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ساغر صدیقی

# Working poor in Pakistan

M.Phil thesis



by

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20/M.PHIL/ECO/PIDE/2010



# **Working poor in Pakistan**

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20/M.Phil/Eco/PIDE/2010

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**The thesis is submitted to Pakistan Institute of Development Economics for  
fulfillment of the requirement of the award of the degree of  
Master's of Philosophy in Economics**

## **DEDICATION**

This humble effort is dedicated to

My Family,

My late Grand father

Muhammad Bagh Ali

My late Grand Mother

Khan Begum

&

My Friends

## **CERTIFICATE**

This is to certify that the research work embodied in this thesis entitled “**Working poor in Pakistan**” carried out by Mr. Mohammad Mohsin Latif Kiani under my guidance and supervision is original, and be accepted as fulfilling the requirement of the degree of Master’s of Philosophy (M.Phil) in Economics.

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Thesis defense date:

11<sup>th</sup> October 2013

## **DECLARATION**

I, Muhammad Mohsin Latif Kiani, hereby declare that the work contained in this thesis is my own and that other scholars' works referred to here have been duly acknowledged. I also declare that this thesis is original and has not been submitted elsewhere for a degree.

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Muhammad Mohsin Latif Kiani

11<sup>th</sup> October 2013

Date

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## **Abstract**

The study is an attempt to investigate the problem of “*working poor*” in Pakistan, its determinants, brief profile and compare our results with “*money metric poverty*”. Although the issue of working poor is not new but nascent area of exploration in the realm of poverty and the study is a first attempt to hit the grounds in Pakistan. We have used PPHS-10<sup>1</sup> household survey data to meet overall as well as specific objectives of the study. Logistic regression model for overall sampled household and urban/rural sampled households are applied because of binary nature of our dependent variable i.e. working-poor. Empirical analysis testifies our hypothesis, where explanatory variables significantly explain the behavior of dependent variable.

**Key words:** Working-poor, work-status, poverty and working household.

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<sup>1</sup> PPHS-10 was conducted by Pakistan Institute of Development Economics.

# Chapter 1

## INTRODUCTION

### 1.1 Background:

The ultimate objective of resource allocation is to reduce market frictions. This further helps to reduce poverty and include more population into opportunity horizon. The concept of poverty is as old as world itself, even before the history documented. It is believed that poverty is the problem among the people who cannot work or afford work due to any reason, thus employment is considered as best shield against poverty [Kim (1998), Kenway (2008), Bell and Newitt (2010)]. But a growing body of literature has shown that people living below the poverty line are engaged in the labor market [Cappellari (2000), Majid (2001)]. Despite their engagement in the labor market they could not move out of poverty, this clearly shows that having a job has no authenticity that of reduction in poverty [Eardley (1998), Brown *et al* (2000), Robson and Rodgers (2008), Bell and Newitt (2010)].

The *working poor* are “the people who are engaged in work but live below the poverty line” [Majid (2001), Berger and Harasty (2002), Kapsos (2004), García-Espejo (2005)]. Generally it is assumed that the working poor are the ones who are employed in a low paying job [Kim (1998)]. However, there is a difference between working poor and low paid workers. If household size is small and more than one person is working in low paying job, there is a possibility that the collective income of household is above the poverty threshold. On the other side, if the household size is large and only one person is employed in a well paying job it might be possible that the household may be classified as poor [Eardley (1998)].



The hybrid concept of working poor sticks together the working status and poverty status. Although there is no hard and fast definition of working poor, the International Labor Organization (ILO) defines it as, *those who work and belong to poor household* [Kapsos (2004)]<sup>2</sup>. The ILO estimated the overall trend of working poor in different years. In 1991, according to \$1.25 per day estimate about 38.6 percent of world population was under working poor and this percentage decreased overtime to 15.5 percent in 2010 while according to \$2 per day estimates 55.3 percent of the world population was considered as working poor and this percentage declined to 30.6 percent in 2010. These results show that the working poor have decreased in the last two decades. However, Asia had a major share in working poor. Due to socio economic reforms the working poor decreased overtime in East Asian countries whereas due to inconsistent policies South Asian countries like Pakistan, Bangladesh, India and Sri Lanka did not show satisfying results [Kapsos and Horne (2011)]<sup>3</sup>.

As the technological advancement are happening globally, the developing economies are also moving towards advance technology but their human resource development structure is not well enough keeping up the pace [Hulme (2007)]. The working people of the developing countries are not advancing their skills along with the technological advancement that hinders the way to productive employment [Crouch (1997), MacNaughton (2010)]. It is obvious from the economic theory that more the human capital is acquired lesser the chances to be poor; a rise in human capital has favorable impacts on productivity. Thus by increasing the human capital we can induce a rise in the productive employment and this will help to decrease working poor significantly [Ono and Rebick (2002)].

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<sup>2</sup> See Kapsos (2004), "Estimating growth requirements for reducing working poor: Can the world halve working poor by 2015?"

<sup>3</sup> See ILO Key Indicators of Labour Market, 7<sup>th</sup> edition---chapter 1a: "Working poor in the world: Introducing new estimates using household survey data".  
Source: ILO Employment Trends Website

Pakistan was initially an agrarian economy; however, the fruits of global technological advancement have reached Pakistan and created a shift towards industrialization. Industrial sector shares the largest component of GDP<sup>4</sup> after service sector and it covers almost 13.02% of employed labor force which created a rise in demand for the skilled and professionals which badly affected the demand for semi-skilled and un-skilled working class [Aftab (1991), Bhutta (2001)]. Changes in structure of employment and unequal distribution of wages contribute to a rise in working poor class and it does not necessarily mean that people who are engaged in low paying jobs are poor. Although poverty based on income or consumption is high in Pakistan, the main concern is that people who work still live below the poverty line; working poor is thus major issue in Pakistan [Gazdar (2004)]<sup>5</sup>.

The main reason behind the problem of working poor is that governments focus primarily on creating job opportunities but they neglect the issue of job quality; that is un-skilled and semi-skilled workers get low pay jobs and have no opportunity to enhance their skills [Eardley (1998), Jamal (2008), Kenway (2008) and Bell and Newitt (2010)]. With the effort of the ILO a “Decent Work Agenda”<sup>6</sup> has become part of the Millennium Development Goals (MDGs). This agenda aims to create opportunities for people to avail a decent and productive work prospects in an environment which ensures liberty, impartiality, sanctuary and their self-respect. To completely eradicate working poor it is mandatory to fulfill all these conditions in both developing and developed economies [ILO (1999)].

This study aims to contribute in Pakistan’s literature on poverty by estimating the “working poor” and it also makes a profile of the working poor. The study also examines the determinants of working poor. It has used the primary data set of the Pakistan Panel

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<sup>4</sup> See highlights of the Pakistan Economic Survey 2011-12

<sup>5</sup> He is the only researcher who highlighted the issue of “working poor” and its importance in a country like Pakistan, up to best of my knowledge.

<sup>6</sup> See Report of the Director-General to the International Labour Conference: *Decent work* (1999)

Household Survey (PPHS-2010) conducted by the Pakistan Institute of Development Economics.

## **1.2 Objectives:**

### **1.1.1 Overall Objectives:**

The main objective of the study is to assess the magnitude of “working poor” and factors associated to it in case of Pakistan. The specific objectives are:

- ✓ To determine the magnitude of working poor in Pakistan,
- ✓ To compare the working poverty incidence with money metric poverty; and
- ✓ To find the determinants of working poor.

### **1.3 Outline of the study:**

The study is planned in six chapters. First chapter is divided into two major sections; the first section contributes the background of study and objectives of the study are presented in second section. The next chapter presents an in-depth review of literature on working poor around the world. The third chapter is organized in seven parts; its first part deals with definitional issues of working poor, here we have discussed intellectual views and attempt to define working poor in Pakistan while the second part is about conceptual framework. Data source, data limitations, methodology, econometric model and explanatory variables are discussed afterwards. In chapter four, estimates of work status, poverty status and working poverty are presented in first section and then a brief profile of working poor is provided. The fifth chapter presents the results of logistic regression models while last chapter presents conclusions and policy implications.

## *Chapter 2*

### **Literature Review**

The main objective of this chapter is to review the existing literature related to working poverty at domestic and global level. This issue got attention in the 1970's, when after a lot of struggle economists, socialists and humanitarian organizations failed to lift the poor out of the poverty trap. Until 1970's economic reformers and socialists believe that working is the best route to escape poverty but this traditional cure of poverty totally failed when it was observed that many of the poor people work but didn't get rid of poverty. Originally the term working poor was introduced by American economists and they were considered pioneers of the issue as discussed in the literature. But latterly this issue was raised and dealt globally by the International Labor Organization (ILO) and included the issue of working poor in Millennium Development Goals (MDGs) in 2008 under Goal 1.

Working poor work hard to get rid of poverty, but they couldn't. In a society it's our moral duty to help others and people who deserve to be helped that is the poor ones, it's the failure of the whole society if these people couldn't come out of poverty despite they put their best effort by working full time round the year and fighting against forces and factors beyond their control as well [Kim (1998)]. Analysis of low pay dynamics in Italy, revealed the fact that at aggregate level 55 to 70 percent people experience low pay and these are the ones who are experiencing it also in the past [Cappellari (2000)]. It is reported that there is negative relationship between desired wage and working hours and the same is true for the non-labor income with domination of income effect [Brown, Sessions and Watson (2000)]. For the developing countries, the first effort for estimating the working poor population and its trend over time was put by Majid (2001).

From the estimates of 1997 among which 95 percent belongs to low income countries, the working poor were found to be 534 million in developing countries. In absolute terms the population of working poor decline by 0.30 percent every year, the low income countries have shown a stable behavior and declining behavior is observed in middle income countries. It was also found that working poor rate is declining at a faster pace if we look at absolute numbers [Majid (2001)].

Though high economic growth rate is an important factor to achieve lower poverty rates as it is experienced by developed countries, however high economic growth rate is not sufficient condition for poverty reduction; employment and equal distribution of resources has a deep impact on it. Labor market variables reported a probability of being poor is over 20 percent of the ones not having regular salaried work in non-agriculture [Sundaram and Tendulkar (2002)]. Analyzing child poverty in working families, it was argued that family structure and working hours are the most important variables to predict child care and reduce child poverty. It was found that the probability of child poverty in working families was reduced significantly during 1995 to 2000 [Wertheimer, Long and Jager (2002)].

For better understanding of current labor market issues related to poverty and labor market structure they are linked with social network to make a clear picture of current poverty issues in the economy. It is proposed that, poverty cannot be predicted with the help of unemployment in a country, like Pakistan; for policy making and investigation of poverty “working poor” is a better concept [Gazdar (2004)]. In Spain it was found that either low wage or characteristics of household are responsible to lead households to poverty after the analysis of occupational factors and households in relation to working poor and low pay solution. The results indicated that not all low wage workers are poor and most of the workers who doesn't receive a low wage but still belong to poor households while 1.7 percent of the workers face a serious problem as they belong to poor households and also earn low

wages [Espejo and Ibanez (2005)]. In USA working poor were 5.3 percent in 2003 the same as in 2000's report. Income distribution was found to be highly unequal in turkey; the percentage was higher in higher income group and lower in the lowest income group. The number of working poor in turkey had a share of 15 to 29 percent of total employment while 17 percent in self employed and 6 percent of employed in the European Union (EU). These results were found in the study of changing work patterns, poverty risks and labor market isolation between skilled and unskilled workers of the USA, EU and Turkey [Gundogan *et al* (2005)]. Poverty in Turkey is a result of urbanization, started since 1950's and is accelerated since 1980's due to industrialization politics further more it got speed in 1994 and 2001 with structural adjustment politics. Working poor women of Turkey believe that poverty means hunger and being employed means non poor, however they are still poor and the system doesn't allow them to break the vicious circle of poverty [Savran (2007)].

Under Food Stamp Program of US agriculture department, 26 million people were served during 2006. This study focused on the need, effectiveness and performance of the program and found that all eligible people including working poor lie within limits though uncertainty about the true participation rate still exists in some states [Cunnyngham *et al* (2007)]. There are 1.8 million children in Great Britain who belongs to working poor families, among them 340,000 children belong to lone parent families and the rest of the children belong to couple families. The situation got even worse with an increasing number of children in working poor families; almost 500,000 children were added by lone parent families over the representing period [Kenway (2008)]. Belgium also experienced the problem of working poor like other members of the European Union, though low poverty rates among the working age population are examined in earlier studies. Working poor is reported as 8.6 percent using 2003 data set; among these working poor 71.9 percent are female workers indicating that female workers are facing more poverty risk and regional estimates reported that the Walloon

region faces a poverty risk of 15.9 percent almost double than that of Flanders region but Brussels the Capital region faces a higher risk of poverty [Marx and Verbist (2008)].

The working poor phenomenon turned short-term in nature, investigated through longitudinal data of Australia. Along with working poor it was observed that high poverty rates are attached to non-working adults and Author are of the view that “non-working poor” remains the face of poverty in the new millennium [Robson and Rodgers (2008)]. In most of the developing countries it was observed that the majority of the poor people are engaged in the labor market but usually insecure and pitiful incomes. Creating job opportunities with minimal wage standard and long working hours didn't help workers to escape poverty, in-fact better job quality with flexible working hours and friendly environment can help people to get rid of poverty as ILO proposed “Decent Work Agenda” in 1999 [Bell and Newitt (2010)].

A comparative research for 27 European Union members reported working poor situation in Europe. The reported results showed that, 6 percent of all employees and 18 percent of all self employed workers are treated as poor and overall working poor rate was 8 percent according to 2007 data set. However for each member it behaves differently the highest rates were among Greece (14%), Poland (12%), Spain and Italy (11%) and Latvia and Portugal (10%) while states having lowest rates were Czech Republic (3%), Belgium, Malta and Denmark (4%). Comparing results between 2000 and 2007 it is observed that in some EU states the working poor rate has been declining (Estonia, Ireland, Malta, Netherland, Portugal and Sweden), whereas in 10 states it has been increased (Austria, Cyprus, Finland, France, Germany, Hungary, Latvia, Poland, Spain and The UK) and some states it remained stable (Belgium, Bulgaria, Czech Republic, Denmark and Norway). It is ambiguous that working poor were being affected by economic crises [Hanzl-Weib *et al* (2010)].



There is no universally accepted definition of working poor and only a few countries took the initiative to announce official definition of working poor. ILO plays a major role in shaping working poor definition and explores this issue domestically and globally. Working poor definition varies across literature as it is a hybrid concept joining two economic variables; working status and poverty status respectively. ILO defines working poor as; “*Employed persons living in households in which per-capita income/expenditure is below the poverty line*” [Kapsos (2004)], many of the studies was based on ILO’s preferred definition of working poor [Schwartz and Vology (1992); Kim (1998); Gleicher and Stevens (2005)].

Working poor definition of the United States being used by many of the researchers [Zagrosky (1991); Mosisa (2001); Stregmann-Kuhn (2004); Robson and Rodgers (2008); Gundogan *et al* (2005)]. Working poor defined by European Union according to Euro-fund Seminar Report, some of the researchers also based their studies on the EU definition [Gundogan *et al* (2005); Espejo and Ibanez (2005); Hanzl-Weib *et al* (2010)]. Discussing about nature, causes, effects and suggested policies regarding working poor families Chiman (1991) defined working poor families as; “*Families participating in the labor market but remain below poverty line*”. The poverty threshold used in this study was \$12500 for a family of four [Chiman (1991)]. “*Working poor are those who work and belong to poor households*”, and \$1 per day as the poverty threshold [Majid (2001)].

Exploring working poor in Belgium author used two definitions, one broader and other the narrower. The broad definition is: ‘*low wage workers are those individuals whose yearly wage is less than 2/3 of the median net wage for everyone who works at least one hour per week and has a strict positive wage*’ and the narrower one is defined as: ‘*full year full time (FYFT) workers with a low wage worker earning less than 2/3 of the median net wage of all FYFT workers*’, while self employees are not included in either of the above definition [Marx and Verbist (2008)].

Working poor being a hybrid concept joins two statistical units and direct estimates are not available because the joint distribution of employment and poverty is un-available. Micro

data analysis is required to estimate the number of working poor and this type of data is collected by surveys conducted by domestically as well as globally. Response variable turns up dichotomous in this type of investigation, working poor/working non-poor status. In this case, LOGIT or PROBIT Regression model is estimated using maximum likelihood estimation technique. The logistic regression model is non-linear and parameter estimation necessarily requires algorithm and computed results are expressed in probability.

Most of the researcher uses household survey, population census, panel survey, longitudinal surveys etc. While investigating effects, causes, nature and suggested policies regarding working poor families, author used household survey data (1987) of US [Chiman (1991)], Eardley (1998) also used Australian Bureau of Statistics (ABS) Survey of Income and Housing Costs (SIHC) data from 1994-1995 to examine working poor in Australia using LOGIT regression [Eardley (1998)], British Social Attitudes (BSA) survey data from 1985 to 1996 was used to investigate the problem of working poor for people aged 18 and over living in private household using LOGIT regression model [Brown, Sessions and Watson (2000)], using panel survey data from Bank of Italy form 1993 and 1995 was used to explain low pay dynamics in Italy. He adopted and extended the analytical frame work presented by Stewart and Swaffield (S&S) in 1999; the approach was an estimation of Limited Dependent Variables (LDV) models such as LOGIT and PROBIT [Cappellari (2000)]. Working poor population estimates in developing countries and its trend over time used 1980's and 1990's household survey data from World Bank [Majid (2001)]. A household analysis of working poor in Madhya Pradesh (India) using a PROBIT model framework based on unit record data from 50<sup>th</sup> Round Consumer Expenditure and Employment-Unemployment Survey from 1993 to 1994 [Sundaram and Tendulkar (2002)], unit-level data from Pakistan Integrated Household Survey (PIHS) 1998-99 was explored in order to understand the current labor market issues related to poverty dynamics in Pakistan using LOGIT model framework

[Gazdar (2004)], data based on September 2006 to February 2007 fieldwork survey for Turkey was explored in order to focus extent of women working poor [Sarvan (2007)].

Working poor evidence in Belgium was based on European Community Household Panel (ECHP) and Luxemburg Income Studies (LIS) database for year 2003 [Marx and Verbist (2008)], Income and Labor Dynamics in Australia survey was used to determine the number of working poor in Australia [Robson and Rodgers (2008)], European Union Statistics on Income and Living Conditions (EU-SILC) for 2007 was examined in order to investigate working poor characteristics, causes and trend for 27 EU members and also compared the results [Hanzl-Weib *et al*(2010)].

Longitudinal survey was also explored in different studies, longitudinal study of welfare mothers with assistance of State Department of Social Service office of US during 1994 and 1995 using LOGIT regression [Kossek *et al* (1997)], data from population survey of March 1994, US Bureau of Census was used to investigate whether American poor are lazy or not using LOGIT regression [Kim (1998)], Survey of Income and Program Participation (SIPP) from 1996 and Current Population Survey of US from 1996 to 2001 data was used to explain child poverty in working families, SIPP has limited longitudinal data which helps to explain working poor dynamics [Wertheimer *et al* (2002)].

Working poor covers a significant part of the population and were attached with low pay as well as low quality jobs and face a number of problems on the job as well. We take a look on the kind of jobs mostly they do and the problems they face. The working poor families are mainly caused by stagnant economy, inexperienced workers and women, an increase in the number of immigrants both legal and illegal and decreasing purchasing power of the working poor families [Chiman (1991)].

Problems related to carrier attainment also been a hurdle for working poor to stay in a job or organization. Executives and managers can play a major role to reduce frictions faced by

working poor by understanding their work attitudes. In most of the organizations workers had no health insurance; barriers at entry level positions, min wage, and welfare and workplace environment, all these problems are because of employer limited involvement [Kossek *et al* (1997)]. Working poor fails not because of low working hours and laziness but because of too low wages they are receiving and the nature of a job that fails to provide full-time and year-round engagement [Kim (1998)].

The working poor in Australia are mostly engaged in part time and casual work; he argued that employment structure changes and rapidly increased income inequalities are major causes of working poor growth over time [Eardley (1998)]. The working poor are attached with low wage jobs and partly employed people, changing job is a costly phenomenon so few job opportunities are available especially in the sectors entailing weekly wage jobs [Brown *et al* (2000)].

Unskilled workers face a high probability of being poor while skilled workers get the premium; machine operators and the formal manufacturing sector employed workers are poor [Gazdar (2004)]. Unqualified worker in agriculture, operators, fitters, un-qualified workers in the industry, personal and cleaning services, small contract jobs and small companies, transport service, hotel and catering; these all are low quality jobs and lead working poor. Family with one earner supporting with a low wage job, mostly female headed and lone parent family face high risk of poverty and this type of poverty is most temporary one and depends on family Lifecycle, he is of the view that second income is a key to escape from this type of poverty [Espejo and Ibanez (2005); Hanzl-Weib *et al* (2010); Bell and Newitt (2010) and Kenway (2008)].

Working poor women in Turkey are involved in house cleaners and babysitter type jobs as these are least paid, irregular and uncovered by the social security system, these women have low educations and mostly were immigrants having no contact with their town fellows and no

support from their rural relatives. Informal relations between worker and employer exploits the worker, as they got food, clothing and other household goods without any hesitation but pay it with long working hours [Savran (2007)]. Barriers in organizations hurt workers and lead working poor, emotional stress associated with the job, opportunities to improve job attachment, work performance and career attainment. He reported that a single earner running a household is attached with low paying jobs. Discrimination was found to be a more important problem to move within an organization or move to a new high paying job, urban culture and discrimination intersection also restrict the options available for working poor [Leana *et al* (2011)].

Beside the nature of job, there are some other factors that play an important role in shaping working poor lives. Along-with nature of the job these factors should be observed in policy mirror and enable working poor to get rid of poverty circle. Considering social structure, the well being of family is not all about the income, rather its healthy interaction with other families in society (Social capital). For the same reason more factors should be kept in mind while designing welfare policies for such families.

Earned Income Tax Credit (EITC), Improved Child Care Assistance, health facilities, housing subsidies, food cards for the poor children and youth are made to fight against working poor [Chiman (1991)]. Job quality was found as the most important factor especially for workers with few skills; demand side policies are required to create jobs for the low skills along with income credit and supplements and also there must be a focus on education and training programs that enhance their skills and provide them a safe path in getting full-year employment [Kim (1998)]. Marital status was found positively related with hours worked while union membership and desired hours of work behaves inversely.

Socioeconomic variables; education directly affects wages, experience had a concave impact on earnings and occupational is standing came out to be a key determinant of earnings

[Brown *et al* (2000)]. Beside labor market experience, working poor is a majorly victim of socioeconomic and demographic variables; age, gender, occupation, experience, education, marital status, region, religion, race and sector wise affiliation. In addition, one study indicates that immigration also affects job attainment process and lead working poor. Second income source is considered as best shelter against poverty, even both are in a low pay job; two incomes had significant results against poverty [Kossek *et al* (1997); Cappellari (2000); Espejo and Ibanez (2005); Gundogan *et al* (2005); Savran (2007); Marx and Verbist (2008) and Hanzl-Weib *et al* (2010)].

Creating employment opportunities and poverty reduction with better technology and enhancing productivity should remain core objective of Indian economic policies and policy maker should shift their focus from quantity to quality of jobs in other words should focus on Decent Work Agenda proposed by ILO [Sundaram and Tendulkar (2002)]. The core factors related child poverty is; family structure, race and education of parents, parental education plays a key role for children to enter and exit poverty and also higher education appears to be best escape plan of poverty. Federal welfare reform in 1995 and 1996 had significantly increased the poor children percentage living in working families, 43 percent of all poor children in 2000 belongs to families who meet working standards in comparison with 32 percent in 1995 [Wertheimer *et al* (2002)].

Redesign of two major policies used in 1990 for enhancing income of working poor families was made in a study by MaCurdy and McIntyre in 2004. These two policies, one with wage-based Earned Income Tax Credit and other is wage-subsidy Earned Income Tax Credit (EITC). Both the programs are designed to pay benefits to family's earnings as well as the wage rate received by its working members. The authors are of the view that these types of policies adversely affect the work incentives and resources. They found that wage-based EITC is less 20 percent less costly than that of current EITC and families with children

supported by low wage worker would get the same level of benefits but families supported with higher wage workers would get less while the wage subsidy program is found to be less expensive. Their policies are less costly and more beneficial [MaCurdy and McIntyre (2004)]. The Food Stamp Program is the most important component of hunger and poverty alleviation policy in America under US agriculture department. During 2006, this program had served 26 million people with an annual cost of 29 billion and on average \$211 monthly cost per household. This program is considered efficient for all eligible persons including working poor people in America [Cunningham *et al* (2007)]. The problem of working poor is common among families not working full time and there is a need to convert part time working families into full time work as much as possible through policies if the government really believes to overcome working poor and child poverty [Kenway (2008)]. Decent Work Agenda, developed by ILO in 1999 proposes an approach that helps to produce reasonable and sustainable working opportunities and was included in the Millennium Development Goals (MDGs). Many of the developing economies adopt this fresh and appealing approach to root out poverty as well as working poor [Bell and Newitt (2010)].

## **2.1 Conclusion:**

For most people of working age, the best way to avoid poverty and social exclusion is to be in paid work. But the enormous economic and social changes of the past 50 years, the reduction in demand for unskilled labor, the changing nature of employment patterns and family structure have left key groups in society stranded and unable to compete in the labor market. People perceive that working poor are those who engaged in low paid work but it was found that not all working poor are low paid workers. Investigation reveals that second income source is the best way to tackle with poverty even both of them were engaged in low pay work. Labor market problems and personal characteristics are major factors in

determining the size of working poor class. Literature found that, young workers and women are the major victims of working poverty. Educational attainment level improves the earning capability of workers and hence more educated workers are less likely to be among working poor class.

In labor market workers face a number of problems, like barriers at entry level, less experience workers got low enumeration packages, part-time work and discrimination. In developing countries like Pakistan most of the labor force is engaged in agricultural sector and are mainly self employed and unpaid family helpers. Due to technological advancement, workers of the traditional sector did not improve their skills and decrease in demand of unskilled and semi-skilled workers leaves them at the edge of poverty.

Present study is an attempt to investigate the contemporary issue and highlights the major obstacles faced by poor workers of Pakistan. Although this area is being explored in world but being neglected in Pakistan, thus the study provides a detailed discussion on the issue.



## Chapter 3

### Conceptual framework, Data sources and Methodology

There is no generally accepted definition of *working poor*, it carries various definitions across time and studies in the area. Due to non-availability of country specific definition, mostly scholars take working poor as ILO officially defines it. In Pakistan, there is no official definition of working poor. In this chapter we first explore the existing definitions of working poor around the world and attempt to define it in the context of Pakistan, followed by a discussion on the conceptual framework. Data source used in this study and its limitations, and methodology used are also part of this chapter.

#### 3.1 Concept classification:

It is commonly argued that “*poor people are poor because they do not participate in labor market*”. However, there is a group of individuals/households “*who actively participate in labor market activities but still fails to escape poverty*”, and hence the issue of working poor got attention around the world, and there is an ongoing debate on it. The notion of *working poor* is used in literature to represent those people who actively participate in labor market but still fail to escape poverty. This simplest definition of working poor has a number of meanings and dimensions. How “work” is defined; how “poverty” is measured; and who are the working poor—only working persons or all people living in poor working households. The term work is encompassed as an individual phenomenon i.e. either the individual is working or not, whereas poverty is a household fact i.e. either the household is poor or non-poor.

Intellectuals define the term work in various ways while conceptualizing the term working poor. A group of scholars define it as someone who has worked or searching for work for at least half of the past year [Gundogan *et al*(2005)]. Some confine their definition to currently

employed persons and leaving out the unemployed persons looking for work [Hanzl-Weib *et al* (2010)]. Another group of scholars define it as household characteristic rather than to define it at individual level, according to this distinction of work; a non-working member who lives with a working member will be classified as working [Robson and Rodgers (2008)].

Poverty can also be measured in number of ways; either one takes absolute measure or relative measure to define poverty status of household. Absolute measure of poverty defines a poverty line at some specific monetary value adjusted for family size and age of the family members. However, relative measure of poverty is based on the income distribution of country rather than a monetary amount---normally 60%, 50% or 40%---of the country's median income at household level.

This study has used the concept of *working poor* at household level, so we need to define the term *work* at the household level. In order to define it, we borrow the concept from Robson and Rodgers (2008), who define a “working household as the one having at least one member employed or actively participating in labor market activities”. To know how the concepts of “work”, “poverty” and “working poor” prevail in the world we review below the history of definitions across countries.

In the history of poverty analysis we find US pioneer in defining “working poor” and having an official definition. According to Bureau of Labor Statistics (BLS), “*the working poor are those who spent at-least 27 weeks (in a year) in labor force (working or looking for work) but whose income fell below the official poverty threshold*” [BLS, (2007)]. But this definition emphasizes working poor at individual level instead of household level.

According to Euro-fund Seminar Report [Brussels, July (2004)], “*workers living in a household where at-least one member works and where the overall disposable incomes of the household remains below the poverty line (60% of median equalized income) are working*

*poor.*” This definition encompasses working poor at household level. The ILO defines the working poor as “*Those who work and belong to poor households*”.

In Pakistan there is no official definition of the working poor. However, the concepts of employed or working persons and poor (or poverty line) are well defined. The Pakistan Bureau of Statistics has defined the employed or working persons as, “*persons of 10 years of age and above who worked at-least one hour during the reference period (one week before interview) either as paid employed or as self employed*”. The official poverty line in Pakistan is determined on calories basis, 2350 calories per adult equivalent per day and this was evaluated as Rs. 673.40 by Planning Commission of Pakistan using 1998/99 Pakistan Integrated Household Survey (PIHS) dataset, this line is based on the absolute measure. Keeping in view above definition of working persons and poverty, we define *working poor* for Pakistan as, “all members of household having at-least one member employed in labor market, but their adult equivalent expenditure per day remains below the official poverty line”.

### **3.2 Conceptual Framework:**

Till 70’s it was believed that “working” is the best shield against poverty. But with the passage of time this was perceived that this thought no longer persists. Across the globe it was observed that not only the unemployed are poor but many of the people who work are living in poverty. Thus, the majority of the poor is living in “working poor” household. This new phenomena gained roots in United States and later on it was considered and accepted in the labor market in the whole world. Economists from United States coined the term “working poverty” and policy makers and implementers paid special attention to this issue. The common perception about the working poor is a person having very low income, however, workers with lower wage along with other income sources or any other family member

earning will not be considered as working poor [Robson and Rogers (2008)]. A part-time earning along with low wage job is also a major reason behind poverty risk. The reason is that switching a job is costly and time consuming process and there are very few part time jobs accessible in area [Chiman (1991) and Kim (1998)]. Working poor families face a number of problems. These problems may be related to the socioeconomic and demographic characteristics like age, gender, marital status, number of children's (number of dependents), low labor market participations of household members, low level of educational attainment, experience, region and occupation [Brown *et al* (2000) and Savran (2007)]. Generally married people are found more efficient in jobs, but with the addition of a new born, their chance of being poor increases. Because of increase in dependency ratio, families having more number of children under age six are more likely to be among working poor as compared to the families of small size. However, it is argued that second source of income is best shelter against poverty, even both are engaged in low pay jobs; two incomes had considerable outcome aligned with poverty [Espejo and Ibanez (2005); Hanzl-Weib *et al* (2010) and Bell and Newitt (2010)]. Education is positively related to the earning capability of any individual. It increases the current wage and on the same side experience that a person gained also has a sound impact on current and future earnings, thus moving to higher educational attainment level ensures a movement out of poverty [Kosseck *et al* (1997) and Gazdar (2004)].

A woman in the labor market faces a high risk of poverty as compare to her male counterpart. Same situation is faced by a household that is headed by female, because female mostly are involved in low paid service sector jobs like house cleaning, babysitting and other related jobs [Sarvan (2007)]. Occupational attachment is one of the key factors associated to working poor class. Most of the working poor are unskilled workers in agriculture, machine operators, fitters and assemblers, and unqualified industry workers, personal and cleaning services,

small contract jobs and small companies, transport service, hotel, catering and elementary type occupations, all these are low paying occupations and lead to generate working poor class. Most of the working poor were inexperienced workers and attached with low quality jobs. They face barriers at entry level and unfriendly workplace environment. As a result employment status is also considered as a one of the determinant of working poverty [Kossek *et al* (1997) and Marx and Verbist (2008)].

Working poor families are less likely to be in urban areas of the country and does not own home. In this study, all the possible factors of working poor are explored in order to check their significance in the case of Pakistan. Our data set did not entertain us regarding the information of working hours, so it is not possible to incorporate and test part time employment status. However, information regarding age, gender, educational attainment, marital status, house ownership, occupational attachment and employment status is accessible, so it is reasonable to integrate these factors.

### **3.3 Data Sources:**

The data collected by household income and consumption surveys usually give detailed information about the consumption and income levels as well as characteristics of households and their members. This study has used the micro-data of the Pakistan Panel Household Survey (PPHS) conducted by Pakistan Institute of Development Economics (PIDE) in 2010. The 2010 PPHS is the third round of a longitudinal survey. The first and second rounds were carried out in 2001 and 2004 respectively. The PPHS sample is spread over 16 districts of the country: Dir, Mardan and Lakki Marwat from KPK; Attock, Faisalabad, Hafizabad, Bahawalpur, Vehari and Muzaffargarh from Punjab; Badin, Mirpurkhas, Larkana and Nawabshah from Sindh; and Loralai, Khuzdar and Gawadar from Baluchistan. Hence the PPHS-10 represents well four provinces of country in order to make sample more

representative [Arif and Durr-e-Nayab (2012)]. Table 1 presents total number of rural/urban PSUs by districts.

**Table 1: Primary Sampling Units (PSUs) by Province and District**

Province	Districts	Number of PSUs	
		Rural	Urban
<b>Punjab</b>	Attock	7	4
	Faisalabad	6	16
	Vehari	10	4
	Bahawalpur	9	7
	Hafizabad	10	4
	Muzaffargarh	9	4
<b>Sindh</b>	Nawab Shah	8	4
	Mirpur Khas	8	4
	Badin	19	3
	Larkana	11	7
<b>KPK</b>	Dir	11	2
	Lakki Marwat	5	2
	Mardan	7	6
<b>Baluchistan</b>	Loralai	7	2
	Gwadar	7	3
	Khuzdar	7	3
<b>N</b>	<b>(16)</b>	<b>(141)</b>	<b>(75)</b>

Source: PPHS-10

A village is considered as Primary Sampling Unit (PSU) for rural sample with a total number of 141 PSUs in PPHS-10. The PPHS-10 round for the first time added the urban sample from

all the 16 districts from four provinces of the country with a total number of 75 urban PSUs. Total rural households interviewed in PPHS-10 are 2800 while the urban sample consists of 1342 households, reaching to the total sample size of the PPHS-10 as 4142 households. The PPHS sample is rich enough to represent the overall country and exploring social, demographic and economic issues [Arif and Durr-e-Nayab (2012)].

Table 2 presents data on some variables of interest. Average age of the head of households turns out as 48 years and there is a slight difference between average age of rural and urban households i.e. 48.5 and 46.8 years respectively. Overall percentage of female headed households is very low, 4.2 percent. No major difference is observed in regional distribution of female headed households i.e. 4.1 percent in rural areas and 4.3 percent in urban areas. The average household size is 7.6 members---7.8 members in rural areas and 7 members in urban areas, which clearly indicate a higher average household size in rural areas of the country. More than 50 percent of households are headed by people having no formal education at all and this proportion is relatively higher in rural areas of country. The proportion of household heads, having matriculation or high level education is much higher (15%) in urban areas than in rural areas (6%). However, educational level below matriculation is almost equal in both regions of the country.

Occupational classification of the household head varies across both regions of country, in rural areas almost half of the population is engaged in agriculture, fishery and related occupations. Nearly one-third of the population from overall country as well as urban and rural areas is attached to elementary occupations. In occupations like managers, officials, sales and services and machinery, craft and plant, roughly a similar proportion of workers participate from rural as well as urban areas. Data on land ownership shows that 56.6 percent of rural households are landless. About one-fifth of the rural sampled households are small landholders, owing less than three acres of land while one-tenth of the households own more

than ten acres of land. Thus, the PPHS-10 has a good representation of landless households as well as small, medium and large landholders.

**Table 2: Socio-economic characteristics of the sampled households**

<b>Characteristics</b>	<b>Overall</b>	<b>Rural</b>	<b>Urban</b>
<b>Average age of household head (years)</b>	48.0	48.5	46.8
<b>Gender:</b>			
<b>Female headed households</b>	4.2%	4.1%	4.3%
<b>Average household size</b>	7.6	7.8	7.0
<b>Level of educational attainment of household heads:</b>			
<b>No education</b>	54.90	58.97	46.19
<b>Below Matriculation</b>	26.41	26.25	26.75
<b>Matriculation</b>	9.75	8.45	12.53
<b>Above Matriculation</b>	8.94	6.33	14.53
<b>Overall</b>	100	100	100
<b>Occupation of the head:</b>			
<b>Managers, Officials and related</b>	10.29	7.15	17.44
<b>Sales and Services</b>	11.23	7.65	19.40
<b>Agricultural, Fishery and related</b>	35.24	46.40	9.80
<b>Machinery, Craft and Plant</b>	11.89	9.23	17.96
<b>Elementary</b>	31.34	29.56	35.40
<b>Overall</b>	100	100	100
<b>Land ownership:</b>			
<b>Landless households</b>	67.4	56.6	91.2
<b>Small landholders (up to 3 acres)</b>	14.1	19.1	3.0
<b>Medium landholders (&gt; 3 to 10 acres)</b>	10.7	14.0	3.3
<b>Large landholders (&gt; 10 acres)</b>	7.8	10.3	2.5
<b>Overall</b>	100	100	100

Note: Data source PPHS-10

N= 4126 households

### **3.4 Limitations of Data:**



Although PPHS-10 is limited to only 16 districts of the country, i.e. one-sixth of overall distribution but it incorporate all those districts which are most populace and thus shares a rich source of information regarding demographic and socio-economic characteristics of households, we face certain limitations in order to complete our study. Employment is defined well under PPHS-10 but information concerning working hours for individual are not available which restrict us to investigate the issue of underemployment i.e. is there any relationship between working-poor and underemployment. Sample size of PPHS-10 is small i.e. 4142 households but its coverage for overall country is well enough to got satisfactory results.

### **3.5 Methodology:**

The analysis is carried out at the household level in order to meet our objectives. We have first identified households' poverty status and then by using Pakistan's official definition of employment, working status of the sampled households is determined. These two variables, poverty status and work status, are used to define working-poverty status of the sampled households.

This study has used the series of following questions asked in the PPHS-10 to estimate the working status: (i), "Did you do any work for pay, profit, or family gain during the last week, at least for one hour on any day?", (ii), "if did not worked did have any job or land?" and (iii), "Did help in business or agriculture?". Work status of the individuals' i.e. working or non-working is defined by using these questions asked in the survey from both male and female respondents. As discussed in last section, our analysis is at the household level so we have to define work status at a household level i.e. either the household is a working household or non-working household. We define a working household as one having at least one member employed as defined by the above questions asked in PPHS-10. This definition

is a broad definition of work status as it takes into account the work status of all household members. Overall estimated number of working households differs from that of working individuals in the sample because of a slight modification in definition in order to meet our objectives.

As discussed earlier, calories-based poverty line has been used in Pakistan. To construct poverty line, calories intake expenditure for 2350 calories per adult equivalent per day is aggregated along with expenditures on non-food item. Using Pakistan Integrated Household Survey (PIHS) 1998/99 data set, the Planning Commission of Pakistan measured official poverty line in Pakistan. The monetary value of poverty line for 1998/99 was Rs. 673.40 per adult<sup>7</sup> per month. This poverty line is adjusted at the time of poverty estimation after accounting for the inflationary impact in intervening years. The monetary value of this poverty line for 2010 set at Rs. 1671.89 per adult per month.

The PPHS-10 asked questions about both food and non-food items from female and male respondents respectively. Female questionnaire incorporate questions regarding expenditure and consumption of 49 food items<sup>8</sup> and also expenditure on having meals outside in last week. We include both expenditures in order to compute expenditure per day on food items. Questions concerning non-food<sup>9</sup> expenditures are asked by male members in the households, such as expenditures and consumption on electricity, gas, telephone etc. Both of the food expenditure from female section and non-food expenditures from male section is then aggregated to achieve monthly expenditures of sampled households and then these expenditures are converted into per adult per month expenditures using relative weights<sup>7</sup>. In order to define poverty status of sampled household, we use poverty line of Rs. 1671.89, applied on data as per adult equivalent expenditures per month. Those households whose adult

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<sup>7</sup> Weight for household members below age 18 is 0.8 and members having age 18 or above is 1.

<sup>8</sup> Detailed list for food items is given in Appendix 2

<sup>9</sup> List for non-food household items is given in Appendix 3

equivalent expenditures per month fell below the threshold level were defined as poor households and other households were treated as non-poor.

Our dependent variable “working poor” is a joint variable that has combined households’ “work” status with households’ “poverty” status. Thus, the working poor are the households which have at least one member employed in labor market as defined above and whose per capita income fell below the poverty line being used in this study.

### **3.6 Model:**

Our dependent variable, working poor status of a household is binary in nature. In this case, Linear Probability model does not work properly because our results do not abide by the limits described by binary character of the dependent variable i.e. though they fall between zero and one but they are also scattered around zero and one. This type of endogenous variables is better explained with the help of logistic regression models using maximum likelihood estimation procedure and their results do not encounter the problem as faced by Linear Probability model [Hayine and Gorman (1999); Dubois, Jeandidier and Berger (2003) and Jamal (2007)]. Two main reasons for applying logistic regression in economics research are; firstly, logistic regression model is flexible<sup>10</sup>, and secondly result’s interpretation is straight forward [Montshwe (2006)]. Along with assumptions on error term of the model, household working poor/working non-poor status is predicted on the basis of computed probabilities. Logistic regression model is considered as powerful technique because it analyzes all type of independent variables (e.g. Discrete, Continuous or mix of both) [Anka (2006)]. The independent variables were examined in order to check their significance for our

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<sup>10</sup> Logistic regression model can incorporate all type of independent variables (e.g. Discrete, Continuous or mix of both)[Anka (2006)].

model and final model contain all the independent variables believe to affect the working poor status of a household.

### 3.6.1 Model Specification:

Logistic model can be written as:

$$\text{Prob (WP = 1)} = \frac{e^z}{1+e^z}$$

Where:

$$\text{WP = Working poor} \begin{cases} y = 1 & \text{if working poor} \\ y = 0 & \text{if working non-poor} \end{cases}$$

e = base to natural logarithm and

$$z = \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Edu} + \beta_3 \text{HHsize} + \beta_4 \text{Dep\_Ratio} + \beta_5 \text{Occupatio} + \beta_6 \text{Emp\_status} + \beta_7 \text{location} \dots \dots \dots (1)$$

Where age is taken as a continuous variable and it refers to the household head's age. Also household head's education is taken and divided into four categories; no education represents the number of household heads who never attended the school, below matriculation represents those who completed their 9 years schooling but could not pass class 10, matriculation includes all those household heads who completed schooling with class 10 and above matriculation category included those households whose heads completed more than 10 years of education. We use three dummy variables to represent different levels of schooling and use matriculation as base categories. Our next explanatory variables are household size

and dependency ratio, which refers to demographic situation of households; household size is total number of household members and dependency ratio is measured as the ratio of total number of dependent members of household and total number of independent members of household. Dependent members are the total number of members in household having age below 15 years and members having age 65 and above, rest of the members of the household having age between 15 and 64 are treated as members in working age. Dependency ratio is divided into three categories; low, medium and high, further two dummy variables are added for medium and high categories in comparison with low category to check age dependency effect.

Occupational classification and employment status represent labor market activities. In PPHS-10 occupations are classified according to Pakistan Standard Classification of Occupation<sup>11</sup>. Occupations are divided into 10 categories; legislation, senior officials and managers, professionals, technicians and associate professionals, clerks, service workers, shop and market sales workers, skilled agricultural and fishery workers, craft and related workers, plant and machine operators and assemblers, elementary occupations and armed forces. For the present analysis these 10 categories of occupation have been grouped in five major occupational categories; *Officials and professionals*; here we combine first four categories with addition of armed forces, *Sales and service*; this class includes the fifth category in above explained list, *Agricultural and fishery related* class consist of sixth category in above explained list, *Machine craft and plant* takes into account seventh and eighth from the list and *Elementary* class represents elementary occupations. The officials and professionals category is used as the reference category. Employment status is also included to see the difference in working poor rate among self employed, casual worker, piece-paid worker and regular paid workers. We use these four categories of employment

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<sup>11</sup> Complete occupational details are given in Appendix 4

status and three dummy variables are added to check their significant impact. Self employed is used as reference category. Urban/ruralis used to investigate regional differences i.e. if there any difference among rural and urban households?

The analysis is carried out at the household level. The variables that affect the working poor status of household are included in our analysis, such as age, education, family structure, occupation, employment status and location.

### **3.7 Explanatory variables and their expected relationship with working-poor:**

#### **3.7.1 Gender and Age of household head:**

Demographic factors like gender and age of head of households are likely to be related to working poor status. Households headed by female are more likely to be poor according to existing literature because primarily households are headed by males and this shift from male to female occurs mainly due to death of male household head or separation. Age of the household head plays a vital role to determine household's poverty status and working poor status as well. Older household heads are more experienced as compared to their young counterparts and have a permanent income stream because of a stable employment status [Eardley (1998)]. Another possible explanation in this context is that the older household heads have some of the household members employed in labor market and supporting the family in order to escape from poverty, [Gundogan *et al* (2005), Garcia-Espejo and Ibanez].

#### **3.7.2 Marital status of head, Family size and Dependency ratio:**

Marriage is also observed as a major determinant of poverty as well as working poor. In a study of Australia, it is found that poverty risk for a married worker is double than that of unmarried workers [Eardley (1998)]. In Pakistan there is joint family system to support the

unemployed members of household. This joint family system results in large household size which may result in high dependency ratio due to the presence of under-age members of households. Large household size means more mouth to feed and bear education, medical and other expenses as well and this creates more chances of being poor [Gundogan *et al* (2005), Arif and Farooq (2012)]. Age dependency is measured as ratio of dependent and independent household members; high dependency ratio means more dependent family members like children and elders in households which may lead to poverty.

### **3.7.3 Education of household head:**

Education level of head of household also affects the poverty status. Higher the educational level, lesser the risk of poverty. Well educated workers can easily get well paying jobs because of their better skill than the skilllevel of workers with low education. Household heads having more years of schooling can get a job with high remuneration and thus making it easier to cover all the household expenses [Eardley (1998), Gundogan *et al* (2005) and Arif and Farooq (2012)].

### **3.7.4 Occupation and Employment status of head:**

The nature of a job also gives an idea about poverty; the working poor rate varies across occupations [Gundogan *et al* (2005)]. Workers engaged in an occupation which demands more education levels like management are distinguished by higher earnings and face a lesser risk of being poor. On the other hand workers in occupations like service, transportation and construction do not generally have higher educational levels thus face higher risk of being poor because of low levels of their earnings [Robson and Rodgers (2008), Marx and Verbist (2008)]. Employment status also plays a vital role to distinguish poor and non-

poor; permanent employees are less likely to be poor as compared to casual workers and piece-paid workers.

### **3.7.5 Location of household:**

Location plays an important role in determining whether the economic household is poor or non-poor. In rural areas the lack of infrastructure, health and educational facilities leads to low level of skill acquisition among the workers which in turn directs them to a low paying jobs and hence higher chances of being poor in comparison with the workers living in urban areas of the country [Jamal (2007), Arif and Farooq (2012)].



## Chapter 4

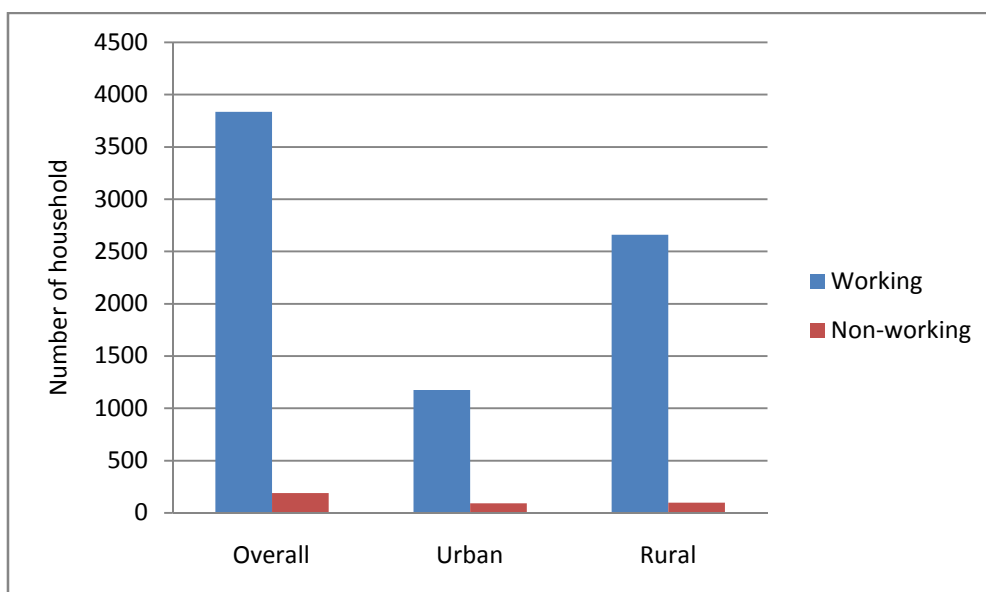
### A profile of Working-poor in Pakistan

#### 4.1 Work, poverty and working poor

##### 4.1.1 Work Status:

The first objective of this study is to estimate the “proportion of working people living below the official poverty line”. Going further to discuss the working poor estimates of sampled households we first take a look at work status estimates at the household level as defined in last chapter and poverty estimates of the sampled households. According to our estimates, out of 4026 sampled households 3836 (95.28%) household are characterized as “working households” and rest of the 190 (4.72%) households do not have any individual active in labor market and these households are treated as non-working households. Majority of the working households are located in rural areas (figure 1).

Figure 1: Working and Non-working status of the sampled Households' by Rural-Urban areas (numbers)

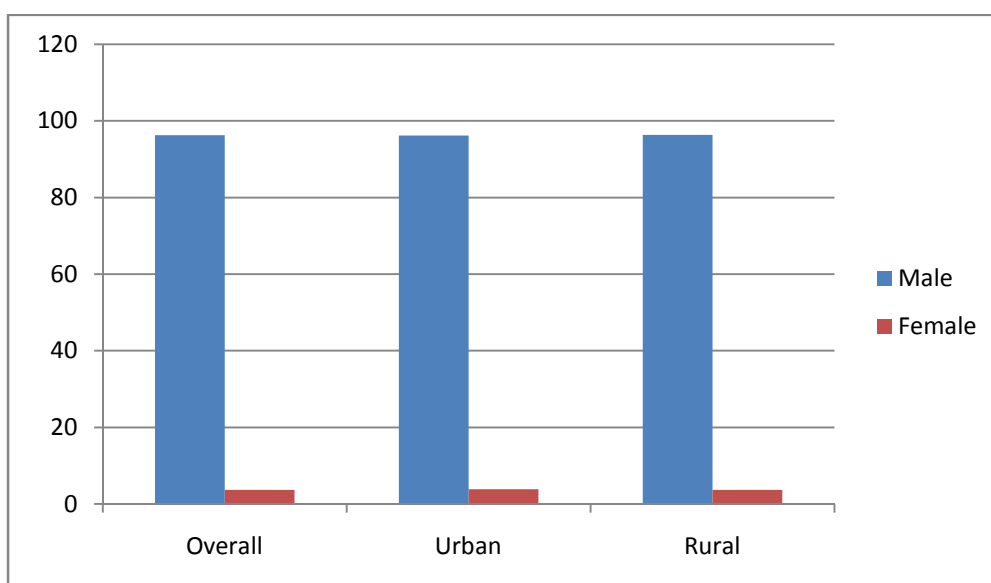


Source: PPHS-10 micro data

Most of the non-working households are male headed and almost 28 percent of the non-working households are characterized as poor households. Statistics on educational attainment levels shows that 80 percent of the non-working household heads have no formal education and only 5 percent of the non-working household heads complete matriculation and above matriculation levels. However, non-working households share an equal proportion in rural/urban areas of the country.

We take a deeper look for the estimates of our working households; this will further help us in understanding the factors associated with working poverty. Some fundamental questions are: what proportion of the working households is headed by female and what is their urban-rural distribution? What is the proportion of young headed working households in comparison with proportion of old headed working households. Figure 2 displays gender wise headship of working households in rural and urban areas and in overall country. In Pakistan proportion of female headed working household is very low in overall country as well in rural and urban areas i.e. almost 96 percent of the working households are headed by males, and females' shares are not substantial.

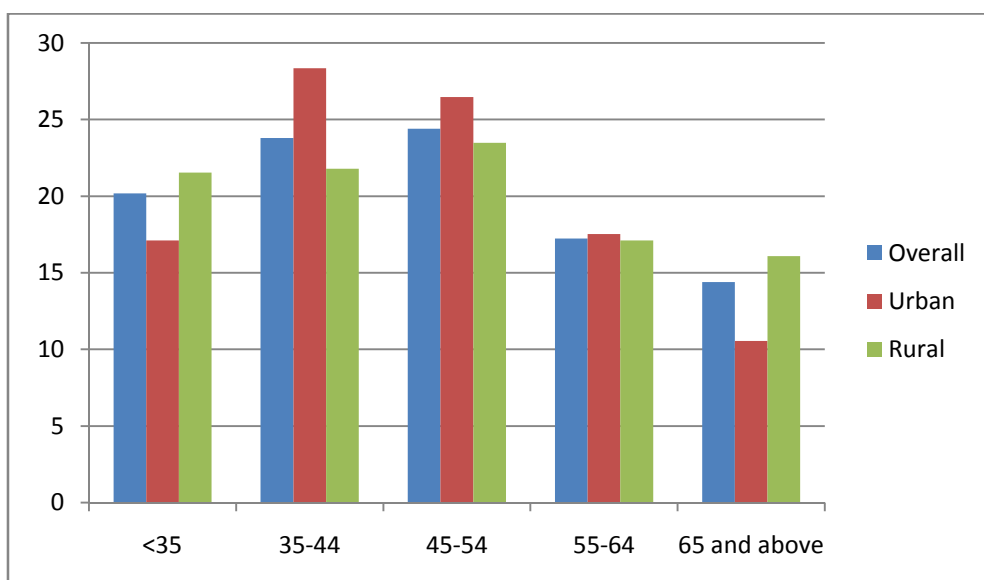
**Figure 2: Gender of the head of working households by Rural-Urban areas (%)**



Source: PPHS-2010 micro-data

Poverty risk also varies across workers from different age groups; old workers are less likely to be among poverty groups as relative to young workers. Figure 3 displays our findings based on poverty risk faced by workers of different age groups from rural and urban areas of Pakistan. The figure reveals that majority of the working heads belongs to 2<sup>nd</sup>(35-44) and 3<sup>rd</sup>(45-54) age group and in both regions of the country working heads in these age groups show higher percentages, however, heads having age above 65 are in small proportion in both regions.

**Figure 3: Age wise distribution of heads of working households (%)**



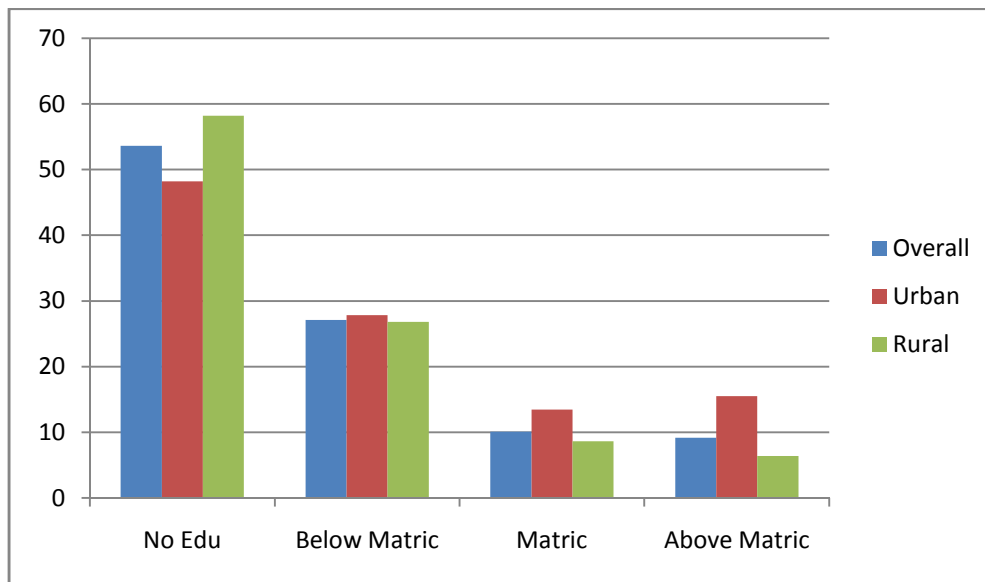
Source: PPHS-2010 micro-data

Note: Age represents households head age

Education is the key element in determining working poor status of households, educational attainment levels of working households in rural and urban areas gave us a clear picture of poverty differentials among educated heads and uneducated heads. More than half of the working heads in overall country are non-educated and the situation is even worse in rural areas of the country where almost 85 percent working heads end up with below

matriculation and only 6 percent working heads had educational level above matriculation (figure 4). However, urban areas show a considerable proportion in both matriculation and above matriculation categories; 13 and 15 percent respectively.

**Figure 4: Distribution of the head of working households by Education and Rural-Urban areas (%)**



Source: PPHS-2010 micro-data

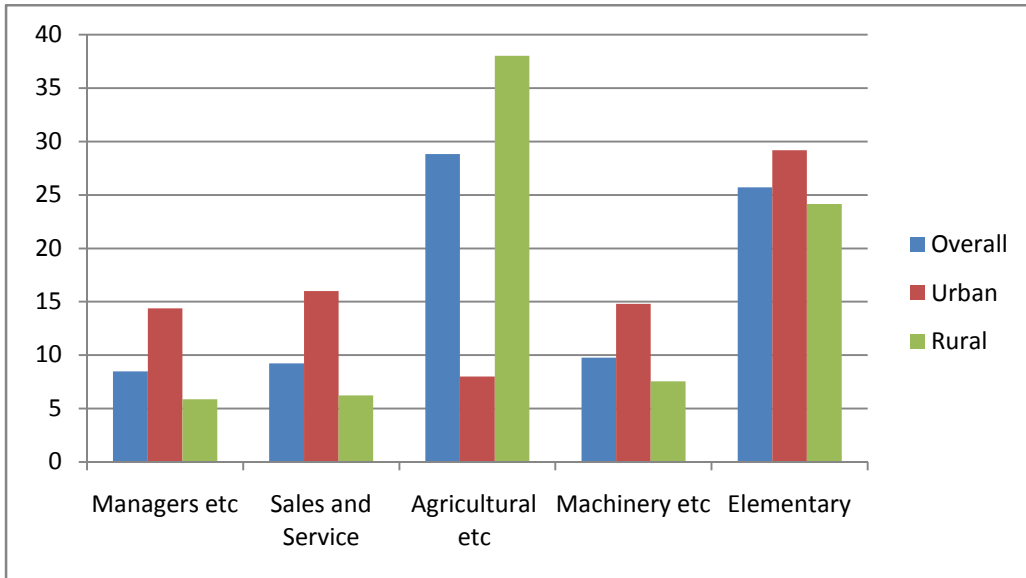
Note: The given education is for households' head

Labor market indicators play a central role in shaping working poor lives in both areas of the country. Estimates presented in Figure 5 reveal that in Pakistan, according to PPHS-10 more than half of the working heads are engaged in agricultural, fishery and related and elementary occupations. Working heads living in urban areas are mainly engaged in elementary occupations and a considerable proportion of working heads engaged in manager, officials and related occupations and sales and services occupations. About 40 percent of the rural working heads work in agricultural related occupations and almost one-fourth are attached to elementary occupations.

According to the PPHS-10 data set, one-fourth of the working heads in Pakistan are regular employees and nearly half are self-employed. More than half of the rural area working heads

are self-employed and one-fifth are regular employees relative to 31 percent and 37 percent in urban areas respectively (Figure 6).

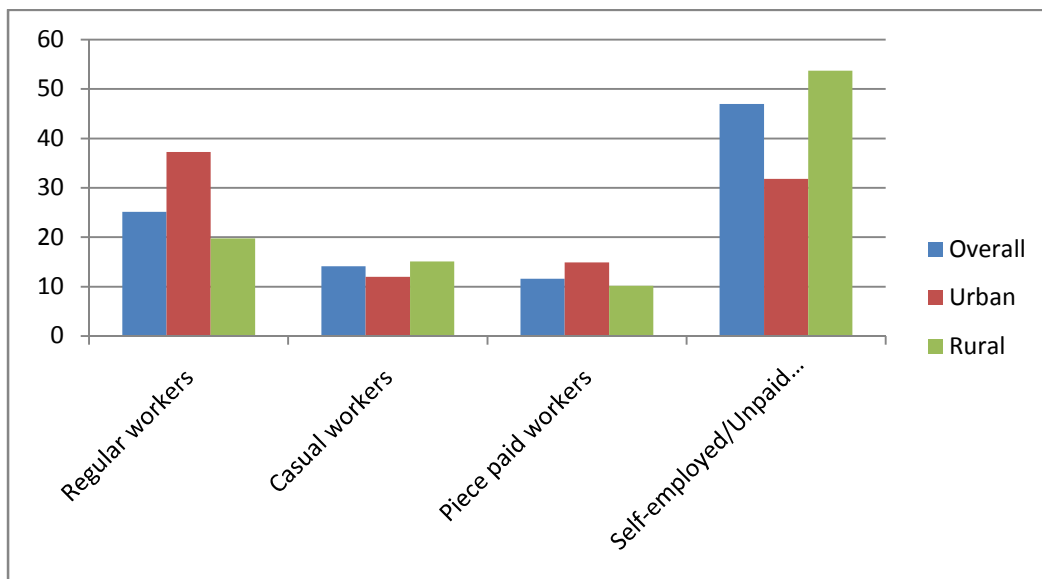
**Figure 5: Distribution of the head of working households by Occupation and Rural-Urban areas (%)**



Source: PPHS-2010 micro-data

Note: Occupation represents households head occupation

**Figure 6: Distribution of the head of working households by Employment status and Rural-Urban areas (%)**



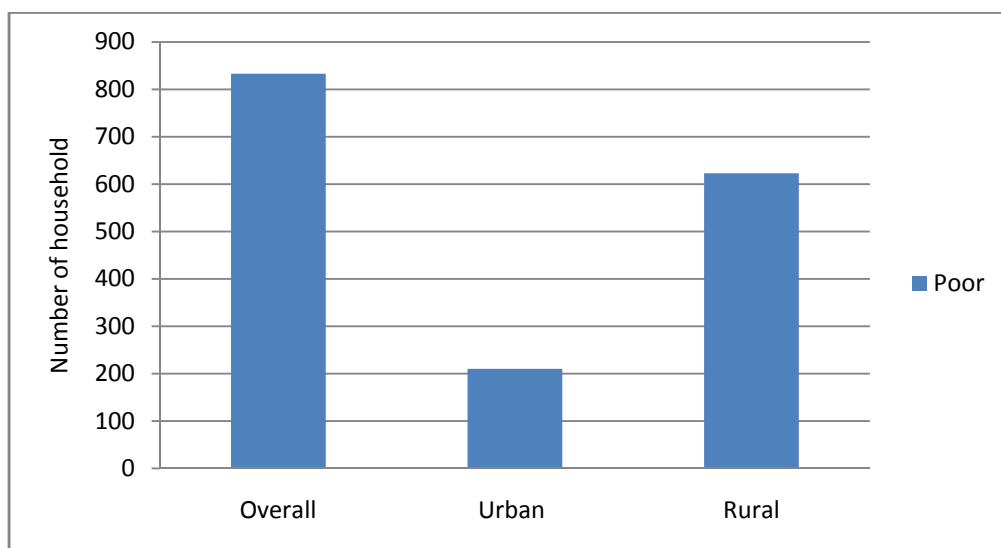
Source: PPHS-2010 micro-data

Note: Employment status represents households' heads' employment status

#### 4.1.2 Poverty Status:

Poverty status of household is measured according to calories based poverty line; 2350 calories per adult equivalent per day. Overall poverty estimates<sup>12</sup> using PPHS-10 data set are 20.70 percent, 22.4 percent of rural households are poor while the corresponding figure for urban areas is 16.6 percent; this means out of the 4026 sampled households, 210 poor households are located in urban areas and 623 poor households belong to rural areas of the country.

Figure 7: Poverty (money-metric) estimates by Rural-Urban areas (numbers)



Source: PPHS-10 micro-data

The PPHS-10 data show that about 95 percent of the poor households are male headed and among non-poor household, almost 96 percent are headed by males. Almost half of the poor heads belongs to age group less than 35 and 35-44 respectively, however, only 12 percent of the poor heads having age above 65 years. However, non-poor household heads' age distribution looks like a normal distribution (Table 3).

<sup>12</sup> All estimates of poverty and working poor are adjusted for household size.

**Table 3: Socio-demographic characteristics of the poor/non-poor households (%)**

<b>Characteristics</b>	<b>Poor</b>	<b>Non-poor</b>
<b>Gender:</b>		
Male headed	94.64	95.87
<b>Age of head:</b>		
<35	22.57	19.51
35-44	26.52	22.94
45-54	20.87	24.75
55-64	17.49	17.27
65+	12.55	15.53
<b>Education of head:</b>		
No education	65.02	52.70
Below Matriculation	25.95	26.62
Matriculation	6.21	10.46
Above Matriculation	2.82	10.22
Overall	100	100
<b>Occupation of the head:</b>		
Managers, Officials and related	5.44	11.31
Sales and Services	9.80	11.53
Agricultural, Fishery and related	35.21	35.25
Machinery, Craft and Plant	9.80	12.33
Elementary	39.75	29.58
Overall	100	100
<b>Land ownership:</b>		
Landless households	72.94	66.48
Small landholders (up to 3 acres)	16.62	13.57
Medium landholders (> 3 to 10 acres)	6.91	11.34
Large landholders (> 10 acres)	3.53	8.62
Overall	100	100

Source: PPHS-10 micro-data

Almost 65 percent of the poor heads have no formal education and one fourth of the all poor heads, who join school, did not complete matriculation level. Roughly 9 percent of the poor heads have educational level of matriculation and above; however, educational attainment levels of non-poor heads at this level is more than double than that of poor heads.

Poor heads are mainly attached in agricultural, fishery and related and elementary occupations, almost three fourth of the poor heads are engaged in these two types of occupations. Managers and official related occupations entertain nearly 5 percent of all the poor heads. However, a similar proportion of non-poor heads are engaged in agricultural, fishery and related jobs but in elementary type occupations non-poor heads shows a decreasing pattern and almost 22 percent of the non-poor heads are engaged in managers and service type occupations.

Data on land ownership reveals that about three-fourth of the poor households are landless in comparison to 66 percent landless non-poor households. Proportion of medium and large landholder is also high among non-poor households. Most of the households owning more than 10 acres are located in Baluchistan, where land is useless in terms of income earning capability.

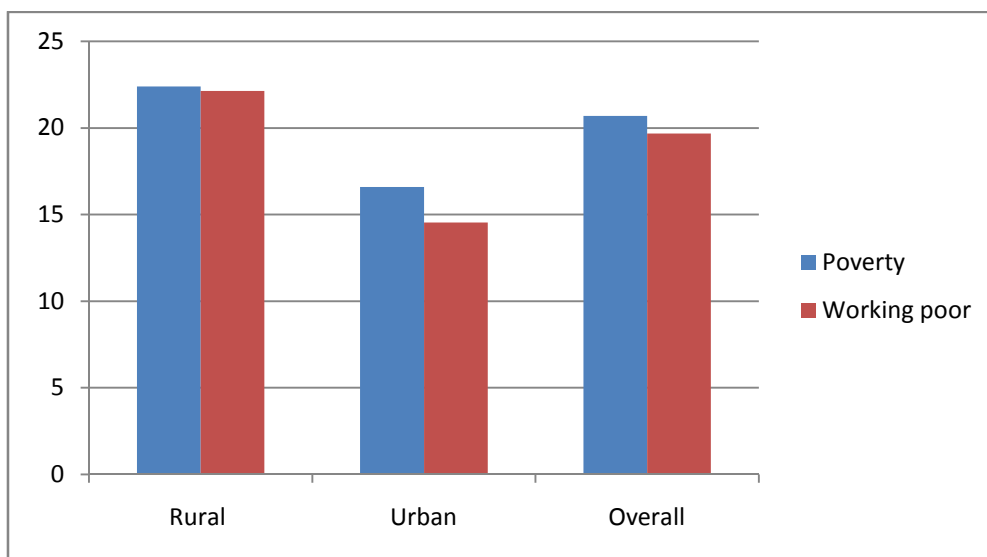
#### **4.1.3 Working poor:**

Overall “working poor” household estimated for 2010 are 791 (19.68%) from total 4026 sampled households; 22.14 percent of households are working poor in rural areas and 14.55 percent of households are working poor in urban areas (Figure 8). If we look at the overall estimates it can be observed that there is only a minor variation between overall poverty and working poor estimates a difference of only one percentage point (20.70 Vs 19.68). A straight forward implication comes out that in Pakistan almost all the poor



households belongs to working households as defined in our study. Household located in urban areas got more benefits from work status of households in comparison with those located in rural areas of the country. This regional difference may occur because of more facilities available in urban areas as compared to rural localities, such as urban people enjoy improved health facilities, better schooling environment, improved infrastructure and superior job opportunities judge against their rural counterparts.

**Figure 8: Poverty and working poor estimates for Rural-Urban areas (%)**



Source: PPHS-10 data set

## 4.2 Profile of working-poor:

Profile is a descriptive summary of a contemporary issue to highlight its occurrences and rationale behind possible changes in it. Working poor profile compares its key characteristics and explains how working poor estimates varies across factor associated to it. This section is divided into six sub-sections to explore the relationship between explaining factors and poverty status of working class in Pakistan using 2010 data set. Demographic factors like age and gender are more likely to affect poverty status of households; also education is an important factor in shaping working poor lives. Occupational classification and employment

status of workers are linked to working poverty, and finally relationship between working poor class and asset holding and land ownership is observed. These illustrations will help understand the association between working poor and socio-demographic factors.

#### 4.2.1 Demography

Demographic factors have a great effect on poverty as well as working poor. In PPHS-10 the proportion of overall female headed households is 4.2 percent, while considering only “working poor” households, male headed households differ from female headed households; for example compared to 16.57 percent of female headed households 19.79 percent of male headed households are poor. Young workers face a higher risk of poverty than older ones and these findings are similar to Gundogan *et al* (2005) and Robson and Rodgers (2008) findings. Table 4 sets the data on ages into different groups to see incidence of working poor by age of the head of households. Generally young workers experience higher risk of poverty because of low labor market experience. There is a considerable difference among rural and urban young workers. The proportion of working poor in rural households declines as the age of the household increases. But there is no such linear relationship between age and working poverty in urban areas.

**Table 4: The incidence of working poor by age of the head of household (%)**

Age groups	Rural	Urban	Overall
<35	21.42	12.14	18.95
35-44	21.30	13.01	18.11
45-54	18.94	9.97	14.45
55-64	17.13	12.33	16.77
65+	13.48	10.19	7.74
<b>N</b>	<b>(2760)</b>	<b>(1266)</b>	<b>(4026)</b>

Source: PPHS-2010 micro-data

Note: Age represents households head age

Marital status is classified as currently married and others because we are concerned about marital status of household head and it is obvious that most of the household heads are married. Looking at overall distribution of marital status we come to know that 90.11 percent of the household heads are currently married and rest of the household heads are either divorced, separated, widow or never married. The marital status does not have a significant impact on households' working poor status i.e. among married household heads 16.62 percent face risk of being poor while rests of the household heads face a poverty risk of 15.83 percent. Household size is another important factor for determining the household working poor status. One possible explanation is that, as the household size of a working household increases the risk of being poor also increases; in other words, dependency rate increases because now more mouth are to be fed with same earnings. Dependency ratio better reflects this issue as it measures the ratio of dependent household members to working age population. Members having age less than 14 years and above 65 years are treated as dependents while members of age group 15 to 64 are the working age category. Larger the number of dependents in a household higher will be the dependency ratio and vice-versa. Dependency ratio is divided into three categories<sup>13</sup>; low, medium and high, where "low" group reflects less number of dependents in a household and "high" reflects more number of dependents in a household. Overall working poor rate differ across three groups and we can say that high dependency ratio is subject to high risk of working poor and vice-versa. Also there is a sizeable difference if we compare rural and urban working poor rate across low, medium and high dependency ratio classes. If we take a look at high dependency ratio we can

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<sup>13</sup> Dependency ratio is classified as:

Low = 0 to 0.5

Medium = 0.51 to 1.0

High = 1.00001 to max

observe that rural households face a double risk of being working poor as compared to their urban counterparts.

**Table 5: The incidence of working poor by dependency ratio (%)**

<b>Dependency ratio</b>	<b>Urban</b>	<b>Rural</b>	<b>Overall</b>
<b>Low</b>	8.67	11.57	10.65
<b>Medium</b>	13.04	20.88	18.80
<b>High</b>	15.31	30.00	25.13
<b>N</b>	<b>(1266)</b>	<b>(2760)</b>	<b>(4026)</b>

Source: PPHS-2010 micro-data

#### **4.2.2 Education:**

Education also plays a major role in shaping the lives of people. A less educated worker faces a more risk of being poor than his/her educated counterparts. We can observe a clear declining trend in working poor rate as one gets educated. Table 6 shows the working poor rate among different educated classes across regions. It is clear from the table, as educational level of workers raises their probability of being poor declines, in both urban and rural areas. There is a significant difference among non educated heads in rural and urban regions, because in rural areas most of the people are attached to agricultural sector where there is no need of formal education while in urban areas due to availability of some better jobs for even non educated class makes this disparity. This difference could be observed in all educational levels for urban and rural regions and also we can see that the difference becomes smaller at high educational levels; above matriculation in our analysis which means above matriculation is quite helpful in order to lower the risk of poverty among educated class.

**Table 6: The incidence of working poor by educational level of head of households (%)**

<b>Educational level</b>	<b>Urban</b>	<b>Rural</b>	<b>Overall</b>
<b>No education</b>	14.09	20.96	19.15
<b>Below matriculation</b>	12.94	18.71	16.87
<b>Matriculation</b>	9.43	12.50	11.25
<b>Above matriculation</b>	4.32	6.32	5.29
<b>N</b>	<b>(1266)</b>	<b>(2760)</b>	<b>(4026)</b>

Source: PPHS-2010 micro-data

Note: Education represents only household head's educational attainment

#### **4.2.3 Occupation:**

The nature of job gives an idea about working poor. The probability of being poor among workers varies across occupation. Most of the working poor may be employed in service occupation, sales, subsistence agriculture, labor and mining, drivers and related occupation. Managers, officials and related occupational group cover a smaller proportion of employed persons who suffer poverty. Table 7 presents working poor rate across different occupations as well as their rural/urban differential. Managers, officials and related group of occupation requires high education and characterized with high earnings and less likely to be among working poor class. From table 7 we can see that household head from urban areas are less likely to be in agricultural, fishery and related occupations as a matter of fact most of the rural household heads are engaged in this occupation. Households' heads in elementary occupation face the higher risk of poverty than all other occupational classification and most of the workers in this occupation belong to rural areas of the country.

**Table 7: The incidence of working poor by occupation of the head of household (%)**

<b>Occupational group</b>	<b>Urban</b>	<b>Rural</b>	<b>Overall</b>
<b>Managers, Officials and related</b>	5.32 (169)	7.66 (158)	8.87 (327)
<b>Sales and Service</b>	9.04 (188)	11.89 (169)	15.13 (357)
<b>Agricultural, Fishery and related</b>	8.42 (95)	18.05 (1025)	17.23 (1120)
<b>Machinery, Craft and Plant</b>	12.64 (174)	15.20 (204)	14.02 (378)
<b>Elementary</b>	17.49 (343)	23.89 (653)	21.69 (996)
<b>N</b>	<b>(964)</b>	<b>(2182)</b>	<b>(3146)</b>

Source: PPHS-2010 micro-data

Note: Occupation represents household head's occupational attachment.

\*Parenthesis shows total numbers of household head in each occupation.

#### **4.2.5 Employment status:**

Worker's employment status also plays a major role in determining poverty status. Casual paid workers experience the highest risk of being poor in comparison with all other categories of employment status, also the working poor rate of piece paid worker is higher than regular and self employed workers. Table 8 lists the working poor rate of urban, rural and overall for different employment status categories. The possible explanation is that casual workers' poverty risk may be associated with non availability of jobs on daily basis for all workers in a particular area. However, in rural areas workers doing casual work suffer more risk of being poor relative to their urban counterparts. On other side workers engaged in *piece work* type from urban areas face a higher risk of poverty than rural area workers. *Piece work* can be defined as type of employment in which a worker is paid a fix wage rate for a specific task or we can say that they were paid per piece of work done e.g. garment worker, electrician, and

plumber etc and these type of employment can be observed more in urban areas of the country.

**Table 8: The incidence of working poor by employment status of the head of household (%)**

<b>Employment status</b>	<b>Urban</b>	<b>Rural</b>	<b>Overall</b>
<b>Casual workers</b>	18.80	30.84	27.71
<b>Piece paid workers</b>	21.89	16.74	18.55
<b>Self-employed/Unpaid family helpers</b>	9.97	17.25	15.37
<b>Regular workers</b>	9.09	16.67	13.26
<b>Employer</b>	7.69	14.29	10.45
<b>N</b>	<b>(964)</b>	<b>(2182)</b>	<b>(3146)</b>

Source: PPHS-2010 micro-data

Note: Employment status represents household heads employment status only

Self-employed workers from rural areas are more likely to be poor because in rural areas most of the people are engaged in agriculture sector and cultivate their own farm or work as a contract cultivator however in urban areas self employed people are those who mostly run their own shops and related work. An employer faces the least risk of poverty as compared to all other categories of employment.

#### **4.2.6 Household Asset holding:**

A household asset is an important variable that tells us about household's welfare status; Jamal (2007) finds that household assets are highly correlated with households' total expenditure. We take a look on different household assets and percentage of working poor households who owns that particular asset. Table 9 helps in classifying household's percentage and asset ownership of working poor household and overall ownership.

Here we select some of the important household assets from twenty household assets list<sup>14</sup> of PPHS-10 and present differences in particular asset ownership among the working poor and overall sample. Looking at the reported results, we can observe that there is much difference among our selected household assets ownership among two classes. Working poor household did not own air conditioner and internet facility, only 0.16 percent of the working poor household contains freezer relative to 5.44 percent of overall ownership. However, ownership of air cooler and motor bike creates the highest difference relatively. Car ownership amongst these two groups also creates a huge difference i.e. 0.25 percent of the working poor household owns car in comparison to 5.19 percent overall.

**Table 9: Household ownership of assets (%) for working-poor households and all sampled households**

<b>Assets name</b>	<b>Working-poor household</b>	<b>Overall</b>
<b>Freezer</b>	0.16%	5.60%
<b>Air conditioner</b>	No one	2.85%
<b>Air Cooler</b>	0.09%	8.25%
<b>Cooking range</b>	0.03%	1.68%
<b>Microwave Owen</b>	0.06%	3.32%
<b>Motor bike</b>	2.02%	25.39%
<b>Car</b>	0.25%	5.44%
<b>Tractor</b>	0.32%	6.23%
<b>Computer</b>	0.22%	7.14%
<b>Internet</b>	No one	1.20%

Source: PPHS-2010 micro-data

Here we present number of household asset<sup>15</sup> ownership of working poor households in overall country and urban/rural as well. More the numbers of assets a household own more

<sup>14</sup> Complete list of these 20 household assets is given in Appendix 5

<sup>15</sup> Haroon Jamal (2007) in his paper "Income Poverty at District Level: An Application of Small Area Estimation Technique", assigns equal weights i.e. 1 to all assets included in the study to calculate asset score in order to smooth out the distribution of assets across households.



expenditure are required to retain these household assets as a result of it household total expenditure rises significantly [Jamal (2007)]. Most of the working poor household does not contain any of the assets from the list of 20 household assets include in PPHS-10 survey household assets list and same is true for urban and rural households, however most of the rural household manage themselves without any household asset. From table 10 it is clear that as the number of asset increases percentage of working poor household decreases. It is worth mentioning here that no working poor household owns more than a total of ten assets from total twenty household assets list. The table shares no of assets a household owns and working poor rate in overall country and urban/rural as well.

**Table 10: The incidence of working poor by number of household assets and Rural/Urban (%)**

<b>No of assets household owns</b>	<b>Urban</b>	<b>Rural</b>	<b>Overall</b>
<b>0</b>	22.47	32.99	33.04
<b>1</b>	20.31	27.65	25.45
<b>2</b>	26.14	18.83	20.83
<b>3</b>	19.30	16.13	17.02
<b>4</b>	14.92	13.33	12.98
<b>5</b>	11.70	7.82	8.60
<b>6</b>	8.39	7.80	7.69
<b>7+</b>	5.69	7.61	5.34
<b>N</b>	<b>(1263)</b>	<b>(2758)</b>	<b>(4021)</b>

Source: PPHS-2010 micro-data

#### **4.2.7 Land ownership:**

There is only a slight difference between working poor households that owns land in comparison with landless working poor households. The working poor rate among landless

household is 17.79 in overall country as compared to 16.41 working poor households having land. In order to observe more deeply we divide land ownership into four categories as landless households, small land owners, medium landowners and large land owners where small landholder are those owing less than 3 acres, medium landholder owns between 3 and 10 acres and large landholders have more than 10 acres of land respectively. Table 11 presents distribution of land ownership among four groups. Almost 65 percent of the working poor households in rural areas are landless in comparison with 56 percent landless households in rural areas. Proportion of small landholders is almost equal among working poor rural households and overall rural households, however, there is a significant difference among medium and large landholders' classes.

**Table 11: The incidence of working poor by land ownership (%)**

<b>Land ownership</b>	<b>Overall rural</b>	<b>Working poor rural</b>
<b>Landless</b>	56.60	65.48
<b>Small (&lt; 3 acres)</b>	19.10	21.30
<b>Medium (3 to 10 acres)</b>	14.00	8.68
<b>Large (&gt;10 acres)</b>	10.30	4.54
<b>All</b>	100	100
<b>N (4026)</b>	<b>(2751)</b>	<b>(507)</b>

Source: PPHS-10

Note: Data was presented in terms of kanals, where 1 acre=8 kanals

### **4.3 Summary:**

This chapter presents data on “working” status of households, their “poverty” status and “working poor” estimates using PPHS-10 data, and a profile of the working poor is reported. Using work status definition at household level, almost 95 percent of the households are characterized as working households. Almost 96 percent of the working households are male

headed and most of the heads are young. More than half of the working household heads have no formal education and are mainly attached to agricultural sector and elementary occupations. Results of poverty and working poor reveals that in case of Pakistan, almost all poor households are working poor households and both poverty and working poor incidence is higher among rural households of country. Young workers face higher risk of poverty than older ones and educational level is negative correlated to the working poor status of household, more the educational attainment level lesser the chances of being working poor. Workers in occupations like agriculture and fishery and elementary jobs are more likely to be poor, while managers and officials are less likely to be poor. The incidence of working poor is relatively higher among casual workers, piece paid workers and landless.

## Chapter 5

### Determinants of Working-poor

#### 5.1 Overall model results:

To meet second objective of our study, we estimate logistic regression model in order to examine the determinants of the working poor i.e. dichotomous in nature. Logistic regression model makes use of Maximum likelihood estimation procedure and Equation (1) is our final model we estimated, results are presented in Table 13. The overall results of the model are significant, consistent, unbiased and according to the existing literature of working-poor. To check goodness of fit of logistic regression model there are a number of tests but in our model we use Hosmer-Lemeshow test for goodness of fit, because it is extensively used in literature and best explains the model's prediction power. According to Hosmer-Lemeshow test our model best explains the relationship between dependent and explanatory variables; the statistics for our model are reported in Table 13.

In order to estimate Equation (1), we drop some households for the missing information regarding our explanatory variables i.e. information regarding occupation is not available for heads not participating in labor market and hence no information about employment status as well. Doing so, we end up with only one female headed household in our final sample and hence this important variable is dropped from our analysis. Our estimated sample size is of 3146<sup>16</sup> households well enough to end up with some good results, the likelihood estimation procedure is iteration based and got maximum on 2<sup>nd</sup> iteration.

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<sup>16</sup> Our complete set of information contains 4026 households extracted from PPHS-10

### 5.1.1 Descriptive Statistics:

Our final sample contains information regarding 3146 households and all the characteristics are subject to head of the household. Gender turns out to be a constant and hence dropped from the analysis. Mean age of the household head is 44.59 years with a variation of 12.62 years and the youngest household head that belongs to our sample has 20 years of age. Average household size of the sample is 7 with a variation of 3.67 units and our sample contains largest household with 43 members (Table 12).

**Table 12: Mean, standard deviation and range of the explanatory variables used in analysis**

<b>Explanatory Variables</b>	<b>Mean</b>	<b>S.D</b>	<b>Min</b>	<b>Max</b>
<b>Demography:</b>				
Gender (Male=1)	99.99%	20.39%	0	1
Age	44.59	12.62	20	88
Household size	7.33	3.67	2	43
<b>Education of head:</b>				
No education	48.57%	49.99%	0	1
Below Matriculation	29.75%	45.72%	0	1
Matriculation	11.16%	31.49%	0	1
Above Matriculation	10.52%	30.69%	0	1
<b>Occupation of head:</b>				
Managers and related	10.20%	30.27%	0	1
Sales and Services	10.99%	31.29%	0	1
Agricultural related	35.32%	47.80%	0	1
Machinery and Plant	5.02%	21.84%	0	1
Elementary	37.67%	48.46%	0	1
<b>Land Ownership:</b>				
Landless	67.66%	46.78%	0	1
Small Landholders	14.03%	34.74%	0	1
Medium Landholders	10.48%	30.64%	0	1
Large Landholders	7.82%	26.86%	0	1

Source: PPHS-2010 micro-data

Note: \* Age and household size is taken as continuous variables and dummy variables are included for all other explanatory variable categories.

### **5.1.2 Logistic regression results:**

Household is the unit of analysis; we test the working poor status of household and their characteristics. The average age of household head is 44.59 and age of the household head is negatively correlated with working poor, household head with higher age are less likely to be working poor than young ones. Household size also plays a major role in determination of their working poor status and is positively related to working poor i.e. larger the household size more risk of being part of the working poor class. Large households are more likely to be working poor in comparison with small household size.

We also include household square in our analysis in order to generate quadratic curve, the intuition here is that; as the household size increases there is a possibility of more worker available in the household which in turn effort to lift their family out of poverty. The household size square is negatively related to working poor and significantly shows that, having more workers lessen the risk of poverty. Dependency ratio is also an important predictor of working poor and highly correlated with working poor. High dependency ratio is positively associated with working poor status of household. Working households with high dependency ratio are more likely to be poor than households with low dependency ratio.

Experience is also a very important economic factor which explains the old age relationship and educational role in determining ones wages. Experience in our study turns out insignificant, because most of the workers are engaged in occupations like labor, driving, mining, mechanic, agriculture and market service and this type of occupation require low levels of education and hence experience does not matter in this kind of investigation.

**Table 13: Results of Logistic regression model for total sample**

<b>Logistic Regression Model</b>			
<b>(Dependent variable – Working poor)</b>			
<b>Working-poor=1</b>			
	<b>Odds Ratio</b>	<b>Coefficients</b>	<b>Significance</b>
<b>Demography:</b>			
Age	0.95	-0.06	0.037
Age square	1.00	+0.00	0.228**
<b>Education:</b>			
<i>*Matriculation</i>			
No education	1.73	+0.55	0.000
Primary education	1.65	+0.51	0.003
Above matriculation	0.46	-0.77	0.004
<b>Occupation:</b>			
<i>*Managers and officials</i>			
Agricultural and fishery	1.34	+0.29	0.051
Sales and services	1.52	+0.42	0.043
Clerical staff	0.62	-0.48	0.036
Elementary	1.37	+0.31	0.079
<b>Family size:</b>			
Household size	1.40	+0.34	0.000
Household size square	0.99	-0.01	0.000
<b>Employment status:</b>			
<i>*Self-employed</i>			
Regular paid workers	1.28	+0.25	0.082
Casual paid workers	2.10	+0.74	0.000
Piece paid workers	1.57	+0.45	0.014
<b>Dependency ratio:</b>			
<i>*Low</i>			
Medium	1.38	+0.32	0.016
High	1.90	+0.64	0.000
<b>Location:</b>			
<i>*Urban</i>			
Rural	1.66	+0.51	0.000
<b>Summary statistics:</b>			
<b>N</b>	<b>Hosmer-Lemeshow:</b>		<b>0.3281</b>
<b>(3146)</b>	<b>Predicted power:</b>		<b>83.25%</b>

Source: PPHS-2010 micro-data

Note: \* represents reference category for each explanatory variable and \*\* for in-significant results

Education is an important variable to track working poor status, household heads with higher education, experience a low risk of being working poor as compared to the household heads with low level of education. In our analysis we classify education as; no education, primary education, matriculation and above matriculation. Results shows that low levels of education i.e. below matriculation is positively correlated with working poor and above matriculation is negatively correlated to working poor.

Working people having no education and primary education are more likely to be poor than working people with education equals matriculation and working people with education above matriculation are less likely to be poor than working people having matriculation certificate.

Occupation gave us a clear idea about working poor status of household, people engaged in low paying occupation face a higher risk of being poor. People engaged in agricultural, sales and elementary occupation work are more likely to be poor as compared to the people engaged in managerial and official related work. Most of the poor workers are from labor in mining, manufacturing, construction, agricultural, fishery, drivers, machine operators, plant workers, personal and protective service, other service, sales and market worker.

Along with occupation, employment status also gave us a better picture of working poor class. In our analysis we classify employment status as; regular paid, casual paid, piece paid and self employed. Casual work, piece paid and regular paid work classes are positively correlated to poverty, workers having casual paying jobs faces a higher risk of being poor than all other categories. Casual worker are more likely to be working poor than self employed workers.



## 5.2 Regional level analysis:

According to our estimated results working-poor rates significantly vary across rural and urban areas of the country and urban areas of the country experience high poverty and working-poor rates (Table 13). We apply logistic regression model for both urban sampled households and rural sampled households and investigate the regional differences among determinants of working-poor households in Pakistan. Tables 14 and 15 give the detailed result of determinants of working-poor households for both urban and rural sample. Both model are fitted good and explains the true relationship between explanatory variable and our dependent variable i.e. working-poor, and all the explanatory variables behave accordingly.

Educational is a key variable in shaping lives of people, education benefits everyone. Low levels of education are related to high risk of poverty for working class. Heads with better educational levels manage more efficiently than that of illiterate household heads and also pay attention to their children's to move out from poverty trap. More than 80 percent of the rural households' heads never attended school or just end up with primary education as a result rural households' face more poverty risk than urban households, however, education above matriculations had significant impact on reducing poverty levels of working households. Jamal (2007) argues that education of head in rural areas is not significant, however, female education plays a very important role in shaping lives of poor household in rural areas of the country.

Age of the household head is a significant variable in explaining poverty status of the working households, higher age of the heads reflects higher market experience as well as a permanent job [Gundogan *et al* (2005)].

**Table 14: Results of Logistic regression model for rural areas**

<b>Logistic Regression Model for Rural sampled households</b>			
<b>(Dependent variable – Working poor)</b>			
<b>Working-poor=1</b>			
	<b>Odds Ratio</b>	<b>Coefficients</b>	<b>Significance</b>
<b>Demography:</b>			
Age	0.96	- 0.03	0.193**
Age square	1.00	+0.00	0.617**
<b>Education:</b>			
<i>*No education</i>			
Primary education	1.18	+0.16	0.265**
Matriculation	0.65	- 0.43	0.000
Above matriculation	0.22	- 1.48	0.000
<b>Occupation:</b>			
<i>*Managers and officials</i>			
Agricultural and fishery	1.26	+0.22	0.032
Sales and services	1.26	+0.23	0.156**
Clerical staff	0.52	- 0.64	0.393**
Elementary	1.38	+0.32	0.089
<b>Family size:</b>			
Household size	1.35	+0.30	0.000
Household size square	0.99	-0.01	0.000
<b>Employment status:</b>			
<i>*Self-employed</i>			
Regular paid workers	1.38	+0.32	0.076
Casual paid workers	2.14	+0.75	0.000
Piece paid workers	1.11	+0.11	0.642**
<b>Dependency ratio:</b>			
<i>*high</i>			
Low	0.46	- 0.76	0.004
Medium	0.67	- 0.40	0.000
<b>Summary statistics:</b>			
<b>N</b>	<b>Hosmer-Lemeshow:</b>	<b>0.4423</b>	
<b>(2182)</b>	<b>Predicted power:</b>	<b>86.25%</b>	

Source: PPHS-2010 micro-data

Note: \* represents reference category for each explanatory variable \*\* for in-significant results

**Table 15: Results of Logistic regression model for urban areas**

<b>Logistic Regression Model for Urban sampled households</b>			
<b>(Dependent variable – Working poor)</b>			
<b>Working-poor=1</b>			
	<b>Odds Ratio</b>	<b>Coefficients</b>	<b>Significance</b>
<b>Demography:</b>			
Age	0.86	-0.14	0.019
Age square	1.00	+0.00	0.046
<b>Education:</b>			
<i>*No education</i>			
Primary education	1.86	+0.62	0.032
Matriculation	0.75	- 0.29	0.046
Above matriculation	0.48	-0.73	0.063
<b>Occupation:</b>			
<i>*Managers and officials</i>			
Agricultural and fishery	3.62	+1.29	0.044
Sales and services	2.05	+0.71	0.017
Clerical staff	1.35	-0.12	0.711**
Elementary	0.87	+0.29	0.743**
<b>Family size:</b>			
Household size	1.89	+0.63	0.000
Household size square	0.98	-0.02	0.000
<b>Employment status:</b>			
<i>*Self-employed</i>			
Regular paid workers	1.26	+0.23	0.419**
Casual paid workers	2.38	+0.86	0.012
Piece paid workers	3.42	+1.23	0.000
<b>Dependency ratio:</b>			
<i>*High</i>			
Low	0.84	- 1.64	0.530**
Medium	1.01	+0.02	0.957**
<b>Summary statistics:</b>			
<b>N</b>	<b>Hosmer-Lemeshow:</b>	<b>0.2721</b>	
<b>(964)</b>	<b>Predicted power:</b>	<b>80.75%</b>	

Source: PPHS-2010 micro-data

Note: \* represents reference category for each explanatory variable \*\* for in-significant results

Our findings suggest that in urban areas age of the household head plays a vital role, however, it seems to be insignificant in rural areas and these findings are parallel to Jamal (2007). As a matter of fact education levels of urban households is higher than rural households, thus gets well paying jobs on the other hand in rural areas mostly people were engaged in agriculture and age of the household head did not significantly impact poverty status of these working households.

Occupational attachment for service and sales category and clerical staff category comes out to be insignificant for rural areas of the country because rural people are less likely to participate in these types of occupations; however employment status shows a similar pattern in both urban and rural areas of the country.

Dependency ratio plays a significant role for rural households while it turns out insignificant in urban areas of country. In rural areas, usually household is large in size and most of the household members are dependents on the head because most of them work on their own farm with parents and hence not able to add much in household aggregate income to escape poverty.

## *Chapter 7*

### **Conclusions and policy implications**

#### **6.1 Summary and Conclusions:**

##### **6.1.1 Summary:**

There is ongoing debate on working poverty, but in case of Pakistan this area has so far been neglected. This study has fixed this gap in the knowledge. It has estimated the incidence of working poor in Pakistan. It has also compared money metric poverty with the working poor statistics. The PPHS-10 micro-data was the source to meet the objectives of this study.

The estimated working poverty, 19.66 percent, is not different from the money metric poverty rate of 20.70 percent. Most of the working poor households are located in rural areas of the country same as the case of money metric poverty. Age of the head of households turns out to be negatively related with the working poor; household headed by higher age group are less likely to be among the working poor class because of better labor market experience. Likewise education of the head of households' lifts up families; households headed by persons with matriculation or above level of education are less likely to be among the working poor than households headed by persons with no education or with low levels of education. Household size plays a vital role in shaping working poor status of households; households having large family size are more likely to be among working poor in comparison with small household size. Working poor are mostly engaged in low paying jobs; managers are less likely to be poor than those of elementary workers and agriculture related workers. Also employment status is a key variable to determine working poor class. A large proportion of poor workers are engaged in casual (dihari) work and piece paid work. The ownership of household asset has a negative impact on the incidence of working poverty. In short, in

addition to labor market variables, socio-demographic variables as well as asset status of a household and location largely explains the variations in working poverty in Pakistan.

### **6.1.2 Conclusion:**

Study highlights some important factor relating working poverty in Pakistan.

- ✓ In Pakistan, almost all poor households are working poor.
- ✓ Most of the workers are engaged in low paying jobs and are either casual worker or piece paid worker.
- ✓ Majority of the working poor households have large families and high child/old-age dependency.
- ✓ Working poverty rate is high among rural households.
- ✓ Educational level is inversely related to working poor class.

### **6.2 Policy recommendation:**

In light of above findings about working poor people of Pakistan, here we gave some suggestions.

- ✓ Reduce vulnerable employment in order to condense social risk of workers. Vulnerable employment includes self-employed workers and unpaid family helpers and these workers find it difficult to access decent work in order to meet social norms.
- ✓ Enhance productive employment through skill and wages. A better policy environment and balance growth path will increase productive employment, especially for young workers.

- ✓ Reduce child/old age dependency in order to reduce government expenditures on health, education and social security.
- ✓ Improve educational attainment levels of the workers especially young workers to get better income earning capability. Since on job training are important in improving skill levels, this will help them attain necessary characteristics to earn more and get rid of poverty.
- ✓ The rural area of the country has poor infrastructure, little health facilities, less education opportunities and job opportunities available to them as compared to their urban counterparts. While policy designing, rural areas should be kept in mind in order to add them in opportunity horizon.

Keeping in view all the above findings and problems associated with working poor class, if we really want to facilitate poor workers of Pakistan; we must educate them in order to help them out of poverty. In this aspect government should take initiative to provide educational facilities to this class, especially their children in order to break vicious circle of poverty they were trapped in. Government should keep in view the idea of quality of jobs while tackling with the problem of unemployment.

It is expected that the finding of our study will provide a base on the scenario of poor workers of Pakistan, from which further research can explore more about the situation that why a major portion of employed population cannot meet their basic needs.

### **6.3 Future research:**

Up-to the best of my knowledge, this is the very first study being conducted for the subject of working poor people of Pakistan. Our findings give a baseline to the researchers interested to

explore the area under consideration. Here I suggest some dimensions regarding future research;

- ✓ Using national poverty line, there is a need to estimate working poor at province level as well as district level analysis.
- ✓ Vulnerability of employment may be investigated.
- ✓ One can estimate working poor for south Asian region and compare these estimates for Pakistan; this could be done using international poverty line.
- ✓ Using survey data set, one should also estimate working poor at individual level.



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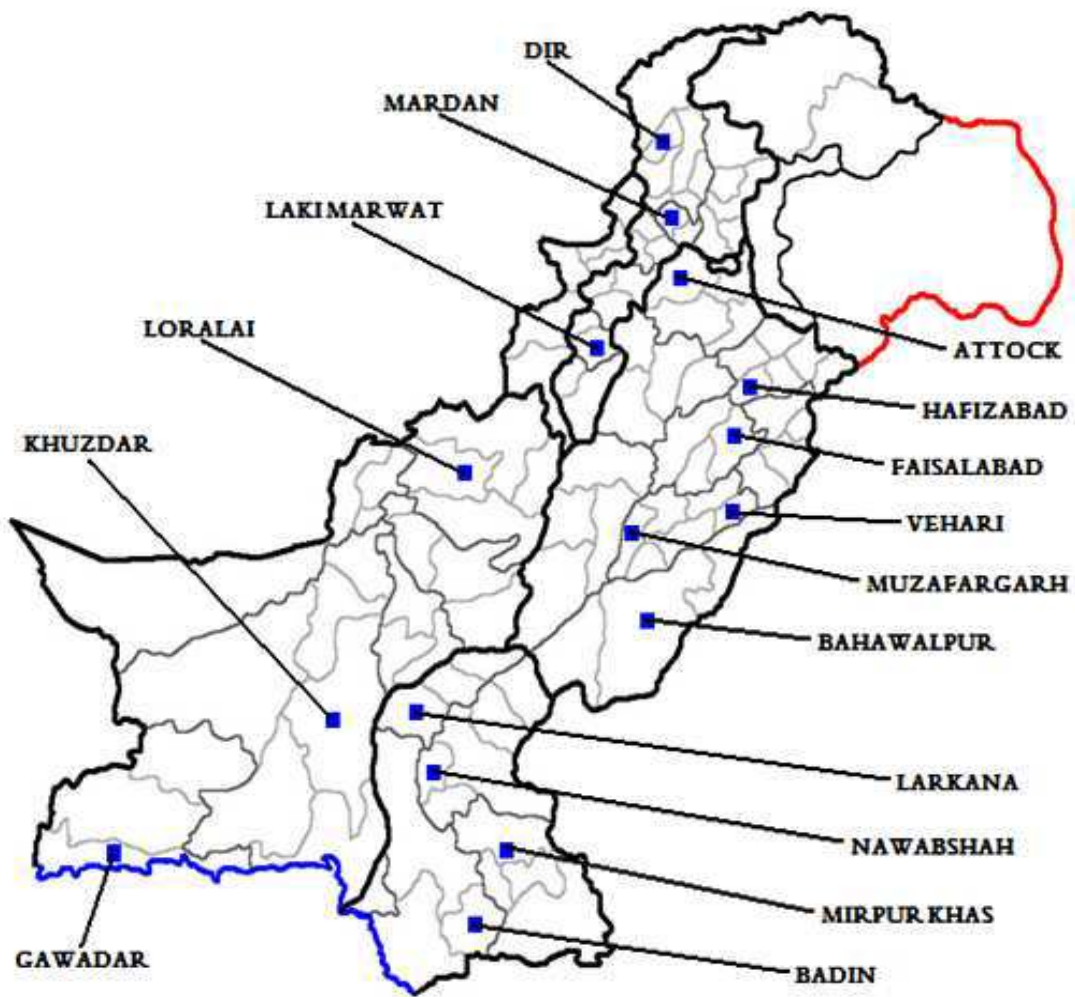
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## Appendix

Appendix 1: PPHS-10 coverage map for selected districts(PPHS-10)



**Appendix 2: Items included in household food basket (PPHS-10)**

S.#	Item name	S.#	Item name	S.#	Item name	S.#	Item name
1	Atta	14	Dalda	27	Beef	40	Spices
2	Wheat grain	15	Ghee	28	Chicken	41	Tea
3	Maida	16	Fresh Milk	29	Eggs	42	Bread/ bun
4	Maize flour	17	Yogurt	30	Other poultry birds	43	Other baked food
5	Basmati Rice	18	Lassi	31	Fish	44	Soft drink
6	Other Rice	19	Cheese	32	Onion	45	Kerosene
7	Other Grains	20	Butter	33	Potatoes	46	Charcoal
8	Chick peas Dal	21	Milk powder	34	Sag	47	Firewood
9	Masoor Dal	22	Other Milk products	35	Other vegetables	48	Dung cakes
10	Mung Dal	23	Baby formula	36	Bananas	49	Match box
11	Mash Dal	24	Sugar	37	Other fruits		
12	Other Dal	25	Gur	38	Canned food		
13	Vegetable Oil	26	Mutton	39	Biscuits and cake		

**Source: PPHS-2010 micro-data**



### Appendix 3: List of non-food items(PPHS-10)

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S.#	Item name	S.#	Item name
1	Electricity	11	Servant wages
2	Gas/cylinder	12	Permit/Visa, traveling (abroad)
3	Telephone	13	Household Appliances
4	Travelling	14	Furniture purchase/repair
5	Pan/cigarettes/Tobacco	15	Construction/repair of dwelling
6	Clothes/Shoes	16	Planting trees
7	Soap/Cosmetics	17	Purchase/repair of Agricultural tools
8	Education/Books	18	Purchase of fodder
9	Cinema/Sports etc	19	Other Exp
10	Medical care etc		

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**Source: PPHS-10**

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#### Appendix 4: Pakistan Standard Classification of Occupations list(PPHS-10)

S.#	Occupation name
1	Legislators, Senior Officials and Managers
2	Professionals
3	Technicians and Associate Professionals
4	Clerks
5	Service workers and Shop and Market sales workers
6	Skilled Agricultural and Fishery workers
7	Craft and related trade workers
8	Plant and Machine operators and Assemblers
9	Elementary occupations
10	Armed forces

Source: PPHS-2010 micro-data

#### Appendix 5: Household assets detail list (PPHS-10)

S.#	Asset name	S.#	Asset name	S.#	Asset name	S.#	Asset name
1	Refrigerator	6	Geyser	11	T.V	16	Iron
2	Freezer	7	Heater	12	Motor Cycle	17	Telephone
3	Washing machine	8	Cooking stove	13	Car	18	Computer
4	A.C	9	Cooking Range	14	Tractor	19	Internet
5	Air cooler	10	Microwave Owen	15	Scooter	20	Other

Source: PPHS-2010 micro-data