood strategy and poverty, Barati et al. (2022) investigated the measuring index of multidimensional poverty status in the rural region of Iran. The MPI index and the Fuzzy method were employed in the study. Poverty is influenced by a variety of factors, including household condition, household education, family size, family strategy, distance from the center, and access to natural resources. Furthermore, big family size homes were more impoverished than others. The findings also revealed that poverty in rural livelihoods rose as a result of reliance on the agriculture industry and unemployment.

Gautam et al. (2021) investigated the internal link between poverty and non-climatic variation in rural farm-based families in Nepal's Gabdki Province. Three hundred sample sizes from three separate groups were obtained. The Binary Probit Regression Approach was employed in this work to use the determinants of poverty shocks. Large size, Dalit ethnic group, and farm families are characterized as impoverished. Furthermore, the study suggests that the shocks impacted households that rely on forestry, borrowing, and farmers. Pathak et al. (2021) investigated the link between multidimensional poverty and TB in India. Data from the fourth round of the National Family Health Survey for the fiscal year 2015-2016 were utilized. The survey collected 628,900 samples. Its findings revealed a substantial relationship between multidimensional poverty and tuberculosis, but not between multidimensional non-poverty and non-tuberculosis.

According to research by Jaiyeola and Bayat (2020) performed in Nigeria, poverty in rural families, the underdevelopment of skills, employment possibilities, and availability to subsidies for start-up firms have all been factors. According to Eyasu (2020), the likelihood of becoming poor grows with the size of the household head's family, but the likelihood that rural Ethiopian families would become poor reduces with non-farm income.

The main factors influencing poverty at the home level in Somalia were studied by Mohamoud and Bulut (2020). The findings showed that household size, household size access to electricity, hunting, fishing, and agriculture, as well as poverty at the household level, are all strongly correlated.

Although there isn't a direct correlation between poverty and a household's degree of education. People in Sindh's rural areas have low living standards, as demonstrated by studies by Waheed et al. (2020) and Guriro et al. (2019). A substantial correlation between poverty, education, microcredit, and land ownership was also found, according to the data. In 36 districts of Punjab, Nawaz et al. (2016) investigated the driving forces underlying the real picture of lowering numerous dimensions of poverty. The study's findings demonstrated a correlation between Punjabi poverty and low levels of education, a lack of assets, and big household sizes in Pakistan district level.

Khurram and Hassan (2019) looked at the prevalence of rural poverty. They discovered that family size had a favorable relationship with poverty. The female poverty ratio is greater than the male poverty ratio. The findings also show a negative relationship between the head of the family, education status, landowning household, monetary value of livestock, monetary value of physical assets, and household poverty status. Weather tourism decreased poverty in 29 Chinese provinces, according to Zhao and Xia (2019). The findings indicate that tourism has a long-term positive influence on poverty through reducing income disparity and poverty.

Additionally, the study suggests that in the western region of China, there is a significant correlation between poverty reduction and tourism. Rehman et al. (2020) explored that the respondents' educational levels, the number of households in need of skill or training, and the collection of recyclables had a substantial negative influence on poverty in Bangladesh.

Furthermore, increasing education levels and improving skill and training for adolescents are some of the prospects for reducing poverty. Idrees (2017) investigated poverty in the urban and rural regions of Islamabad's capital territory and each province. The research measures poverty using three distinct methods: headcount ratio, poverty gap, and square poverty gap. Furthermore, except for the capital area of Islamabad, the data demonstrate that urban poverty is lower than rural poverty in all regions. Saleem and Khan (2017) researched the poverty ratios in four Pakistani provinces, as well as urban and rural regions. According to the study's findings, multidimensional poverty was much higher in Pakistan's rural regions than in its urban regions during the five time periods studied. Memon et al. (2015) researched the rural poverty level in Pakistan's Sindh province's Tando Allayar district. The findings found that the rural chosen regions rely on traditional agriculture, inadequate infrastructure, illiteracy, and a lack of basic requirements, which hinder them from better sources of income and contribute to regional poverty. Trani et al. (2016) investigated multidimensional poverty

in Afghanistan by identifying persons with disabilities who are impoverished. According to Revandar and Minuwanthi (2020), there are many different characteristics of poverty and income that contribute to the association between age of the head of home and poverty in Sri Lanka. They show that there is an inverse relationship between the ages of the family head, low income, and multi-layered poverty using the HIES data from 2016. Furthermore, the study found that the chances of multi-layered poverty decrease from 68.18 to 69.23 years and then climb. According to Garza et al. (2021), Maxico has a high proportion of poverty among families with multiple members and households headed by women or people who speak the original language. Additionally, the age of the household has a negative link with poverty whereas the size of the family has a positive correlation.

In case of Pakistan, the structural causes of poverty were investigated by Arshad et al. (2017). The findings showed that all the explanatory factors—such as education, pay, work status, age, technical competence, etc.—are positively connected with the outcome variable. Mahmood et al. (2019), Pakistan's subjective and objective poverty levels were compared. Data from the Pakistan Panel Household Survey (PPHS) from 2010 were used by the researcher, and a total of 4,141 homes were surveyed. The results demonstrated that several factors impacted the comparison of overall non-poor subjective and poor objectives. When factors for example physical security, education, family size, and owning a home have a substantial direct relationship to lowering poverty relative to total non-poor, the household also falls below the subjective poverty threshold. Sarwar et al. (2019) examine the many forms of poverty and its causes in Pakistan. The results indicated that paid employment, household size, area, spouse, and job status all significantly and favorably affect poverty, whereas household head age, education, income, assets, spouse education, and spouse age all significantly and adversely affect poverty.

Khan et al. (2020) investigated how transfer payments affected poverty across all provinces. According to the study's findings, Punjab and KP experienced less poverty as a result of the transfer payment. On the other side, transfer payments have a beneficial effect on poverty levels in Baluchistan and Sindh. Liu et al. (2020) investigated how agriculture and remittances from abroad may help Pakistan's rural poor. In his opinion, agriculture is more successful in reducing rural poverty in the near term while international remittances have a favorable long-term influence. Farooq and Ahmad (2020) analyzed rural poverty and economic growth in Pakistan, using data from three separate time periods: 2001-2004, 2001-2010, and 2005-2010. Furthermore, the findings suggest that livestock and animal ownership have a substantial and indirect association with poverty. Land ownership has a positive and substantial association with poverty. Cheema and Nadeem (2020) investigate poverty and its "basic correlates" in four provinces of Pakistan. According to the results, poverty is lower in cities than in rural regions. According to the provincial poverty research, poverty is highest in Baluchistan and lowest in Punjab. Furthermore, remittances (domestic and foreign), education (particularly for females in rural areas), social benefits (pension and other financial benefits), and property, computer, and livestock ownership are important factors influencing poverty, whereas household size, dependency ratio, and unemployed population have a negative impact. Gul et al. (2020) investigated the association between deprivation and income inequality in Bannu, Khyber-Pakhtunkhwa, Pakistan. The findings show that unemployment, poor socioeconomic conditions, a lack of educational opportunities, and a lack of access to healthcare services are the main causes of income disparity and poverty in the chosen location. Shaikh et al. (2020) investigated the impact of COVID-19 on poverty in Pakistan. The information was gathered from 500 people in five distinct districts: Shikapur, Larkana, Sukkur, Kambershahdadkot, and Jacobabad.

3 Theoretical Framework

The classical theory of poverty view that the individuals as largely responsible for their own destiny, choosing in effect to become poor (Shikh et al., 2020). They attached the poverty with values like security, self-respect, independence, political right, vulnerability, decision making freedom, justice, social exclusion and identity. The economic point of view in measure of poverty includes consumption income and other social indicators such as literacy, nutrition, life expectancy, and infant mortality. Traditionally, the developed and developing nations used the difference of income and consumption as a measure of poverty to identify the poor population in the society (Wagle, 2006). The modern perspective of poverty defined by the World Bank as; "Poverty is lack of food, clean water, hygiene, shelter, education, health facilities, unemployment, and lack of representation and freedom" (World Bank: 2009). World Bank (2018) defines poverty as, "the extreme poor as those living on less than $1.90 a day". In case of Pakistan poverty problem exist from independent to till now.

The factors that influenced poverty are disability, dependency, age, education, male household head, and married household head. The disability age and dependency ratio have positive relationship on poverty. While education, male household's head, and married household's head have a negative relationship on poverty. The household Survey data of Pakistan Social and living standard measurement (PSLM) 2019-2020 is used in this study. The data is collected and organized "by the Pakistan Bureau of Statistics" (PBS). The collected data is an important source of information for households in Pakistan.

The sampling procedures were used by Pakistan Bureau of Statistics (PBS) is "two stage stratified random sampling". The survey includes rural and urban areas of KP, Punjab, Baluchistan, Sindh, Islamabad, Gilgit Baltistan and Azad Jammu & Kashmir. In the previous PSLM, 2018-2019 survey the total numbers of sample size consists of 5,300 blocks (one block consists of 200 to 250 houses) which were approximately covered 80,000, households. While Pakistan social and standard measurement PSLM 2019-2020 survey have total numbers of sample size consist of 6,500 blocks which were approximately covering 195,000 households. Furthermore, in the present survey, 607 blocks were dropped due to the Covid-19 pandemic, Security issues, and military restricted areas. The details of dropped urban and rural areas in the country areas listed under. Shah et al. (2020) estimated the poverty line. For calculating poverty, the first step is to select an appropriate poverty line, which was presented by the planning commission of Pakistan in 2015-2016 amount of $28.91 per person per month and found at $1 is equal to RS 104. The international poverty line estimates that the very poor are those who live on less than $1.90 per day (World Bank 2018). We used the PSLM survey data 2019-2020 to calculate the poverty line based on the international poverty line. For example, $1 is equal to (RS 159.4) and $1.90 dollars is equal to (RS 303). Based on the international poverty line, a person with a daily income of less than RS 303 in Pakistan is considered poor. According to our results, 66% of the population's per day income is less than RS 303 per day.

Idrees (2017); Khurram and Hassan (2019) followed to indicate our dependent variable i.e., poverty, at the household level. The reduction of poverty is the first goal among 17 sustainable development goals. Poverty is a dummy or binary variable. We take the value of 1 for poor and the value of zero for non-poor. Furthermore, if the income of a household is less than $1.90 or less than RS 303 per day, the household is considered poor, while if the household's income is more than $1.90 or more than RS 303 per day, the household is considered non-poor.

The age of household's head is essential in explaining being poor or non-poor. The age of the household's head is defined a nonlinear function. When the age is less than 15 years, poverty is appearing, when he or she is dependent. After 60 years of age likelihood of poverty again appearing. From the PSLM Survey 2019-2020 we select age as a complete year of head of household. Study takes age as continuous variable.

The Sustainable Development Goals (SDGs) consists of 17 goals. The PSLM survey 2019-2020 reported education as a 4th goal/indicator of Sustainable Development Goals. The study takes

education is a dummy variable, and value 1 is selected for literate and value "0" is selected for illiterate.

Conceptually the unmarried single women are more likely poor than married women as a household's head. The head of household is divided into two categories: Married and Unmarried. According to our study we take the married head of household as a dummy variable the value 1 for married head of household and the value 0 for otherwise.

Families consist of male and female members. In this study we take male as a head of household. Male is a dummy variable we take value 1 for male head of household and value 0 for otherwise.

The study takes Dependency Ratio (DR) or dependent persons as a continuous variable. The dependent persons include persons of age less than 14 years and greater than 64 years.

Dependency ratio (DR) = (population less than 15 years age and greater than 64 years)/(population greater than 14 years age and less than 64 years)

Region wise data of PSLM reports 2019-2020 are available. A dummy variable with value of "1" is used for Urban and value of "0" is for rural. Dummy variables of three provinces are also including in the study i.e., KP, Punjab, and Sind, while Baluchistan is selected as a reference province. The PSLM 2019-2020 report include functional limitation for the first time in the survey, because the functional limitation (Disability) is also one of the key indicators of sustainable development goals (SDGs) 2030. The functional limitation includes disabilities of seeing, hearing, walking, remembering, washing, Language etc.

Although the Linear Regression is often employed in economic as well as in social analysis as it might produce erroneous results when the dependent variable is binary/dummy. The dependent variable was estimated using Logistic Regression technique, since the sample household are either poor or non-poor. This means that households, which are poor, have value of 1, and households that are non-poor, have value of 0. In this study the Logistic Regression model with poverty dependent variables are used. Basically, the Logistic Regression Model is used to calculate the likelihood of a family falling into one of the two categories of a binary dependent variable, such as poor and non-poor. The binary Logistic model can be explained with the help of following equation.

$$y_i = E(p=1 \mid X_i) = 1/(1+e^{(-(\beta o+\sum \beta i x i))}) \qquad 1$$

Where Y indicates probability of household to be poor on the bases of the given Xi: P=1. This means that the household is poor and xi indicate the independent variable of the poverty. β_0 and β_1 are the regression coefficient where e represent the base of the natural logarithm.

In the current study, we also used Probit Regression model because the dependent variable of the study is Binary/Dichotomous in nature. We can explain the Probit Regression with help of equation.

$$p^* = a_1+a_2 X1+a_1 X2\ldots\ldots\ldots\ldots a_K XK_{(i)}+e_i \qquad 2$$

In the above equation p* is the dependent variable indicating poverty and Xi represent the determinants of poverty.

We applied marginal effect after regression. The marginal effect is generally applying both probit and logit model during regression analysis. The marginal effect indicates that how much change the probability of the dependent variable due to change in the probability of independent variables. Further, explain with the help of the equation.

$$dY/dX \qquad 3$$

In the equation, y shows the dependent variable while x shows the independent variable. If the sign of coefficient value is positive it's mean that the probability of unites increases in dependent (y)

variable due to unites change the probability of independent (x) variable. On the other hand, when the coefficient sign is negative (-) it's mean that the probability of unites decline in the dependent variable due to unites change in the probability independent variable.The following model is used to examine poverty and its determinants in Pakistan.

$$Pi=a_0+AgeHHa_1+Age2HHa_2+HHlitratea_3+MaleHHa_4+HHMarrieda_5+URBANa_6+DRa_7+KPa_8+PNJa_9+SNDa_10+D1a_11+D2a_12+D3a_13+D4a_14+D5a_15+D6a_16+aD7a_17+e \quad 4$$

In the above model P represent dependent variable (poverty) and ith represented by ("1" and "0")

Pi= 1 household i is poor

Pi= 0 household i is non-poor

AgeHH, Complete year of household's head. The age is continuous variable in the study. Age2HH taking square on age, HHL, represent household head education status, literate = "1" and "0" otherwise, MaleHH is represent male household head, (male = 1 and 0, otherwise), HHMarried is the household head married (married=1 and otherwise 0), URBAN is the household from urban area, (urban=1 and 0 otherwise), DP is number of dependent in household, KP household belong to KP, PNJ household belong to Punjab, SND household belong to Sindh and household from Baluchistan is base category. D1 seeing disability, D2, hearing disability, D3 walking disability, D4 remembering disability, D5 washing disability D6 Language disability, D7 any kind of disability, e represent error term $\alpha 0$ is intercept and $\alpha i \ldots n$ is slope parameters.

5. Analysis and Results

The descriptive data given in table 2 revealed that the overall sample size is 160,330, which, based on the current sample, represents roughly 66 percent of Pakistan's poverty level. The literature also supports our analysis, which was based on the World Bank's poverty level of $1.90, where poverty was nearly 76%. (Mahmood et al., 2019). According to the current results, the greatest age of the household's head is 99 years, the minimum age is 14 years, and the average age of the household's head is around 46 years. Pakistan has a literacy rate of 63 percent, according to the descriptive data. Similarly, 82 percent of household heads are men, while 87 percent of household heads are married. According to the outcome, 31 percent of people live in urban areas. Similarly, out of Pakistan's total population, 17 percent of people reside in KP, 50 percent in Punjab, 23 percent Sindh, and 9 Sindh of people are in Baluchistan. According to the results, there are similarly 14% of people who have vision impairment, 10% who have hearing impairment, 23% who have trouble walking, 11% who have trouble getting dressed and washing their hands, 8% who have trouble speaking, 11% who have trouble remembering, and 37% who have some form of disability.

The marginal effect after Binary Logit Regression is run for finding the most important determinants that impact poverty. Dependent variable is binary in nature having two categories; one and zero used for poor and non-poor respectively. The result of table 7 shows that the values of coefficient and standard deviation. The sign of the coefficient indicates that negative and positive relationship between variables.

The variables that impact the likelihood of a household poorness were identified using a Logistic Regression Model shows in table 7. The log likelihood value is -91220.256, which indicates a highly statistically good model. If the value of log likelihood is more negative, the model will be more good fit.

The outcome of the study shows that the coefficient of household's head age, literacy of household's head, male as a household's head, married household's head, dependency ratio, region including rural, urban and province, and functional limitations, are all statistically significant at 1 percent.

The empirical result shows the sign of age is positive and the sign of age square is negative which shows that an increase in age of a household's head by one year increases the likelihood of poorness by 2%. However, the age square shows that an increase in age of household by 1 year the likelihood of being poor decline by 0.02%. The same result discussed by (Majeed & Malik, 2015). According to life cycle theory a person has low income when he is young(means that he/she has no experience of work) as age increases he gain experience than the income level also increases after a certain limit he/she reach an old age, the income level again falling. This shows the nonlinear relationship or U-pattern.

The literacy rate is one of the key determinants of poverty. If people are literate, they will be able to escape poverty. The results indicate that if head of a household is literate, the probability of being poor is 16% less as compared to the illiterate household's head. Education is one of the main determinants to reduce poverty. Education increases the earning capacity of a person. Increase in income capacity is helping to decrease poverty of an individual.

Although both the male household head and married household head sign are also negative. If a household is headed by a male, the probability of being poor is 49 % increase as compared to the households, which are headed by a female, similarly observed by (Majeed & Malik, 2015).

If a household's head is married, the likelihood of being poor is 6% less as compared to the head of a household whose marital status is single. Deutsch & Silber (2005) argued that when head of a household is single, poverty is higher; and when he or she is married, poverty level is low.

For a household living in an urban area, the likelihood of being poor is 9% less as compared to those households living in rural areas. Similarly argued that likelihood of being poor for household's head in rural region is more as compared to urban (Iqbal et al., 2020) on the other hand (Deyshappriya & Minuwanthi, 2020) argued that living in the urban region of Pakistan has a negative relationship with poverty (Majeed & Malik, 2014).

Dependency ratio is very much linked with poverty status. High dependency brings high poverty. If dependency in a household is increased by 1 unit, so the likelihood of being poor in the household increases by 29%, similarly examined (Shah et al, 2020).

In addition, those households living in KP have 13% less probability of poorness as compared to the reference category of Baluchistan. Those households living in Punjab have 3% less probability of being poor as compared to that in Baluchistan. Households living in Sindh have 7% more likelihood of poorness as compared to that in Baluchistan.

Moreover, the disability and poverty have positive relation. If head of a household is having problem of seen/visual disability, the likelihood of being poor is increases by 3% as compared to non-disable. If a household is facing hearing disability, the possibility of being poor is increased by 3% as compared to non-disable of hearing. If a household is facing walking disability, the likelihood of being poor is increased by 3% as compared to non-disable of walking. If a household is facing remembering and concentrating disability, the likelihood of being poor is increased by 3% as compared to those who are not facing the problem. If head of a household is having problem of washing and dressing functional limitation (disability), the likelihood of being poor increase 5% as compare to the households which are not facing the problem. If head of a household is having a language and communicating problems, the likelihood of being poor is increasing by 6% as compared to those who are not facing the problem. If head of a household is facing any kind of disability, the likelihood of being poorness increases by 4% as compared to non-disable. Argued that disability increase likelihood of being poor, similarly result discussed by (Shah et al., 2020).

In this study we apply marginal effect after the Probit Regression Model. The results of the model are shown in table 3 Based on the literature review, the present study indicates that dependency ratio functional limitation (disability) HHmales and ageHH have a positive relationship with poverty. While the age2HH, HHmales, HHliterate, HHmarried, and urban households have a negative relationship with poverty. The result shows that all the variables such as AgeHH, age2HH, HHlitrate, HHmale, HHmarried, DR, Disabilities, Urban, KP, Punjab, and Baluchistan all are statistically significant at 1% according to our hypothesis.

The log likelihood value is -91235.977, which indicates a highly statistically good model. If the value of log likelihood is more negative, the model will be more good fit. In the present study, dependency ratio includes those members of households having an age of less than 14 years and greater than 65 years. Generally, if there are more dependent persons in a family, it means a higher dependency burden, that family could be poorer. The result shows that if there is a 1 unit increase in dependency ratio, the likelihood of being poor increases by 28% also discussed by Ermiyas et al. (2019) there is positive relationship between dependency ratio and poverty. Similarly, disability has also positive impact on poverty. Disabilities can limit people's capabilities in several ways. If there is any kind of disabilities found in a family, the likelihood of poverty increased.

The empirical results given in table 8 indicates that if there are disabilities like seeing, hearing, walking, remembering and concentrating, washing and dressing functional limitation (disability), language and communicating problems, and any other kind of disability; the likelihood of being poor increases by (3%, 3%, 3%, 4%, 5%, 6%, and 3%, respectively, as compared to non-disable. Furthermore, it's examined that person with disabilities (PWDs) likelihood of being poor.

Age is also a key determinant of poverty. The sign of age is positive, and the sign of age square is negative. If age of household head is increased by one year the likelihood of being poor increase by 8% and on the other side if the age square of household head increases by one year the likelihood of being poor decreases by 0.023%. There is U-shaped relationship between age and poverty, or age of head of household and poverty has non-linear relation. With an increase in age per year after certain limit poverty again increases.

In addition, there is 45% probability of increasing poverty of the household if the head of household is male, as compared to otherwise. the literature supports our result (Majeed & Malik, 2015). Education is the most important factor that affects poverty. If the head of household is literate, the probability of poverty decreases by 16% as compared to illiterate. Similarly, we compared married and unmarried heads of households with poverty. The result showed that if household's head is married, the likelihood of being poor decreases by 6% as compared to an unmarried head of household. Generally, it's investigated that most of the population living in rural area in developing countries. Likewise, we compared urban and rural households with poverty. If a household live in an urban area, the likelihood of poverty decreases by 9% as compared to those households from rural areas. In addition, the results show that if a household belongs to KP or Punjab, the likelihood of being poor is less than 12% and 3% as compared to Baluchistan. While in the case of Sindh, the likelihood of being poor is 8% more as compared to Baluchistan. Our Results are similar with the findings of these studies for example (Lekobane & Seleka, 2017, Adjasi & Osei., 2007, Deutsch & Silber, 2005, Ermiyas et al., 2019, Deyshappriya & Minuwanthi, 2020, Rehman et al., 2020, Majeed & Malik, 2015, Rosano et al., 2009).

5 Conclusion and Recommendations

The goal of the study is to look at Pakistan's household-level factors that contribute to poverty. The Pakistan Social and Standard Measurement Survey (PSLM) 2019–2020 rounds provided the secondary data. The dependent variable was categorical or binary, hence Probit and Logit regression methods were utilized to analyze the data. According to the present study's descriptive analysis, 66% of Pakistan's population lives in poverty overall, the average age is 46, 31% of people live in urban

areas, 63% of people are literate, and dependence ratio is 43%. The regression model results indicate that the age of the household head, dependence ratio, and kind of disability (specific or general) are positively linked with the likelihood of poverty occurrence. More importantly, the presence of a disabled person in the home increases the chance of poverty compared to the absence of a disabled person. On the other hand, the education of the household head, married marital status, living in an urban region, and belonging to a reasonably advanced province are all adversely related with the chance of poverty occurrence. Moreover, families with people who are handicapped in any way are more likely to be poor. Similarly, there is a significant correlation between poverty and the number of dependent family members. In addition, when the leader of the home is married, the risk of poverty is minimal. The findings also showed that household poverty is significantly influenced by literacy rates and rural households are more likely to be impoverished than urban families. Similarly, inter-provincial comparisons revealed that Sindh has the highest household poverty rate while Khyber Pakhtunkhwa has the lowest.

Therefore, legislative measures are necessary for the disabled's livelihood, or some monetary support in the form of stipend can help reduce the effect of disability on poverty levels. Furthermore, individuals with disabilities (PWDs) have difficulty finding work, and poverty increases the likelihood of impairment, thus the government should implement a rehabilitation program for disabled people. Individual education reduces the prevalence of poverty. To that end, specific legislative measures are essential to ensure that everyone has free or low-cost access to education. To decrease rural urban disparity, initiatives must be taken to reduce disparities in infrastructure, health, and education across the area. The higher the reliance ratio, the greater the probability of poverty. As a result, encouraging governmental actions to reduce family size is necessary because it is directly tied to dependence ratio.

References

Adjasi, C. K., & Osei, K. A. (2007). Poverty profile and correlates of poverty in Ghana. International Journal of Social Economics, 34(7), 449-471.

Akinbobola, T. O., & Saibu, M. O. O. (2004). Income inequality, unemployment, and poverty in Nigeria: a vector autoregressive approach. The Journal of Policy Reform, 7(3), 175-183.

Arshed, N., Alamgir, S., & Aziz, O. (2017). Structural determinants of poverty in Pakistan. International Journal of Economics and Financial Research, 3(1), 1-7.

Barati, A. A., Zhoolideh, M., Moradi, M., Sohrabi Mollayousef, E., & Fürst, C. (2021). Multidimensional poverty and livelihood strategies in rural Iran. Environment, Development and Sustainability, 24(11), 12963-12993.

Becker, W. C. (1964). Consequences of different kinds of parental discipline. Review of Child Development Research, 1(4), 169-208.

Bossert, W., Chakravarty, S. R., & D'Ambrosio, C. (2013). Multidimensional poverty and material deprivation with discrete data. Review of Income and Wealth, 59(1), 29-43.

Bradshaw, T. K. (2007). Theories of poverty and anti-poverty programs in community development. Community Development, 38(1), 7-25.

Cheema, A. R., & Nadeem, M. Y. (2020). Poverty and its correlates in Pakistan. International Journal of Disaster Recovery and Business Continuity 11 (3), (2020), pp. 3675 – 3719.

Cheema, A. R., & Sial, M. H. (2014). Poverty and its determinants in Pakistan: Evidence from PSLM 2010-11. Journal of Poverty, Investment and Development, 5(3), 1-16.

Deutsch, J., & Silber, J. (2005). Measuring multidimensional poverty: An empirical comparison of various approaches. Review of Income and Wealth, 51(1), 145-174.

Deyshappriya, N. R., & Minuwanthi, R. (2020). Determinants of poverty: Is age non-linearly related with poverty? Evidence from Sri Lanka. International Journal of Asian Social Science, 10(4), 181-192.

Ermiyas, A., Batu, M., & Teka, E. (2019). Determinants of rural poverty in Ethiopia: A household level analysis in the case of Dejen woreda. Arts Soc. Sci. J, 10(2), 1-6.

Eyasu, A. M. (2020). Determinants of poverty in rural households: Evidence from North-Western Ethiopia. Cogent Food & Agriculture, 6(1), 1823652.

Farooq, S., & Ahmad, U. (2020). Economic growth and rural poverty in Pakistan: A panel dataset analysis. The European Journal of Development Research, 32(4), 1128-1150.

Garza-Rodriguez, J., Ayala-Diaz, G. A., Coronado-Saucedo, G. G., Garza-Garza, E. G., & Ovando-Martinez, O. (2021). Determinants of poverty in Mexico: A quantile regression analysis. Economies, 9(2), 60.

Gautam, N. P., Raut, N. K., Chhetri, B. B. K., Raut, N., Rashid, M. H. U., Ma, X., & Wu, P. (2021). Determinants of poverty, self-reported shocks, and coping strategies: Evidence from rural Nepal. Sustainability (Switzerland), 13(4), 1-20.

Government of Pakistan (GOP), Economics Survey 2017-2018, Economic Advisory Wing Islamabad.

Gul, A., Zahra, F., Iqbal, A., Ghafoor, T., & Hussain, M. (2020). Linkage between poverty, inequality, and income distribution: A case on Bannu District, Pakistan. Asian Development Policy Review, 8(4), 330-339.

Guriro, S., Mehraj, J., & Shaikh, M. A. (2019). Millennium Development Goals to Sustainable Development Goals: Poverty Reduction and Primary Education in Sindh Province of Pakistan. Indian Journal of Science and Technology, 12(39), 1-7.

Idrees, M. (2017). Poverty in Pakistan: A region-specific analysis. The Lahore Journal of Economics, 22(2), 139-163.

Iqbal, A., Siddiqui, A., & Zafar, M. (2020). A geographically disaggregated analysis of multidimensional poverty in Punjab. International Journal of Social Economics, 47(3), 365-383.

Iqbal, K., Roy, P. K., & Alam, S. (2020). The impact of banking services on poverty: Evidence from sub-district level for Bangladesh. Journal of Asian Economics, 66, 1-16.

Islam, M. S., & Alam, K. (2018). Does social capital reduce poverty? A cross-sectional study of rural household in Bangladesh. International Journal of Social Economics, 45(11), 1515-1532.

Jaiyeola, A. O., & Bayat, A. (2020). Assessment of trends in income poverty in Nigeria from 2010–2013: An analysis based on the Nigeria General Household Survey. Journal of Poverty, 24(3), 185-202.

Khan, M. R. S., Iqbal, J., Khan, M. S. U., & Bilund, M. M. I. (2020). Estimating the Impact of Transfer Payments on Poverty in Pakistan. Iqra Journal of Business and Management (IJBM), 4(2), 2020.

Khurram, S., & Hassan, M. U. (2019). Exploring the incidence and correlates of rural poverty in Pakistan. Pakistan Economic and Social Review, 57(1), 69-92.

Leisering, L. (2003). The two uses of dynamic poverty research–Determination and contingent models of individual poverty careers. University of Bielefeld, Institute for World Society Studies, Social Policy–Working Paper, (6).

Lekobane, K. R., & Seleka, T. B. (2017). Determinants of household welfare and poverty in Botswana, 2002/2003 and 2009/2010. Journal of Poverty, 21(1), 42-60.

Liu, F., Li, L., Zhang, Y., Ngo, Q. T., & Iqbal, W. (2021). Role of education in poverty reduction: macroeconomic and social determinants form developing economies. Environmental Science and Pollution Research, 28(44), 63163-63177.

Mahmood, T., Yu, X., & Klasen, S. (2019). Do the poor really feel poor? Comparing objective poverty with subjective poverty in Pakistan. Social Indicators Research, 142(2), 543-580.

Mahmood, T., Yu, X., & Klasen, S. (2019). Do the poor really feel poor? Comparing objective poverty with subjective poverty in Pakistan. Social Indicators Research, 142, 543-580.

Majeed, M. T., & Malik, M. N. (2015). Determinants of household poverty: Empirical evidence from Pakistan. Pakistan Development Review, 54(4), 701-717.

Manjengwa, J., Matema, C., & Tirivanhu, D. (2016). Understanding urban poverty in two high-density suburbs of Harare, Zimbabwe. Development Southern Africa, 33(1), 23-38.

Memon, A. W., Magsi, Inayatullah. & Magsi, Habibullah (2015). Prevalence of rural poverty in Sindh, Pakistan: case of TandoAllahyar District. Euro Acad Res, 2, 13296-13307.

Mohamoud, A. M., & Bulut, E. (2020). Determinants of poverty in Somalia: A logit model analysis. Fiscaoeconomia, 4(2), 437-451.

Nawaz, S., & Iqbal, N. (2016). Education poverty in Pakistan: A spatial analysis at district level. Indian Journal of Human Development, 10(2), 270-287.

Pathak, D., Vasishtha, G., & Mohanty, S. K. (2021). Association of multidimensional poverty and tuberculosis in India. BMC Public Health, 21(1), 1-12.

Rahman, M. Z., Siwar, C., & Begum, R. A. (2020). Eradicating poverty among the waste workers through waste collection? A case study of Dhaka City. International Journal of Environment and Waste Management, 26(1), 85-101.

Ravindra Deyshappriya, N. R., & Minuwanthi, R. W. W. (2020). Determinants of poverty: Is age non-linearly related with poverty? Evidence from Sri Lanka. International Journal of Asian Social Science, 10(4), 181-192.

Rosano, A., Mancini, F., & Solipaca, A. (2009). Poverty in people with disabilities: Indicators from the capability approach. Social Indicators Research, 94(1), 75-82.

Saleem, H., & Khan, M. B. (2017). Multidimensional poverty in Pakistan: A policy perspective. In Proceedings of the International Conference on Poverty and Sustainable Development, 4(1), 35-51.

Sarwar, W., Bukhari, N., Awan, M. A., & Altaf, M. (2019). Construction of poverty index identifying potential household factors impacting poverty in Pakistan. International Journal of Research Scholars (IJRS) 3(2), 1-6.

Sekhampu, T. J. (2013). Determinants of poverty in a South African township. Journal of Social Sciences, 34(2), 145-153.

Shah, S. Z. A., Chaudhry, I. S., & Farooq, F. (2020). Poverty status and factors affecting household poverty in Southern Punjab: An empirical analysis. Journal of Business and Social Review in Emerging Economies, 6(2), 437-451.

Shaikh, D. F. M., Memon, A. R., & Shaikh, K. (2020). Impact of Covid-19 coronavirus on poverty in Pakistan: a case study of Sindh. International Journal on Economics, Finance and Sustainable Development, 2(4), 5-16.

Suppa, A., Huang, Y. Z., Funke, K., Ridding, M. C., Cheeran, B., Di Lazzaro, V., ... & Rothwell, J. C. (2016). Ten years of theta burst stimulation in humans: established knowledge, unknowns and prospects. Brain Stimulation, 9(3), 323-335.

Taylor-Gooby, P. (2004). New social risks in postindustrial society: Some evidence on responses to active labour market policies from Eurobarometer. International Social Security Review, 57(3), 45-64.

Teitz, M. B., & Chapple, K. (1998). The causes of inner-city poverty: Eight hypotheses in search of reality. Cityscape, 33-70.

Teitz, M. B., & Chapple, K. (1998). The causes of inner-city poverty: Eight hypotheses in search of reality. Cityscape, 33-70.

Trani, J. F., Kuhlberg, J., Cannings, T., & Chakkal, D. (2016). Multidimensional poverty in Afghanistan: Who are the poorest of the poor? Oxford Development Studies, 44(2), 220-245.

Ullah, A. A., & Routray, J. K. (2007). Rural poverty alleviation through NGO interventions in Bangladesh: How far is the achievement? International Journal of Social Economics, 34(4), 237-248.

UNICEF. (2016). Retrieved from https://www.unicef.org/pakistan/education

United Nations Development Program. (2020). In Pakistan, pandemic could push millions more into poverty.

Vandecasteele, L. (2011). Life course risks or cumulative disadvantage? The structuring effect of social stratification determinants and life course events on poverty transitions in Europe. European Sociological Review, 27(2), 246-263.

Wagle, U. R. (2006). Economic inequality in Kathmandu: A multi-indicator perspective. Himalayan Journal of Development and Democracy, 1(1), 1-29.

Waheed, K., Mirza, A. I., Khalid, A., & Rehman, S. U. (2020). How to deal with multidimensional urban poverty in South Asian cities: A case of Lahore metropolitan area. Journal of Innovations in Science & Technology, 2(03), 61-79.

World Bank. (2009). Retrieved from https://datatopics.worldbank.org/world-development-indicators/themes/poverty-and-inequality.html

World Bank. (2018). Retrieved from https://www.worldbank.org/en/publication/poverty-and-shared-prosperity-2018

Appendix

Table 2

Descriptive Statistics

Variables	Obvs	Mean	Stdev	Min	Max
POVERTY	160,727	0.6601131	0.473672	0	1
HHAGE	160,727	46.25344	14.41445	14	99
HHAGE2	160,727	2346.869	1406.939	196	9801
HHLITRATE	160,727	0.6387267	0.4803739	0	1
HHMALE	160,727	0.823958	0.3808594	0	1
HHMARRIED	160,727	0.8751762	0.3305221	0	1
URBAN	160,727	0.3111798	0.4629776	0	1
DEP RATIO	160,727	0.4322795	0.2933109	0	6
KPK	160,727	0.1782463	0.3827212	0	1
PUNJAB	160,727	0.4960025	0.4999856	0	1
SINDH	160,727	0.2308946	0.4214065	0	1
BALOCH	160,727	0.0948565	0.2930175	0	1
D1	160,330	0.1443211	0.3514161	0	1
D2	160,330	0.1073224	0.3095237	0	1
D3	160,330	0.2376099	0.4256202	0	1
D4	160,330	0.114545	0.318473	0	1
D5	160,330	0.1097549	0.312585	0	1
D6	160,330	0.0802595	0.2716953	0	1
D7	160,330	0.3799913	0.4853858	0	1

Source: Calculated by author.

Table 3

Disable poor and non-poor of Khyber Pakhtunkhwa

KPK	**Disable poor and non-poor**		
Disabilities	Total	Poor disable	Non poor disable
D1=Seen disability	4,014	2,280	1734
D2=Hearing disability	3,272	1,778	1494
D3=Walking disability	7,260	4,122	3138
D4=Remembering disability	3,584	2,052	1532
D5=Washing disability	3,115	1,749	1366
D6=Language disability	2,389	1,375	1323
D7=Any kind of disability	11,179	6,337	4839

Source: Calculated by author

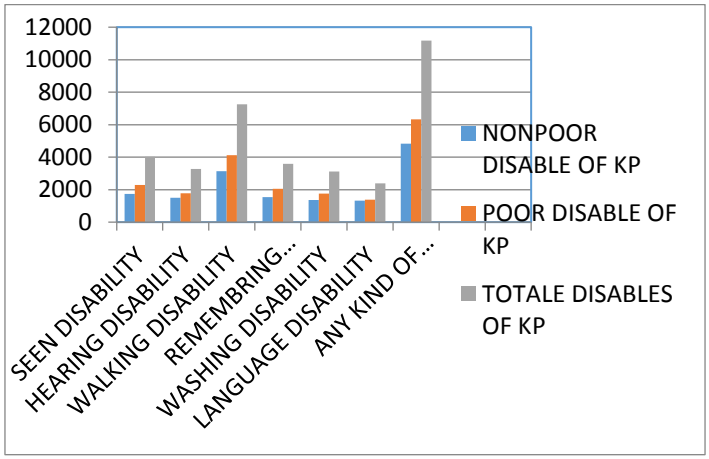

Figure 2

Descriptive Statistics of Disable Poor and Non-Poor of KP

Table 4

Disable Poor and Non-Poor of Punjab

Punjab	**Disable poor and non-poor**		
Disabilities	Total	Disabilities	Total
D1=seen disability	12282	7809	4473
D2=hearing disability	9196	6001	3195
D3=walking disability	19810	12454	7356
D4=remembering disability	9221	6146	3075
D5=washing disability	9030	6150	2880
D6=language disability	6466	4524	1942
D7=any kind of disability	32274	20471	11803

Source: Calculated by author

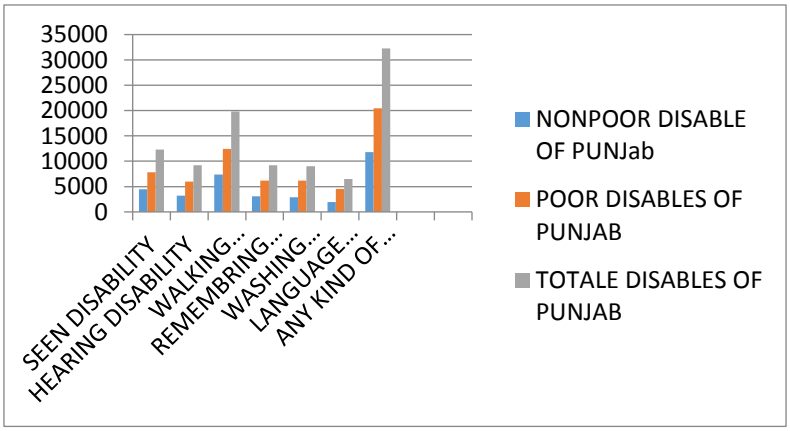

Figure 3

Descriptive Statistics of Poor Disable and Non-Poor Disable Punjab

Table 5

Descriptive Statistics of Disabled Poor and Disable Non-Poor of Sindh

Sindh	**Disable poor and non-poor**		
Disabilities	Total	Disabilities	Total
D1=Seen disability	5042	3570	1472

D2=Hearing disability	3398	2523	875
D3=Walking disability	7966	5844	2122
D4=Remembering disability	4092	3218	811
D5=Washing disability	3902	3183	719
D6=Language disability	2934	2443	491
D7=Any kind of disability	12623	9300	3323

Source: Calculated by author.

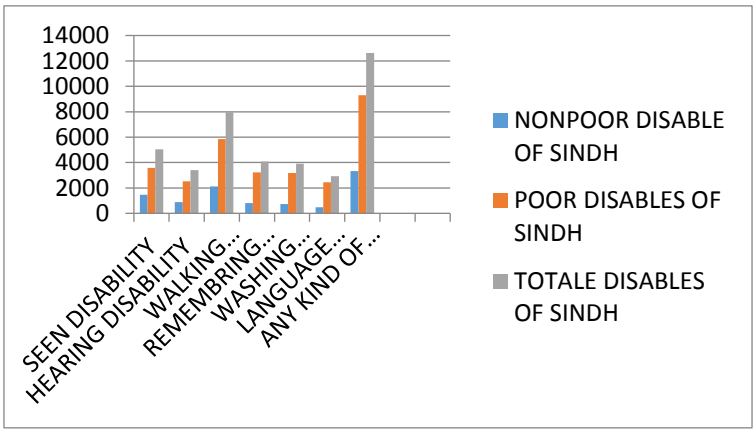

Figure 4

Descriptive Statistics of Disable Poor and Non-Poor of Sindh

Table 6

Descriptive Statistics of Disabled Poor and Disable Non-Poor of Baluchistan

Baluchistan		**Disable poor and non-poor**	
Disabilities	Total	Disabilities	Total
D1=seen disability	1801	1385	416
D2=hearing disability	1341	1043	298
D3=walking disability	3060	2385	675
D4=remembering disability	1468	1173	295
D5=washing disability	1550	1211	339
D6=language disability	1070	892	178
D7=any kind of disability	4851	3745	1106

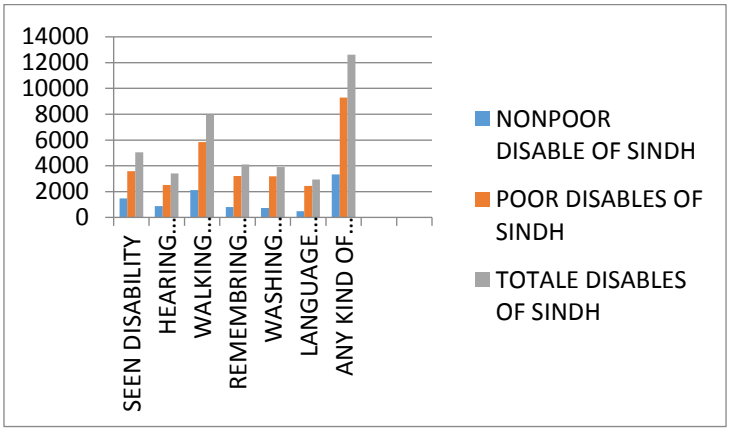

Figure 5

Descriptive Statistics of Disable Poor and Non-Poor of Baluchistan

Table 7

Results of Logit Model

VR	Logit (1)	Logit (2)	Logit (3)	Logit (4)	Logit (5)	Logit (6)	Logit (7)
Age HHH	0.0188***	0.01891***	0.01897***	0.01908***	0.01899***	0.0188***	0.01866***
	(0.00054)	(0.00054)	(0.00055)	(0.00055)	(0.00054)	(0.00054)	(0.00054)
Age2	-0.000234***	-0.00024	-0.00024***	-0.00024	-0.00024	-0.00023***	-0.00024
	(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)	(0.00001)
HHLiterate	-0.1638***	-0.1637***	-0.1638***	-0.1637***	-0.1635***	-0.1634***	-0.1639***
	(0.00254)	(0.00254)	(0.00254)	(0.00254)	(0.00254)	(0.00254)	(0.00254)
HHMale	0.4906***	0.4905***	0.4903****	0.4905***	0.4901***	0.4904***	0.4898***
	(0.00416)	(0.00416)	(0.00416)	(0.00416)	(0.00416)	(0.00416)	(0.00416)
HHMarried	-0.0693***	-0.0695***	-0.0687***	-0.0688***	-0.0688***	-0.0690***	-0.0684***
	(0.00434)	(0.00434)	(0.00434)	(0.00434)	(0.00434)	(0.00434)	(0.00435)
Urban	-0.0883***	-0.0879***	-0.0883***	-0.0877***	-0.0876***	-0.0876***	-0.08822***
	(0.00293)	(0.00293)	(0.00293)	(0.00293)	(0.00295)	(0.00293)	(0.00293)
Dep ratio	0.2969***	(0.2957)***	0.2960***	0.2935***	0.2933***	0.2932***	0.2971***
	(0.00449)	((0.00449)	(0.00449)	(0.0045)	(0.0045)	(0.0045)	(0.00449)
Kpk	-0.1246***	-0.1249***	-0.1252***	-0.1255***	-0.1244***	-0.1252***	-0.1252***
	(0.0056)	(0.0056)	(0.0056)	(0.0056)	(0.0056)	(0.0056)	(0.0056)
Punjab	-0.0326***	-0.0327***	-0.0326***	-0.0327***	-0.0325***	-0.0328***	-0.0336***
	(0.00463)	(0.00463)	(0.00463)	(.00463)	(0.00463)	(0.00463)	(0.00463)
Sindh	0.0758***	0.0760***	0.0760***	0.0756***	0.0760***	0.0756***	0.0757***
	(0.0048)	(0.00476)	(0.00476)	(0.00476)	(0.00476)	(0.00476)	(0.00476)
Disability1	0.0270***						
	(0.00347)						
Disability2		0.0314***					
		(0.00391)					
Disability3			0.0297***				
			(0.00296)				
Disability4				0.053***			
				(0.00374)			
Disability5					0.0512***		
					(0.00382)		
Disability6						0.0625***	

						(0.00432)	
Disability7							0.0347*** (0.00269)
Observation	160,330	160,330	160,330	160,330	160,330	160,330	160,330
Pseudo-R2	0.1117	0.1117	0.2119	0.1123	0.1123	0.1124	0.1122
Log likelihood	-91220.256	-91201.815	-91158.31	-91166.963	-91154.974	-92030.114	-91169.416

Note: standard errors in the parentheses. 2. ***, **, * shows 1%, 5 % and 10% level of significance.

Table 8

Results of Probit Model

VAR	**Probi (1)**	**Probit (2)**	**Probit (3)**	**Probit (4)**	**Probit (5)**	**Probit (6)**	**Probit (7)**
Age HHH	0.0184*** (0.00053)	0.0185*** (0.00053)	-0.01858*** (0.00053)	-0.0186*** (0.00053)	-0.0186*** (0.00053)	-0.0184*** (0.00053)	-0.0183*** (0.00053)
Age 2	-0.00023*** (0.00001)	-0.00023*** (0.00001)	-0.00023*** (0.00001)	-0.00023*** (0.00001)	-0.00023*** (0.00001)	-0.00023*** (0.00001)	-0.000223*** (0.00001)
HHLiterate	-0.1614*** (0.0025)	-0.1613*** (0.0025)	-0.1614*** (0.0025)	-0.1613*** (0.0025)	-0.1611*** (0.0025)	-0.1611*** (0.0025)	-0.1615*** (0.0025)
HHMale	0.4796*** (0.00424)	0.4796*** (0.00424)	0.4794*** (0.00424)	0.4796*** (0.00424)	0.4793*** (0.00424)	0.4796*** (0.00424)	0.4788*** (0.00424)
HHMarried	-0.0679*** (0.0043)	-0.0681*** (0.0043)	-0.0674*** (0.0043)	-0.0674*** (0.0043)	-0.0674*** (0.0043)	-0.0677*** (0.0043)	-0.0671*** (0.0043)
Urban	-0.0865*** (0.00287)	-0.0860*** (0.00287)	-0.0864*** (0.00287)	-0.0859*** (0.00287)	-0.0857*** (0.00287)	-0.0857*** (0.00287)	-0.0863*** (0.00287)
Dep ratio	0.0287*** (0.00434)	0.2862*** (0.00434)	0.2865*** (0.00434)	0.2840*** (0.00434)	0.2837*** (0.00434)	0.2837*** (0.00434)	0.2874*** (0.00434)
Kpk	-0.1220*** (0.00535)	-0.1223*** (0.00535)	-0.1228*** (0.00434)	-0.1229*** (0.00535)	-0.1218*** (0.0053)	-0.1226*** (0.0053)	-0.1233*** (0.0053)
Punjab	-0.0316*** (0.00449)	-0.0317*** (0.00449)	-0.0317*** (0.00449)	-0.0318*** (0.00449)	-0.0315*** (0.00449)	-0.0319*** (0.00449)	-0.0327*** (0.00449)
Sindh	0.0764*** (0.0067)	0.0766*** (0.0047)	0 .0765*** (0.00467)	0.0760*** (0.00467)	0.0766*** (0.00467)	0.0761*** (0.00467)	0.0762*** (0.00467)
Disability1	0.0266*** (0.00345)						
Disability2		0.0314*** (0.00388)					
Disability3			0 .0293*** (0.00294)				
Disability4				0.0452*** (0.00371)			
Disability5					0.0504*** (0.00378)		
Disability6						0.0620***	

						(0.00428)	
Disability7							0.0341***
							(0.00266)
Observation	160,330	160,330	160,330	160,330	160,330	160,330	160,330
Pseudo R2	0.1116	0.1116	0.1118	0.1123	0.1123	0.1124	0.1122
Log likelihood	-91235.977	-91233.319	-91216.224	-91171.852	-91180.956	-91167.575	-91183.592

Note: standard errors in the parentheses. 2. ***, **, * shows 1%, 5 % and 10% level of significance.