IMPACT OF REMITTANCES ON HOUSEHOLD WELFARE: A CASE STUDY OF DISTRICT LOWER DIR IN PAKISTAN

By

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NATIONAL UNIVERSITY OF MODERN LANGUAGES ISLAMABAD

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Candidate of PhD Economics at the National University of Modern Languages do hereby declare that the thesis entitled IMPACT OF REMITTANCES ON HOUSEHOLD WELFARE: A CASE STUDY OF DISTRICT LOWER DIR IN PAKISTAN submitted by me in partial fulfillment of Ph.D degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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DEDICATION

Every challenging work needs motivation, efforts as well as guidance of elders, especially those elders who are close to you.

I dedicate my humble effort to my beloved parents whose affection, support, encouragement and prayers make me able to get such success and honor.

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ABSTRACT

This research thesis examines the impact of foreign remittances on household welfare. Primary data are used for this purpose. Data have been collected through questionnaires from 403 households in district Lower Dir, Pakistan. Randomly 35 villages were selected from the entire district for survey. Stratified Sampling Technique has been used for further selection of remittances receiving and non-remittances receiving households. Both types of households (remittances receiving and non-receiving households) are given equal share in total sample size. The study covers information about five main determinants of household welfare, i.e. education, wealth, food, poverty and health. OLS model is used for first three determinants (i.e. education, wealth and food) and Logit & Probit models have been used for last two determinants (i.e. poverty and health).The results indicate that remittances have a positive and significant impact on household education, wealth status and food consumption. Remittances raise the income level of remittances receiving households, which is further used for educational expenditures. Consequently, remittances receiving households spend more income on education than non-receiving remittances households. Remittances and child's enrolment in schools are positively correlated. In addition, remittances receiving households have been found with higher wealth status and having more assets than non-receiving households. Indeed, total monthly income has a positive and significant impact on household wealth score. The results show that increase in total monthly income leads to pushing up the wealth score of the household. A big share of incoming remittances is used for the purpose of food consumption. The results also conclude that remittances receiving households spend more than non-receiving households for food expenditures. On the other hand, results also show that 76% of the remittances receiving households are above the poverty line and only 8% non-receiving households are above the poverty line. It means that foreign remittances reduce household poverty level. If a household receives foreign remittances then it is more likely for them to be above the poverty line and less likely to be below poverty line. In other words, when a household turns from non-receiving to a receiving household its probability of being non-poor also rises. Results also concluded that 83% of remittances receiving households can fulfill the basic needs of healthcare (i.e. transportation cost on healthcare, hospital and doctor fee, diagnostic tests charges, medicine cost). On other hand, only 36% of remittances non-receiving households can afford the needs of healthcare. The results establish positive relationship between foreign remittances and household's health status. Remittances receiving households can easily fulfill the needs of healthcare. Moreover, remittances receiving households prefer private hospitals to government hospitals for their treatment. Conversely, remittances non-receiving households prefer medical facilities provided by the government instead of private hospitals.

Keywords: Remittances and Welfare, Education, Wealth, Food, Poverty and Health

JEL Classification: F24, I31, I20, D31, I32, I10

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LIST OF ABBREVIATIONS

OECD	Organization for Economic Cooperation and Development
WB	World Bank
GDP	Gross Domestic Product
BEOE	Bureau of Emigration and Overseas Employment
LDC	Less Developed Country
PSLM	Pakistan Social & Living Standard Measurement
PRI	Pakistan Remittances Initiative
SBP	State Bank of Pakistan
HIES	Household Integrated Economic Survey
USA	United State of America
UK	United Kingdom
FDI	Foreign Direct Investment
US$	United State Doller
UN	United Nation
NIPS	National Institute of Population Studies
OLS	Ordinary Least Square
2SLS	Two Stage Least Square
ARDL	Autoregressive Distributed Lag Model
VAR	Vector Auto regression Model
PKR	Pakistani Rupees
IMF	International Monetary Fund
FAO	Food and Agriculture Organization
PCA	Principal Component Analysis
SPSS	Statistical Package for the Social Sciences

CHAPTER 1

INTRODUCTION

1.1 Background

Remittances is one of the most important financial sources for receiving economies. The remittances inflow contributes positively to economic growth and poverty reduction. It increases the income strength of the recipient economies, improves the health facilities, helpful in providing better education facilities and enhances the investment opportunities. Furthermore, it is added that foreign remittances contributing well to major economic components of the welfare of society. The incoming remittances are helpful for development and economic growth of the recipient economy (Siddique, 2012). The remittances of Pakistan from 1970-2010 have been an important source of foreign exchange earnings. In general the long run remittances inflow leads to sustainable economic growth and increases the wellbeing of poor household. Pakistan has been receiving a considerable amount of foreign remittances, which leads improving in the balance of payment status, decreases the current account deficit, supportive to economic growth and household welfare (Javid, 2012).

The inflow of remittances to Pakistan has increased sharply after 9/11 from 1075 million United State Dollars (US$) in the year 2001 to US$ 6000 million in year 2008 (WB, 2015). During the period from 2011 to 2015, the average US$ 15 billion per year remittances are being received by Pakistan. The average contribution to Gross Domestic Product (GDP) was 5% from the year 1975 to 2015, which has a great importance and support to Pakistan economy (WB, 2015). The

number of migrants has also increased with the passage of time, according to the statistics of Pakistan Bureau of Emigration and Overseas Employment (BEOE). According to official data approximately 3 million labor workers have migrated from 1970 to 2002 and number of migrants further raised to 9 million in year 2015 (BEOE, 2015). This growth of migrant's number raises the amount of incoming foreign remittances. The influential growth further contributes to decrease the current account deficit, raises the size of foreign exchange reserves, stabilization of exchange rates and a decline in poverty (Iqbal, 2010).

It is further argued that foreign remittances are a significant source of income for poor household, which also support to raise investment ratio in education of family, availability of good health status and to maintain the consumption status during economic shocks (Suleri, 2006). Remittances inflow leads to a considerable increase in the income of household, but there is no assurance that remittances lead to parallel increases in the entire household welfare components such as education, healthcare and other consumption patterns. If remittances contribute strongly towards savings and investment, then it leads to improve the household welfare (Colombage, 2010). According to the literature, remittances play very important role in poverty reduction and household welfare (Murphy, 2006).

Foreign remittances increase directly the household income which further increases the overall household consumption pattern. The household consumption is divided into seven major categories, i.e. Consumption of food (both own productions & directly purchased), consumption on non-food items (personal care & Clothing), durable goods consumption which is further divided into two categories i.e. home appliances, vehicles (television, computer, fridge, furniture &

motorcycle, car, tractor, truck), public utilities consumption (telephone, electricity, natural gas & water), educational consumption (tuition fee, uniform, books, stationary & traveling expenses), health care consumption (medicine, hospitalization charges, laboratory tests, transport & other health related expenses) and real estate consumption (properties, buildings, construction of houses).

According to Cuong (2009), the impact of internal and external remittances with respect to welfare is very significant and important for Vietnam. According to this study, the internal and external remittances improve both income and consumption patterns of the recipient household. The influence of remittances on non-food items is more than food items. The study also reveals that the impact of foreign remittances on income is much larger than consumption expenditures in Vietnam. A large amount share of foreign remittances is used for the sake of saving and investment. Conversely, most of the domestic remittances share is used for the sake of consumption expenditures due to the low level of income.

The less developed countries (LDC) face many problems and challenges. Pakistan is also one which also faces many problems i.e. poor & too risky investment opportunities, debt burden, political instability, high growth rate of population, the bad law in order situation, unemployment, lack of foreign investment, lack of capital formation, energy crises and other economic and non-economic difficulties. Due to these problems, incoming foreign remittances play very significant role to encourage the productive economic activities in the economy.

A research study regarding tenfold increase in foreign remittances to Pakistan is performed by Amjad (2012). This research study has a comprehensive base of the tenfold increase in foreign remittances from the year 2001 to 2012. Remittances ratio is above US$ 1 billion in the fiscal year 2001-2002 and this figures reached to US$ 12 billion in 2012. Another important thing is the share of rural regions in foreign remittances increases extremely, according to the source of Pakistan Social & Living Standard Measurement (PSLM) 2007-2008 that 70% share of total remittances received by rural regions, in 1996-1997 both of urban and rural region were receiving an equal share of 50%. This massive improvement influenced positively the wellbeing of rural regions. Seven reasons are given by the author for this growth in foreign remittances which are: an increase in number of workers, use of formal channels for sending remittances, change in skills of employment structure, whitening black money through remittances, undeclared export earning, illegal earning and transferring sale of abroad assets. This study also concluded that inflow of foreign remittances through the formal channel to Pakistan cannot increase the total demand pattern of Pakistani currency in the sense of foreign currency. In addition, the study revealed that Pakistan Remittances Initiative (PRI) collectively is in progress and the State Bank of Pakistan (SBP) and Finance Ministry are playing their important role in converting foreign remittances from informal channel to proper channel. This effort has been successful because it is strongly supported by commercial banks.

Furthermore, a closer analysis of both urban and rural areas at the district level is performed (Amjad, 2012). According to the rural areas analysis, over half of the remittances were sent to three major districts, i.e. Gujranwala, Lahore and Karachi with 23.7, 17.6 and 13.8 percent respectively of the total urban remittances in the year 2001 to 2002. Later on, in 2007-2008, major

changes are developed where both Karachi and Lahore could not qualify as two of the top three major recipient cities, while Gujranwala still sustained the top position and accounting for one-third of total urban remittances. Now currently in 2010-2011 Faisalabad and Rawalpindi collectively contributed for one-fourth of the remittances in urban areas. The analysis of rural areas recognized that Gujarat, Swat and Dir are the three top districts which contributed almost one-fourth of the total rural remittances in 2001-2002. In 2007-2008, the district ranking changed to Gujarat, Sialkot and Mandi Bahauddin attained the importance with the receipt of 26% in the total remittances.

The percentage distribution of remittances as reported in the household integrated economic survey (HIES) analyze that remittances are higher from Middle Eastern countries with respects to other regions by (Amjad, 2012). Almost 33% of the incoming remittances are reported to be originated from Saudi Arabia alone. The role of the Organization for Economic Cooperation and Development (OECD) member countries, particularly United State of America (USA) and United Kingdom (UK) is reported to be much less in the Household Surveys almost 9% as compared to the official government data of 44%. One cannot rule out the possibility of underreporting in (HIES) data while at the same time it is equally plausible that officially reported remittances from the OECD countries is different from workers' remittances in HIES.

Foreign remittances play an exceptionally important role for the survival and stability of the economy of Pakistan. Foreign remittances provide protection to the livelihood of the migrant families and also play a very key role to fulfill the gape of current account deficit. Currently, Pakistan is facing a big problem of trade deficit of almost US$ 18 billion during the year 2015-16.

The total imports were recorded to almost US$ 40 billion and total exports are recorded to almost US$ 22 billion for the year 2015-16. On the other hand, incoming foreign remittances are recorded to almost US$ 20 billion during the year 2015-16. Therefore, the deficit of trade was nearly the same as the amount received through remittances. Without foreign remittances, it would be very difficult to fulfill the huge gape of trade deficit. The inflow of foreign remittances through the formal channels are managed by the State Bank to fulfill the gape of trade deficit. In addition, the State Bank pays Pakistani rupees against foreign currency to migrant families. It is the most important macroeconomic level function and contribution of foreign remittances. This process also gives support to the management of exchange rate. The demand for local currency increases when foreign currency is converted into local currency. Thus, these remittances are also significant for exchange rate stability (Rehman, 2017).

After studying this positive role of remittances on the socioeconomic conditions of any society, especially in the developing countries like Pakistan, we considered to conduct a research study on remittances on micro level. This research study is conducted in district lower Dir which is one of the 26 districts of Khyber Pakhtunkhwa province of Pakistan. In district lower Dir there are many problems such as low literacy rate, high growth rate of the population, fewer business opportunities, a small portion of agricultural land and unemployment. It is very difficult to fulfill the basic needs of life without migration because of these problems. Arif (2009) identified that Khyber Pakhtunkhwa is the 2nd largest remittances receiving province after Punjab. According to the latest report of BEOE, Khyber Pakhtunkhwa contributes almost 25% share of the total Pakistani migrants till February 2017. Indeed, district, Lower Dir is being one of the highest

remittances receiving districts of Khyber Pakhtunkhwa. Therefore, it is very important to study the impact of remittances on household's welfare of district Lower Dir.

1.2 Socio-Economic Consequences of Migration

Cross-border migration process advances the diversity of culture in different societies and different regions. Individuals move from one home country to another host country for the purpose of better income earning and decent employment opportunities. The dream behind these steps are to advance the quality of social life individually and for whole beloved family which is left behind.

According to the report of World Bank (WB) foreign remittances is an essential source of private inflows to developing countries. Migrants send foreign currency to home country with a greater amount, which is providing support to stabilize and sustain the balance of payment position. The overall volume of remittances inflow to developing countries is much greater as compared to foreign direct investment (FDI) in the year 2013, which is three times greater than from official development assistance they received. The remittances inflow provided a stable shield to import bill of different countries like India, China, Egypt, Nepal, Haiti, Honduras and also Pakistan. China and India received remittance almost US$ 64 billion and US$ 71 billion respectively, which is the world highest top two countries in the year 2014. Due to this substantial growth in immigration and its influence on development and growth, it has become an important instrument for policy experts globally (WB, 2015).

Worker remittances contributed to the development of financial infrastructure. Incoming funds from developed countries improve demand for banking and other financial institutions.

Developing countries, mostly suffer from weak financial infrastructure and low level of money circulation in the economy. The incoming foreign remittances increased the competition among financial institutions and also improve the money circulation in the economy. The commercial banks, microfinance institutions, saving sector and investment sector services are promoted especially in rural regions. The development related authorities need to channelize remittances inflow properly with respect to its volume and provide more effective policies related to investment and consumption patterns (Motelle, 2011). Foreign remittances also have a progressive impact on development sector of the society and lead to poverty reduction in a country. Enrolment of children in schools is also affected positively by migration. Ultimately, remittances contributed remarkably to promote development in the receiving economies (Javid, 2012).

The global market of remittances is wider, which affects both low-income states as well as high-income states. There is a higher rate of returns in high income countries and wage rate is about five times greater in high income countries than in low income countries, that's why migrants are attracted. Migrants earn more incomes on the basis of higher wage rate in industrialized countries or high income countries and send these earnings back to homebased country. These overall capital inflows to developing countries stimulates wealth power and consumption strength which further promotes economic activities in the entire economy.

The worldwide international migration extended rapidly, particularly during the last fifteen years of period from year 2001 to 2015 (United Nation, 2016). In 2001, 173 million individuals have migrated. This figure has raised to almost 191 million in 2005 and 222 million in 2010. Finally, it reached its peak in 2015 when 244 million people migrated. In during the period 2000

to 2005 international migration increased with average growth rate of 2% per year. The growth rate is further increased to 3% average per year from 2005 to 2010. But, this growth rate is reduced to almost 1.9% average per year during the period from 2010 to 2015. The 71% of the international migrants are hosted by high income countries which is almost equal to 173 million. The 124 million international migrants hosted in Organization for Economic Cooperation and Development (OECD) member countries and non OECD member countries hosted 49 million. This number has been shared by OECD member and other high income, non OECD member countries. On the other hand, only 71 million, i.e. 29% of all migrants are hosted by low and middle income countries. More specifically, middle income countries hosted 61 million and low income countries hosted 9 million of international migrants (UN, 2016).

According to World Bank report, international migration increased rapidly and the number of worldwide migrants, including refugees, reached to 258 million in the year 2017, this ratio was recorded 172 million in the year 2000. The total share of migrants in the world population increased from 2.8% to 3.4% respectively in the same period. A considerable number of migrants were migrated to high-income countries with the ratio of three out of four (3/4) during the period from 2000 to 2017. Where the population share of international migrants in the migrant host country increased from 9.6% to 14%. Among the top five migrants hosting countries, the United State is on the top of the list, followed by Germany as a second higher place and then by Saudi Arabia as the third largest migrant hosting country. The Russian Federation ranked as fourth highest which are followed by the United Kingdom. When migrants numbers are measured with respect to the host country population share than the top three migrant host countries are the United

Arab Emirates, which is followed by Kuwait and Qatar respectively. There are more than eight migrants for every adult native individual in these three Arab counties (WB, 2018).

The other important type of migration which is newly introduced a phenomenon of forced migration. A migration process due to conflicts and wars is known as a forced migration. The history of force migration started from World War II, when almost 51 million people were forcefully migrated to worldwide as refugees (Zetter, 2015). This type of migration is generally a huge humanitarian problem for both host and home countries which creates many problems related to employment, development and public spending. Forced migration has created various challenges and problems in some of the regions in the world. According to UN report, almost 20 million refugees were migrated to worldwide. Turkey is one of the top refugee-hosting country in the globe by hosting almost 1.6 million and Pakistan followed by second higher refugees hosting country with a number of 1.5 million refugees. Lebanon is the third position in this respect which hosts 1.2 million and Iran hosts 1 million with fourth largest refugees host country. The millions of Afghani refugees were migrated to neighboring countries due to more than 35 years of war. The biggest share of almost 90% Afghanistan refugees are living in developing countries, however, only 10% are hosted by developed countries. Syria is also affected by war and 50% of the country residents is moved. Maximum of the Syrian refugees are migrated to bordering countries such as Turkey, Jorden and Lebanon, which has already hosted Iraqi and Palestinian refugees in million (UN, 2016).

Around 90% of the poor people of developing world belong to Africa and Asia and most of them live in rural areas. More precisely, 75% of the poor people live in rural and 25% in urban

areas of different developing countries. Indeed, the economies of developing countries almost based on agriculture. The income of 2.1 billion poor population is below two dollars (2 $) per day and population which has income below one dollar (1$) also have a presence of 880 million. Due to this situation, it is very difficult to control the poverty level especially in rural areas of developing countries like Pakistan. Poverty is the sum of low income, poor health care, weak housing facilities and lack of education opportunities. More than 63% of the total population of Pakistan is living in rural areas according to economic survey of 2011-2012. This is the valid reason of poverty that majority of people live in rural parts and totally dependent on the agriculture sector. However, the contribution of agriculture sector to GDP is around 22% only. A big share of overall population, i.e. more than 63 percent is living in rural areas. Although this also provides a big share of employment to Pakistan economy, which is above 40% of the total labor force (Pervez and Rizvi 2014).

1.3 Statement Problem

The population of Lower Dir district is almost near to 0.8 million according to the 1998 census report. The population growth rate is so high which is 3.42% per year according to census 1998. With this growth rate, the projected population increased to 1.043 million in 2015 according to the projection for 2015 on the basis of 1998 census (National Institute of Population Studies (NIPS, 2015).

There are several problems in the district in Lower Dir such as high growth rate of population, low literacy rate, lack of job opportunities, shortage of natural resources, deficiency of agriculture land, scarcity of capital and an unfavorable environment for business activities. These

all problems lead to migration hence the people of Lower Dir prefer to go abroad in order to fulfill the basic needs of social life, obtain a respectable position in society and to make their future bright. According to the study performed by Amjad (Amjad, 2012) Gujarat, Swat and Dir are the top three remittances receiving districts of rural areas, recording almost one-fourth of the total rural remittances in 2001-2002.

The current situation of Lower Dir is that a large number (i.e. 169325) which is almost 0.17 million people are migrated internationally according to the report of BEOE, 2015. In other words, district Lower Dir contributes almost 2.22% share of the total number of Pakistani migrants and having only 0.54% share in the total country population. Majority of people migrated to the Middle East as well as to other countries for a better opportunity of jobs and good pay. These migrated people send a substantial level of remittances to support and compensate their families in a better way. According to literature, these remittances increase the consumption level of households and help declining poverty level. However, at the same time remittances have some drawbacks such as it increased the dependency ratio in families as well as the dependency on other nations and also lead to the outflow of the skillful and educated people.

1.4 Hypothesis

Hypothesis is constructed on the bases of previous literature, which combining different views and the relationship of the variables with respect to remittances and household welfare. Firstly, remittances contribute to household's income in case of a low and middle-income class of developing countries. Similarly, migrant's remittances have been contributing for household food, non-food consumption, house construction and land purchasing. On the theoretical side, many

researchers considered the multiplier effects made by remittances which may or may not be direct in nature. Some of the recent research in this regard showed that remittances might not be invested in a productive way but they still can generate an important multiplier effect. One unit remittance as spent on other basic needs leads to stimulate total retail sales, which can further stimulate demand for other goods and services like health, education and utilities (OECD, 2005).

Some studies also refer remittances as driving force for better life standard and reducing poverty (Baruach, 2006). Remittances play a very crucial role for the socio-economic development of low income families in the least developed countries. It pushes up income level of poor people and also provides an opportunity for better life standard to remittances receiving families (Hasan, 2006). In some studies, remittances are found responsible for better health status and affecting positively the educational expenditures of household (Murphy, 2006). Education of household head is found to have a positive correlation with household welfare and larger household is found having a negative relationship with the welfare (Quartey, 2006). After studying the impact of remittances on different variables representing household welfare and better-off position of remittances receiving families, the following hypotheses are constructed.

H_0: Remittances have an insignificant impact on household education.

H_1: Remittances have a significant impact on household education.

H_0: Remittances have an insignificant impact on household wealth score.

H_1: Remittances have a significant impact on household wealth score.

H_0: Remittances have an insignificant impact on household food consumption.

H_1: Remittances have a significant impact on household food consumption.

H_0: Remittances have an insignificant impact on the household poverty level.

H_1: Remittances have a significant impact on poverty levels of the household.

H_0: Remittances have an insignificant impact on the household health status.

H_1: Remittances have a significant impact on health status of the household.

H_0: Other determinants (like father's education, mother's education, household size) have also insignificant impact on household welfare.

H_1: Other determinants (like father's education, mother's education, household size) have also a significant impact on household welfare.

1.5 Significance of Study

The impact of remittances inflow on the socioeconomic development of remittances receiving household in of Pakistan is very impotent and significant. At the start of migration, the migrants usually work for a lot of months to pay the costs of visa and migration. The 36% of total remittances are spent for the purpose of saving and investment. Remittances push up the income level of household which leads to improving socioeconomic status of household (Arif, 2009). The role of remittances inflow to Pakistan during emergencies and crises are also important and significant. Foreign remittances played a key role during an earthquake of 2005. The external financial source plays active role in the recovery of massive destruction. Migrated household were

in a better position to recover their job position, home condition and rebuild their living standard (Suleri, 2006).

Foreign remittances inflow contributes greatly to the socio-economic development of remittances receiving families in rural houses of district Faisalabad, Pakistan (Saleem, 2007). Remittances raise the living standard of emigrant families. After migration, the emigrant's families totally change their lifestyle and at that moment remittances are used for the property and business purposes. Currently, 42% of migrant households use public transport and before migration the use of public transport was 76%. The inflows of remittances not only develop the socioeconomic status but it also modifies the behavior of overall society. Participation of mothers on decision making and management were also increased.

The foreign incoming remittances have a positive impact on migrant family social status, life style improvement and opportunities of standard education for children. In addition, remittances also have a positive effect on changing the behavior of friends and relative concerning to remittances receiving household. The remittances receiving household are engaged with the business of micro level, real estate investment and investment in agriculture land. It has also been observed that major motion behind foreign migration was a bad economic condition, the soul of competition, unemployment and low level of social status in society. Migration also has a positive impact on marriages celebration programs, opportunities of getting married in well establish family, promotes the nuclear family system, increases political importance, improves housing standard and obtaining new brand automobiles (Mohammad, 2010).

The most important impact of foreign remittances is to support the consumption needs of the migrant families. This is the micro level impact of foreign remittances, which improves income strength of remittances receiving households and eliminates the poverty at the household level. It is argued that 25 % share of foreign remittances is used for food, health and education expenditures and almost 30% share of remittances are used for the repayments of loans, marriages and durable goods. A major share, almost 40% of incoming remittances is used for real estate businesses, saving and investment. Moreover, when migrant families fulfilling the economic needs the consumption of foreign remittances motivates business activities in the economy. These demands of different consumption patterns boost all other economic sectors which are demanded. All other sectors like agriculture, service and industry sectors are positively affected (Rehman, 2017).

Foreign remittances are a major source of foreign exchange earnings since 1970 for Pakistan. During the last four decades, a significant amount of remittances has been received by Pakistan however, fluctuations are also founded in remittances inflow. The inflow of remittances contributing positively to household welfare, economic growth and decreasing current account deficit. In addition, it also improves the balance of payment status and reduces dependency on external borrowing.

In the last fifteen years from 2001 to 2015, foreign migration and incoming remittances have increased with greater volume. A lot of people prefer migration to improve the socioeconomic condition of their families. After migration, most of the people engage themselves in different income generating activities within and outside of their home country. Therefore, it is very interesting to investigate differences among diverse aspects of people who migrated and the people

who did not migrate. This difference is investigated with respect to the socioeconomic welfare of households through the indicators of education, poverty, wealth status, food consumption and health care of the households. This research study also highlights the importance of worker remittances and gives policy recommendations related to its socioeconomic impact on migrant families.

Indeed, Pakistan is a developing country which faces a lot of problems some of which are poverty, unemployment, lack of capital and high population growth rate. Migration plays a vital role in solving these problems to some extent and reduces pressure on the overall economy. In more populous countries like China, India, Russia and United State internal migration from rural regions to urban regions also play important role in poverty reduction and employment opportunities. However, the impact of internal migration within Pakistan is inconsiderable because of minor difference in wage rate of workers within the country. Yet, migration is always considered as a necessary element for socio-economic development of poor families all over the world, especially for developing nations. Therefore, this overall significant worth of migration and foreign remittances increase the role of government and policymakers. In addition, it also justifies the importance of research studies for investigating the impact of remittances.

Migration is one of the most important economic, socio and demographic process where the people migrate within a country or to another country. In earlier history, people usually moved from one region to another region either willingly or unwillingly. Sometimes, people migrate due to natural reasons or some personal objectives and causes. In recent time, foreign migration has been increased considerably. Therefore, it is essential to investigate the reasons behind migration

and its impact on household welfare. In addition, it is also important to identify the socioeconomic conditions of migrants' households. Such research study are very helpful for policymakers to develop effective policies and make good decisions in order to enhance the benefits of migration.

The total number of registered workers with BEOE till October 2015 are about 7.991 million who migrated from Pakistan to abroad. Before 1996 Dir Lower and Dir Upper was one district called Dir. Therefore the BEOE maintained data of both district collectively. According to that data, district Dir contributes a share of 0.304 million (i.e. 304785) which is almost 4% of the total overseas Pakistani migrants. This means that district Dir has 1% share in total country (Pakistan) population and 4% in total overseas migrants. Lower Dir and Upper Dir have projected population of 1.043 million and 0.837 million respectively, whereas the total Pakistan population is 191.710 million according to the projection for 2015 on the basis of 1998 census (NIPS, 2015). As Upper Dir has a population of 0.837 and Lower Dir has a population of 1.043 million hence we computed the number of migrants for each district on the basis of population presence. Based on that computation, district Lower Dir has almost 0.17 million migrants which are almost 2.22 % of the total number of Pakistani migrants. Although the population share of district, Lower Dir is only 0.54% of the total population of Pakistan. The contribution of total migrant numbers is four times greater than its share of the population.

Due to all of these issues and gaps, it is very important to carry out a detail research study on migration to fulfill all of the directions which are needed for modern research. Our study is based on the primary data source and data have been collected from 35 different villages of seven Tehsils of district Lower Dir with the help of random sampling techniques.

After close analysis of existing literature there is some research studies at local levels and national levels that have worked in different directions and different aspects of foreign migration. But this research study is different from all existing research studies with respect to the comprehensive literature review, econometric analysis, detail descriptive information and specially the significant importance of the area where the survey were conducted. This research study analyze the detail, comprehensive and up-to-date literature review. Which is divided into three sections theoretical, micro and macro analysis. We have used three different econometric models (OLS, Logit & Probit) for regression analysis. In descriptive analysis the comparison has been made between remittances receiving households and non-receiving households on the basis of household welfare, i.e. wealth, education, poverty, health and food. The study area of this research study also have a significant importance regarding remittances and number of migrants. District Lower Dir is listed one of the top districts in Pakistan with respect to migrant's numbers and incoming remittances. This is the first time for District Lower Dir which has been considered for a comprehensive research study. It is very important to carry out a detail research study on migration to fulfill all of the directions which are needed for modern research.

1.6 Research Questions

The overall research study investigates a lot of questions related to migration, remittances and other related information about household receiving remittances. In order to collect primary data, a questionnaire is designed which consists of hundred questions. The questionnaire is divided into seven sections based on household welfare and the variables (i.e. education, wealth, food, poverty and health). In order to investigate the impact of the remittances on dependent variables, this research study answers the following research questions.

- What is the impact of remittances on household welfare?
- What is the impact of remittances on the education level of the household?
- What is the impact of remittances on the wealth status of the household?
- What are the effects of remittances on household food consumption?
- What is the impact of remittances on poverty?
- What is the impact of remittances on household health status?

1.7 Objectives of the Study

The main objective of this research study is to investigate the impact of foreign remittances on household welfare in district lower Dir, Khyber Pakhtunkhwa, Pakistan. This important objective has been derived from the main determinants and factors of household welfare in Pakistan. The research study commences in this thesis is expected to convey important and useful information related to foreign remittances and its relation with household welfare. The detail information about welfare determinants and their measurement are also considered with respect to household education, wealth status, food consumption, poverty level and health status. The impact of remittances on family education, poverty level and food consumption of household have never been analyzed for this region (Lower Dir) in such a details. Furthermore, this study analyzes the interrelationship of the foreign remittances and household welfare in district lower Dir. The following points highlight the important objectives of this research work.

- Estimating the effect of migration on the socioeconomic development and welfare of Lower Dir at the micro level.
- Investigating the relationship between inflow of foreign remittances and poverty.
- Analyzing the impact of foreign remittances on household education.

- Examining the impact of foreign remittances on household wealth status.
- Exploring the impact of foreign remittances of household food consumption.
- Investigating the impact of foreign remittances on household health status.
- Developing policy recommendations about foreign remittances in order to utilize it in the best way.

1.8 Contribution of this Study

This thesis offers the following four contributions. The first contribution is related to the use of primary data source. The second one is regarding the importance of the study area with respect to migration and remittances. The third contribution concerns with investigating the impact of remittances on household welfare. The final contribution is about the policy recommendations.

1. The first contribution is that this research work is based on the primary data source. The author was involved on the ground for collecting data from respondents. In order to collect primary data, a questionnaire is designed which consists of hundred questions. The questionnaire is divided into seven sections based on the determinants of household welfare. The data regarding all five household welfare determinants are obtained from the household survey. The total sample size of this research study is 403, in which almost half are remittances receiving households and half are non-remittances receiving households. Four hundred and three households were been interviewed through a questionnaire to get the relevant information during years 2013 and 2014.

2. One of the most important districts of Pakistan (i.e. Dir Lower) with respect to foreign migration and remittances is selected in order to perform the study. Indeed, district, Lower Dir is being one of the highest remittances receiving districts of Pakistan. Dir Lower has almost 0.17 million foreign migrants and has a share of almost 2.22 % in the total number of Pakistani migrants. Although the population share of Dir Lower to Pakistan population is only 0.54 percent. The contribution in total migrant's numbers is four times greater than from its share to the Pakistan population. Therefore, it is very important to study the impact of remittances on households' welfare in this district.

3. The main contribution of this research study is to investigate the impact of foreign remittances on household welfare. In order to determine the impact of foreign remittances five determinants of household welfare are used, i.e. education, wealth, food, poverty and health. Two types of econometric models, i.e. linear and non-linear are used for regression analysis. Ordinary Least Square (OLS) model is used for analyzing the impact of remittances on household education, wealth and food. Similarly, non-linear models Logit and Probit is used for examining the effect of remittances on household poverty and health. In addition, the detailed comparison of both remittance receiving and non-receiving households is given in the descriptive analysis with respect to income, education, wealth, food, poverty and health.

4. Finally, based on this study, two types of policy recommendations, i.e. regarding the migration and remittances and the study area are given. The policy recommendations about the migration and remittances are regarding the use of informal channels for remittances,

formal education, technical training, migration cost and healthy workforce. Policy recommendations regarding the study area are concerned with female participation in earing, business opportunities, agriculture land, education and health facilities in district Dir Lower.

1.9 Overview of Migration

The migration and foreign remittances have an important role in Pakistan economy. Foreign migration from Pakistan has been started in 1976 and since this year remittances sent by migrants to Pakistan has considerably increased. Table 2.1 summarizes the historical figures of remittances sent by migrants to Pakistan and its contributions to GDP. The era from 1976 to 2015 has been divided into eight durations or periods, each of five years. This table also shows the total remittances send to Pakistan in each duration, average remittances per year in each duration, the contribution of total remittances to GDP in percentage, average per year contribution to GDP in each duration and the average increase in remittances in %.

As shown in Table 1.1, during 1976 to 1980 Pakistan received US$ 6.14 billion in the form of remittances and the average remittances per year in this duration is US$ 1.228 billion. The total contribution to GDP during the first duration is 32.46 % and 6.5 % on average per year. There is 100 percent increase in total and average remittances in a period of 1981 to 1985, i.e. from US$ 6.14 to 12.71 billion and from US$ 1.228 to 2.542 billion per year respectively. Total contribution to GDP during 1981 to 1985 is 42.456 % and average contribution per year is 8.4 % which is the highest for five years in the total era. In period 1986 to 1990, the total remittances have been reduced to US$ 10.52 billion and average remittances per year to US$ 2.104 billion. Subsequently,

the average contribution of remittances to GDP has also been reduced from 8.5 to 5.82 %. The reduction in remittances continue in the next ten years (i.e. from 1991 to 2000) and reduced first to US$ 1.605 billion and then to US$ 1.246 billion on average respectively. Similarly, the average GDP contribution also fallen down to 3% and 1 % respectively from 1991 to 2000. During period 2001 to 2005, the total remittances and average remittances per year have been increased sharply and reached to US$ 17.2 billion and US$ 3.44 billion respectively. In the next two periods (2006-10 & 2011-15) the remittances have been increased and reached to its peak of US$ 76.465 billion. The total contribution to GDP has also been increased during this period to 22.449 % and then to 25.305 %. The shortfall in foreign remittances in the period from 1986 to 2000 is due to economic crises in gulf countries. After 9/11 remittances have been increased sharply which is the last period (i.e. 2011-15) in Table 2.1. This increase in remittances is due to improvement in government policy regarding the formal channel of incoming remittances as well as because of an increase in the numbers of migrants.

Table 1. 1

Historical Data of Incoming Foreign Remittances and its Contribution to GDP in Pakistan

Duration/ Period	Total Remittances in Billion US$	Average Per Year Remittances in Billion US$	Contribution of Total Remittances to GDP (in %)	Average per year contribution to GDP (in %)	Average per year Increase in Remittances
1976-1980	6.14	1.228	32.46	6.492	53.247
1981-1985	12.712	2.5424	42.456	8.4912	5.1686
1986-1990	10.52	2.104	29.107	5.8214	-4.2752
1991-1995	8.028	1.6056	15.644	3.1288	-2.0914
1996-2000	6.234	1.2468	9.679	1.9358	-6.0968
2001-2005	17.204	3.4408	19.63	3.926	39.7424
2006-2010	36.565	7.313	22.449	4.4898	17.8258
2011-2015	76.465	15.293	25.305	6.32625	15.468

Source: World Bank (WB), 2016

According to the WB 2015 report, the growth in international remittances has come down in 2015 due to slow economic growth in Europe. Remittances rate has been counted slowest since the worldwide economic crises in 2008-2009. The worldwide economic recovery is also expected in the year 2016 and the global remittances flows are projected to accelerate 4 %. The remittance will reach to US$ 610 billion in 2016 and will further increase up to US$ 636 billion in the year 2017. Remittances inflows to developing countries are also expected to recover and increased up to US$ 459 billion in 2016 and then further growing to US$ 479 billion for the year 2017. Top five migrant hosted countries to hold this position will still continue (United State (US), Saudi Arabia (SA), Russia, Germany and United Arab Emirates (UAE)). The top five position of remittances receiving countries will also maintain the same status, i.e. India, China, Mexico, Philippines and Nigeria. Flows of remittances to East Asia and Pacific (EAP) regions in 2014 were counted US$ 122 billion with the growth rate of 7.6 %. Two East Asian and Pacific (EAP) countries, i.e. China and Philippine have progressed globally and become the second and third largest countries in remittances recipient by receiving US$64 and 28 billion respectively for the year 2014.

The flow of remittances to Europe and Central Asian developing countries are continuing to decline sharply for years 2014 and 2015. In 2014 remittances reduced by 6.3 % and expected to reduce 13 % in year 2015. The main reason behind this is the economic crises in Russia which provided base and major source for remittances to Central Asian developing countries. Due to crises, migrant workers lost their jobs in Russia which leads to reducing in real income and remittances. In Latin America and Caribbean (LAC) countries remittances are estimated with a growth rate of 2.3 % in 2015 to reach US$ 66 billion. Mexico received US$ 25 billion in 2014 which is the world fourth largest remittances recipient. Remittances to Latin America region are

expected to increase to US$ 69 and 71 billion respectively for the year 2016 and 2017. Remittances to East and North Africa region are expected to slow considerably for the year 2015 but in the year 2014 this region shows a modest growth rate of 7.7 %. The Egypt received US$ 20 billion with the growth rate of 10 % which is the word sixth largest remittances recipient in 2014. Lebanon got 13 % growth rate with the help of US$ 9 billion which is the world tenth highest recipient for the year of 2014. On the other hand, the South Asian region received US$ 117 billion remittances in the year 2014. The slight growth rate is expected for South Asian (SA) region to receive remittances US$ 120 billion, US$ 126 billion and US$ 132 billion for three consecutive years, i.e. 2015, 2016 and 2017. International remittances are very important for developing countries such as Pakistan, Bangladesh, Nepal and Sri Lanka. Foreign remittances for these countries exceeded 6% of their GDP in the year 2013. India is the largest remittances recipient in this region and also the largest migrant producing country in the world. On the bases of data presented and estimation drawn a sharp rise in remittances is expected in all regions of developing countries (WB, 2015).

The large increase in oil prices also has some important contribution and impact on external and internal balances in Pakistan economy. The low level of oil prices in the global market, contributing to fiscal and external balances, but a rapid increase in oil prices also disturb the stability process. On the other side, low oil prices, restrict the public spending of Gulf Countries, which further leads to a negative impact on Pakistani migrant's earnings. This process would reduce the growth of remittances and raises the current account deficit (WB, 2016).

According to the World Bank latest report of 2018 remittances are come back to the highest level in the year 2017. After the decline of remittances flows in two consecutive years (i.e. 2015 & 2016), the remittance flows increased by almost 9% in the year 2017 to low and middle-income

countries. The total amount of remittances reached to almost US$ 466 billion in the year 2017 which are estimated three times greater than the official development assistance. Without China, the size of remittances flows to less and medium income countries are significantly greater than the foreign direct investment. Remittances are also more stable relative to the exchange of equity flows and private debt. These figures are based on the true size of official data. On the other hand, the remittance size of the informal channel is considerably larger. In the year 2017, a significant strong recovery is founded in remittance flows and exceeded from expectations. Remittances were higher than the expected in most of the regions in Central Asia, Europe, Middle East, North Africa, Russian Federation, Sub Saharan Africa and United State. Exchange rate played an effective role in the motivation of remittance flows. The stronger European euro and stronger Russian ruble against US dollar further made more noticeable the remittances growth in the term of US dollar. These effects also played an effective role to compensate the reducing rate of remittances from the Gulf Cooperation Council (GCC) countries and especially Saudi Arabia, due to tightening fiscal policies and discouraging foreign worker recruitment. The top five remittances receiving countries were India, China, Philippines, Mexico, Nigeria and Egypt in term of the dollar in the year 2017. On the other hand, according to the share of GDP, the top receiving countries were mostly smaller economies like Kyrgyzstan, Tonga, Tajikistan, Haiti, Nepal and Liberia for the year 2017 (WB, 2018).

Remittance flows to South Asia raised to 5.9% in the year 2017 after almost 6% decrease in the year 2016. The remittance flows to India declined steeply by 9% in the year 2016 and remittances growth rate reached to almost 10% in the year 2017 with the help of US$ 69 billion, which increased from US$ 63 billion in the year 2016. This growth is likely to be continued in the

year 2018 on the behalf of good economic conditions in the developed economies especially United State and due to increase in the oil prices will contribute positively to Gulp Council Countries (GCC). In Pakistan, a slow growth of 2.4% in the total remittances is recorded in the year 2016 and remittances continued nearly flat for the year 2017, due to a substantial decrease in the remittance inflows from the major source country Saudi Arabia. This is due to nationalization policies regarding labor market in Saudi Arabia. This trend is expected to continue in the year 2018. On other hand, inflows of remittances from UAE, UK and US will increase. The other important country in South Asia Bangladesh also faced a steep decline of 12% in the year 2016 and remittances were recorded almost the same in the year 2017 (WB, 2018).

1.10 Organization of the Thesis

This thesis consists of seven chapters. Following are the outlines of each chapter.

Chapter 1: Introduction. This chapter gives an overview of migration and foreign remittances. The socio-economic consequences of migration are detailed, the problem statement is presented and then the hypothesis is discussed. The significance of the study is explained, research questions are listed down and the objectives of the study are highlighted. Finally, the organization of the thesis is described.

Chapter 2: Literature Review. This chapter summarizes the existing state of the art regarding the migration and impact of remittances. The literature review is divided into four sections. The first section analyzed the literature about theoretical based studies. The second section presented the existing micro-based studies. The third section discussed the macro based studies. Finally, the summary of the literature review has been provided.

Chapter 3: Research Methodology. This chapter presents the research methodology. The universe of study is described, then sampling method and data source are discussed. Variables are explained and the measurement details are provided. Theoretical frameworks are summarized and details about the two-step analysis, i.e. descriptive statistics and regression analysis are elaborated. Finally, the model used is explained in detail.

Chapter 4: Poverty Analysis. This chapter analyzes variables used to determine poverty and health status. The empirical methodology adopted for household poverty and health status are discussed in details.

Chapter 5: Descriptive Analysis of Data. This chapter presents the detail descriptive analysis of the household survey. First general background about households are given and then education related information of households are discussed in details. Information about migration and migrants is described. Wealth status related data are presented and the food consumption of the households is elaborated. Finally, the data related to health status are summarized.

Chapter 6: Empirical Analysis. This chapter presents the regression analysis in order to investigate the impact of remittances on household welfare. The OLS analysis is explained which is used for regression analysis of household education, wealth and food. The Logit & Probit analysis is described which is used for regression analysis of poverty and health.

Chapter 7: Conclusion and Policy Recommendations. This chapter concludes the thesis. First, a conclusion of the thesis is provided and then policy recommendations regarding migrations, remittances and study area are described. Finally, the future extensions of this thesis are discussed in details.

CHAPTER 2

LITERATURE REVIEW

Migration is a human phenomenon where people move from one place to another place either with the aim of settling down in a new place or looking for better job opportunities so that they can help their family financially through remittances. Several studies are conducted in literature regarding migration, remittances and their impact on poverty and economic growth. Most researchers agreed that foreign remittance improves the economic growth and reduce poverty in a country. The impact of migration and remittances has been studied at both micro and macro level. Micro level studies analyze the impact of migration and remittances on household welfare determinants such as income, health, education, wealth, food, poverty, etc. However, macro level studies investigate the effect of migration and remittances on macro determinants such as national income, GDP growth rate, inflation etc.

There are two types of migration, i.e. internal and external or international migration. The internal migration is the movement of people within the boundaries of a county, i.e. from rural to urban areas and between cities, provinces, states, district, town, etc. The external migration takes place when people move from one country to another country. The international migration is further divided into two types based on the geography or the types of county from which migration takes place. The first type of external migration is the outflow of people from less developed countries to developed countries, which is also called south to north migration in geographical context. The second type of external migration takes place when the people of the less developing country move to another less developing country, which is also called south-to-south migration.

Several econometric models such as OLS, Two Stage Least Square (2SLS), Logit model, Probit model and Hickman econometric model have been used to study the impact of remittances.

This chapter summarizes the literature about migration and remittances. The literature review is divided into three sections, based on the types of studies conducted in the past, i.e. theoretical based studies, micro based studies and macro based studies. The remaining part of this chapter analyzed the literature about these different types of studies. Finally, the literature review concluded with a summary.

2.1 Theoretical Based Studies

This section summarizes the theoretical studies regarding migration and remittances. There are several theories, which explain the flow of people from one place to another. Usually, these theories are not based on experiments and econometric models. The history of literature about migration started with Lewis model (1954), which state that migration from rural to urban areas in the country increases the output and productivity of the labor force. This model is based on "Dual sector economy" which is the transition of labor between traditional sector, which has excess of the work force and industrial and developed sector. In the rural areas, there is a surplus of labor and the productivity is low and most of the people are based on agriculture sector. The agriculture sector is based on traditional and old technology. However, large number of labor force links to small parts of agriculture land. The income of labor force per head in traditional sector is lower than from developed sector. The surplus of labor force decreases the productivity of land or agriculture sector. When labor shifts from rural areas to urban areas, it contributes to the industrial

sector and sustainable development. This migration also increases the competence and progress of labor force because of high wage rate and more opportunities of jobs.

Mayda and Patel (2005) did a research study related to international migration flows, policies and the role of remittances receiving countries. They discussed four main variables, i.e. economic, political, social and cultural that affect migration policies. Existing literature mostly focused on supply side factors of migration, but the demand side factors of migration have not gotten much attention. However, migration is affected from both sides, i.e. demand and supply. The objective of this research work focused on the effect of migration policies and its importance for both trading countries (i.e. migrants producing country and migrants demanding country). It was concluded that the most important variable affecting migration is the gap of human capital between immigrants and natives. International migration produces expansion and benefits globally and both the countries gain from this trade. Study suggested that free trade of migration are more profitable and the gains might be much greater than from eliminating prevailing trade barriers.

Another comprehensive study performed by Baruah (2006) investigated the incoming remittances from developed countries to less developed countries. The analysis was developed on the basis of strong theoretical base. However, statistical and econometric technique was not used in this research study. This study suggested that there are two important actors, i.e. the person who sends the remittances and the household who receives it. The policy makers of both countries host and home need to develop a policy framework for the facilitation of progress. The governments of developing countries need to stress and give attention to poverty alleviation through potential use of incoming remittances. This research study recognized that remittances inflow has a positive

relationship with income of poor people. Remittances provide foreign exchange reserves for developing nations, therefore the role of remittances inflow is very important and significant. It is also needed to develop rules and regulations against the illegal channels of remittances. The improvement of coordination between financial institutions and remittances receiving families are also important for developing trust on government agencies. The study discussed both types of effects of remittances, i.e. positive and negative. Remittances have positive impact such as they enhance source of foreign exchange reserves, increase saving and investment, improve education, raise standard of living, decrease income inequalities and reduce poverty level. On the contrary, remittance also has some negative effects such as they create imbalance problem for government, lead to brain-draining problem, and also raise income inequalities.

Using a theoretical methodology, Hasan (2006) examined the study about remittances as a source of economic development in Bangladesh. This research study was based on strong historical background relative to Bangladesh economy. The study concluded that the concept of migration is very old. In early era, people used to migrate for the purpose of safety and food. But nowadays people migrate for better economic opportunities. Remittances play very important role in the socioeconomic development of developing countries like Bangladesh. It improves the income level of poor people and also provides the opportunity of better life standard to remittances receiving families. Four million individuals migrated from Bangladesh to other developed countries during 1976 to 2004. Remittances contributed to the Bangladesh economy at both macro and micro level. According to the data of 2004, formal channel remittances contributed 6 % to GDP. After the adding of informal channel remittances then the contribution gone up to 10 % of

GDP. Study suggested, that the government needs to develop a migration policy for the improvement of human skills and exiting financial setup.

Some selected theories used by Bijak (2006) to explain international migration forecasting with the help of fundamental rights, model was designed on the basis of research questions and the methods were using micro data. The study suggested that if a model is designed with the help of proper method, then it could reach easily to forecast for future. High quality forecast for international migration and its outfall is very significant nowadays. Population movement from one country to another is attracting importance due to natural changes in residence dynamics. This is particularly vital in the world develop regions like Europe, which are facing zero natural growth of population. However, the role of foreign migration is not only restricted to change in demography, it also has some influence on the social life of other regions, labor markets, culture and politics. New variety of methodologies are needed to be adopted and critically analyzed the existing methods. Meanwhile, foreign migration is very confusing and multi-measurement phenomenon, which are connected to different fields of science, i.e. economics, sociology, statistics, geography, demography and political science. The aim of this research study was to develop a detailed discussion of different methods to combine in one united theory to fulfill all the dimension of forecast hypothesis.

Murphy (2006) investigated in a research study related to internal migration in China. Remittances are more profitable when the migrant pay less for traveling and have low-cost entry to the labor market. The internal remittances are then more profitable from external and for a larger number of poor people in the case of China. Domestic remittances improved greatly the income of

poor people and supported 18% of the total rural population of China. Two types of internal migration are being practiced in China, i.e. intra-provinces and inter-province. In China, 50 % of migrants are under the umbrella of intra-province and most of these migrated from rural to urban regions, where they earn a considerable amount of income and send this money to their home regions. The money sent by migrants sustained a strong connection with family care and to maintain both setups, i.e. urban employment and support rural agriculture production. Remittances contributing positively to the welfare of recipient household and also play a crucial role in poverty reduction of poor areas. Remittances in China are mostly used for multi-purposes such as on the quality of housing facility, health, education and expenditures on food and nonfood items. These consumption expenditure leads to motivate the economic activities in rural regions, increase the contribution to social life, promote self-respect in the society and also providing respectable marital status.

The most populated migrant hosted Arab Gulf countries (Saudi Arabia, Kuwait, Bahrain, Oman, United Arab Emirates and Qatar) are investigated by Malecki and Ewers (2007). The labor force of these countries consists of both highly skilled professionals and unskilled workers. The framework of Arab Gulf cities agrees to get known as urban development in the region as a result of wealth accumulation that motivates higher flows of skilled and unskilled workers belonging to the different regions of the world. The research study focused on the cities of rich oil Gulf countries, due to the extremely rich capital region, producing remarkable capital and promoting unparalleled migration flows of workers. These flows of the population took quite control on all the issues in Gulf cities connected to globalization. The Gulf is the most urbanized region all over the world. All of the Gulf countries except Saudi Arabia have more than 90 % of total population

existing in urban areas. The Arab Gulf States are the center of international labor migration market. According to WB 2006, Saudi Arabia was the second highest country from which remittances were sent after United State.

Azeez and Begum (2009) examined about Gulf migration and its social and economic impact on Indian economy by conducting a case study of Kerala state. This research study was based on historical data but not on statistical techniques. Nowadays migration is a well-known phenomenon all over the world and thus Globalization promotes labor force for international markets to avail the better opportunity of job and outcome. International migration contributes to both economies, i.e. migrated country as well as the home country. The fruits of migration have been seen very clearly at micro-level of household development or community level. Inflows of foreign remittances improve the income level of household, food consumption, quality education, health facility and also play an important for the development of infrastructure. After 1973 of the oil boom, when Gulf countries started oil export then the need of labor force increased. Due to this situation, the new labor market was introduced for both skilled and unskilled labor force. A lot of people migrated from the Indian state of Kerala after 1970. The State of Kerala received 18465 crores during the period from 1999 to 2004. The research study suggested that the inflow of foreign remittances played a very considerable role for social and economic development of Kerala state.

A study conducted by Ratha (2011) which provides a detailed literature review related to remittances and its development side impact on receiving countries in the South. Foreign migration has some development implication for receiving countries in South and North. According to the report of UN 2009, that 215 million people or 3 % of the total world population were believed

living outside their home countries or birth countries. Most bright reason for international migration is a better economic opportunity because nine out of ten migrants migrated for economic reasons. Some other reasons also have some impact on migration such as political discrimination, war and other conflicts. The study suggested that remittances promote changes in climate, promote political stabilization in institutions and also plays important role in national security. Migration is encouraged by a clash and natural disaster prominent to a rapid increase in the inflow of emigrants, the displaced population may possibly cause unsustainable happenings in lack of other resources of being soothing remaining environmental complications and producing new ones. Long-term movement can disturb the atmosphere through enlarged competition for restricted natural resources. On the other side, migration can provide a network for implementation of new procedures and raw things, prominent to more friendly to environmental structure and consumption patterns. Migration stimulates communication connections within two countries or across the border, which further leads to influence accountability situation. Migration has a significant association with domestic institutions and politics. The movement of educated, skillful and capable people is adversely connected with governance capability in developing countries where the situation of institutions is not good. The availability of high professionals can play a positive role in institutional development, political awareness, stability and overall effectiveness. Migration also stimulates gender empowerment especially during absenteeism of male member of the household, women play an important role for caring of elders, caring for children, controlling income consumption patterns and part of the community in decision making patterns.

Siddiqui (2012) conducted a research study regarding the impact of migration on development and poverty. Foreign migration has become the vital part of the modern worldwide

economy. Both types of migration, i.e. internal and external are important for the development and poverty reduction of the individual family, specific society as well as for the countrywide economies. Impact of migration was investigated at different levels, i.e. individual level, household level, community level and national level. Results confirmed that migration contributed positively to an individual (male or female) across the border or across the regions internally for employment opportunities and for better earning. Evidence presented that individuals benefited socially and economically from their movement but also faced some problems such as social and contractual. The most important and interested area of this research is household level. The study suggested that international migration reduces poverty of household for a short-term period. In addition, international migration has a greater impact than internal migration due to the size of incoming funds. Expenditures on education and health facility also got a valuable importance in the volume of foreign remittances. The pattern of short-run contribution to both the regions, Asia and Africa gains positively from migration. On the other hand, elder household members and younger household also pay the cost of carelessness due to the absence of important family members in the household. Besides that, at the community level foreign migration also has some productive contribution to the concept of charity which leads to removing the poverty status of the overall community. The results submitted that in short-term period, the foreign migration contributes positively to reduce poverty, evidence based on Africa, Asia and Latin America.

The report of UN Conference on Trade and Development (UNCTAD) in (2012) which focused on less developed countries in connection with remittances and displacement of knowledge regarding the productive capacity building. This research study was designed for less developed countries of different regions such as Asia, Africa, America and Pacific. The

unexpected global recovery of economies and falling Eurozone crises remain to undermine those indicators which qualify developing countries to attain greater growth between 2002 and 2008. The study argued that remittances are an important private monetary source for families in home countries of migration. In addition, further efforts are needed to decrease transaction costs of remittances and promote opportunity for development and supportive environment for investment. The report focused on the bright issue related to remittances from extended and wider side perspective. The potential role of migrant's movement at a higher level from less developed countries provides sources of financial development, promotes knowledge transformation, motivates trade and market access facility to host country. It is needed on behalf of less developed countries to develop appropriate policy to utilize the capital inflows in the best way, which they lack most of the time. Similarly, migrants and highly skilled professionals can play a vital role of development agents, knowledge broker, new trade pattern, exchange of knowledge, skills and technology transfer between home and host countries. The research study discussed details about brain drain phenomenon and suggested that how this issue can be turned into brain gain. The brain drain of highly skilled professional, doctors and engineers has a negative impact at the time of migration but in long-term these inflows stimulate education and produce new emerging high skilled brain gain. At the same time, some migrants eventually get settled abroad, this process also pushes human capital endowment to the home country.

Rehman (2017) analyzed remittances and its relationship with economic growth. This research study mainly discussed that how to reshape incoming foreign remittances from capital-intensive sector to labor-intensive sector of the Pakistani economy. It is concluded that a massive amount of incoming remittances is available for the investment sector, which is needed to compare

with federal government budget of Pakistan. These funds are mostly invested in real estate sector. The business of real estate sector is extremely connected to capital intensive, which produces fewer job opportunities on the higher cost of money. Basically, Pakistan is a labor rich country and demanded for a labor-intensive business. The research study suggested a model to utilize the investable share of incoming foreign remittances for developmental programs in the field of energy sector. It is also suggested that remitters and migrants are more preferable for fundraising with respect to foreign loans. Fundraising from migrants will be helpful to reduce the burden on foreign exchange reserve, the management related to liquidity will be easy, and the income returns will also come to the home country. Therefore, the authors recommended to reshape and restructure of the remittances and taking serious steps regarding proper utilization of remittance funds through monetary and fiscal policies. These steps will be in the favor of economic betterment and will be helpful to remove the economic problems of Pakistan economy.

This section analyzes the theoretical literature regarding migration and remittances. There are several theories, which explain the flow of people from one place to another. It is concluded that migration has become the vital part of the modern global economy. Both types of migration, i.e. internal and external are important for the development and poverty reduction of the individual family, specific society as well as for the national economies. International migration produces expansion and benefits globally and both the countries gain from this trade. Remittances have positive impact such as they enhance source of foreign exchange reserves, increase saving and investment, improve education, raise standard of living and reduce poverty level. On the contrary, remittance also has some negative effects such as they create imbalance problem for government, lead to brain-draining problem, and also raise income inequalities.

2.2 Micro-Based Studies

In micro level studies, the impact of remittances with respect to household related variables are investigated. Household related variables comprised of household economic status (i.e. monthly income, number of income earners, agriculture production), household wealth status (i.e. land ownership, house ownership and other assets), household education status (i.e. father's education, mother's education, child enrolment in school and education expenditures), household health status (i.e. weight of the children below five years of age, health expenditures, child mortality rate), household demographic status (i.e. urban, rural, family size). This section summarizes the literature about micro-level studies.

The household welfare oriented approach was used to examine its relationship with migrant's remittances in Ghana by Quartey (2006). Data of Ghana Living Standard Survey (GLSS) were used with the help of pseudo model in this research study, which were collected for the year 1987-1988, 1988-1989, 1991-1992 and 1998-1999. Incoming remittances of migrant workers were an important source of income for many Ghanaian households, especially during economic crises. Remittances are also one of the potential sources of foreign exchange. The study suggested three methods for the measurement of remittances flows, i.e. through the balance of payment (BOP), household standard survey and financial institution (such as money transfer agencies and banks). Ghana received around US$1.017 billion according to the year 2003, this figure is lower than the actual one due to informal channels of incoming remittances. The study concluded that the inflow of remittances raises the welfare of household significantly, almost 1% growth in remittances leads to improvement of household welfare by 0.23%. The negative relationship was found between GDP and incoming remittances, which means that during shock times in economy remittance

inflows increased to Ghana. Thus, the contribution of remittances is very supportive during shock periods to reduce economic crises. It is also concluded that household welfare has a positive correlation with the education level of household head and negatively correlated to the age of the household head. Household size has a negative correlation with respect to welfare, due to the lesser amount of consumption expenditures. The study suggested that a policy is needed from the central bank to provide simple, easy, low cost and formal way to migrants for incoming remittances so that migrants can use a formal way for remittances instead of informal ways.

Siddique and Kemal (2006) examined the remittances inflow in Pakistan and its relationship with trade liberalization and poverty level. HIES data of the year 1989 to 1990 was used for empirical analysis. Micro impact of macro adjustment policies (MIMAP) model was used for statistical analysis on the basis of general equilibrium model. The results explored the relationship between remittances and globalization and showed that remittances reduced when migrated people returned home during the time period of trade liberalization. The research study concluded that trade liberalization gives benefits to urban household more than rural household. Trade liberalization also has a negative impact on poverty. The results also concluded that during trade liberalization when remittances declined, the welfare of urban households declined but the welfare of rural household still increased relative to the base year. The overall results concluded that inflow of remittances has a positive relationship with poverty reduction. In addition, the decline of remittances is a cause of the rise in poverty level and this decline disturbs economic gains from trade liberalization.

Suleri and Savage (2006) investigated the role of remittances inflow to Pakistan during emergencies and crises. Four districts of Khyber Pakhtunkhwa affected by the earthquake in 2005 were selected for sample collection procedure which was further restricted to four villages. Total sample size was 320, and 80 samples from each district, which further consist of 60 remittances receiving households and 20 of non-receiving households. Results were developed on the basis of theoretical analysis and field survey. This research study suggested that incoming foreign remittances play very crucial role during the earthquake of the year 2005. A large number of households migrated to foreign countries from northern Pakistan, which is effected from an earthquake. Due to the mass destruction it is very challenging to fulfill the destruction compensation through internal financial sources, however the external financial source of remittances contributed well in the recovery of massive destruction from both sides of country level and household level. The research study concluded that after earthquake both types of household remittances receiving and non-receiving household faced various problems. But the remittances receiving households are in a better status to maintain and recover their home facility, their jobs facility, and access to financial setup and to rebuild their source of revenue. On the other side, it was very tough for non-migrated families to reconstruct and manage all these facilities.

A research study by Faini (2006) investigated migration and remittances inflows with respect to the well-known phenomenon of brain drain. In most migrations, the skillful individuals moved from the home country to the host country. This type of outflow of skillful people is known as brain drain, which is a major concern of the policymakers of developing countries. This research study was based on the data of European Community Household Panel (ECHP), collected from European households from the year 1994 to 2001. The results suggested that it is possible for

educated migrants shifting abroad to increase the earnings and spendings on education so that it may lead to raises the number of skillful educated workers in the home country. The best thing is that skillful migrants have a better opportunity of earning and of long stay abroad, thus more earning leads to sending more money to the home country. Although it is also notable that some households use these incoming funds in a better way but some of these are used only for consumption expenditures. Results concluded these drawbacks and negative impacts of brain drain is little in the front of higher incoming remittances of skilled labor. Skilled migrants mostly belong to comparatively wealthy families and due to good conditions of these families, migrants do not face any greater pressure of sending remittances to families. Apparently, it reflects that they have the ability to support their relatives in migration and settlement in the host country. It is also recommended that this issue of brain drain needs more close research, particularly on a household level.

Dubey et al. (2006) conducted a research study in India about rural-urban migration and its social structure with surplus labor force evidence. Data of Indian National Sample Survey Organization (NSSO) for the year 1999 and 2000 was used in this research study. Probit model was used to investigate the impact of rural-urban migration on behalf of household social, economic, demographic and educational characteristics. The empirical connection between industrialization and economic development is the most well-known recognized way for economic growth. Lewis argued that transferring of labor from traditional agriculture sector to modern industrialized sector promote economic growth and development. This study also focused on surplus labor migration from agriculture rural regions to urban industrialized regions increases the productivity, output, income and progressive economic impact on the overall economy. The study

found strong empirical feedback of Lewis model of rural urban migration and its significant output influence. The result suggested that younger age groups are more likely to migrate, household size and age shows a negative relationship with migration. Educated households are more likely to migrate with respect to the uneducated or low level of education. If a person is more educated, then the returns from migration also increases. It also summarized that lower degree of land ownership household has more opportunity of higher income in migration than a high degree of land ownership household. The important contributing factor of poverty in rural regions is surplus labor and migration contributes reducing the extra labor supply in rural regions.

The socioeconomic impact of foreign remittances in rural households of Pakistan was studied by Saleem and Aslam (2007). The data were collected through interview and100 samples of households were selected using snowball method. The research findings show that foreign remittances inflow contributes greatly to the socio-economic development of remittances receiving families. Remittances raise the living standard of emigrant families. The research study found that 71% of migrated persons are married and their families are fully dependent on remittances. After migration, there is a significant change in the emigrant's families regarding their lifestyle, as well as the remittances are also used for the property and business purposes. It was found that during study time 42% of migrant households use public transport and before migration the use of public transport was 76%. The inflows of remittances not only develop the socioeconomic status but it also modifies the behavior of overall society. Engagement of mothers in decision making and management has increased. The main motive of migration is to develop a social and economic status for better life and hence people spend remittances on health, education, housing and other services which improve the living standard of his family.

Battaglia and Colleo (2007) performed a study about remittances and its relationship with human development through expenditure on education and health in Albania. In order to investigate the impact of remittances on the household, two different models were used for analysis which are OLS for four categories of spending on food, non-food items, durable goods and utilities and Censored Tobit model for health and education status of the household. The data used in this research study was obtained from Albanian Living Standards Measurement Survey, collected by Institute of Statistics Albania through the suggested method of Word Bank. The study suggested that remittances are spent on education and health more than other consumer goods as compared to the non-receiving household. The difference was also found between rural and urban household behavior regarding spending. This research study also concluded that incoming foreign remittances are contributing positively to the social status of household. Foreign remittances inflow push up the expenditures for quality education, health facility, food and non-food items and other goods and services. These expenses, promoting better economic opportunities in a society, which further contributing positively to poverty reduction and for the development of overall society.

Research study regarding the rural Philippines evaluated by Quisumbing and Mcniven (2007) where they studied the relationship of migration with assets, consumption and credit constraint. OLS model, instrumental variables estimates and probit model were used for statistical analysis. Data was collected on the basis of two surveys (i.e. 1984-85 and 2003-2004) conducted by the International Food Policy Research Institute (IFPRI) with the collaboration of Research Institute for Mindanao Culture, Xavier University (RIMCU) from that household who live in southern Bukidnon, Philippines. Results showed that OLS and instrumental variable technique

results were relatively different and sign for coefficient were also different. OLS results indicated the weak negative relationship of number of migrants with housing facility, assets with land and without land and on entire spending. OLS estimated that foreign remittances have a significant positive impact on spending per adult, clothing, shoes and on education expenditures. The instrumental technique has a significant positive relationship with housing facility, durable goods, assets and total expenditures per adult, due to endogeneity problem OLS estimates did not display any significant relationship with assets holding. The study submitted that foreign migration increases the priority of better child schooling, educational expenditures and also contributing to reduce child labor. The most substantial contribution of migration is to motivate self-employment, with respect to capital-intensive setup. Some immigrants have good experience and association with foreign communities which guide more migrants and send out of the home country, this procedure increase the volume of migration and remittances. This process goes beyond to smoothing household consumption structure and have the possibility to support next generation in the long-run. The study also discussed some barriers and problems among them, the important one is to reduce transaction costs on incoming remittances are helpful for receiving household and also for the economy.

Castaldo and Reilly (2007) studied about migrant remittances and its impact on consumption pattern of Albanian household. The Albanian Living Standards Measurement Survey (ALSMS) which was collected by Albanian National Institute of Statistics with the collaboration of WB is used in this research study. OLS model was used for statistical analysis. Albania is one of the poor countries in Europe, it has watched a huge number of external and internal migrants belonging to this country, this migration ratio increased after 1990. In 2003 one out of five (1/5)

of Albanian population was estimated to live abroad. According to the report of Bank of Albania, foreign remittances reached to US$1,028 million in 2004 and which is round about 13.5 percent of the GDP. This research study based on four main indicators of consumption patterns expenditure on food items, non-food items, durable goods and utility-related expenses. The statistical analysis concluded that the internal remittances are not showing any statistically significant impact on all categories of expenditures except non-food items. International remittances have shown a statistically significant impact on household expenditure categories except for non-food items. Results of the study discussed that external remittances rise household budget stocks of the expenses on durable good or luxury goods, utilities and decrease the share of spending on food items. On the other hand, internal remittances have not shown any clear independent impact on expenditure pattern, because of small sample size of internal remittances, due to low salary compensation to workers in Albania and greater impact of external remittances on expenditure patterns. Those households who received external remittances have 25% excess expenditure (when other things remain constant) on durable goods and 16% excess expenditure for utility category than other households who are non-receiving foreign remittances.

Acosta et al. (2007) examine a research study related to immigrant's remittances and its impact on human capital and poverty in Latin America. Nationally representative household living economic Surveys (2000 to 2004) of eleven (11) different Latin American countries (i.e. Bolivia, Guatemala, Ecuador, Haiti, Mexico, Honduras, Paraguay, Nicaragua, Dominican Republic and Peru) were used for analysis of OLS and Heckman's Two Step regression models. This research article discussed details about remittances impact on poverty, education and health in Latin America. The key findings recommended that incoming foreign remittances decrease the level of

poverty in most of the selected countries. The results are true and applicable at that time when migrant household members come to his home country. It is also recommended that remittances have a positive relationship with the child's education, however, it also has a connection with parents education in some cases. In case of health status results are limited to two countries Guatemala and Nicaragua, the result submitted that foreign remittances contributing progressively to children's education and health facility of poor households. Moreover, results conveyed that household with the migration of lower propensity is more likely to own greater per capita income status, which supports a consistent migration behavior with respect to return. Larger household (especially higher number of male adults) have more chances to receive remittances. On the other hand, higher children ratio and female adults have a negative relationship with foreign remittances. The higher level of education status is negatively correlated with migration and remittances, excluding Honduras and Haiti.

Brown (2008) developed an analysis for tow Pacific countries, i.e. Tonga and Fiji to examine impact of migration and remittances. This research study was based on household level data collected by WB (2006) in these two countries. The instrumental variable technique was used for econometric analysis to determine the impact of migration and remittances on household wealth, education, poverty, inequality and health. The research study found a strong and positive relationship with each of the above variables. The results suggested that remittances inflow contributes informally to the social protection system of household. On the other hand, there is an absence of formal protection system. The research study argued that remittances is not used for the purpose of productive investment, thus sometimes it has a negative impact on remittances receiving economies. A significant amount of remittances is consumed for different consumption

purposes which further effect to rise in wage rate and disconnect the labor force from their jobs. Likewise, it was also suggested that remittances inflow has a progressive relationship with household health status, education, saving, investment and economic growth.

Orbeta (2008) investigated a research study about the economic effect of external migration and incoming foreign remittances on the Philippines household. The basic concept of economic theory related to migration is that due to an increase in remittances inflow, income and demand for normal goods also increases. The estimation give some mixed results. A simple comparison of stages and share of expenditure showed the positive relationship of total consumption with remittances. It was also shown that remittances receiving households spend more than non-receiving for transportation facilities, education, housing, durable goods and communication. On the other hand, remittances receiving households have a lower elasticity for food which are regularly eaten outside the home. It was worthy recommended that an important way of getting out from poverty, personal wellbeing was measured with basic components. The remittances receiving household are found with a higher rate spending's on elasticity than non-receiving household. Additionally, it is also added that remittances receiving household, invest higher in human capital than others.

Rossi (2008) analyzed a research study about migration and its association with youth in developing countries. Research report mostly focused on the international migration of youth and children with one developing country to another developing country. More specific, the migration which was identified from South-South migration. Although most of the extensive research studies and policy recommendations were based on migration and socioeconomic development from one

side, however children and youngsters development is considered in exceptional cases. Wage differences between two developing countries attract South-South migration but the difference is not much higher than the difference between the industrialized and developing countries. According to WB report 2007, every two out of five (2/5) migrants worldwide belong to South-South migration which totals 77 million migrants out of 191 million. However, the actual figure is higher than this above official ratio because of weak registration or migrants record in developing countries. A wide range of approach to measure child well-being drive from the account of four main non-monetary sources of education, health, economic activity and social plus psychological positions. These all four standard measurements fulfill the basic universal rights of children and also connected with children wellbeing. According to the international definition, children are those individuals who are below the age of 18 years, which is used in this study. The research concluded that demand increases for children to work during the initial stage of migration when a household needs to pay migration cost. While after starting incoming remittances reducing demand for children to work. It is also concluded that remittances show a positive impact on school attendance for both of the genders between ages of 11 to 14 years, however for old age family members the relationship was not found significant. Heath status of household has a positive connection with foreign migration due to good income status of migrant families. Foreign migration also has an encouraging influence on social setup plus psychological conduct of migrant family members due its relationship with other societies, which provides a constructive atmosphere for youngsters.

The primary data research study was done by Arif (2009) to examine the impact of remittances inflow on the socioeconomic development of remittances receiving household in case

of Pakistan. This research was based on a household survey of overseas migration and remittances (HSOMR), five hundred forty-eight (548) samples were collected in 2009. This study gave the following findings. The migrant ratio of Balochistan and Sindh is low, however, Khyber Pakhtunkhwa has a greater share in total country migrants. The 60 % of total Pakistan migrants belong to only 20 districts. The migrants pay a very high value of the amount to go and work in a foreign country. In starting days the migrants work quite a long period to pay the cost of visa and migration. A lot of time is spent on the recovery of migration cost. The 36 % of total remittances were spent for the purpose of saving and investment. Remittances push up the income level of household which leads to improving the socioeconomic status of the household. The study suggested, that the government of Pakistan needs to increase the number of migrants and also develop a migration policy for the improvement of labor skills. To develop a strategy for the awareness of people related with migration particularly in poor regions of the country. The government also needs to develop a policy for long-term to utilize remittances inflow on a better way for saving and investment purpose then it is further helpful for development and growth.

A study based on Viet Nam was conducted by Cuong (2009) to examine foreign and internal remittances and its impact on household welfare. Data used in this research study were taken from Viet Nam Household Living Standard Surveys (VHLSS) of years (2002 and 2004), collected on behalf of WB. The most well-known estimation technique of Average Treatment Effect on the Treated (ATT) approach for both fixed and random effect has been used in this research study. It was found that foreign and internal remittances increased both income and consumption expenditures of remittances receiving household. Spending of remittances on non-food items is higher than on food items. It was also found that a big share of remittances is used

for the purpose of saving and investment and little share is used for consumption and expenditures. On the other hand, most of the internal remittances are used for only consumption expenditures. The research study concluded that small portion of the population was connected with foreign remittances, which was 5.9 % in 2002 and 7.1 % in 2004. On the other hand, the proportion of internal remittances has a huge share of 78.2 % in 2002 and 86.3 % in 2004. However, both types of remittances increased with respect to time. Foreign remittances recipient households have higher income and hence its impact on consumption expenditures, saving and investment is positive. However, internal remittances were used mostly for consumption expenditures.

Shahbaz and Aamir (2009) analyzed oversees Pakistanis remittances relationship with poor household. Recently introduced methods were used in this research study, Dicky Fuller Generalized Least Square method (GF-GLS) was used for stationarity process and PSS (Pesaran, Shin and Smith, 2001) method was used for co-integration between the running players of the study. The study suggested that the inflow of remittances increases income and wealth status of poor household especially deprived people of rural areas. The study concluded that improving remittances can lead to cover the weak economic situation of household in Pakistan.

Giannetti et al. (2009) investigated about migration and its relationship with inequality of income. Research analysis is based on micro data set of Community Statistics on Income and Living Condition of European Union (EU-SILC) for the year 2005. Logit model was used for regression to determine the statistical relationship. The research study focused on incoming remittances to the household in Poland, Slovenia, the Czech Republic and Hungary. These four countries are located in Central and Eastern Europe which are considered the most advanced in

conversion process concerning the capitalist economic structure. WB 2008 classification related to income, Slovenia and the Czech Republic are classified in the group of high-income countries while Poland and Hungary are considered a part of group upper middle-income countries. Migration has a good impact on producing countries in many aspects with respect to labor supply, variations in labor skill structure, internal consumption pattern and trade pattern. Surrounded by these aspects of incoming remittances impact on growth and development showed a lot of attraction for researchers and international institutions. Results obtained showed that remittances relationship with poverty is statistically significant and increase of remittances reduce poverty. Moreover, effects on poverty reduction seem to be smaller mostly in volume than welfare transformation to the household. It means that generally remittances contribute more to welfare than poverty. Results showed the different welfare transformation relationship pattern with remittances across the considered countries. The incoming transferring funds have the potential capacity to motivate the migrant sending household expenditures in different areas of entrepreneurship, education and health. The outcomes support that the impact of migration is very important and significant on the country institutional setup, socioeconomic conditions, discovering the special effects of foreign remittances on reducing income inequalities and social disparities elimination. The analysis suggested that migration and foreign remittances allocation promotes the importance of receiving household at the national level and regional level.

Tariq et al. (2010) investigated a research study about the educational impact of incoming foreign remittances to Pakistan. To investigate the impact of remittance inflows on household education, primary data were collected from the province of Khyber Pakhtunkhwa four main cities, i.e. Peshawar, Charsadda, Nowshehra and Mardan at the household level. The total sample size,

which was used in this research study was 400, 100 sample from each city. OLS model was used for regression analysis. The results concluded that remittances have a significant negative impact on children's educational performance while parents are not educated. On the other hand, when parents are educated then it shows an insignificant relationship. The absenteeism of father presence in home country disturbs the check & balance system on children's activities therefore it disturbs children's educational progress. It is also concluded that the educational status of parents is the most important factor for children's educational performance. The mother's education plays a very substantial role in children's education the reason is that mothers are more responsible for children's education. However, the higher education of the mother has no significant impact. The higher income status and more assets availably also have a progressive influence on education because of soothing household income, which provides better facilities of education.

Anton (2010) investigated about the remittances impact on nutrition position of children in Ecuador. In order to investigate, the impact of remittances on health care, OLS and 2SLS econometric models were used for regression analysis. Cross-sectional data of Survey on Living Condition (SLC) collected in 2005-2006 by the National Institute of Static and Censes Ecuador were used. Ecuador is one of upper middle income country of Latin America, which has a population 15 million in 2013 and 20% of the total population are economically motivated or connected with foreign migration from United State (US) and Spain. The increase of international migration during last two decades is also a typical phenomenon in Latin America in 2005, Ecuador received a considerable amount of US$ 1800 million about 5% of GDP. To measure nutrition status of the child, three different techniques or indicators were used. The first technique is mass of body related to height (without age short term indicator), second one is a measurement of

chronic disease or malnutrition (long-term indicator) and the third type of measurement is the weight of the body relative to age (medium of the short and long-term). Results suggested that remittances have a positive relationship with child nutrition for a short and middle term period, but in long term period, the relationship is not significant. The study suggested that during financial crises in migrant hosted countries child health status of Ecuadorian may be affected negatively due to reduction in incoming foreign remittances.

Kiiru (2010) investigated about the remittances and its connection with poverty in Kenya. The combination of OLS, 2SLS and Heckman's estimation econometric models were used for statistical analysis. Cross-sectional data from Kenya Integrated Household Budget Survey (KIHBS) collected in 2005-2006 was used. Kenya is one of the developing countries of East Africa had a population of 45 million in 2014. Migration is used as a tool of the strategy of individuals and families to come out from poverty and crises in developing countries. Migrants are not focusing only to develop their own lifestyle but also send a huge amount of earning to the home country. The results concluded that remittances have a progressive positive impact on household consumption. Remittances also contributed during household economic crises and shocks. Especially rural household faces shocks related to the price which affects agriculture production but remittances are used for recovery from these shocks. The study also suggested that remittances generate positive, potential impact on the welfare of recipients household. Thus, remittances stimulate significant economic activity on a local level.

Mohammad et al. (2010) analyzed about foreign remittances and its impact on socioeconomic conditions of rural household in lower Dir, Khyber Pakhtunkhwa, Pakistan.

Snowball sampling method was used for interviewing 100 of migrant families from four villages in the year 2008. Results suggested that foreign incoming remittances have a positive impact on migrant family social status, lifestyle improvement, education for children and also have an impact on changing the behavior of friends and relative concerning to remittances receiving household. The remittances receiving households are engaged in the business of micro level, real estate investment and investment in agriculture land. It was also observed that major motion behind foreign migration was bad economic conditions, the soul of competition, unemployment and low level of social status in society. Migration also has a positive impact on marriages celebration program, opportunity to get married in well-established families, promote the nuclear family system, increase political importance, housing standard and new brand automobiles. Due to lack of information and government guidance, it is also possible that these incoming funds are used in that way to promote national level interest and benefits. The study recommended that government and other related departments need to provide a sound and secure environment to the migrant household to get better utilization of foreign remittances at the country level.

Taylor and Filipski (2011) conducted a research study about migration policy outcomes on the rural household of Mexico and Nicaragua. Disaggregated Rural Economy Model (DREM) was used to construct a series of the household interacting model within rural economy of a general equilibrium model. Two different household surveys were used for both areas of Nicaragua National Household Living Standards Survey (NNHLS) of 2001 and 2005 and Mexico National Rural Household Survey (MNRHS) of 2003 and 2008. Social Account Matrix (SAM) was constructed for all of the rural household groups. Mexico and Nicaragua both are dependent meaningfully on the income sent by internal or foreign remittances, by migrants working in other

countries legally and illegally. Results revealed that income in both countries rural areas are sensitive to change in migration and change in foreign remittances. Results suggested that migrant producing area's welfare not only depends on maintain the current ratio of migration but also to continue migration growth over time. Usually, the joint direct and general stability effects of immigration and remittances are encouraging for small landholders and landless families. Policies of immigration, economic status and also the aging capacity of migrant can influence the return and output from migration. The study also concluded that migrant gender and human capital also have some different returns capacity. According to Mexican analysis, the growth in earnings to male migration to United State seems to have greater opportunity cost than in the earning to female, although it also has an optimistic impact on income. It was found totally opposite for Nicaragua to Costa Rica immigration, where the rise in income for female migrant has a greater positive impact on income with respect to the male migrant. The study concluded, that foreign remittances are important for development perspectives, not only in the sense of their masses but also in the sense that the inflow directly goes to households and most of them live in rural areas where poverty is mostly found.

Nguyen and Purnamasari (2011) examined foreign migration and its impact on child outcomes, gender matter and supply of labor force in Indonesia. Cross-sectional data of Indonesian Family Life Survey (IFIS) collected in 1993 and household data of the year 2000 and 2007 was used. Two econometric models, i.e. OLS and Probit models were used with the help of instrumental variable technique for statistical analysis. Information collected for variables like foreign migration, human capital development (health and education), the supply of labor, assets of the household, weekly household income and detail information about expenditures like (food,

non-food, durable goods, education and health). Landownership and housing were measured for asset of household and per capita expenditure was measured for a proxy of household welfare. According to WB, international migration has increased with respect to time and participation of women also increased to the international labor market, in 2005 the participation of female migrant in the world reached close to half. Due to international trend, Indonesia is also one of the largest exporting country of migrants around the globe. However, the special thing is that these migration dominant strongly by female migrants of Indonesia. According to the official data of 2007, almost 80% of presence contributed by the female labor force. Indonesia received almost US$ 5.7 billion according to world band in 2006. Results concluded that influence of migration is mostly depending on migrant gender. Foreign remittances and migration leads to reducing labor supply or working hours of migrant's other family members due to the presence of male household migrants. On the other hand, results for female migrant are different from male, female migrants remittances do not lead to decrease working hour of adults or it may be possible that female prefers more to invest in children. Therefore, it was shown that female international migration reduces child labor supply. Enrolment of school going children or attendance of children in school did not show any clear relation with any gender migration.

Motelle (2011) investigated to analyze the role of remittances and its impact on financial development in Lesotho. Counteraction econometric model was used to determine the long run relationship for the data of central bank of Lesotho. Lesotho is one of the developing countries surrounded by South Africa has a population of 2 million in 2013, 70% of the population live in rural regions and 57% of the population live below poverty line. Lesotho is one of the high inflow remittances receiving country, from the period 1990 to 2003 remittances contributed 40% average

share of the GDP. According to WB 2006 report, remittances contributed 26% share to GDP in the year 2004. The contribution of remittances is crucial and important for financial development in Lesotho that belongs to long history regarding labor migration to South Africa (SA). A positive relationship between remittances and financial development was shown to work on two channels. First, demand for financial services increased by remittances and during sending remittances are connected to the saving pattern. Second, remittances offer an alternative choice to finance the businesspersons who are not able to succeed for credit in the frontline of commercial banks. Remittances have a long run relationship with financial development. The financial development also has a significant shot run and long run relationship with trade openness and inflation. Monetary liberalization and volume of the economy contribute only to long run financial development. In case of Lesotho, financial sector development can help to increase the volume and propensity of incoming remittances. Remittances motivate and demand financial products like credit cards, debit cards and bank accounts. It also pushes the immediate needs of the recipient household which motivates domestic resource mobilization. The Granger causality test expressed that monetary development influences additional remittances. Hereafter, observing the role of remittances in Lesotho, it is transferred to the development of the monetary sector can support growth to the propensity for remittances.

Faulkner (2011) performed a study which counters the foreign remittance flow and its effects on poverty level and income inequality in Guatemala. Cross-sectional data of 2006 National Condition Survey of life was used with the help of statistical multinomial Logit model. Guatemala is a small country of Central America located to the north of the United States and South of Mexico having a population of 15.5 million in 2013. In 2006, 31% of Guatemalan household received

foreign remittances, which is increasing with the passage of time. The Economic impact of remittances is counted significantly larger with respect to expenditures per capita of remittances receiving than a non-receiving household that shows the ambiguous effect of migration on the overall welfare of household. The results concluded that remittances are a vital part of the overall Guatemalan economy. It is also the key factor to remove poverty and income inequality all over the country. The negative impact of remittances on education shown by Acosta et al. 2006, but this research study admitted that foreign remittances have a positive relationship with education. Most of the family members in remittances receiving household with below 30 years of age are found to have well educational status. Above 30 years age, family member education status is found disturbing. The study also argued, that remittances are not showing any greater impact on the household wealth status. It is concluded that both types of international and internal remittances contributing positively to poverty reduction and also decreasing income inequalities.

Garip (2011) investigated regarding replication migration and increasing remittances and its relationship with wealth inequality for Mexico. For statistical analysis combination of three econometric models, i.e. OLS, Selectivity Correlated Heckman's model and Probit model were used in this research work. Mexican Migration Project data of 1965 and 2008 based on 16000 household samples was used for analysis. To examine the probability of a positive relationship between wealth and migration, two sample analysis were developed, first one between non-migrants and first time migrants, the second one between non-migrants and repeat migration. Both the models described different results, the wealth probability of first time migration significantly decreases, but the probability of repeating migration significantly increases by a greater margin. Non-migrants, first time migrants are relatively poor from repeated migrants. The study showed

that first time migrants own wealth of US$ 2594 average worth of land but repeating migrants contributed the wealth of US$ 7050. The results suggested that foreign remittances inflows are the key instruments of wealth accumulation in the case of the Mexican economy. Wealth inequality is also discussed in detail, foreign remittances pattern pushes up the wealth distribution in the Mexican society. Specially long term migration or repeat migration are going to increase the wealth of individuals, who send remittances continuously, leading to wealth accumulation of remittances sending household with disproportionate way. These overall outcomes cause a division in Mexican community between foreign remittances receiving household and non-receiving household.

Importance of domestic remittances and its impact on the wellbeing of rural-urban movement was investigated by Akay et al. (2012). Data of Rural-Urban Migration in China (RUMC) collected in 2008 based on three components of urban household details, rural household details and migrant household details. For statistical analysis both of the econometric models, OLS and Probit were used. Remittances provide a massive cash flow worldwide. In several countries with extensive internal movement, remittances similarly circulated with the greater amount, at the country level. China succeeded with a big amount of almost US$ 30 billion that moved in the year of 2005 from urban regions to rural regions. Two motives were discussed in this research paper, first one is to investigate the impact of remittances on migrant well-being and the second one is to underline the motivation and vision behind sending remittances. The results concluded that sending remittances from urban to rural areas promote welfare. Moreover, it was also found that remittances impact is significant only for those household migrants who migrated within the province and for those who come back to their home region at the end. To explore the motivation

behind migrant's remittances is that unselfishness and contractual inspiration connection with family left behind. Although estimation suggested that former and traditional motivation behavior is contributory and dominant one. China is one of the most populous country for internal migration and hence economic welfare and social impact of remittances have a great importance and contribution to the economy.

Ranathunga (2012) conducted a research study regarding the rural to urban worker migration and its impact on household welfare in Sri Lanka. Primary data were collected by the author in Sri Lanka for the year 2011, a sample size of 377 rural to urban migrant labor workers was surveyed from 20 urban factories selected non-randomly in Gampaha district. Combination of three econometric models, i.e. OLS, Tobit and Probit model were used for regression analysis. Labor migration from rural region to urban regions is not a modern phenomenon or temporary, it is a universal connection of economic modernization. Nowadays international migration takes more attention than internal migration but both types of migration play different and important role for different regions. Some research studies suggested that internal migration is more important than external migration, countries like China, India and Viet Nam have more internal migration than international migration. However, some studies also suggested that internal migration and remittances are not impressive for poverty reduction, especially in developing countries. In case of Sri Lanka researchers have given satisfactory attention to internal migration. The results discussed that never married internal migrants are more likely to send remittances regularly, the reason is that elder parents are not able to work and due to non-availability of proper income in hometown. Internal migrants provide 21% of household average income and 25 % of migrant constructed new houses. It also contributes significantly to asset accumulation of lands

and vehicle in hometown regions. Those households who have more farmland received more remittances for the purpose of investment in farming. Migrants also send remittances for education if students are available in the household. Research study confirmed that internal migrant remittances are not only used for consumption measures but are also used for profitable investment measures. It was concluded that internal migration reduces poverty and improving household welfare. Although external migration is so expensive and unaffordable for the poor household but internal migration is easy and affordable for poor families.

K. De and Ratha (2012) examined foreign remittances and its impact on Sri Lankan household income, assets and human capital. Cross-sectional data of Sari Lanka Integrated Survey (SIS), of the year (1999 -2000) was used for analysis. The survey sample is grounded on 7500 households which was collected from all nine provinces in the country for the years 1999 and 2000. It was shown in the research study that international migration and inflow of foreign remittances has been progressively growing in Sri Lanka and providing an essential source for foreign exchange. This case is also true and important for other South Asian economies like Pakistan and India. Subsequently, these countries are in the subcontinent having some similar nature in cultural aspects, economic and religious aspects. Due to same nature countries, these results are important and significant for other two countries. Main variables which are investigated belong to household demography, parent's occupation, income status, education, health and assets strength of household. This study is almost similar to our research study regarding model and dependent variables, but the measurement process is different. The results summarized that remittances have a significant positive relationship with the children education and household health status. However, household assets have not shown any significant relationship with foreign

remittances. It is suggested that incoming foreign remittances stimulate income, which is further used for human development and capital accumulation. Policy side needs to support and encourage migrants for better earning to the home country, if some decline comes in foreign remittances then it is not progressive for remittances receiving economies.

Chowdhury et al. (2012) envisaged about the internal migration and its relationship with the socioeconomic status of migrant household in Sylhet City of Bangladesh. The study focused on internal migration to assess the impact on socioeconomic conditions of migrant's families. Bangladesh is basically a developing country and maximum population lives in rural regions. With respect to time scarcity of land and other resources an increasing rate and unemployment are also increasing rapidly in rural Bangladesh. Due to this socioeconomic problems rural Bangladeshi prefer migration to get control on these economic problems and increase the wellbeing of his social life. A lot of people migrate to Sylhet town from different regions of the country to develop their economic grounds and they stressed on the success of their substantial objectives. Total Sixty samples were collected from three labor groups in Sylhet city, twenty sample from each labor group which migrated from other regions. Descriptive research technique was used to observe the variation in socioeconomic measurement considered in the study data from 2006 to 2012. Results suggested that migration with in country has a positive and significant relationship with the livelihood of migrant household. The overall social and demographic status of most respondents is not good and satisfactory. Most migrants are young, illiterate, married and belong to large family setup. Due to these reasons, mostly respondents are living below the poverty line. It was concluded that after migration most of the most of the migrant's families develop their economic position. The social status is also developed after migration due to progress in housing facility, water

facility, sanitation, social involvement and working effectiveness. Migration plays a vital role in poverty reduction of the poor families.

Iqbal (2013) performed a study about foreign remittances inflow and its links with household poverty level in Pakistan. HIES data of Pakistan was used in this research study. For empirical analysis, Propensity Score Matching (PSM) model was used to investigate the remittances relationship with poverty level. Results concluded that estimated average remittances increased 45% per capita income of that type of household which does not receive remittances. In the case of urban household, this percentage increased to 64 %. The results also indicated that remittances reduce the chances and probability of 30 % below the poverty line. For rural parts, this percentage is counted 36 %, which is higher than the urban areas (i.e. 23 %). The general analysis concluded that foreign remittances push up per capita income of household which further lead to poverty reduction at overall and separately at rural and urban parts of Pakistan. The inflow of remittances plays a positive role to support or stabilize economy at macro and micro level. It also supports the government steps and policies which are taken for poverty reduction.

Chakraborty et al. (2013) conducted a research study about transfer behavior related to monetary aspect in migrant in Kyrgyzstan. The data used in this research study are survey of Life in Kyrgyzstan (LIK), collected in the years 2010 and 2012 by German Institute for Economic Research. OLS and Probit model were estimated for statistical analysis. In developing countries rural household applying many widespread strategies to come out or deal with poor living setup. One of the most well-known strategies is migration from rural region to economically advanced regions. Research study mainly focused on monetary aspect transferring to determine that

migration provides strength or a decline in private transferring. Migration from Kyrgyzstan to Russia is considered economically better and provide sound income earning the opportunity for most of the Kyrgyzstani migrants. The migration from Kyrgyzstan and other Central Asian countries is considered the second largest migration in the world after Mexico to United state according to WB report. The results suggested that in most of the developing countries there is weak setup of financial institutions, credit cards and lack of insurance facilities, therefore it is very difficult to provide confidence to the household for use of formal financial channels. Results showed that migrant's households were more likely found to afford financial transfers to others. However, results did not clearly identify that these monetary transferring from migrant household to non-migrant. On the other hand, nonmigrant household was found to be more likely to receive financial transfers than migrants household. It was concluded, that non-migrant household has more power and excess supply of labor force than migrant household, it is needed to target that labor force in future studies.

Abadi (2018) performed a micro perspective analysis for Ethiopia to investigate the relationship between remittances and household food security. Two livelihood zones were selected by using the sample size of 301 households from a regional State of Ethiopia. A model of propensity score matching was incorporated for statistical analysis. Ethiopia is one the highest remittances receiving county, which was ranked 8th among the largest remittances receiving county in Sub Saharan Africa by the World Bank in the year 2010. Ethiopia received US$ 387 million in the form of remittances in the year 2010. The descriptive analysis concluded that remittances receiving household are having better off position as compared non-receiving. The results of propensity score matching conform that remittances show a statistically significant positive impact

on food security indicators of the household. It is concluded that generally remittances provided food security and reduce poverty in rural regions of developing countries. The research study suggested that remittances play an important role in food security policies and programs in Ethiopia. It is the need of time to generate adequate plans for effective demand to motivate income growth and transfer policies.

In this section micro level studies are analyzed, to investigate the impact of remittances. In micro based research studies mostly household related variables are investigated i.e. household economic, wealth, educational, health and demographic ones. The overall results concluded that inflow of remittances has a positive relationship with poverty reduction and household welfare. It is also suggested that incoming foreign remittances play very crucial role during economic crises and natural disaster. Some of the researchers also suggested that negative impacts of brain drain is little in the front of higher incoming remittances of skilled labor. Foreign migration increases the priority of better child schooling, educational expenditures and also contributing to reduce child labor. Remittances motivate and demand financial products like credit cards, debit cards and bank accounts. The main motive of migration is to develop a social and economic status for better life and hence people spend remittances on health, education, housing and other services which improve the living standard of their families.

2.3 Macro-Based Studies

Macro-level studies are based on the aggregate behavior of the economy. In macro analysis studies, the macroeconomic indicators are used that are import, export, exchange rate, remittances, unemployment, GDP growth rate, inflation, national income, saving and investment at the national

level. Most of the researcher analyzed macroeconomic variable for a long term period or time series analysis to investigate the impact and relationship between the variables in long run.

Jongwanich (2007) examined worker's remittances and its impact on economic growth and poverty reduction for developing countries of Asia and Pacific. Panel data were used in this research study from the period of 1993 to 2003. Two separate econometric models were used for empirical analysis of poverty and growth. For panel system, the most suitable Generalized Method of Movements (GMM) was used for regression analysis to investigate the impact of remittances inflow on poverty level and economic growth. This research study has two main findings. First, the inflow of remittances have a positive relationship with economic growth but this impact is marginal for all the selected countries of Asia and Pacific. The inflow of remittances affects economic growth positively, through the expansion of domestic investment level and development of human capital formation. Second, inflows of remittances have direct and significant relation with poverty reduction. The remittances inflow pushes income level of the household then it increases consumption level of the household, further, it leads to poverty reduction. The research study suggested that remittances is not a basic or key economic variable for long run economic growth to push exports up and improve foreign direct investment. On the other hand, remittances have a positive impact on poverty reduction. The government needs to develop a policy for the productive use of remittances.

Mayda (2007) investigated a panel data related to international migration with the help of two sided factor flows. The theoretical framework was developed on the basis of prediction related to demand push and supply pull migration behavior but also used a model of OLS, Instrumental

Variable (IV) technique and Tobit model for analysis. This research paper empirically examined the factor of migration inflows of fourteen OECD member countries, between 1980 and 1996. The most vital determinants of migration discussed in this study are the economic situation, geographic, demographic and culture of bilateral movement flows. Supply and demand side aspects were utilized on the basis of migration, migrants move from one country to the other for the purpose of economic and noneconomic returns. Some country's economies need labor worker or known as demand side, on the other hand, some countries are overburdened or overpopulated with labor worker, this country comes on the supply side and the mutual trade is developed for both countries. Results suggested that migration policies play a worthy role in collective gains from trade of migrants. It is interacted an indicator variable to change in the migration policy of destination countries corresponding to pull and push factors. Pull effect has become more positive and push factors effect turns into negative especially in those times when host country migration laws lead to less restrictive.

Empirical analysis of all incoming remittances was performed by Ali and Nishat (2009) with respect to all other foreign inflows such as FDI, foreign aid and foreign debt to determine its impact on poverty level in Pakistan. Autoregressive Distributed Lag Model (ARDL) approach was used for statistical analysis of dependent and independent variables. Time series data was used in this research study from the period 1972 to 2008. Empirical results of this research study showed that foreign capital inflows have a positive relationship with poverty and female enrolment. The study admitted that poverty has a positive impact on infant mortality. It is concluded that due to rise in foreign capital inflows lead to increase in the level of poverty directly, on other hand increase infant mortality indirectly. Research study suggested that remittances inflows are not

utilized properly or not used for productive purposes and most of the remittances are used for consumption purposes with respect to productive investment.

Mughal and Diawara (2010) investigated the effects of remittances on income inequality and poverty level in Pakistan. Both types of approaches, i.e. macro and micro analysis were used in this research study. OLS and 2SLS methods were used for macro analysis with the help of time series data of period 1963 to 2006. For micro analysis Probit model was used on the basis of cross-sectional data which are taken from Pakistan integrated household survey of the year 2001-2002 and Pakistan social and living standards measurement survey of the year 2005-2006. Empirical results pointed out that inflow of international remittances decreases the level of poverty and income inequality in both the analysis of macro and micro. It was found, that a 100% increase in remittances leads to 36% decrease in poverty level. Similarly, two times increase in remittances inflow leads to 10% decrease in income inequality. Micro analysis concluded that inflow of remittances has a significant positive relationship with saving ratio. The research study also suggested that migration to the Middle East has a positive and significant relationship with poverty alleviation. On the other hand, incoming remittances from North America and European countries have a negative relationship with poverty alleviation and income inequality. The study also suggested that to maximize the benefits of incoming remittances, Pakistan needs to give importance to the improvement of human capital, labor force skills, productivity and output. The study suggested to develop a financial system of banking for better saving and investment opportunities.

Ahmad et al. (2010) investigated the research study to analyze the relationship between remittances and welfare of household in Pakistan. Two types of analysis were developed in this research study, the macro analysis was used to analyze sectorial effects which come through reduction of remittances and micro analysis which was developed on the basis of household that how remittances decrease poverty level. For macro analysis computable general equilibrium CGE model was used to the support the social accounting matrix (SAM) model of the year 2002. While for micro analysis OLS was used on the basis of the HIES data of Pakistan 2005-2006. Theoretical analysis of this study suggested that remittances have different impact in the short run and in the long run, but some points are very clear that remittances inflow improves living standard, health and educational status of the household. It is also added that foreign migration has some negative effects which one of the most important is the outflow of highly educated and skillful labor force from developing country. It is measured like a huge loss of human capital or in other words "brain drain". A huge amount of skillful labor force, highly professionals, engineers and doctors, which are migrated to developed countries for better opportunities. The results showed that the decrease of remittances inflow leads to a decrease in GDP, investment level and consumption level of the household. Additionally the inflow of remittances decreases the poverty level by 12%, when a household receives foreign remittances. The results further concluded that remittances receiving household have an average income of 17% greater than non-receiving household.

The macro economic impact study analyzed by Colombage et al. (2010) about international migration and its macro level impact on Sri Lankan economy. The study investigated the relationship between foreign remittances and some selected macroeconomic variables, GDP, saving, investment and exchange rate. In order to determine the long term relationship between

macroeconomic variables, co-integration model was used in this research study for a time series data. Results of the study suggested that foreign remittances contributed directly to household income, promote saving and investment. Migration at the beginning of career or youth migration and middle age migration positively contribute in long term. On the other hand, professionals have higher income earning and stability in the home country. Some high level of occupations provide stability in the short run and also provide a security for next generation. Household social and economic background also plays an important role in the better utilization of foreign remittances, if household other members have a good sense of business, incoming funds would be utilized in an appropriate way. The significant impact of migration is to reduce poverty level and facilitate a low level of earning for poor household through the capital for investment in the market which is not attainable in lifetime without migration. Migration provides opportunity for employment for those who are unemployed by self and other family members who are also unemployed before migration. The study also discussed some negative impacts of migration on domestic or home country labor market. Large outflows of the population were noted who left the country on permanent basis these migrant are well educated and high class professionals. These outflows have some major social, economic and political impact on the home country. Labor migration with large number leads to a shortage of skillful labor in the home country labor markets, causes the appreciation of wage rate and unemployment.

Arunatilake et al. (2010) investigated about foreign migration and its impact on Sri Lankan economy for both micro and macroeconomic level. The secondary data source of Central Bank of Sri Lanka and Sri Lanka Bureau of Foreign Employment was used for macroeconomic analysis. For microeconomic analysis data on Consumer Finance and Socio-Economic Survey data (CFS)

which is also collected by Central Bank of Sri Lanka in 2003-2004 was used. Migration from Sri Lankan started in 1970s, a lot of labor force migrated to the Middle East, this increase leads to having impact on the domestic plan. Foreign remittances are increasing day by day and reached to US$ 2.5 billion and is 8% of GDP share. This ratio and statistics indicate that foreign remittances have a significant impact on the economy. Foreign remittances is an important source for the development of macro level indicators, promoting external finance, FDI, national saving, investment and during crises it also plays a key role in supporting the economy. It was concluded that overall impact of remittances on development and growth is quite significant but some other benefits are conditional. The microeconomic impact is also significant, using survey data it was found that remittances help the poor household in attaining higher income. Both types of households were compared which have different characteristic and all these differences can affect the expenditure form of household. Expenditures of remittances receiving household are greater than non-receiving household. These higher spending of remittances receiving household are further divided to higher spending on food items, non-food items, health spending and education expenditure. On the other hand, expenditure on durable goods is counted higher for the non-receiving household.

An important research study investigated that remittances are used as a source of capital development in Sub Saharan Africa by Kagochi et al. (2010). The research study was based on six Sub Saharan African (SSA) countries (Ghana, Botswana, Nigeria, Kenya, Swaziland and South Africa) for the period of 1991-2007. Both types of time series and cross-sectional data were used from the source of WB, International Monetary Fund (IMF) and other international organizations. GDP growth rate was used as a dependent variable and other related variables are remittances,

education, health and nutrition. Due to a combination of cross-sectional and time series data Parks model was used for regression analysis. Africa received only 4% of entire worldwide remittances which are further divided in small portion to developing countries. The trend increased during 2000 to 2005 by more than 55%, reaching almost US$ 7 billion. According to WB 2009 data, in 2007 Nigeria received US$ 9 billion, Kenya get US$1.6 and Senegal received US$ 1.2 billion. Major challenges for the Sub Saharan African are little number of international migrants and small portion of migration in rich countries. In 2005 only 2.9% of migrants moved to high income countries which are not the member of OECD, 25% migrant moved to high income OECD member countries and 63% migrants were the part of migration intraregional for the same year. Results indicated that remittances have not shown any direct impact on economic growth of low GDP per capita of Sub Saharan Countries. On the other hand, remittances showed a positive effect on economic growth of higher Gross Domestic Product per capita of SSA countries. The empirical evidence does not support the opinion that remittances as a source of capital development in case of poor SSA countries. The research study suggested that education, life expectancy ratio and capital formation may be the greatest contributors in SSA countries for economic development.

Siddique et al. (2010) conducted a study about remittances and its impact on growth in India, Bangladesh and Sri Lanka. Time series data were collected for the time period of 1976 to 2006. Granger causality test was used under the framework of Vector Auto regression Model (VAR) for statistical analysis. Results indicated that remittances inflow plays a very positive role in the advancement of economic growth in Bangladesh. On the other hand, the analysis of India did not clarify a perfect picture about results. In the case of Sri Lanka results indicated the causality that remittances activate economic growth. The research study suggested that the role of

remittances inflow is very important and significant for the economic status of Bangladesh, India and Sri Lanka. Unfortunately, the uses of this important source were not organized through proper migration policy. A lot of people send money through Hundi which is not a formal channel, it is needed to develop the financial system of banking and other financial institutions for the encouragement of formal channel. On the other hand, it also promote saving and investment opportunities.

Makhlouf and Mughal (2011) examined the relationship of migrant remittances inflow and Dutch disease system in Pakistan. Bayesian model of Gibbs algorithm was used because the presence of uncertainty to manage floating exchange rate of Pakistani Rupee. The research study analyzed both types of setups, short run and long run relationship of remittances with the exchange rate and also the fluctuation in the non-tradable sector. Two types of data were collected for annual analysis the data is taken from 1980 to 2008 and for monthly analysis the data used from 2001 to 2009. This research study suggested that migrant remittances are one of the most important sources for foreign exchange reserves, especially for developing countries like Pakistan. The inflow of remittances reduces poverty level, increases saving ratio, more funds are available for investment and increased consumption level of the household. Results of the research study showed that migrant remittances have a lot of benefits for household directly. However, indirectly remittances also have some costs in the sense of Dutch disease system. The inflow of remittances increases the consumption level of the household, then the increase in demand leads to inflation thus imported goods leads to be cheaper than domestic goods. Imports would be attractive because of the less competitive domestic market. Development of financial sector is also important for monetary purposes.

Kock and Sun (2011) investigated the reasons and determinants behind increase and decrease of incoming remittances. The study was based on Pakistan economy with respect to other regional developing countries. Estimation of this research study was based on panel data of fifteen countries from the period 1997 to 2008. Combination of OLS and Bayesian approach was used for regression analysis. Results concluded three main causes of remittances inflow to Pakistan: (i) a general increase in migrated people (ii) improvement in the skills of Labor force (iii) change in domestic earnings of agriculture or relative change in investment earnings in the home or host countries. The study suggested that for the sustained and greater remittances it is needed to improve skills or worth of migrated labor force to increase the output and productivity. It is also needed to provide peaceful and silence environment for business opportunities that lead to raising return on investment in the home country relative to the host country.

The poverty reduction connection with remittances inflows analyzed by Irfan (2011) in case of Pakistan. Time series data was used in this research study from 1975 to 2009 and for the empirical analysis OLS model was developed to estimate inflow of remittances and its impact on poverty level at the macro level. This research study generally explained that remittances inflow is a big source of economic growth, especially in developing nations. Remittances inflows directly motivate an increase in income which affects the consumption level positively and increases the opportunities for investment. These improvements further lead to welfare and poverty reduction at different sides. This research study also discussed the global scenario with respect to remittances inflow and its impact on different regions on the basis of WB and IMF data. According to the data from 1975 to 2010 East Asia and South Asian zones increased its volume of remittances extraordinary. The relative percentage East Asia exceeded South Asia which has only 3 % percent

of total remittances in 1980 after extremely increased in remittances inflows, percentage share increased by 21% in 2010. Results suggested that remittances inflow leads to poverty alleviation while the impact on inequality is specific to the country and further it was added that outflow of population to developed countries also affect the economy especially labor market.

Chaudhry et al. (2011) conducted a study to investigate the financial crises and its impact on migrant remittances, economic growth and poverty level in selected South Asian countries. The research study was based on macro analysis of three countries Pakistan, Sri Lanka and Bangladesh. Time series data was used for all variables from 1975 to 2007. In order to determine the relationship of the variables GDP growth rate of (home and host countries), real exchange rate, poverty and inequality, OLS, 2SLS and counterfactual approaches were used for econometric analysis. Results found that remittances inflow has a strong significant relationship with GDP growth rate of host country and growth rate of remittances inflows. It was also found that crises in host country have a negative impact on remittances such as the inflow during crises in the Middle East or North America/Europe the remittances inflow goes down. Sometimes in such situations, migrated worker loses his job which also affects remittances inflow in long term.

Amjad et al. (2012) conducted a preliminary study to discuss tenfold increase in foreign remittances to Pakistan. This research study was comprehensively based over tenfold increase in foreign remittances from 2001 to 2012, remittances ratio is above US$ 1 billion in the fiscal year 2001 and 2002, this figure reached to US$ 12 billion in the fiscal year 2011. Another important thing is the share of rural regions in foreign remittances increased extremely, according to the source of (PSLMS 2007-2008) that 70% share of total remittances received by rural regions, in

1996-1997 both of urban and rural regions were receiving an equal share of 50%. Formal remittances increased sharply from about US$ 1 billion in 2001 to US$ 11 billion in the year 2011, over 11 times growth has been counted during the decade. The major contributing countries to expand the volume of foreign remittances are Saudi Arabia, United State, United Kingdom and the United Arab Emirates. This massive improvement would influence positively the wellbeing of rural regions. Seven reasons are discussed for this higher increase in foreign remittances and they are, increase in a number of workers, use of formal channels for sending remittances, change in skills of employment structure, whitening black money through remittances, undeclared export earnings, illegal earnings and transferring sale of abroad assets. The major idea behind this study is that inflow of foreign remittances through the formal channel to Pakistan cannot increase the total demand pattern of Pakistani currency in sense of foreign currency. The research study suggested that Pakistan Remittances Initiative (PRI) collectively in progress SBP and Finance Ministry played an important role in converting foreign remittances from informal channel to proper channel. This effort is successful through the strong support of commercial banks. Numbers of techniques are used to estimate the size of informal remittances in Pakistan. That half of remittances are coming through informal channels. Results concluded that there is much difference between government surveys data and SBP data of incoming remittances.

Azam and Shakeel (2012) examined the effects of foreign capital inflow on the household saving ratio in Pakistan. Multiple regression models were used to calculate the relationship between inflow of foreign capital and domestic household saving ratio. Time series data was used in this research study form 1981 to 2010. Results showed that foreign direct investment has a positive and significant effect on the domestic saving ratio. In addition, remittances also have a

positive and significant relationship with domestic saving ratio but foreign aid has a negative and insignificant relationship with the domestic household saving ratio. This research study also suggested that in case of Pakistan or any other developing nation, if you want to increase the saving ratio of the household for development purposes then stress and focus is needed for the betterment of household saving ratio. On the other hand, foreign aid has a negative impact on saving ratio because of this impact it is needed to ignore foreign aid for the progressive saving ratio of household in Pakistan.

In order to investigate the importance of remittances and its impact on economic growth and poverty reduction in Pakistan, a study was conducted by Javid et al. (2012). ARDL approach was used to investigate the effects of remittances inflow on poverty reduction and economic growth. Time series data were used in this research from 1973 to 2010. The results of this research study developed on the basis of district wise analysis in all of four provinces of Pakistan. The inflow of remittances contributed to poverty reduction in three provinces of Pakistan, Punjab, Sindh and Balochistan but in the case of Khyber Pakhtunkhwah it has not given clear results. The empirical analysis clarifies that inflow of remittances has a strong and positive impact on economic growth. This study also examined that inflow of remittances has a strong relationship with poverty reduction. The inflow of remittances contributes to both economic growth and poverty reduction especially in developing countries like Pakistan. Thus, the inflow of remittances plays very important and positive role in supporting poor families of developing countries. The long run inflow of remittances leads to sustainable economic growth and increases the welfare of poor household.

Baas et al. (2016) performed a research study about the macroeconomic impact of remittances on the remittances sending economy. Using the German economic data to analyze the impact of remittances on one of the highest remittances sender countries of the world. Migration to Germany increased sharply during the last two decades due to the increase in the numbers of refugees and government policies regarding immigration to control and balanced the population problem. It is analyzed that the rapid increase in migration and remittances may be harmful to the migrant host country. Generally, the outflow of remittances looks like an outflow of purchasing power. The fear regarding purchasing power loss was not rejected fully for all sectors. In some sectors, it has a negative impact, especially in the service sector and when resources shifted to the tradeable sector due to loss in the employment and production. Other sectors which are providing resources to the manufacturing sector or closer to the manufacturing sector are more likely to get benefits. Remittance flows are connected with migrant plan regarding permanent or temporary migration. Temporary migrants are likely to send more remittances compared to permanent migrants. According to an economic point of view, remittances have an impact on real exchange rate of both trading countries, remittances receiving and remittances sender through the Dutch disease system. The results concluded that remittances have an opposite Dutch disease impact on the migrant host country. It contributes positively to export industry and also shows a positive contribution to GDP.

Betting (2016) conducted a research related in order to investigate the natural disaster and its relationship with remittances of low and middle income counties. A panel data of countries were used for a 20 year period of 1990 to 2010. The results show that after disaster remittances leads to increase and further contributing to the reconstruction and rehabilitation process. It is also

analyzed that remittances provided risk protection to migrant families in both cases before the disaster and after a disaster. The role of remittances is more effective, especially in those countries which have more experience of disruptive events in the recent past. Further, it also added that remittances played very important role in the development of the weak financial system at the local level.

Barajas (2016) performed a research study related to monetary policy transmission for remittances dependent economies. The research study argued that worldwide flows of remittances turn into a stable, permanent and increasing progressively to emerging and developing economies. A rapid growth is recorded officially and it exceeded over the flows of private capital or official aid. Foreign remittances have some benefits related to welfare and poverty reduction for remittances receiving household. However, on other hand remittance inflows also have some macroeconomic challenges and creating a problem of the Dutch disease system. It produces pressure on real exchange rate due to appreciation in real exchange rate, which further leads to disturbing the quality progress of institutions and delaying the speed of fiscal adjustment policies. This process further disturbs and indeterminate the long-term growth rate. Remittances expand the balance sheet of banks, providing a stable source for interest related incentives, which give a strength to banks related liquid assets. On the other hand, it reduces the role of the interbank market, thus the overall policy rate and major transmission channel are going to disconnect. The research study concluded that due to the increase in remittance, inflows are connected to the weaker transmission. As independent and free monetary policy is becoming ineffective, that's why remittances receiving countries prefer a fixed exchange rate. The study also suggested that for achieving a policy target, it is needed to impose taxes over excess reserves and also to facilitate

banks to expand lending. Although, a careful monitoring regarding expanded credit will be effective.

Pekovik (2017) conducted a research study about the impact of remittances on poverty reduction for transition countries. A panel data of nine countries for the period 2002 to 2013 and Least Square Dummy Variable (LSDV) model with the help of panel corrected standard errors were used for estimation in order to analyze the impact of remittances. In the current decade, the flows of migration increased considerably from transition countries. The considerable increase in migrant's numbers further contributed positively to remittances coming back to transition countries. It is analyzed that remittances contribution to GDP was 1% during the early 1990s, but in the last decade, the contribution to GDP reached to almost double. It is also analyzed that most of the remittances go to the investment side and consumption side of utilities, durables, housing and health expenditures. On behalf of transition countries, remittances are one of the top external financial sources which exceeded over official development assistance and foreign direct investment. The transition process of these countries from socialism to capitalism system causes the decline in output and an increase in poverty level. The results concluded that remittances show a significant negative relationship with poverty. A 10% increase in the remittances per capita leads to reduce almost average 5% poverty level. Due to limited data availability of transition countries, the results and estimation are still consistent and theoretically justifiable with previous studies. The study suggested that it is necessary to develop a proper policy regarding remittances to provide more appropriate progress in the remittance management.

Kumar (2017) investigated the remittances impact on growth for Kyrgyzstan and Macedonia with respect to financial development. Time series dataset was used for a period of 1990 to 2015 and the combination of ARDL and cointegration approach is used for statistical analysis. The research study argued that Kyrgyzstan and Macedonia received a lot of remittances during last 25 years with a reasonable increasing rate. Subsequently, due the volume of incoming remittances both of these countries gained attention in the latest development dialogue. The short term and long term effects of remittances are explored with the help of causality dynamics and financial development. The results concluded that remittances show a weak positive relationship with growth and weak negative relationship with financial development in short-run for both countries. In long-run, remittances show a positive impact on economic growth for these two countries. On the other hand, financial development impact is negative for Kyrgyzstan and statistically insignificant for Macedonia. It is also suggested that the remittances impact on growth is uncertain and mostly depend on that whether incoming remittances are used for investment or consumption purposes. A small share, only 6% to 12% of remittances is used for investment purpose in Macedonia. Mobilization is needed for remittances flows to divert remittances from the consumption pattern to investment pattern. It creates more opportunity to save and provides the cheapest way of financing which further promotes economic activities in the whole economy.

Awdeh (2018) examined the socio and economic impact of remittances on labor producing Middle Eastern and North African (MENA) countries. The research study used the vector autoregressive model and also run a granger causality test for the whole set of labor producing countries. A set of time series data form the period 1991 to 2015 has been used for this research study with the help of dependent variables related to economic developments, employment,

external balance and the possible uses of remittances in these regions. Both of these regions the Middle East and North Africa have the ability of a major source for remittances and a major recipient of the remittances. The remittance flows in these regions have some significant socio and economic contributions. The results concluded that remittances shows a positive and significant impact on household expenditures and gross domestic product. On the other hand, it is also argued that due to increase in inflation and a weak economic condition there is an increase in the inflows of remittances.

Docquier (2018) investigated a growth theory related research study to summarize the current advances on bidirectional connections between migration and development. The research study argued that in the short run a rise in income brings small impact on low skilled and average rate of emigration with a given macroeconomic set of determinants. In the long-run, an increase in income raises the proportional rate of movement for a highly skilled labor force. Therefore, economic development having uncertain long-term influence on the stock of emigration. The quantitative analysis admitted that skill based emigration is more likely to produce positive effects on per capita income in the most of low income and middle income countries. Some of the separate policy actions are negatively connected to emigration and economic development. Especially, most of high income countries conduct a restrictive immigration policies to decrease migration. Migration barriers reduce the role of effective and cooperative policies regarding migration and development.

Apergis (2018) explored the asymmetric impact of real exchange rate measures on poverty reduction through remittances. A panel data of 99 countries were selected for a time period of 1980

to 2015 with the help of threshold partial adjustment modelling technique. The results of this research study documented that depreciation of real exchange rate shows a strong positive impact on poverty rate through remittances. On the other hand, real exchange rate depreciation shows a stronger negative relationship with remittance flows. It is also concluded that the significance and magnitude of these remittance flows played an extraordinary role for the poverty alleviation and development, especially in developing countries. Remittance flows to developing economies have helped to raise foreign reserve, foreign exchange earnings and service debt. They have also given support to reduce the current account deficit of many economies. Changes in exchange rates have a stronger connection with remittance flows. Exchange rate depreciation is supportive positively to foreign exchange reserve and the current account balance. Likewise, depreciation of real exchange rate promotes investment opportunities at greater amount and improves economic growth in the economy. Especially, when exchange rate depreciation has a stronger influence on remittance flows and some of the migrants are interested to invest in real state, small scale business and other assets. Then exchange rate depreciation is likely to reduce poverty rate and credit constraints. Therefore, policymakers of emerging economies should monitor carefully the outcomes of exchange rate movement that they can manage properly for the better off of the whole economy.

Acharya (2018) investigated the impact of foreign remittances on economic growth by using a panel data of 18 Asian and Sub Saharan African countries for a time period of 1975 to 2014. Eighteen countries are selected based on similar population size, nature and development level. A panel dynamic ordinary least square estimator was used for statistical analysis. The results show that remittance flows significantly increases economic growth, especially through human

capital investment. It is further added that remittance flows have a modest relationship with growth while controlling human capital and further potentially contributing to output growth. Remittances show a significant long-term positive impact on human capital formation. The research finding suggested that it is the need of time to channelize remittance flows to human capital investment. For less developed countries, it is necessary to promote new knowledge, modern technology and human skills, which are crucial for a greater economic development.

Bhattacharya (2018) analyzed the impact of remittances flows on financial development. The 57 highest remittances receiving economies were selected for this research study and annual data from 1992 to 2012 are used for analysis. A long-term equilibrium relationship between remittances and three other alternative indicators are used for financial development. Remittances are the second largest source of external finance after foreign direct investment in the developing economies. During the last three decades, flows of remittances from migrants have increased considerably, which is considered a key input for economic development in Asia, Africa, Latin America and Pacific region. The research study argued that after 2000s, the world economy entered into the third stage of financial globalization. Less developed economies are now more intact with the worldwide financial system and having more capital inflows. Globalization of the financial system expands function related to financial setup by improving access to funding and advancing the financial infrastructure. The globalization concept reduces the problem related to asymmetric information and enhances the availability of credit. The results concluded that remittance inflows have a significant association with financial development in the long term. Sending more remittances through formal financial channels can be promoted if the cost of the remittance transaction is reduced. It is suggested that in future policies regarding the appropriate channel for

remittances should be formulated, this will motivate a function full financial system. The use of cell phone technology for the transfer of payments will be more effective to save the time and providing the facility of low cost money transfer.

Chami (2018) investigated cross country analysis to analyze the relationship between remittances flows with the labor market. Three sources of data have been used in this research study, i.e. balance of payment statistics of the IMF, international development statistic database of the OECD and ILO Global Employment Trend database in order to cover 177 countries for the period of 1991 to 2015. It is argued that currently, remittance flows are one of the leading international financial flows, which reached to almost US$ 400 billion in 2015. Remittances are providing a major share of GDP for many developing countries. In the year 2015, about 30 countries received remittances more than 5% share of GDP. The results concluded that remittance flows have a stronger impact on labor demand and labor supply in migrant producing countries, but at the same time it may have a complex situation. These effects were considered highly significant and larger in size from official development aid and foreign direct investment. Remittances decrease labor force participation and discouraging the formal behavior of the labor market on the supply side. Furthermore, male and female labor force showed significantly different reflection to remittances. While on the demand side, remittances decrease the overall rate of unemployment, but contributing to mostly lower wage. Although income inequalities decline due to higher remittances, a decline in average productivity growth and wage rate. It is also explained that remittances contributing to lower wages plus lower productivity of non-tradeable industries at the cost of high productivity plus high wage tradeable industries. It means that a manufacturing

employment rate is negatively correlated to remittances, whereas real estate business, transportation and construction are positively connected to remittances.

In this section macro-level studies are analyzed, which are mostly based on aggregate behavior of the economy. The macroeconomic indicators are used that are import, export, exchange rate, remittances, unemployment, GDP growth rate, inflation, national income, saving and investment at the national level. Foreign remittances is an important source for the development of macro level indicators, promoting external finance, FDI, national saving, investment and during crises it also plays a key role in supporting the economy. The inflow of remittances affects economic growth positively, through the expansion of domestic investment level and development of human capital formation. Second, inflows of remittances have direct and significant relation with poverty reduction. The research studies also suggested that migration to the Middle East has a positive and significant relationship with poverty alleviation. On the other hand, incoming remittances from North America and European countries have a negative relationship with poverty alleviation and income inequality.

Furthermore foreign migration has some negative effects of which of the most important one is the outflow of highly educated and skillful labor force from developing countries. These outflows have some major social, economic and political impact on the home country. Labor migration with large number leads to a shortage of skillful labor in the home country labor markets, causes the appreciation of wage rate and unemployment. However, indirectly remittances also have some costs in the sense of Dutch disease system. The inflow of remittances increases the consumption level of the household, then the increase in demand leads to inflation thus imported

goods lead to be cheaper than domestic goods. Imports would be attractive because of the less competitive domestic market. It is also argued that remittances inflows are not utilized properly or not used for productive purposes and most of the remittances are used for consumption purposes with respect to productive investment.

2.4 Summary

This chapter comprised of prior literature where many research studies about migration and remittances and its linkage with household welfare have been reviewed. The researchers mostly focused on limited and underline areas and objectives regarding the problem. Some of the studies deal with theoretical background, some of them have focused on micro level and others have analyzed the macro level. In this chapter we have incorporated all the available and up to date literature to cover all relevant aspects of current study.

Researchers analyzed and investigated migration and workers remittances in different ways using different techniques, in different regions all around the world. Most of the researchers investigated at micro level and analyzed micro impacts of migration by using household integrated economic surveys of the well-reputed organizations. Macro level research studies are also conducted but these studies are rare as compared to micro level. The overall literature showed that the relationship of remittances, poverty and economic growth is very significant. According to literature, foreign remittances improve the economic growth and reduce poverty. Remittances provide foreign exchange reserves for less developed countries. Some researchers also argued that remittances play very important role during economic crises, shocks and natural disasters. On the other hand, some researchers also give space to the negative side of remittances such as the

problem of brain drain or outflow of highly skilled and educated people from home country and the use of remittances for nonproductive purposes. These research studies recognized that remittances inflow has a positive relationship with income of the poor household. It is also concluded that remittances increase the income level and wealth status of household which further leads to enhance consumption expenditures. The main motive of migration is to develop a social and economic status for better life. Because of this motive, people spend remittances on health, education, housing and other services which improve the living standard of the family. Researchers argued that some of the positive and productive contributions of foreign remittances are connected to proper and effective government policy regarding foreign remittances.

This research work is basically a primary research work which is designed for specified objectives. In Pakistan, few research studies are conducted on primary data. This research study has the ability to fulfill the gap in previous research studies and can differentiate other research with respect to the volume of literature and detailed descriptive analysis as well as inferential analysis. The detailed comparison has been developed for both types of households, i.e. remittances receiving and non-receiving households with respect to education, wealth, food consumption, poverty and health status of the household. The study area also has a significant importance regarding remittances and number of migrants. District Lower Dir is listed one of the top districts in Pakistan with respect to migrant's number and incoming remittances which contributes almost 2.22% share to total numbers of Pakistani migrants (BEOE, 2015).

CHAPTER 3

RESEARCH METHODOLOGY

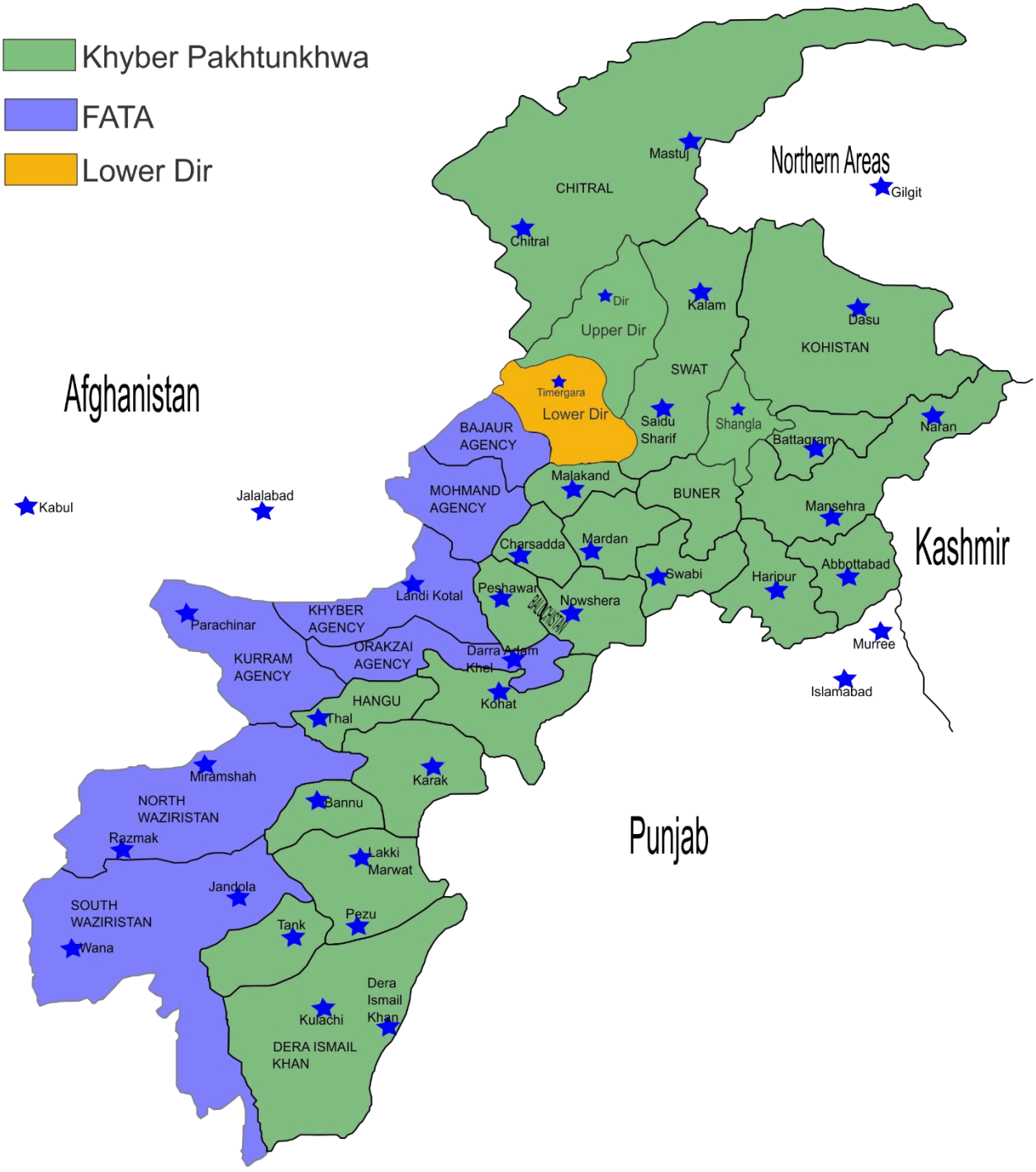
This chapter presents the methodology adopted for this research work. First, we discuss the universe of study. Sampling collection, data source and determinants of dependent variables are discussed. The detail about measurement of dependent and independent variables and theoretical framework have been given. Two step analysis and econometric model are discussed in the last. In the following, each of the sections is explained in details.

3.1 Universe of study

District Dir Lower is selected for this research study which is one of the twenty six districts of Khyber Pakhtunkhwa province. Dir Lower is located on the north west of Pakistan near the Afghan border. Geographically, it is located in a very important place as shown in Figure 3.1. Dir Lower not only has a border with Afghanistan but also with other three districts of Khyber Pakhtunkhwa as well as with Federal Administrative Tribal Areas (FATA). Afghanistan is in the north-west, district Swat is on the east, district Upper Dir is on the northeast and district Malakand is on the south of Dir Lower. People access the FATA especially Bajaur Agency, Swat, Upper Dir, Chitral and Northern Areas from other parts of Pakistan using the routes passes through Dir Lower. Therefore, Dir Lower is one of the most important districts of Khyber Pakhtunkhwa province.

District Dir Lower has a total area of 1,583 Km Sq. The population was about 0.8 million according to the 1998 census report. The projected population in 2015 is 1.043 million based on the population growth rate of 3.43% according to census 1998 (NIPS, 2015).

Figure 3.1. Map of the Study Area District Lower Dir



The female population was slightly higher than that of male with a ratio of 50.43 and 49.57 %. According to census 1998, the exact population of male was 355,728 and female population was 361921. The household size is considerably higher and was 10 family members on average each household has according to census 1998.

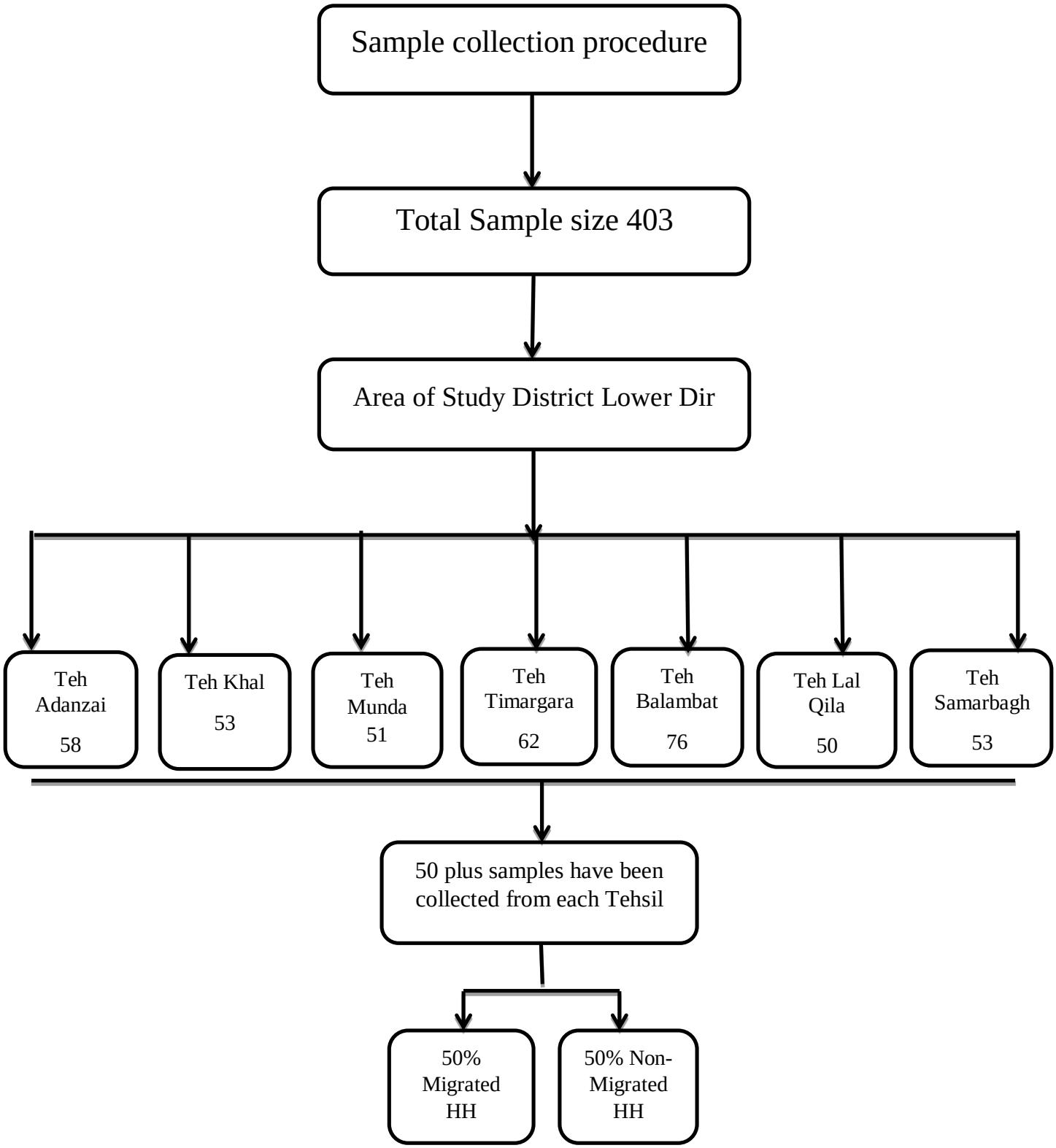
The district of Lower Dir is divided into seven Tehsils, i.e. Adanzai, Balambat, Khaal, Lal Qila, Munda, Samarbagh and Timargara. According to the projection for 2015 on the basis of 1998 census (NIPS, 2015) Adanzai has a population of 222,352, Balambat has 170,286, Khaal has 103,426, Lal Qila has 143,536, Munda has 86,611, Samarbagh has 161,211 and Timargara has 155,230. Adanzai is the most populated and Munda is the least populated Tehsils of district Dir Lower.

The total registered voters in the constituency are 540,091 of whom 308 polling stations, they have already used their right in last general elections 11 May 2013. The literacy ratio of the Dir Lower among the population aged 10 years and above is 29.90% which has increased significantly since 1981 when it was just 10.16 %. The male literacy rate is considerably higher as compared to female literacy, i.e. 48.76% compare to 12.25 % of female (Census report 1998).

3.2 Sampling

In order to collect data, the samples is selected from district Lower Dir. The total sample size used in this research study is 403, in which almost half are remittances receiving households and almost half are non-remittances receiving households. Four hundred three (403) households were been interviewed through a questionnaire to get the relevant information during years 2013

Figure 3.2 Sample Collection Procedure



and 2014. For total sample size we have used the method of (Lemeshow et al. 1990) to estimate the total sample size. On the basis of this formula the total sample size were estimated 384, while we have collected 5% extra sample from the required level. The formula is given in equation 3.1.

$$n = \frac{z^2 = z^2_{1-\frac{a}{2}} p(1-P)\mathrm{N}}{d^2\,(N-1) + z^2_{1-\frac{a}{2}} p(1-P)} \qquad (3.1)$$

The household sample has been collected randomly and at least 50 sample from each of the seven tehsils. Thirty-five (35) villages of all seven tehsils are randomly selected for research survey. For further household sample selection stratified random sampling technique has been used for the two groups of households, i.e. remittances receiving and non-receiving households. Proportional share is given in all villages to each group of households on the base of their presence.

Figure 3.2 shows total sample size of seven tehsils of Dir Lower, i.e. Adanzai, Khaal, Munda, Timargara, Balambat, Lal Qila and Samarbagh. Fifty eight (58) households' samples have been collected from tehsil Adanzai which further comprises of twenty-five (25) of remittances receiving households and thirty three (33) of non-receiving households. Fifty three households are collected from tehsil Khaal which contains nineteen (19) remittances receiving households and thirty four (34) non-receiving households. All the other tehsils also have some presence in sample size. Fifty one (51) households samples are collected from Munda with a ratio of thirty two and nineteen (32, 19) remittance receiving and non-receiving households. Similarly, from Timargara sixty two (62) households with a ratio of twenty seven and thirty five (27, 35), from Balambat seventy six (76) households with a ratio of forty one and thirty five (41, 35), from Lal Qila fifty (50) households with a ratio of thirty and twenty (30, 20) and from Samarbagh fifty three (53) households with a ratio of twenty nine and twenty four (29, 24) remittance receiving and non-

receiving households samples are collected. The total sample size is four hundred three in which the share of remittances receiving households is two hundred three (203) and non-receiving households are two hundred (200). The percentage of share given to different tehsils in total sample size is within the range of 12% to 19%. Adanzai contribution to the total sample size is 14.4% and Khaal has a share of 13.2%. Similarly, Munda and Timargara presence in the total sample size is 12.7% and 15.4% respectively. On the other hand, Balambat contribution is 18.9%, while Lal Qila has only 12.4% and Samarbagh also has a presence of 13.2% in total sample size.

3.3 Data Source

In order to get the relevant and correct data primary data source have been used. Information is collected from households using a questionnaire which contains relevant survey questions about the remittance and other control variables. The questionnaire is designed to fulfill the information and measurement needs of dependent and independent variables which is important for our research study. The questionnaire contains 100 questions and divided into seven sections based on the following measures, i.e. basic information of household, education status, migration details, wealth status, food consumption details, health status of the household and information about domestic earnings details or home country earning details.

Our work is based on a primary research study which is also known as original research work that has been designed for specific purpose and objectives where researchers are practically involved in the collection of data directly from respondents. Primary research study provides several benefits over secondary data. Primary research study usually provides strength, experience and vision to researchers regarding issues. In social studies, it is very difficult to get

the proper and required depth of the research study when a researcher is reporting and working on secondary data regarding some individuals and groups of the societies. Primary data also provides maximum control to researchers about the method of collecting data, reporting results and conclusions of the research output. Therefore, in our study, we are using the primary data source in order to get as many benefits as much possible. The survey is conducted in district Lower Dir of Khyber Pakhtunkhwa province and data are collected from seven Tehsils. At least 50 questionnaires are filled from each Tehsils with a proportion of almost of 50% of remittances receiving families and 50% from non-remittances receiving families. A total of 403 households have been surveyed as a sample in which 200 are remittances receiving households and 203 of non-receiving households.

3.4 Variables Determining Education, Wealth and Food consumption

There are some important characteristics that can affect and determine household education status, wealth status and food consumption. Socioeconomic conditions of the household have an important connection with all of the three dependent variables, i.e. education, wealth and food. If a household is receiving sufficient amount of foreign remittances and parents are more educated then it is possible that the household has good wealth status, consume more on education and food. The explanatory variables are controlled and connected with household social, economic and demographic conditions.

The dependent variables of first three models are household total monthly expenditures on education, wealth score and food consumption. Independent variables are divided into three main categories, economic variables, education variables and demographic variables. These categories

are further divided in different independent variables. The complete list of dependent and independent variables are given in Table 3.1.

Economic status of household is very important determinant for household total monthly expenditures on education, wealth score and food consumption score. Five variables are considered which are concerned with overall household income and production, household type, the total monthly income of the household, number of income earners, total agriculture production and total livestock. Household type is the most important variable of this research study which differentiates that whether household receives foreign remittances or not. Foreign remittances play a crucial role to increase household education expenditures, wealth status and food consumption. The foreign remittances increase the income of household which further leads to an increase in consumption on education and food. Some portion of remittances has been used for saving and investment purpose which increase the household wealth status. Household income is positively correlated to educational expenditures, food and wealth status. Income earners are also positively correlated to educational expenditures, food consumption and wealth status. As the number of income earners increases, educational expenditures, wealth status and food consumption are positively affected due to increase in income. Agriculture production and livestock are also positively correlated to educational expenditures, wealth status and food consumption.

Education status of the parents in the household is also an important indicator for educational expenditures, wealth status and food consumption. In addition, education status also indicates human capital and earning potential. If a person is more educated then he will get a respectable status in society. Education related variables are divided into three variables, i.e.

father's education, mother's education and number of children between 5 and 18 years of school going age. Father's and mother's education are positively correlated with educational expenditures, wealth status and food consumption. Good educational status and technical skills lead to more earning potential. Number of children between 5 and 18 years are positively associated with educational expenditures and negatively related to wealth score and food consumption. If a household invests more in human capital or in children's education then it leads to overburdened household income. On the other hand, an increase in number of children number pushes up dependency ratio and also negatively affects household income.

Demographic variable is also one of the most important independent variables which has an impact on household educational expenditures, wealth status and food consumption. This variable indicates the family size in the form of total family members in the household. Household size has a negative relationship with household educational expenditures, wealth status and food consumption. When family size increases especially the number of old age members and children, dependency ratio also increases and poverty level rises.

3.5 Measurement Details of Dependent and Independent Variables

All dependent and independent variables with description and measurement are listed down in Table 3.1. The detailed measurement and discussion of dependent and independent variables are given below one by one.

Table 3. 1

Description and Measurement of Dependent and Independent Variables

Notation	Description	Measurement
Dependent Variables: Household Education, Wealth Score, Food Consumption Score, Poverty and Health		
1. EDU	Household education	Total monthly expenditures on education
2. WS	Household wealth score	Instrumental technique of wealth score has been calculated according to the international standard including sixteen major assets of household, i.e. sewing machine, cloth presser/iron, fans, motorbike, car, heavy vehicle, UPS/ generator, cell phone, cooking range, juicer machine, animal shelter, fridge, television/computer, washing machine, house type and number of rooms
3. FCS	Household food consumption score, consumed major food items by household in last week	Eight major food items expenditures: a) Cereals: wheat, bread, rice, maize b) Dhal: beans, lentils, peas, nuts c) Vegetables d) Fruits e) Meat, poultry, fish, eggs f) Milk, cheese, yogurt g) Sugar, honey h) Oil, ghee, butter
4. HHP	Household poverty status: Daily income of below 2 US$ are considered poor and above are non-poor	= 0 If household is poor = 1 If household is not poor
5. HHH	Does monthly income fulfill the basic needs of health care (i.e. doctor fee, medicine cost, diagnostic test charges, transportation expenditure related to health)	0 = If household does not fulfill the needs of healthcare 1 = If household fulfills the need of healthcare

Continues…….

……Continued

Notation	Description	Measurement
Independent Variables: Economic Status of Household		
HHT	Household type	0 = If household is non-receiving foreign remittances 1 = If household is receiving foreign remittances
TMI	Total monthly income	Counts in thousand PKR
NIE	Number of income earners	Counts
AP	Agriculture production	Counts in PKR
TL	Total livestock	Counts in PKR/month
Independent Variables: Households Education Status		
FEP_1	First category of father's education	If father has primary education = 1 Otherwise = 0
FES_2	Second category of father's education	If father has secondary education = 1 Otherwise = 0
$FEHS_3$	Third category of father's education	If father has higher secondary education = 1 Otherwise = 0
FEG_4	Fourth category of father's education	If father has graduation = 1 Otherwise = 0
FEM_5	Fifth category of father's education	If father has masters level of education = 1 Otherwise = 0

Continues……

……Continued

Notation	Description	Measurement
MEP_1	First category of mother's education	If mother has primary education = 1 Otherwise = 0
MES_2	Second category of mother's education	If mother has secondary education = 1 Otherwise = 0
$MEHS_3$	Third category of mother's education	If mother has higher secondary education = 1 Otherwise = 0
MEG_4	Fourth category of mother's education	If mother has graduation = 1 Otherwise = 0
MEM_5	Fifth category of mother's education	If mother has masters level of education = 1 Otherwise = 0
NCH	Number of children between 5 and 18 years of age	Counts
Independent Variables: Households Demography		
HS	Household size	Counts
FC	Total monthly food consumption	Counts in thousand PKR

Household education (EDU) is the first dependent variable which is measured on the bases of household total monthly expenditures on education. Total monthly expenditures on education represent all sort of household expenses related to education such as tuition fee, uniform and stationery. Higher education expenses are also mentioned in total monthly expenditures in order to determine the overall impact of foreign remittances on household education.

Household wealth status (WS) has been considered as a second dependent variable to investigate the position of household wealth power. A well-known method Principal Component

Analysis (PCA) also called Factor Analysis for household's wealth status has been used in order to measure household wealth status. Well reputed organizations such as IMF, WB and Demographic Health Survey (DHS) use this method for different household surveys all over the world. Using the principal component method wealth score has been determined. This technique is used to determine a common set of items that are normally found in household ownership or in use. These items also identify the basic needs of human life. Major sixteen items are measured which are: sewing machine, cloth presser/iron, fans, motorbike, heavy vehicle, car, UPS/generator, cooking range/cooking stove, cell phone, juicer machine, animal shelter, fridge, television/computer, washing machine, type of house (i.e. concrete house, house made of both concrete and mud, house made with iron sheets roof, mud house) and number of rooms in house, (UN, Food and Agriculture Organization (FAO), 2013). In order to measure the wealth index based on PCA, the statistical software Statistical Package for the Social Sciences (SPSS) is used.

Food consumption (FCS) is the third dependent variable to measure household food consumption strength. Food items are divided into eight standard categories: a) Cereals: wheat, bread, rice, maize. b) Dhal: beans, lentils, peas, nuts, c) vegetables d) fruits e) meat, poultry, fish, eggs f) milk, cheese, yogurt, g) sugar, honey, h) oil, ghee, butter. Household food consumption is measured on the bases of consumption of all these major food items in last week. When household consumes a reasonable amount on food and has a balanced diet, then that household would be considered as a food secured household. Many researchers used food consumption as an indicator to analyze household food security (UN, FAO, 2013). Data are collected from households regarding the food items consumed during last week on the bases of food expenditures of various major food items. Food consumption score is measured using Table 3.2, where major food items

are listed down in eight categories, created on their dietary characteristics and the standard weights of each category are also given. The food consumption score is calculated by first multiplying the standard weight with the number of days on which a food category is consumed by household and then summing up in order to determine the aggregated score. Further, food consumption score has been used to divide the households into three categories, i.e. poor food consumption, border line food consumption and acceptable food consumption (UN, FAO, 2013). The household which has food consumption score below 28 is considered poor food consumption households. Conversely, the household which has food consumption score above 42 is considered as acceptable food consumption households. On the other hand, the household which has food consumption score between 28 and 42 belongs to borderline consumption category. The highest possible food consumption score is 112 which can be obtained when a household consumed all categories of food items every day.

Table 3. 2

Food Items and Food Groups with Standard Weights of Food Consumption Score

Food items	Food groups	Weight
Cereals: wheat, bread, Rice, Maize	Main staples	2
Dhal: beans, lentils, peas, nuts	Pulses	3
Vegetables	Vegetables	1
Fruits	Fruits	1
Meat, poultry, fish, eggs	Meat	4
Milk, cheese, yogurt	Milk	4
Sugar and honey	Sugar	0.5
Oils, ghee, butter	Oil	0.5

Source: UN, Food and Agriculture Organization (FAO), 2013.

Household poverty status (HHP) is the fourth dependent variable which is measured according to the international standard definition of poverty of the WB. WB defined poverty on the bases of daily income of an individual. According to WB, if a person has income below 1.25 US$ per day then it means he is living in extreme poverty condition. Similarly, a person is considered in moderate poverty if he has daily income below 2 US$. In 2008 it is also estimated that 1.4 billion of the world population has daily income less than 1.25 US$ and 2.7 billion has income less than 2 US$ per day. Poverty analysis is developed on the basis of moderate poverty level which is below two US$ per day (< 2US$). Households which have daily income below two US$ considered poor households (WB, 2013). A binary choice model has been used for household poverty status. When a household is below the poverty line then 0 and when it is above poverty line then 1 is given to household poverty status.

Household health status (HHH) is the last dependent variable of this research study which is also based on the binary choice model. Household health status is measured using a simple rule. If a household monthly income fulfills the basic needs of healthcare (i.e. doctor fee, medicine cost, diagnostic test charges, and transportation expenditure on health) then the household health status is assigned the value 1 otherwise 0. Howdon and Rice (2018) used health care expenditures for health care analysis.

There are also some important independent variables that can affect and determine household education, wealth score, food consumption score, household poverty level and health status. Socio, economic and demographic situation of the household have an important connection with all dependent variables. If a household has a good income, receiving remittances, high

number of earners and parents are more educated then it is more likely to have fewer chances of poverty, have good health status, more capability to invest in human capital and having a better position regarding food consumption and wealth score. Independent variables are divided into three main categories, i.e. economic variables, variables related to education and demography. These categories are further divided into different independent variables sets. The complete list of independent variables is given in Table 3.1.

Economic status of household is very important determinant for all five dependent variables. The Economic variable is divided into five categories which are concerned with overall household income and production are household type (HHT), total monthly income of household (TMI), number of income earners (NIE), total agriculture production (AP) and total livestock (TL). Household type determines that whether household receives foreign remittances or not. Foreign remittances have some rational relationship with all of our dependent variables. If a household is non-receiving foreign remittances then zero (0) code is given to the household type otherwise one (1). Household income is measured in thousand Pakistani Rupees (PKR) for OLS of first three models (i.e. education, wealth and food) and for fourth and fifth models (i.e. Logit & Probit) of poverty and health. Total monthly income variable represents the overall income of household which is summation of domestic income and foreign income as remittances.

Number of income earners is simply measured by counting the family members of a household who are in a position to earn income. Agriculture productions of all three major crops (i.e. wheat, maize, rice) are measured in kilogram (Kg). The market value of agricultural production of these crops is represented by one variable (AP) and converted into PKR for

regression analysis. Livestock of a household which is based on the market value of large animals (e.g. buffalo and cow), small animals (e.g. goat) and poultry is represented by one variable of (TL) livestock in PKR.

Education related variable is divided into three sub variables, i.e. father's education (FE), mother's education (ME) and number of children (NCH) between 5 and 18 years of school going age. Father's and mother's education is categorized into five dummy categories, (i.e. primary, SSC/matriculation, HSSC/intermediate, graduate and master). No formal education has been used as a based category or reference category in both father's and mother's education. The number of children between 5 and 18 years of school going age is counted based on their presence in a household.

The demographic variable is also one of the most important independent variables in this research study. This variable represents the household size (HS) which is measured by counting the numbers of family members in the household. House size is used for both OLS regression of first three models and Logit & Probit model of household poverty and health status analysis. Food consumption (FC) or total monthly expenditures on food consumption is used only in last two models (poverty & health) which is measured in thousand PKR.

3.6 Theoretical Framework

Theoretical framework develops a structure that can hold and support a theory regarding research study. The theoretical framework of this study presents and describes the concept behind this research study. There are many migration theories which are constructed by different

economists. These theories are based on many general rules and principles which are applied to both internal and external migration. The Lewis model (1954) provides a base for this research study. Lewis model explains that migration from rural parts to urban parts in the country increases the output and productivity of labor force. This model is based on "Dual sector economy", one is a traditional sector which has an excess of the labor force and based on agriculture, another one is an industrial and developed sector. In the rural areas, there is a surplus of labor, low productivity and most of the people income is based on the agriculture sector. However, usually agriculture sector is based on traditional and old technology. A large number of the labor force is linked to small parts of agriculture land. The income of labor force in traditional sector is lower than the developed sector. This surplus labor force decreases the productivity of land or agriculture sector. When labor shifts from rural areas to urban areas, it creates industrialization and sustainable development. This migration also increases the competence and progress of labor force because of high wage rate and more opportunities of jobs.

3.6.1 Neoclassical Theory of Migration (Lewis 1954, Todaro and Harris & Todaro 1970)

Neoclassical migration theory is mainly based on wage rate difference between two markets or across two countries. According to this theory, migration is taking place due to the geographical difference in labor supply and demand. Additionally, the wage differences between capital rich countries and labor-rich countries. The neoclassical migration theory is further extended from macro level to micro level by the human theory of migration (Todaro, 1969). The human theory of migration added that social and demographic characteristics of individuals are also one of the most important determinants of migration. Individual makes decision of migration after personal assessment related to cost and benefits. The authors also argued that men are more

likely to migrate than women. Individuals take a decision of migration for a better life, job opportunities, job security and higher wage rate in host countries. This Neoclassical theory mostly focused on cost and return factors.

3.6.2 New Economics Theory of Migration (Boom and Stark, 1991)

The New Economics of Migration theory is a theoretical model basically responses to the neoclassical theory. New economies of migration updates this existing theory of migration and focus are shifted from individual decision to mutual household decision. This approach argues that groups and families take rational decisions of migration on the basis of minimizing risk, maximizing income and other determinates like production, consumption, capital market, insurance market and consumer credit markets.

3.6.3 World Systems Approach Theory (Wallerstein, 1974)

World systems approach introduced migration theory with different concepts. This theory explains that structural changes in the world markets are the important determinants of migration. Additionally, migration is a function of globalization, due to increase in the dependencies of the economies, it introducing a new forms of production. This approach is mostly focused on capital mobility. The theory explained that capital and labor mobility is interlinked with each other and as two sides of one coin.

3.6.4 Dual Labor Market Theory (Piore, 1979)

Dual labor market migration theory follows the world system migration theory and explains that migration connected structural changes in the economy but the main focus is on demand side. There are two types of markets, i.e. capital intensive and labor intensive. In capital

intensive market, skilled and unskilled labor are employed and in labor intensive market the unskilled labor are prevailed. The theory discusses that migration is determined by the conditions of labor demand rather than supply. Economies of advanced countries or capital intensive economies need to hire low skilled labor force. The domestic labor force is not agrees on to work due less pay and status.

3.7. Two-step Analysis

This research study is based on two type of analysis, which are descriptive and regression analysis. The following section explains each of them in more detail.

3.7.1 Descriptive Analysis

The descriptive analysis explains the characteristics of data regarding remittances receiving and non-receiving households. The main purpose of the descriptive analysis is to describe all features and strength of households with respect to income, wealth, education, health, poverty and food consumption for both types of households. The descriptive analysis further comprised of seven sections which are basic information about the household, educational status of households, information about the migration of households, wealth status of households, food consumption of households, health status of households and information about domestic earnings. Each of these sections is discussed in details in chapter five.

3.7.2 Regression Analysis

Regression analysis basically draws inferences regarding the significance of explanatory variables which affect response variables. Regression analysis further comprised of two sections,

first one is OLS and the second one is based on Logit and Probit models. OLS has been used for first three models of education, wealth and food consumption while Logit and Probit models have been used for last two models of poverty and health status of the household. Further details about regression analysis have been provided in chapter number six.

3.8 The Model

The methodology of this research study is based on the previous knowledge of literature related to foreign migration and impact of incoming remittances on household welfare. This model was used by (Mughal & Diawara, 2010) to investigate the impact of remittances on poverty and income inequalities by using household survey for micro evidence and they used Probit model for regression analysis. Poverty, inequality, consumption and saving were used as dependent variables and remittances was considered a binary responsive variable. We used the same technique but our dependent variables are different i.e. education, wealth, food, health and poverty. Our analysis are also based on micro level that's why this methodology is suitable for our analysis as well. Orbita, (2008) used the same model to investigate the economic impact of remittances on household welfare while (Mekenzie, 2007) used this model to investigate the educational impact of remittances at micro level for Latin America. We have also used the similar model for household education following (Mekenzie, 2007).

This research study has five models for five dependent variables, i.e. education, wealth, food consumption, poverty and health status. These five dependent variables determine the household welfare status and to analyze that how foreign migration can influence important household characteristics. The research analysis is based on household welfare, therefore, it is

essential to use all five determinants to analyze its relation with foreign remittances one by one. First, three models of education, wealth and food consumption are simple in nature and OLS method is used. For last two binary response dependent variables, two approaches (i.e. Logit model and Probit model) are used to estimate the regression.

$$Y_i = \beta_0 + \beta_1 \text{ REMIT} + \beta_3 X_i + \varepsilon_i \qquad (3.2)$$

Where Y_i represents dependent variables of household education status (EDU), wealth status (WS), food consumption score (FCS), household poverty (HHP) and household health status (HHH). The independent variable is a remittance of household (REMIT), X_i represents other potential or control variables that are total monthly income (TMI), number of income earners (NIE), agriculture production (AP), total livestock (TL), father's education (FE), mother's education (ME), number of children below eighteen years and above five years of school going age (NCH), household size (HS) and total monthly consumption on food (FC) and ε_i is the error term.

In this study, separate regressions are run for all three dependent variables (education, wealth score and household food consumption score) to find out the relationship between these variables. Equation 3.2 represents the basic model of this research which is further divided into distinct regression models. Equations 3.3, 3.4 and 3.5 represent first three independent variables separately, i.e. household education status, wealth score and food consumption score. The education model of 3.3 which is also been used by (Mekenzie 2007) to determine the impact of foreign remittances on household education status.

$$\text{EDU} = \beta_0 + \beta_1 \text{ REMIT} + \beta_3 X_i + \varepsilon_i \qquad (3.3)$$

$$WS = \beta_0 + \beta_1 REMIT + \beta_3 X_i + \varepsilon_i \quad (3.4)$$

$$FC = \beta_0 + \beta_1 REMIT + \beta_3 X_i + \varepsilon_i \quad (3.5)$$

Where EDU represents the dependent variable of household educational status, WS is the second dependent variable which represents household wealth status and the third dependent variables is FC describing food consumption of household. REMIT is remittances of household (household type), X_i represents other potential or control variables that are total monthly income, number of income earners, agriculture production, total livestock, father's education, mother's education, number of children below eighteen years and above five years of school going age, household size and ε_i are the error terms.

In order to estimate all these regression models, OLS is used for the first three models of education, wealth score and household food consumption score. OLS is the best option to use because it is simple in nature, the relationship among the variables are linear and also fulfill the properties of OLS model. Other two models of household poverty and health status have a binary response of 0 and 1 which represent that whether a household is poor or not and fulfill the basic needs of health care or not. Due to binary response and non-linear relationship Logit and Probit models are used for regression of both household poverty and health status. Logit and Probit both are the nonlinear regression models. We used both of the models for empirical analysis to analyze the results in both models and also to provide more strength to the results. For binary response model, linear probability model is not consistent because of the following reasons. In linear probability model, the error term is not normally distributed and have a problem of heteroscedasticity. The other main problem in this model is that the probability varies linearity with every explanatory variable, which leads to marginal effects is remain constant of the

explanatory variables. In addition, the result for predicted probability sometimes may not be within the range of 0 and 1. Furthermore, the linearity assumption is also incompatible to develop observed behavior for binary choice decision problem. Therefore, in order to avoid these problems it is more appropriate to use a nonlinear model to handle the specific requirements of the model having binary dependent variable.

CHAPTER 4

POVERTY ANALYSIS

4.1 Introduction

Poverty has many aspects such as lack of food availability, lack of housing facility and inability to afford a doctor during sickness. It may be in the form of not having enough money to avail the schooling facility, lacking job facility and insecurity about the future due to scarce resources. Poverty is losing a child during early birth and illness caused by unclean water and lack of food. Poverty is ineffectiveness, incompetence, lack of freedom, lack of representation and powerlessness. Poverty has various characteristics and varying from one place to another with the passage of time. In literature, poverty has been defined in several ways. According to WB, poverty is the incapability to obtain a nominal living standard, which is analyzed in terms of sufficient income to afford basic expenditures and essential needs (WB, 2006).

Poverty is a common phenomenon, especially in the rural regions, where most of the individuals are facing a scarcity and human deficiencies regarding earning, clothing, housing, health care services, healthy sanitary facilities, education and human rights. In Pakistan, almost 61% of total country's population are living in rural parts. The poverty ratio in rural areas is higher than urban areas. A significant amount of the rural population that is almost 65% of population share are directly or indirectly connected to the agriculture sector. Furthermore, about 45% of the Pakistan population generate their earnings from the agriculture sector. Due to increase in poverty level in the rural regions, the debate has been developed on productivity and growth trends for a

modern agriculture setup. Therefore, it is very important to control such aspects which affect the poor condition of rural households. Some other variables like increase in the household size, dependency ratio during education and unemployment also contributed positively to poverty. On the other hand worth of livestock, farming and foreign remittances decrease the probability of being a poor. Additionally, the socioeconomic opportunities in the economy and the availability of infrastructure facility in the residential regions also plays a significant connection with poverty.

Worldwide, around 90% of the poor people of developing world belong to Africa and Asia. These poor people mostly live in rural areas or in other words three out of four poor people live in rural areas of different developing countries. Developing countries' economies mostly based on agriculture. About 2.1 billion poor population have income below two dollars (2 $) per day and 880 million of the world population living with a daily income below one dollar (1$). Due to this situation, it is very difficult to control poverty level especially in rural areas of developing countries like Pakistan. Poverty is the sum of low income, weak housing facility, poor healthcare and lack of education facilities. This is the valid reason of poverty that most of the people live in rural areas are totally dependent on the agriculture sector, while the contribution of agriculture sector to GDP is around 22%. According to recent economic survey 2011-12, more than 63 percent of the population live in rural areas which also provide a big share of employment to our economy, i.e. above 40 % of the total population (Pervez, 2014).

Pakistan is one of the most top populous countries in the world which ranked sixth most populous country in the world with the estimated population of almost 200 million in the year 2017. The 59% of county's population live in rural parts of the country and 41% live in urban parts

of the country. The growth rate of population is almost 1.9% (Pakistan Economic Survey, 2017). According to government official data poverty level in rural regions decreased from 39% to 28% during the period 2001 to 2006. There is also a huge difference between rural areas verses urban with respect to poverty, poverty in rural areas is much higher than urban areas (Pakistan Economic Survey, 2006).

According to World Bank report (2016) Pakistan has made a substantial progress in poverty reduction, especially during the last fifteen years from 2001 to 2015. The progress in poverty reduction was counted almost 10% from year 2001 to 2015 and even the most poor population share of 5% got special improvement in their social life. It is analyzed that in the year 2001, 14% of the population share consumed monthly 550 PKR per person as a real per capita expenditures but in 2014 this ratio reduced to only 2%. In year 2016 the government of Pakistan introduced a new national poverty line with the help of a higher standard of wellbeing for poverty and suggesting that almost 30% of the population are below the poverty line. Pakistan is gradually moving into the right direction by reducing the infant mortality and maternal mortality ratio. The ratio of infant mortality went down from 80 to 66 within 1000 during the period of 2005 to 2015. On the other hand, maternal mortality rate reduced from 249 to 178 within 100,000. Population growth rate is a big problem and challenge for government to deliver services related to all sectors of human development. The stunting rate or nutritional deficiency of Pakistan have not much improved which ranked the third highest in the number of stunted children all around the world and in the South Asia Pakistan is on the top with the rate of almost 44%. This stunting rate is directly connected to access to clean drinking water and the accessibility of sufficient sanitation

facilities. The current status of sanitation and water availability is clearly inadequate to decrease the stunting level (WB, 2016).

The educational status is also improving gradually and during the period of 2001 to 2010 a significant improvement was achieved in the educational indicators. Literacy rates increased to 58% from 53% during the period of 2005 to 2010, but after 2010 the ratio is within the range 58% to 60%. Likewise, the gross and net enrolment in primary and middle schools also increased from the year 2005 to 2010. In addition, the gross enrolment to middle and secondary school ratio are still remain the same, i.e. 62% and 58% respectively in year 2015. It is recommended that the quality of education is not much improved in the recent years. A huge numbers of schools in Pakistan are still missing the important basic facilities of electricity, drinking water and toilets. The 52% of the total country schools are having the facility of electricity, boundary wall, running water and toilets (WB, 2016).

All of the Pakistani provinces are working on the different directions of human development progress. Khyber Pakhtunkhwa got more progress with respect to other provinces, especially during the period from 2010 to 2015. The gross ratio of primary school enrolment increased 3 percent in the Khyber Pakhtunkhwa province during period of 2010 to 2015, while other provinces failed to improve the enrolment ratio. The Khyber Pakhtunkhwa also got more progress than other provinces in the child vaccination rate, which improved from 40% in year 2005 to 53% in year 2013 and further increased to 58% in the year 2015. On the other hand, Sindh seems to be not improved in the same indicators. The child vaccination ratio was decreased from 46% in year 2005 to 45% in year 2015 and the ratio of gross primary enrolment also goes down from 82%

in year 2010 to 79% in the year 2015. Stunting situation is also verse and higher in the province of Sindh. A large number of differences outcomes are still continuing in the urban and rural Sindh. Only 35% of rural household have the facility of the toilet, but on the other hand urban household own 97% of toilet facility. The basic facilities in schools are also worst in the province of Sindh, only 23% of schools have the basic facilities. Punjab is on top with a ranking of 93%, followed by Khyber Pakhtunkhwa with 44% and then Baluchistan with the score of 26%. Punjab shows mixed results in social indicators while Baluchistan struggled like Sindh. It is suggested that in the recent years Punjab is stagnant in some social indicators, but having some special progress in stunting ratio, child vaccination and rural sanitation system. Gender inequality is reducing day by day and the literacy rate of female are also increasing with respect to time and women are gradually participating more in education and work (WB, 2016).

4.2 Variables Determining Poverty and Health Status

There are some important characteristics that can affect and determine household Poverty level and health status. Socioeconomic conditions of the household have an important connection with household Poverty. If a household has a good income, receives foreign remittances and his parents are more educated then it is possible to have fewer chances of poverty and having good health status. The explanatory variables are controlled and connected with household social, economic and demographic conditions.

The dependent variables are taken as household poverty and health status. A binary choice model has been constructed for household poverty and health status. When a household is below the poverty line then zero (0) is given to household poverty status and one (1) in the case when it

is above the poverty line. Similarly, when a household is not able to fulfill the needs of healthcare then zero (0) is given to household health status and one (1) in the case when a household can fulfill the needs of healthcare through monthly income.

Independent variables related to poverty and health are divided into three main categories, i.e. economic variables, education variables and demographic variables. These categories are further divided in different independent variables. The complete list of dependent and independent variables is given in Table 3.1.

Economic status of household is a very important determinant of household poverty and health status. Five variables are considered which are concerned with overall household income and production, household type, the total monthly income of the household, number of income earners, total agriculture production and total livestock. Household type is the most important variable of this research study which shows that whether a household receives foreign remittances or not. Foreign remittances play a key role to reduce poverty and improve the health status of the household. The foreign remittances increase the income of poor people and subsequently reduce poverty level. Household income is negatively related to poverty whereas positively related with the health status of the household. Increase in income leads to a decrease in poverty level and also boost good health status. Income earners are also negatively related to poverty while positively related to health status. As the number of income earners increases poverty decreases and health status are positively affected. Agriculture production and livestock are also negatively related to poverty and positively related to health status.

Education status of household is also an important indicator for poverty and it indicates the human capital and earning potential. If a person is more educated then he gets a respectable status in the society. Education related variables are divided into three variables, father's education, mother's education and number of children between 5 years and 18 years of school going age. Father's and mother's education are negatively related with poverty and positively related with household health status. In addition, good education and skills leads to more earning potential. On the other hand, number of children between 5 years and 18 years are positively related to poverty and negatively related to health status. If household invests more in human capital or in children's education then it leads to overburdened on household income. In addition, an increase in number of children also pushes up the dependency ratio.

Demographic variable is also one of the most important independent variables to have an impact on household poverty and health status. This variable is indicating the household size or total family members in the household. Household size has a positive relationship with poverty and has a negative impact on health status. When family size increases especially old age members and children then dependency ratio increases and poverty level also rises.

4.3 Empirical Methodology

The dependent variables are a binary response variables and we are using two nonlinear models, i.e. Logit and Probit to estimate the regression with such dependent variables. The following section explains these two non-linear models in details.

4.3.1 Non-linear Models

For binary response model linear probability model is not consistent because of the following reasons. In linear probability model the error term is not normally distributed and has a problem of heteroscedasticity. The other main problem in this model is that the probability varies linearly with every explanatory variables, which leads to marginal effects is remain constant of the explanatory variables. In addition, the result for predicted probability sometimes may not be within the range of 0 and 1. This can restrict the residuals of the model inappropriately. Moreover, the assumption of linearity is also incompatible to develop observed behavior in case of binary dependent variable. Therefore, in order to avoid these problems it is more appropriate to use a nonlinear model to handle the specific requirements of the model having binary dependent variable. Considering a on non-linear model, the probability that a household is non-poor (or the probability that outcome is one) is given by equation 4.1.

$$P(HHP_i)= 1|x_i,\beta) = 1 - F(-x_i'\beta) \qquad (4.1)$$

In equation (4.1), F is a strictly increasing and continuous function that takes any real value within the rage of zero and one, x_is includes independent variables and β denotes parameters. The probability that a household is non-poor is given by equation 4.1 therefore, the probability that a household is poor (or the probability that outcome is zero) is given by equation 4.2.

$$Pr(HHP_i = 0|x_i, \beta) = F(-x_i'\beta) \qquad (4.2)$$

Given equation (4.2) and (4.2), the parameters of this model can be computed by using the method of maximum likelihood. Equation 4.3 represents the likelihood function as follow,

$$l(\beta) = \log L(\beta) = \sum_{i=1}^{n} [\, HHP_i \log(1 - F(-x_i \beta) + (1 - HHP_i)\log F(-x_i \beta) \,] \qquad (4.3)$$

The first order condition for the maximization of this likelihood is non-linear so that obtaining parameter estimates requires an interactive solution.

There are two alternative interpretations of this specification which are of interest. First, the binary model is often motivated as an unobserved variable specification. Suppose that there is an unobserved variable HHP_i that is linearly related to *x*

$$HHP_i = x_i'\beta + u_i \qquad (4.4)$$

Where u_i is error term which follows normal distribution with zero mean and constant variance. A household is non-poor if the probability of dependent variable (HHPi) is greater than the threshold level.

$$HHP_i = 1 \text{ if } HHP_i > 0$$

$$HHPi = 0 \text{ if } HHP_i \leq 0$$

Threshold level in this case is zero but the choice of a threshold value is irrelevant so long as an intercept is included in explanatory variables. Then

$$Pr(HHP_i = 1|x_i, \beta) = Pr(HHP_i > 0)$$

$$= Pr(x_i'\beta + \mu_i > 0)$$

$$= 1 - F_\mu(-x_i\beta)$$

Where F_μ is the cumulative distribution function of μ_i. Common models include Probit (standard normal) and Logit (logistic) specifications for the function F_u.

In theory, the coding of the two numerical values of HHP is not critical since each of the binary responses represent an event. Nevertheless, by convention codes are set at zero and one and we follow this convention. This restriction yields a number of advantages. For one, coding the variable in this fashion implies that the expected value of HHP is simply the probability that

$$HHP = 1$$

$$E(HHP_i|x_i, \beta) = 1.Pr(HHP_i = 1|x_i, \beta) + 0.\ Pr(HHP_i = 0|x_i, \beta)$$

$$= Pr(HHP_i = 1|x_i, \beta)$$

The second interpretation of the binary specification is that of a regression equation for conditional mean. In regression format, this model can be written as in following equation (4.5),

$$HHP_i = 1 - F(-x_i'\beta) + \in_I \qquad (4.5)$$

Where $\in_i$ is the stochastic error term shows the deviation of the binary HHP_i from its conditional mean, with mean zero and constant variance:

$$E(\in_i|x_i, \beta) = 0$$

$$Var(\in_i| x_i, \beta) = F(-x_i'\beta)\ (1 - F(-x_i'\beta))$$

In contrast to linear models, one of the advantages of non-linear models is that the probability of occurrence changes monotonically with explanatory variables (Xi) but never falls outside the range of zero and one and the relationship between explanatory variables (Xi) and dependent variable (HHP) is nonlinear.

4.3.2 Logit Model

The inadequate outcomes of the linear probability model suggest that non-linear models may be more suitable. Cumulative Logit and Probit distribution would be S-shaped curve confined in the interval [0,1] as shown in the figure 4.1. The figure 4.1 shows that $E(HHP_i) \rightarrow 0$ when $x_i'\beta \rightarrow -\infty$ and $E(HHP_i) \rightarrow 1$ when $x_i'\beta \rightarrow \infty$. One such curve is the logistic curve that corresponds to Logit model. Logit model can be written as in equation (4.6)

$$E(HHP_i) = \frac{e^{xi/\beta}}{1 + e^{xi/\beta}} \qquad (4.6)$$

Where $E(HHP_i)= P(HHP_i= 1)$, as before. Let $E(HHP_i)= \pi_i$ for simplicity and solving for $(x_i'\beta)$, we get equation (4.7),

$$\text{Log } [\pi_i/(1-\pi_i)] = x_i'\beta \qquad (4.7)$$

It is to be noted that $\pi_i/(1-\pi_i)$ is the odd ratio of $HHP_i= 1$ against $HHP_i= 0$.

There are two unique characteristics of the Logit model. First, if we are interested in the effect of a change in explanatory variables (X_j) on the probability that dependent variable equals to one $HHP_i= 1$, we obtain that

$$\partial\pi_i/\partial X_j = \pi i(1 - \pi i)\, x_j$$

Second, if the logistic curve is viewed as a cumulative probability function of Z_i such that

$$P\left(Z_i \le \alpha + \beta X_i\right) = \frac{e^{x_i'\beta}}{1+e^{x_i'\beta}} \qquad (4.8)$$

The probability density of Z_i is therefore,

$$f\left(Z_i\right) = \frac{e^{x_i'\beta}}{1+e^{x_i'\beta}} \qquad (4.9)$$

Equation (4.9) is known as the logistic distribution function.

4.3.3 Probit Model

The cumulative normal distribution function corresponding to the probit model is another function that fulfills the requirements of a non-linear probability model. Considering dependent variable HHP_i determined as by equation (4.10),

$$HHP_i= x_i'\beta + \mu_i \qquad (4.10)$$

When $\mu_i \sim N(0,1)$ and μ_i and μ_j $(i \neq j)$ are independent. The observable binary variable HHP_i is related to HHP_i^* in the following way.

$$HHP_i = 1 \qquad \text{if } HHP_i^* > 0$$

$$HHP_i = 0 \qquad \text{if } HHP_i^* \leq 0$$

The expected value of HPPi is then,

$$E(HHP_i) = \pi_i = P(HHP_i = 1)$$

$$= P(HHP_i^* > 0) = P(-\epsilon_i < x_i'\beta)$$

$$= F(x_i'\beta)$$

Where $F(x_i'\beta)$ denotes the standardized cumulative distribution function of the normal distribution. That is,

$$F\left(x_i'\beta\right) = \int_{-\infty}^{x_i'\beta} f\left(z\right)dz$$

Where $f(z)$ represents the density function of $z \sim N(0,1)$. Since $\pi_i = F(x_i'\beta)$, we can write $F^{-1}(\pi_i) = x_i'\beta$, where $F^{-1}(\pi_i)$ is the inverse of the standard normal cumulative distribution function.

In the midrange, both the logistic distribution function and cumulative normal functions are very close to each other. However, the logistic distribution function has slightly longer tail than the probit function. In any case, logistic function can easily be estimated and interpreted as a linear regression model in log of odd ratio. Both functions are presented in Figure 4.1. In applied research studies the researchers use both of these probability models that we have discussed that is Logit, and Probit, on the same data and compare their results. The Logit and Probit models can be written as in equations (4.11) and (4.12)

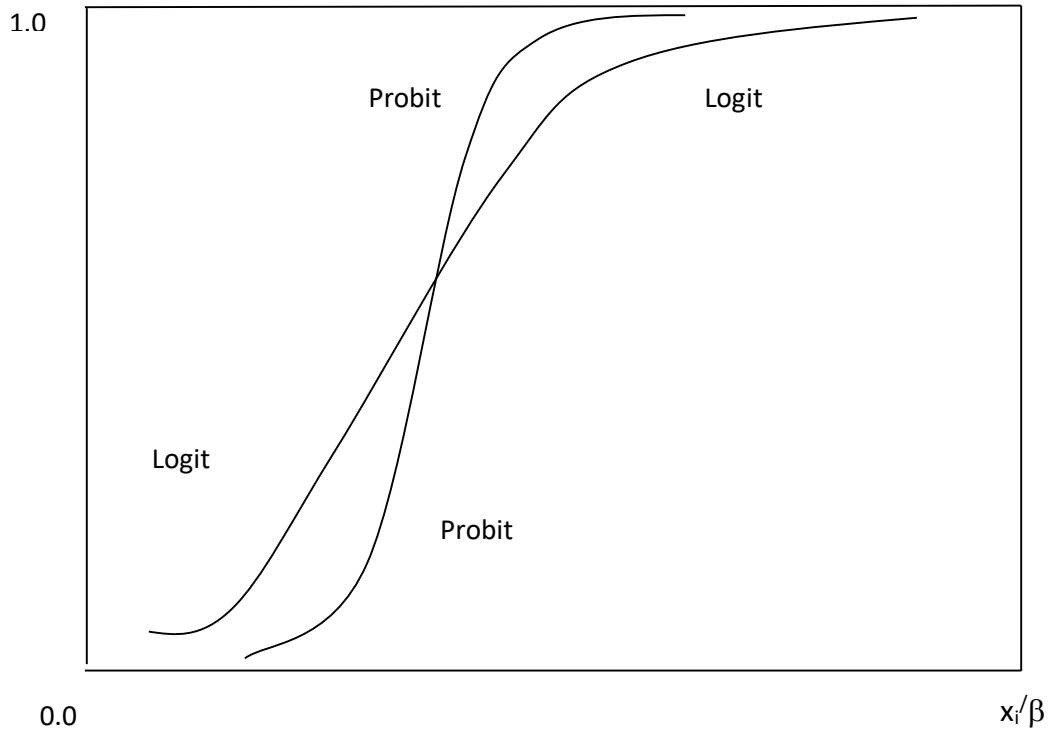
Logistic Model: $$F\left(\alpha+\beta X_i\right)=\frac{e^{x_i'\beta}}{1+e^{x_i'\beta}} \qquad (4.11)$$

Probit Model: $$F\left(\alpha+\beta X_i\right)=\int_{-\infty}^{x_i'\beta} f\left(z\right)dz \qquad (4.12)$$

Where function F in both models shows standardized cumulative normal distribution function. We cannot interpret the estimated coefficients of both models in the same way because the coefficients in both models have different interpretation. For comparison, we estimate the probability derivatives.

Figure 4.1

Cumulative Probit and Logistic Distribution



CHAPTER 5

DESCRIPTIVE ANALYSIS OF DATA

Descriptive statistics are the basic measures used to describe survey data. They present the summary descriptions of single variable analysis and the associated survey sample. Examples of descriptive statistics for survey data include frequency and percentage response distributions, measures of central tendency (which includes mean, median and mode etc.), and dispersion measures such as the range and standard deviation which describes how close the values or responses are to central tendencies.

The primary research survey data are organized with the help of descriptive measures related to the research topic. The actual response of individual household and groups of households is combined through the descriptive measure approach. One of the advantages of the descriptive analysis is that it summarizes the data in a simple way. Household surveys utilize complex sample designs to control survey costs. In addition, complete sampling frames that list all individuals or all households are usually not available. Even when population registries are available, the cost of implementing a household interview survey based on a simple random sampling design would be probably high. The descriptive research study is one of the innovative instrument for a modern research. It creates an opportunity for a researcher to focus on both quantitative and qualitative data types. This type of research can also help to fulfill the basic needs and objectives of research study which are neither easy nor possible in econometric analysis. The obtained information in

detail and interlinkages of different variables are presented in the descriptive form of research with the help of tables and discussions.

The purpose of this chapter is to analyze and discuss the detailed information regarding survey data of household. Additionally the descriptive measurements are provided to describe the output and results of the research study with the help of tables and discussions which will be helpful for readers to understand easily. The objectives of this research work are also traced in descriptive analysis. To investigate the impact of foreign remittances the detail comparison has been developed for both types of households that are remittances receiving household and non-receiving. These comparisons clarify the differences and gaps among these two types of households. It can also provide a summarized and moderate form of results. The research output is represented through tables, graphs, and charts in order to make the comparison prominent.

Descriptive analysis is based on survey data, which is collected from 403 households through questionnair. The questionnaire is designed to fulfill the information and measurement needs of dependent and independent variables which is important for our research study. The questionnaire contains 100 questions and divided into seven sections based on the following measures, i.e. basic information of household, education status, migration details, wealth status, food consumption details, health status of the household and information about domestic earnings details or home country earning details. This chapter is also divided into seven sections according to the questionnaire.

5.1 General Background of Household

This section gives general background about households such as family type, total monthly income and total monthly expenditures. In addition, poverty analysis is also developed for both remittances receiving and non-receiving households. However, before discussing the household background, in order to know that from which Tehsil households belong, this section presents the tehsil wise share of households in remittance receiving household, non-receiving household and total samples.

Table 5.1. 1

Tehsil wise Sample Size Counts and Percentage

Tehsil	Remittances receiving household		Remittances non-receiving household		Total	
	Number of households	Percentage share	Number of households	Percentage share	Number of households	Percentage share
Adanzai	25	12.3%	33	16.5%	58	14.4%
Khaal	19	9.4%	34	17.0%	53	13.2%
Munda	32	15.8%	19	9.5%	51	12.7%
Timargara	27	13.3%	35	17.5%	62	15.4%
Balambat	41	20.2%	35	17.5%	76	18.9%
LalQila	30	14.8%	20	10.0%	50	12.4%
Samarbagh	29	14.3%	24	12.0%	53	13.2%
Total	203	100.0%	200	100.0%	403	100.0%

Table 5.1.1 shows the total number of households belongs to different Tehsil as well as the percentage share of each Tehsil in remittances receiving and non-receiving household's samples. The contribution of Tehsil Lal Qila is the lowest in total sample size, i.e. 12%. The share of Balambat in the total sample size is the highest which is 19%. In addition, the share of Balambat

in remittances receiving and non-receiving household samples are also the highest which is 20.2 and 17.5 % respectively. The contribution of Tehsil Adanzai in the total sample size is 14%. Whereas, its contribution in remittances receiving and non-receiving household samples are 12% and 16.5% respectively. Similarly, other tehsils also have a presence in total sample size within the range of 12 to 19%.

There are three family types living in Lower Dir, i.e. nuclear, joint and extended. The nuclear family is a family where only parents and children are living together. The joint family consists of three generations, i.e. grandparents, parents and children. However, in extended family grandparents, parents, uncles, cousins, aunts and children are living together in the same house. A question regarding the family type is included in the questionnaire and the data are collected based on these three types.

Table 5.1. 2
Family Type and its Percentage in Total Sample Size

Family Type	Number of families	Share in total sample size
Nuclear	49	12.2%
Joint	184	45.7%
Extended	170	42.2%
Total	403	100.0%

Table 5.1.2 shows the total number of families belong to different types and the percentage of each family type in overall sample size. The total number of families is 403. The table shows that forty nine (49) out of four hundred three households live as a nuclear family, which has a

miner share of 12.2% only in the total household survey. On the other hand, one hundred eighty four (184) households live as a joint family system which has a large share of 45% in the total sample size. The extended family system also has a significant share of 42.2% in total sample size which is slightly lower than joint family. In conclusion, we can say that the joint family system has the highest presence, i.e. 46%, which is followed by the extended family system with the presence of 42% and then the nuclear family with the lowest share of 12%. This show that the people of this area live together because of rural lifestyle, religious beliefs and some social, cultural and traditional customs.

Table 5.1. 3

Family Type Percentage within Remittances Receiving and Non-receiving Households

Family Type	Remittances receiving household		Non-receiving household	
	Number of families	Share in receiving households	Number of families	Share in non-receiving households
Nuclear	21	10.3%	28	14.0%
Joint	75	36.9%	109	54.5%
Extended	107	52.7%	63	31.5%
Total	203	100.0%	200	100.0%

Table 5.1.3 shows the presence of each family type in remittances receiving household and non-receiving household samples. The share of the nuclear family in remittance receiving household sample is 10.3%, whereas its presence in non-receiving is 14.0%. On the other hand, 36.9% share of remittances receiving households live in joint family system, while 54.5% share of non-receiving households also live in joint family system. This table shows that significant remittances receiving households live together as extended family. Conversely, a considerable

amount of non-receiving remittances household lives as a joint family system. This show that non-receiving households prefer to live in a nuclear family compared to remittances receiving households.

Table 5.1.4 Dependency Ratio for Remittances Receiving and Non-receiving Households

Household size, numbers of income earners and dependency ration	Remittances receiving household	Remittances non-receiving household
Average household size	12	9
Average numbers of income earners	2.53	1.61
Percentage average dependency ratio	79%	82%

Table 5.1.4 represents the average dependency ratio for both types of households. First row of the table describes the average household size that how many family members exist in one household. Second row represents the average numbers of income earning persons in a family. The third row shows the percentage average dependency ratio that how many family members out of hundred are dependent. This table clarifies that remittances receiving household have more income earners with respect to non-receiving household. Remittances non-receiving household shows slightly higher dependency ratio of average 82% with respect to average 79% of the remittances receiving household. Some of the researchers argued that foreign remittances increase the dependency ratio. But in our study area remittances receiving household have a lesser dependency ratio with respect to non-receiving household.

Table 5.1.5 shows average monthly income and expenditures of remittances receiving and non-receiving households. Remittances receiving households have 108,145 PKR average total

monthly income and 45,312 PKR average total monthly expenditures. On the other hand, non-receiving households have 33,666 PKR average total monthly income and 26,373 PKR average total monthly expenditures. Total mean income for both types of household is 71,276 PKR and average expenditures are 35,913 PKR. This table shows that remittances receiving households have three times greater income from non-receiving households. It reveals that remittances receiving households have more financial strength from non-receiving households.

Table 5.1. 5

Total Monthly Income and Expenditure of Remittances Receiving and Non-receiving Household

Total monthly income or expenditures in PKR	Remittances receiving household	Non-receiving household	Total
	Mean	Mean	Mean
Total monthly income in PKR	108145	33666	71276
Total monthly expenditures in PKR	45312	26373	35913

Table 5.1.6 shows details about poverty that how many of the remittances receiving households and non-receiving are below and above the poverty line. Poverty analysis is developed on the basis of moderate poverty, i.e. if an individual has income below two US$ per day (< 2US$) then he is considered a poor household. Conversely, a person is considered non-poor if he has a daily income above two US$ (>2US$) (WB, 2013). Results obtained show that 76% of the remittances receiving household are above the poverty line. On the contrary, only 8% of non-receiving households are above the poverty line. Similarly, 24% of the households have been found to be below the poverty line even though they receive remittances. The overall percentage of

households belong to above the poverty line for both types of households is 58%. The analysis of overall percentage is given on the base of the total sample size. It is concluded that remittances have a negative relationship with household poverty level, if a household receives remittances then that household has less probability to be below the poverty line.

Table 5.1. 6

Overall analysis about Household Type and its Poverty level

Poverty line	Remittances receiving household		Non-receiving household		Total	
	Numbers	Percentage	Numbers	Percentage	Numbers	Percentage
Above the poverty line	154	76 %	16	8 %	170	42 %
Below the poverty line	49	24 %	184	92 %	233	58 %
Total	203	100 %	200	100%	403	100 %

5.2 Educational Status of Household

This section discusses the detail information about the education of households. The ratio of children enrollment in school and monthly expenditures on education for both remittances receiving and non-receiving household are presented. In addition, monthly expenditure on education with respect to income of the household is also analyzed. Furthermore, the detailed information about father and mother's education are also described.

Table 5.2.1 shows the education related information for remittances receiving and non-receiving households. The first row of the table describes the average number of male and female children per households whose age are between 5 and 18 years. The second row depicts average

enrollment of children in school while the third row presents the percentage enrollment in school with respect to male and female children.

Table 5.2. 1
Average Total Number of Children between 5 and 18 years and their Enrolment in School with Monthly Expenditures on Education

Total number of children, enrollment in school, percentage enrolment and expenditures on education	Remittances receiving household		Non-receiving households	
	Male children between 5 and 18 years	Female children between 5 and 18 years	Male children between 5 and 18 years	Female children between 5 and 18 years
Average number of children per household	2.24	1.82	1.86	1.31
Average enrollment in school	2.13	1.55	1.64	1.1
Percentage enrollment in school	95 %	85 %	88 %	84 %
Average monthly expenditures on education in PKR	7,905		5,310	

The average number of male and female children of remittances recipient households is 2.24 and 1.82 respectively, whose age is between 5 and 18 years, as shown in Table 5.2.1. These figures are lower in non-receiving households, on average, there are 1.86 male and 1.31 female children. Average enrollment of children in recipient households is 2.13 in the total of 2.24 for male while for female 1.55 in the total of 1.82. In comparison, average enrollment for non-recipient households is 1.64 out of 1.86 for male and 1.1 out of 1.31 for female, which is considerably lower than remittances receiving households. Percentage enrollment makes the result more clear where 95% of male and 85% of female children of remittances receiving households are enrolled in school. Furthermore, non-receiving households contributing 88% enrollment for male children and 84% enrolment for female children. Remittances recipient households exceed 7% over non-

recipient households regarding the enrollment of male children and 4% domination in female enrollment. This reveals that foreign remittances have a positive relationship with education and children enrollment in school due to better income position.

The Table 5.2.1 also shows the average total monthly expenses on the education for both types of household. Remittances recipient households spend monthly 7,905 PKR on education. While, remittance non-recipient households spend monthly 5,310 PKR on education. This reveals that foreign remittances have a positive correlation with education expenditures. It is concluded that incoming remittances leads to higher income and more expenditures on education.

Table 5.2. 2
Total Expenditures on Education with respect to Income of the Household

Total monthly expenditures with respect to income	Total monthly income in PKR				
	Less than 20,000	20,001 to 30,000	30,001 to 60,000	60,001 to 100,000	More than 100,000
Average monthly expenditures on education in PKR	1,721	4,606	6,970	6,620	10,344

Table 5.2.2 shows average monthly expenditure on education with respect to income of households. Households are divided into five categories based on their income, i.e. households with monthly income 1) 1 to 20,000, 2) 10,000 to 30,000, 3) 30,000 to 60,000, 4) 60,000 to 100,000 and 5) income more than 100,000. The first category of households which have income less than 20,000 PKR spend 1,721 PKR on average on education. The second category where the monthly income households are between 20,001 to 30,000 PKR the education expenditures rises to 4,606 PKR. Educational expenditures in third and fourth categories of households are more or less

similar. In the last category where the income of the household is more than 100.000 PKR the educational expenditure goes up to 10,344 PKR. This table shows a positive correlation between income and educational expenditures. Although there is an insignificant decrease in educational expenditures in the fourth category compare to the third category of households, however, the overall relationship between income and education expenditure is found positive.

Table 5.2. 3

Distribution of Father's education with respect to Households

Father's education levels	Number of fathers	Percentage of fathers
No formal education	211	53%
Primary school	87	22%
SSC	27	7%
HSSC	33	8%
Graduate	13	3%
Master and higher	28	7%
Total	403	100.0

Table 5.2.3 shows details about educational qualification of household's head or father. The Table 5.2.3 comprises of all educational levels, i.e. no formal education, primary school, SSC (secondary school certificate), HSSC (higher secondary school certificate), graduate and master / higher education. The highest ratio of fathers or head of households has no formal education, i.e. 52 % in total sample size of four hundred and three (403) family. On the other hand, 22% of fathers have a primary school education, 7% have SSC, 8 % have HSSC, 3% have graduation degree and 7% have master degree holder. This Table 5.2.3 shows that 52% of family heads have no formal education which means that a lot of family heads or fathers are uneducated. Only 7% of family heads are master degree holder and three percent 3% have had a graduation degree. The low

educational status of household heads also indicates the weak economy and lack of education facilities in the country.

Table 5.2. 4

Distribution of Mother's education with respect to Households

Mother's education levels	Number of mothers	Percentage of mothers
No formal education	342	84.5%
Primary school	32	8%
SSC	8	2%
HSSC	6	1.5%
Graduate	7	2%
Master or higher	8	2%
Total	403	100.0

Table 5.2.4 describes the details about mother's education in the households. For mothers, the same education levels i.e. no formal education, primary school, SSC, HSSC, graduation, and master/higher education are used. According to results presented, 85% of mothers have no formal education, 8% have primary education, 2% have SSC, 1.5% have HSSC, 2% have a graduation degree and 2% have master degree. Based on Table 5.2.3 and 6.2.4 we can say that mothers are less educated than fathers in the households. Only 1.2% of mothers in the households are master degree holder, whereas 85% mothers have no formal education. This poor education status of mothers also replicates the weak economic and lack of education facilities in the country.

5.3 Information about Migration

This section presents detail information about migration from Dir Lower. Information about migrants such as age, educational status, nature of work, duration of working abroad and migrated country are elaborated. In addition, the channel used for remittances and proportion of monthly expenditures which finances through remittances are also discussed in this section.

The research study analyzed that 92% of migrants are migrated to Saudi Arabia and 6% to Arab Emirate. Moreover, only 4% of migrants are either graduate or have a master degree and most of the migrants are less educated that is 26% which having no formal education or they never go to school. A large number of migrants are either labor or working on daily wages, which is the hardest work and considered unskillful. Due to this weak educational background of migrants demonstrate the weak economic and social status too. Working as labor also indicate that mostly migrants belong to lower and middle income household. Therefore, this research study concludes at least in the context of Dir Lower that most of the migrants have low level of education and technical skills. It means that most of the migrants belong to middle and lower middle class families. So, it is quite possible that the social background of household play a role in some cases but not in all. According to literature it is also argued that remittances of rural regions mostly go to poor household.

Table 5.3.1 list down countries where the population sample migrated. There are six countries from which remittances are received, i.e. Saudi Arabia, United Arab Emirates, Qatar, Oman, UK and France. Three hundred fifteen people out of three hundred forty three (315/343) household members migrated to Saudi Arabia. Saudi Arab received 92% of migration of the total sample size. On the other hand, 5.5% migrants chose to migrate to United Arab Emirate, 1% to

Qatar, 1% to Oman, 0.58% to the United Kingdom and only 0.29% to France. The highest outflow of migration is found to Saudi Arabia which is followed by the United Arab Emirates. Now, the question is here is that why people prefer Saudi Arabia and Arab Emirate for migration. In the 1970s, when migration started, some people from Dir Lower (research area) migrated to Saudi Arab, and later they help their family members, relatives, friends and villager in migration. They even contribute to share initial expenditures with newly migrated persons and help him to find jobs. This process provides a base for the increase in migration and a considerable portion of the younger population also start to migrate for bright future.

Table 5.3. 1

Migrated Country and its Percentage

Migrated country	Count	Percentage
Saudi Arabia	315	92%
Arab Emirate	19	5.5%
Qatar	3	1%
Oman	3	1%
UK	2	0.58%
France	1	0.29%
Total	343	100.0

Table 5.3.2 summarizes the educational qualification of the migrants. Ninety out of three hundred forty three (90/343) migrants have no formal education which is equal to 26% of total migrants. Forty percent (40%) of migrants have a primary school education, 16% of migrants have secondary school education, 13% have higher secondary school education, 2% are graduate, 2% are master degree holder and only 1% have a religious or (Madrasa) education. Education helps

the migrant to get a good job. However, Table 5.3.2 shows that only 4% of migrants are either graduate or have a master degree and most of the migrants are less educated. Some researchers argued that foreign migration create a problem of brain draining, which is actually the migration of highly educated and skilled labor force from home country. However, this research study concludes at least in the context of Dir Lower that most of the migrants have low level of education.

Table 5.3. 2

Education of Migrant's

Migrant's education	Counts	Percentage
No formal education	90	26%
Primary school	138	40%
SSC	54	16%
HSSC	43	13%
Graduate	6	2%
Master or equivalent	8	2%
Religious education (Madrasa)	4	1%
Total	343	100%

Table 5.3.3 shows information about migrant employment and the nature of work. Nature of work of migrants is divided into eight different categories, which are government service, private service, driver, business, plumber, electrician, labor/daily wages and others. The highest number of migrants are either labor or on daily wages (have a share of 36% in total sample size), which is followed by private services which have a share of 24% and then by drivers with a share of 21%. There is only one migrant who has a government job, eighty-three 83 migrants are providing some private services, 71 are drivers, 25 have their own business, 9 are plumber, 8 are electrician, 123 are labor/daily wages worker and 23 belong to other. Table 5.3.3 concludes that a

large number of migrants are either labor or working on daily wages, which is the hardest work and considered unskillful. These figures convey that most of the migrants have no technical education, training and skills.

Table 5.3. 3

Migrant's Nature of Work

Migrant's nature of work	Counts	Percentage
Government service	1	0%
Private service	83	24%
Driver	71	21%
Business	25	7%
Plumber	9	3%
Electrician	8	2%
Labor/Daily wages	123	36%
Other	23	7%
Total	343	100%

Table 5.3.4 shows the how long the migrants are working abroad. The duration of working abroad has been divided into seven different categories, which are 2-5 years, 6-10 years, 11-15 years, 16- 20 years, 21-25 years, 26-30 years and more than 30. The data were collected during August 2013 and December 2013. Most of the migrants are recently migrated because 47 % of migrants have duration of 2 to 5 years abroad (i.e. abroad since August 2008 to 2011), which is followed by the share of migrants (24%) who spent 6-10 years abroad (i.e. abroad since 2003 to 2008). Similarly, migrants who have duration of 11-15 years abroad have a presence of 11%, 16-20 years have 5%, 21-25 years have 4%, 26-30 years have 4% and more than 30 years have 5% share. This clearly shows that a substantial ratio of younger generation are migrated to Saudi

Arabia and the Arab Emirates. In last eight years, i.e. from 2003 to 2011, 71% of the total sample size migrated which is a huge share. The reason behind the migration of young generation is due to the bad economic situation of the home country and to find good job opportunities abroad.

Table 5.3. 4

Duration of Working Abroad

Duration of stay in abroad	Counts	Percentage
2-5 years	160	47%
6-10 years	82	24%
11-15 years	39	11%
16- 20 years	18	5%
21-25years	14	4%
26-30years	14	4%
31 and above	16	5%
Total	343	100%

Table 5.3.5 describes details about the age of migrants which an important variable. The migrant age is divided into five categories, i.e. 1) 20 to 25 years, 2) 26 to 30 years, 3) 31 to 40 years, 4) 41 to 55 years and 5) above 55 years. Most of the migrants are young because 23% of migrants have age between 20 to 25 years and 23% of migrant are 26 to 30 years old. Similarly, 26% of migrant belong to 31 to 40 years category, 24% belong to 41 to 55 years and 4% have age above 55. In other words, it means that 46% of migrants belong to young age, i.e. between 20 to 30 years. This high ratio of youngsters has the ability to contribute long-term incoming remittances for their families as well as for the country economy. A greater presence shows by youngsters due to bad economic situation in the home country, good job opportunities and returns in the migrated country.

Table 5.3. 5

Migrant's Age

Migrant's age	Counts	Percentage
20 to 25 years	77	23%
26 to 30 years	76	23%
31 to 40 years	87	26%
41 to 55 years	82	24%
56 and above	15	4%
Total	337	100%

Table 5.3.6 shows the proportion of monthly expenditures of household financed through foreign remittances. In other words, this table summarizes that how much monthly expenditures of remittances receiving household are covered by foreign remittances. The proportion of monthly expenditure financed through remittances is divided into four categories based on percentage, i.e. 1) less than 25%, 2) 26 to 50%, 3) 51 to 75% and 4) above 75%. Only 5% households belong to the first category, i.e. less than 25% of monthly expenditures are covered through foreign remittances. Similarly, the share of remittance in monthly expenditure was 25 to 50% for 16% of households. The 23% of households are found to cover 51 to 75% of monthly expenditures from remittances. However, 56 % households are found to finance substantially their monthly expenditures from remittances, i.e. above 76%. This table shows that remittances receiving households are significantly dependent on foreign remittances and only a small share of monthly expenditures is financed through domestic sources.

Table 5.3. 6

Proportion of Monthly Expenditures Financed through Remittances

Proportion of monthly expenditure which financed through remittances	Count	Percentage
Less than 25%	10	5%
26% to 50%	32	16%
51% to 75%	47	23%
Above 76%	114	56%
Total	203	100%

Table 5.3.7 shows information about channel used for foreign remittances. The data indicate that 27% migrants use the bank for sending foreign remittances to the homeland, 5% migrants use money transfer agency, 28% migrants use Hundi, 0.5% migrants use the company and 40% migrants send foreign remittances through relatives and friends. Another interpretation of this data are that 68% of migrants use illegal channel (Hundi & relative/friends) for sending foreign remittances. The Hundi and sending remittances through relative and friends are illegal channels but migrants still use these channels because of low cost and easy to access. These illegal methods create many problems for government and planning agencies. The remittances send through unfair means are usually not included in total remittances receiving collection and this is also a threat to general price level or inflation. Therefore, in order to stop the migrants from sending remittances through illegal channels the government and other private money transfer agencies need to provide easy and better facility with low cost for sending money. In concluding remarks, we can say that Table 5.3.7 shows the most important information about migrants because it tells

the story of illegal channels of remittances. Due to illegal channels, the government agencies are not able to develop a proper plan for incoming remittances with respect to its unexpected volume.

Table 5.3. 7

Channel Used for Remittances

Channel used for remittances	Count	Percentage
Bank	58	27 %
Money transfer agency	10	5 %
Hundi	61	28 %
Company	1	.5 %
Relative/ Friends	87	40 %

5.4 Wealth Status of Household

This section presents the details about wealth groups. The presence of remittances receiving and non-receiving households in highest wealth status is analyzed. Comparison of wealth group with total monthly income, total monthly expenditures, father's education and mother's education are also given. House type and room availability ratio are also given for both type of households remittances receiving households and non-receiving households. PCA also called Factor Analysis is used to determine household's wealth status. This is a well-known method, all of the well-reputed organizations of research surveys Demographic Health Survey (DHS), IMF and WB used this technique for household wealth status all over the world. The wealth status of remittance receiving and non-receiving households shown in Table 5.4.1 are also determined based on this technique. The wealth score of a household is divided into five categories, i.e. lowest, lower, medium higher and highest.

Table 5.4. 1

Wealth Status of Remittances Receiving and Non-receiving Households

Wealth Status	Remittances receiving household		Non-receiving households		Total	
	Numbers	Percentage	Numbers	Percentage	Numbers	Percentage
1. Lowest (Lowest to -0.933)	20	10%	60	30%	80	20%
2. Lower (-0.933 to -0.044)	34	17%	46	23%	80	20%
3. Medium (0.044 to 0.535)	47	23%	28	14%	75	19%
4. Higher (0.535 to 0.861)	36	18%	34	17%	70	17%
5. Highest (0.861 to Highest)	66	32%	32	16%	98	24%
Total	203	100%	200	100%	403	100%

The wealth score is divided into five categories, a score from lowest value to -0.933, -0.933 to -0.044, 0.044 to 0.535, 0.535 to 0.861 and 0.861 to highest. Table 5.4.1 shows the presence of remittances receiving and non-receiving households in the lowest and the highest wealth status group. Group 1 indicates the lowest health status where the presence of remittances receiving households is 10%, whereas the presence of non-receiving households is 30%. In the highest wealth status group remittances receiving households has a presence of 32% and non-receiving households have a presence of 16%. In the medium wealth, status group, remittances receiving households have a greater ratio than the first two groups, however, non-receiving household has a lesser ratio of presence than the first two groups. This means that the percentage presence of remittances non-receiving household in the lowest wealth status groups is greater. On the contrary, the presence ratio of remittances receiving household is greater in the highest wealth status groups. Based on this, we conclude that remittances receiving household have a better wealth status than non-remittances received household. In other words, remittances non-receiving household have weak wealth status with respect to remittances receiving household.

Table 5.4. 2

Wealth Status with Total Average Monthly Income and Expenditures

Wealth Status	Total monthly income in PKR	Total monthly expenditures in PKR
	Mean	Mean
1. (Lowest)	33853	19775
2. (Lower)	50768	30125
3. (Medium)	73548	31707
4. (Higher)	81291	37529
5. (Highest)	137820	56143

Table 5.4.2 shows comparison of total monthly income, total monthly expenditures and wealth status group. Average total monthly income of 33853 PKR household lies in the lowest wealth group, 50767 PKR income of household lies in lower wealth group, 73548 PKR income of household lies in medium wealth status group, 81291 PKR income of household lies in second higher wealth status group and 137820 PKR income of household lies in highest wealth status group. Table 5.4.2 also shows that income and wealth have a positive relationship with each other. Normally wealth is a stock variable and income is a continuous or flow variable which may change from time to time. Sometimes a person has a good income status but he has less wealth. However, in long run income contributes to wealth and wealth also contributes to income. Table 5.4.2 shows that total monthly income, wealth status and total monthly expenditures show a positive relationship. This means, that if the income of the household increases the household wealth status also increases and subsequently the household expenditures rises too.

Table 5.4. 3

Father's Education, Comparison with Wealth Status

Father's education	Wealth Status				
	1	2	3	4	5
No formal education	71.3%	61.7%	52.7%	32.9%	29.9%
Primary	11.3%	13.6%	16.2%	10.0%	7.2%
Secondary	11.3%	13.6%	14.9%	22.9%	34.0%
Above	6.3%	11.1%	14.9%	32.9%	26.8%
Total	100%	100%	100%	100%	100%

Table 5.4.3 shows father's education of the family and its comparison with wealth status of the household. Father's education is divided into four categories for better understanding, i.e. no formal education, primary, secondary and above secondary. Fathers with no formal education have a 71% presence in lowest wealth status group and only 30% presence in the highest wealth status group. Similarly, fathers with primary education have a presence of 11% in the lowest wealth status group and 7% presence in the highest wealth status group. Secondary education has 11 and 14% presence in lowest and lower wealth status groups and 23, 34% presence in higher and highest groups. Above secondary education has a presence of only 6 and 11% in lowest and lower wealth status groups and 33 and 27% presence in higher and highest wealth status groups. In conclusion, we can say, that Table 5.4.3. shows a positive relationship between father's education and wealth status of the household. We also found that fathers that are more educated have more presence in the highest wealth status group and fathers that are less educated have less presence in the highest wealth status group.

Table 5.4. 4

Mother's Education, Comparison with Wealth Group

Mother's education	Wealth Status				
	1	2	3	4	5
No formal education	95.0%	91.3%	89.2%	74.3%	77.3%
Primary	1.3%	7.5%	5.4%	10.0%	7.2%
Secondary	2.5%	1.3%	1.4%	10.0%	8.2%
Above	1.3%	0.0%	4.1%	5.7%	7.2%
Total	100%	100%	100%	100%	100%

Table 5.4.4 shows a comparison between mother's education of the family and wealth status of the household. Mothers with no formal education have a presence of 95% in the lowest wealth status group and show 77% presence in the highest wealth status group. Primary education has 1% share in lowest wealth status group and 7% presence in the highest wealth status group. Secondary education has a presence of 3% in lowest wealth status group and 8% presence in the highest wealth status group. Mothers with above secondary education have a presence of 1% in lowest wealth status group and 7% presence in the highest wealth status group. Table 5.4.4 also shows a positive relationship between mother's education and wealth status of household. Mothers with no formal education have substantial presence in all wealth status groups.

Table 5.4.5 shows details about types of houses which are used by both remittances receiving and non-receiving household. There are four types of houses, i.e. 1) lanter/cement mad, 2) mixed from cement and mud, 3) house made with iron sheets roof and 4) house made by mud. In addition, Table 5.4.5 also shows the average of number of rooms in house for both remittances receiving and non-receiving household. Remittances receiving household have a greater presence

which is almost 61% in cement made house and non-receiving household shows a greater presence of almost 43% in house made of mud.

Table 5.4. 5

House Type and its Percentage

House Type	Remittances receiving household	Remittances non-receiving households
Lanter /cement made	61.1%	32.1%
Mixed from cement and mud	21.2%	22.4%
A house made with iron sheet roof	2.0%	2.0%
House made by mud	15.7%	43.4%
Number of rooms in the house	5.71	4.10

Non-receiving households have 32% cement made houses whereas the presence of remittances receiving households is 16% in house made of mud. Average number of rooms in the houses of remittances receiving households is almost 6. However, the houses of non-receiving households have 4 rooms on average. Based on Table 5.4.5 we conclude that remittances receiving households have better housing facility because their houses are made of lanter/cement made, whereas non-receiving households have poor housing facility which is mostly made of mud.

5.5 Food Consumption Status

This Section describes household food consumption score and household food consumption group which are calculated for both remittances receiving and non-receiving

households. The comparison has been developed for both types of household to determine that who is more secure in food consumption.

Food items are divided into eight standard groups: a) cereals: wheat, bread, rice, maize. b) dhal: beans, lentils, peas, nuts, c) vegetable d) fruits e) meat, poultry, fish, eggs f) milk, cheese, yogurt, g) sugar, honey, h) oil, ghee, butter. Data are collected for one week, which is based on the consumption of food which is determined on the bases of food expenditures. When a household consumes a reasonable amount on food and has a balanced diet, that household is considered as a food secured household. Many researchers used food consumption as an indicator to analyze household food security (UN, FAO, 2013). Data for all these food items are collected through household last week food expenditures.

Table 5.5. 1
Average Total Food Consumption Score per Week of Remittances Receiving and Non-receiving Households

Food consumption groups	Remittances receiving households	Remittances non-receiving households	Total food consumption score
	Mean	Mean	Mean
Cereals: wheat, bread, Rice, Maize	7.0	7.0	7.0
Dhal: beans, lentils, peas, nuts	3.0	2.7	2.85
Vegetables	5.1	4.6	4.85
Fruits	3.6	2.7	3.15
Meat, poultry, fish, Eggs	3.0	2.2	2.6
Milk, cheese, yogurt	5.9	5.3	5.6
Sugar, honey	7.0	7.0	7.0
Oil, ghee, butter	7.0	7.0	7.0
Total Food Consumption Score	74.2	66.4	70.35

Table 5.5.1 expresses average total food consumption score and average food consumption separately of main eight food items. Household food consumption and access comes through food expenditures. When household consumes a reasonable amount of food and have a balance diet, it will be considered as a food secured household. Both types of household use three food groups (Cereals, Sugar, Oil) in same score, which is used almost seven of seven days. Other five food consumption group's remittances receiving households have excess use than non-receiving households. All of these measurements are based on the international standard weightage of all food groups. Total food consumption score of the whole week of remittances receiving households is 74.2 and of not receiving is 66.4. This Table 5.5.1 suggests that remittances receiving households are more secure than not receiving household in food consumption. Remittances receiving household use two main food items Fruits and Meat, poultry, fish, Eggs more than non-receiving household, which is the most important and influential food items with respect to calories.

Food consumption score has been used to divide the households into three groups, i.e. poor food consumption, border line food consumption and acceptable food consumption (UN, FAO, 2013). The household which has food consumption score below 28 is considered poor food consumption households. Conversely, the household which has food consumption score above 42 is considered as acceptable food consumption households. On the other hand, the household which has food consumption score between 28 and 42 belongs to borderline consumption group. The highest possible food consumption score is 112 which can be obtained when a household consumed all categories of fool times every day.

Table 5.5. 2
Food Consumption Groups for Remittances Receiving Household and Non-receiving Household

Food consumption groups	Remittances receiving households	Remittances non-receiving households	Total
Poor	1	2	3
Borderline	6	18	24
Acceptable	196	180	376
Total	203	200	403

Table 5.5.2 shows the food consumption groups of both remittance receiving and non-receiving households. Only three households or 0.7 % of the total sample size belong to poor food consumption group. Twenty-four households or 6% of the sample size are in borderline food consumption, whereas 376 which constituted 93 percent of the sample size are in acceptable food consumption group. This table also shows that only one remittance receiving household and two non-receiving households belong to poor food consumption group. In borderline food consumption group remittances receiving households have a presence of 6 and non-receiving households have a presence of 19. On the other hand, in the acceptable food consumption group remittances receiving household have a presence of 196 and non-receiving household have a presence of 180. On the bases of this, we can conclude that remittances receiving household are more food secure than non-receiving households due to the lesser presence in the poor group and a greater presence in the secure group.

Table 5.5.3 shows food consumption with respect to wealth group. Household wealth score is divided into five categories, i.e. lowest, lower, medium higher and highest. The food consumption score is also divided into three categories, i.e. poor, borderline and acceptable. Poor

food consumption group has 3% presence in first lowest wealth group, borderline has 20% and acceptable has 77% share. In highest two wealth groups (i.e. 4, 5) the presence of poor food consumption is 0%, borderline has a presence of 1% and acceptable has a share of 99%. Wealth score and food consumption score shows a positive correlation. Poor household in wealth score is also in the poor food consumption group. Conversely, rich wealth status group household belongs to the rich food consumption group. This table shows that poor households in the food consumption group also have a poor performance in wealth group and acceptable food consumption group shows 99% performance in highest wealth status groups. It means that if a household has a low wealth status then its food consumption will be also at low level. If households have a high level of wealth status then their food consumption will also high.

Table 5.5.3

Food Consumption with respect to Wealth Group

Food Consumption Group	Wealth Group				
	1. Lowest	2. Lower	3. Medium	4. Higher	5. Highest
	Percent	Percent	Percent	Percent	Percent
Poor	3%	0%	0%	0%	0%
Borderline	20%	6%	4%	3%	1%
Acceptable	77%	94%	96%	97%	99%
Total	100%	100%	100%	100%	100%

5.6 Health Status of Household

This Section describes the health status of both remittance receiving and non-receiving households. Three important aspects, which represents household health status and show the gaps between both types of households are presented in this section. These aspects include health

competence, household monthly income fulfillment of basic health care and total monthly expenditure on health care. Information about each aspect is also presented in the separate Table.

There are four main dimensions of access to healthcare, i.e. accessibility, availability, affordability and acceptability. Accessibility depends on location of medical services, transport availability and the transportation cost. Availability is related to timing problems, lack of information about healthcare, lack of motivation, absence of medical or qualified staff and the lack of facility. Affordability depends on higher costs and prices of health services, dual system (public & private) and ability to pay. Acceptability is related to acceptance and the expectation process of households. Due to an increase in food prices the access of healthcare is negatively affected, 43% of household's income is spent for the purpose of food consumption according to Household and Income Expenditure Survey HIES (2011-12).

Table 5.6. 1

Health Facility Avail in the case of Illness

Health facility avail in the case of Illness	Remittances receiving households	Remittances non-receiving households	Total
Private appointment	70.9%	33.0%	53%
Government hospital	21.7%	44.5%	33%
Dispenser/ Local doctor	5.4%	20.9%	13%
Homeopathic/Hakim	.5%	0.0%	0.3%
Self-medication	1.5%	1.6%	1.5%
Total	100%	100%	100%

Table 5.6.1 shows the health facilities availed during illness by both remittance receiving and non-receiving households. Health facilities are divided into five different categories, i.e.

private appointment or hospital, government hospital, dispenser/local doctor, homeopathic/hakim and self-medication. A substantial number of remittances receiving households, i.e. 71% are availing the private hospital or private appointment health facility, whereas only 33% of non-receiving households are availing this facility. On the contrary, 45% of non-receiving households visited the government doctors but only 22% remittances receiving households availed such facility. On the other hand, local doctor or dispenser is visited by 5% of remittance recipient households and 21% of non-recipient households. Based on this we conclude, that remittance recipient households spend higher than non-recipient households on the health and hence prefer private hospitals and appointment instead of the government hospitals.

Table 5.6. 2

Overall analysis about Household Type and Fulfillment of Health Care

Household health status	Remittances receiving households		Non-receiving households		Total	
	Numbers	Percentage	Numbers	Percentage	Numbers	Percentage
Monthly income full fill the needs of health care.	168	83 %	72	36 %	240	60 %
Monthly income not full fill the needs of health care.	35	17 %	128	64 %	163	40 %
Total	203	100 %	200	100 %	403	100 %

Table 5.6.2 shows detail about health status, that's how many households are able to fulfill the basic needs of health care. The detail about both types of household are given separately to analyze and compare both of them. Basic needs of health care comprise from all of health related expenses (i.e. medicine cost, doctor fee, diagnostic test charges, transportation cost on health). Results show that remittances receiving household have a greater presence of 83%, which are able

to fulfill the needs of healthcare and have a lesser presence of 17% in the poor category which are not able to fulfill the needs of health care. On the other hand non-receiving households have a lesser presence of 36%, which are able to fulfill the needs of healthcare and greater presence of 64% in poor category. The overall ratio is 60% for fulfillment of healthcare and 40% for non-fulfillment of health care in total sample size. It reveals that remittances inflow have a positive relationship with health status of household, if a household receives remittances then that households have a greater probability to fulfill the basic needs of healthcare.

Table 5.6. 3

Household Total Expenditures on Food and Health Care

Total monthly cost on health and food consumption	Remittances receiving households	Non-receiving households
	Mean	Mean
Total cost on health per month PKR	8293	3881
Total cost on food consumption per month PKR	30612	18316

Table 5.6.3 shows the average monthly total cost of households on health and food consumption. Remittances receiving households use monthly 8293 PKR for health expenditure and 30612 PKR rupees for food consumption. Non-receiving households use 3881 PKR for health expenditure and 18316 PKR for food consumption. Remittances receiving households spend more (almost double) on health than non-receiving households do. Remittances receiving households also have spent more in food expenditures over non-receiving households.

5.7 Information about Domestic Earnings

This section presents the detail information about labor force which is working domestically in district Lower Dir. The data of the labor force and employed workers are obtained on the base of the household survey. Information is given about the nature of work for both genders, i.e. male and female and detailed. Information about the income status is presented on the basis of income categories. The agricultural production and livestock availability related details are also discussed in this section.

Table 5.7.1

Nature of Work for Male Earning Workers Domestically

Nature of work	Count	Percent
Government service	76	18%
Private service	117	28%
Labor/Daily Wages	134	32%
Business	63	15%
Agriculture/Livestock	16	4%
Other	17	4%
Total	423	100%

Table 5.7.1 shows detail about domestic employment status of households for male workers and their nature of work. It shows that 18% of total domestic earning persons are working as a government servant, 28% are working in private organizations, 32% are labor or working on daily wagers, 15% have their own businesses, 4% income is based on the agriculture sector and 4% have other types of jobs. Table 5.7.1 shows that most of the people are working as a labor, on daily wages and have private services. This result conveys that in survey area there is lack of industries, less agricultural land and limited business opportunities. It is concluded that in district, Lower Dir the overall scenario is difficult for domestic earning persons, limited sources of job

opportunities and low returns in a local market. Due to these reasons people prefer to migrate abroad for better opportunities.

Table 5.7.2

Nature of Work for Female Earning Workers Domestically

Nature of work	Count	Percent
Government service	6	60%
Private service	2	20%
Labor/Daily wages	0	0%
Business	0	0%
Agriculture/Livestock	1	10%
Other	1	10%
Total	10	100%

Table 5.7.2 shows details about the female employment status and their nature of work in the survey area. The result shows that the female job ratio is very low, only ten (10) females are doing job in the total sample of household survey. It shows that six out of ten (6/10) women are working as government employee, two (2) are doing private services, one (1) is employed in agriculture sector and one (1) is doing some other job. There are many reasons behind lack of women job, i.e. low level of female education, rural area and lack of job opportunities for women. This is one of the biggest issues in research area that female participation ratio in economic activities is very low. Due to no formal education of mothers, less opportunities of jobs on door steps push the female presence and responsibility is limited to the home. Most of the household heads are living abroad that is why female participation and importance increased in family to recover the gape of the household head. All the family related issues (social & economic) are controlled by a female head of the household due to the absence of male members.

Table 5.7.3

Income Status of Domestic Earning Persons based on Seven Income Categories

Income Categories	Count	Percent
Less than 5,000 PKR	45	11%
5,001 to 10,000 PKR	163	39%
10,001 to 15,000 PKR	74	17%
15,001 to 25,000 PKR	100	24%
25,001 to 40,000 PKR	66	16%
40,001 to 60,000 PKR	48	11%
60,001 PKR and above	24	6%
Total	423	100%

Table 5.7.3 demonstrates analysis related to income strength of domestic earning persons of households. In order to present the income strength of domestic earning person's income is divided into seven different income categories (i.e. less than 5,000 PKR, 5,001 to 10,000 PKR, 10,001 to 15,000 PKR, 15,001 to 25,000 PKR, 25,001 to 40,000 PKR, 40,001 to 60,000 PKR, and more than 60,000 PKR). The results show that 11% of total domestic earning workers have monthly income less than 5,000 PKR, whereas only 6% have monthly earning more than 60,000. The highest percentage i.e. 39% have income of 5,001 to 10,000 PKR. Similarly, 17% belong to income category of 10,001 to 15,000 PKR, 24% have income from 15,001 to 25,000 PKR, 16% are earning money from 25,001 to 40,000 PKR, and 11% falls in category of 40,001 to 60,000 PKR. The results clarify that most people belong to low level of domestic income and little share of income earning belongs to high income. Table concludes that 50% of total earners work on income below 10,000. It is concluded that due to this low level of income opportunities and low level of income strength, mostly people prefer to migrate abroad for better income status.

Table 5.7.4

Details about Agriculture Production

Total agriculture production and cost	Remittances receiving household	Non-receiving household	Total
	Mean	Mean	Mean
Total production of wheat in Kg	683	436	561
Cost on wheat production PKR	5196	2575	3895
Total production of maize in Kg	423	234	329
Cost on maize production PKR	2623	1552	2091
Total production of rice in Kg	167	84	126
Cost on rice production PKR	1574	719	1150

Table 5.7.4 shows average agriculture production of three main crops (i.e. wheat, maize and rice) and their average expenses. Total average production of wheat for remittances receiving households is 683 Kg and for not receiving household is 436 Kg. Total average production of maize for remittances receiving households is 423 Kg and for not receiving household is 234 Kg. Total average rice production for remittances receiving household is 167 Kg and for not receiving household is 84 Kg. Cost of maize and rice production are almost the same with respect to total average production for both types of households, whereas cost of wheat production of remittances receiving household is greater than not receiving households. The overall average total production cost of remittances receiving is higher than non-receiving household. It means that remittances non-receiving household family members work more in agriculture production compared to receiving household, which actually reduces the cost. It is also noted that remittances receiving households own more agricultural land or higher agriculture production with respect to other type of households. Total average production of both types of households is 561 Kg of wheat, 329 Kg

production of maize and 126 Kg of rice. The result concluded that due to smaller agricultural land and rain irrigated land (arid agriculture) total average agricultural production is at low ratio.

Table 5.7.5

Total Livestock of Large Animals, Small Animals and Poultry

	Minimum	Maximum	Sum	Mean
Total livestock of large animals	0	13	663	1.65
Total livestock of small animals	0	20	458	1.14
Poultry	0	100	1180	2.93

Table 5.7.5 shows details about the total livestock of large, small animals and poultry. Large animals comprises of buffalos and cows whereas small animals are sheep and goats. Total livestock of large animals in total household sample size is 663, on average each household has 1.65 animals. On the other hand, total sum of small animals in total sample size is 458 which means that each household has 1.4 animal on average. Poultry has a total presence of 1180 and the average is 2.93 for each household. The livestock quantity mostly depends and correlated normally with agriculture land. If household owns a large part of agricultural land, then that household will also own greater ratio of livestock. Agriculture land is used as an input for livestock, it can reduce the cost of livestock. It means that mostly people own little portion of agriculture land and it leads to have less livestock.

CHAPTER 6

EMPIRICAL ANALYSIS

Many researchers and economists worked on foreign remittances at micro and macro level. Most of the researchers argued that foreign remittances have a positive impact on improving the education level and life standard. Remittances is positively correlated to poverty reduction, and also increases the household consumption and decreases income inequalities (Baruah, 2006). According to (Quartey, 2006) if foreign remittances increase 1% the household welfare increases by 0.23%. Some researchers also argued that foreign inflows of remittances are not used for productive purpose and investment. Therefore, sometimes it has certain negative impacts on remittances receiving economies. According to Brwon, due to remittances the dependency ratio within the family usually increases. A big share of remittances are used for consumption and they cause an increase in wage rate (Brown 2008). There are diverse opinions about the determinants of household education, poverty level and household food consumption. Research of different economist shows that if parents are educated then there would be a positive impact on the family member's educational level (Tariq, 2010). Similarly, the good background of family income and good wealth status also have a positive impact on the education level. On the contrary, if the family size is larger, then there would be a negative impact on education, poverty reduction and food consumption. In the same way, if the number of income earners in a family is low there would be a negative impact on education, poverty reduction and food consumption.

In this study the household welfare is analyzed by comparing remittances receiving household and non-receiving household. Five main variables (education, wealth, food consumption, poverty and health status) have been examined to investigate the relationship of foreign remittances with household welfare. OLS technique is used for first three dependent variables which are household education, household wealth score and household food consumption score. Logit and Probit model are used for poverty and health analysis. The overall results have been found significant, theoretically support the signs and reasonable R-square and F-test.

This chapter explains the overall estimation of the model. The detailed discussion about the research findings has been analyzed in this chapter. Which have organized into two main sections, OLS analysis and Logit & Probit analysis.

6.1 Ordinary Least Square (OLS) Analysis

The OLS is used for three dependent variables, i.e. household education, wealth status and food consumption. Therefore, this section is further divided into three subsections. However, before discussing these three subsections we first want to present the following. First, the description and measurement of dependent and independent variables are presented in Table 6.1. Second, the results of general and restricted models with the help of Tables for household education level, household wealth status and household food consumption are discussed. Third, the outcomes of three OLS models (i.e. for household education, wealth and food consumption) are interpreted and explained in detail.

Table 6. 1

Description and Measurement of the Variables for Household Education, Wealth Status and Food Consumption Score.

Notation	Description	Measurement
Dependent Variables		
1 EDU	Household education	Total monthly expenditures on education
2 WS	Household wealth score	Instrumental technique of wealth score
3 FCS	Household food consumption score	Major food item expenditures
Independent Variables: Economic Status of Household		
HHT	Household type	= 0 If household is not receiving foreign remittances = 1 If household is receiving foreign remittances
TMI	Total monthly income	Counts in thousand PKR
NIE	Number of income earners	Counts
AP	Agriculture production	Counts in PKR/month
TL	Total livestock	Counts in PKR
Independent Variables: Households Education Status		
FEP_1	First category of father's education	If father has primary education = 1 Otherwise = 0
FES_2	Second category of father's education	If father has secondary education = 1 Otherwise = 0

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Notation	Description	Measurement
$FEHS_3$	Third category of father's education	If father has higher secondary education = 1 Otherwise = 0
FEG_4	Fourth category of father's education	If father has graduation = 1 Otherwise = 0
FEM_5	Fifth category of father's education	If father has masters level education = 1 Otherwise = 0
MEP_1	First category of mother's education	If mother has primary education = 1 Otherwise = 0
MES_2	Second category of mother's education	If mother has secondary education = 1 Otherwise = 0
$MEHS_3$	Third category of mother's education	If mother has higher secondary education = 1 Otherwise = 0
MEG_4	Fourth category of mother's education	If mother has graduation = 1 Otherwise = 0
MEM_5	Fifth category of mother's education	If mother has masters level education = 1 Otherwise = 0
NCH	Numbers of children between 5 and 18 years of age	Counts
Independent Variables: Households Demography		
HS	Household size	Counts

Table 6. 2

Analysis of General Model of Household Education, Wealth Status and Food Consumption Score

	Section A		Section B		Section C	
Models	1. Household Education		2. Household Wealth Score		3. Household Food Consumption Score	
	Coefficient	t-stats	Coefficient	t-stats	Coefficient	t-stats
Independent Variables: Economic Status of Household						
HHT	.087	(1.646)*	.156	(3.149)***	.159	(3.045)***
TMI	.139	(2.410)**	.198	(3.681)***	.172	(2.989)***
NIE	-.058	(-.937)	-.044	(-.767)	-.124	(-2.022)**
TAP	.028	(.602)	.038	(.875)	-.017	(-.358)
TL	.013	(.267)	-.017	(-.378)	.105	(2.077)**
Independent Variables: Households Education Status						
FEP_1	.066	(1.357)	.077	(1.689)*	.041	(.854)
FES_2	.008	(.165)	.198	(4.364)***	.022	(.460)
$FEHS_3$	.052	(1.032)	.157	(3.324)***	.054	(1.096)
FEG_4	.039	(.806)	.130	(2.876)***	.063	(1.326)
FEM_5	.182	(3.374)***	.119	(2.375)**	.100	(1.879)*
MEP_1	.012	(.239)	.050	(1.084)	.063	(1.278)
$MES\&HS_{23}$	.048	(.949)	.114	(2.427)**	.185	(3.818)***
$MEG\&M_{45}$	.216	(4.240)***	.070	(1.466)	.165	(3.274)***
NCH	.110	(1.728)*	-.038	(-.634)	-.155	(-2.469)**
Independent Variables: Households Demography						
HS	.098	(1.255)	.267	(3.645)***	.234	(2.985)***
R^2	.200		.303		.220	
F-test	7.148		11.169		7.220	

Note: The statistics significance at 10%, 5% and 1% are indicated by *, ** and *** respectively. Figures in the parenthesis show t-statistics of regression coefficient.

Table 6.2 represents a general model regression analysis for all the three dependent variables (household education, wealth score and food consumption score). OLS method has been used for these three models. Since there is the presence of highly statistically insignificant variables in the regression, which further leads to few theoretically wrong signs of the variables. Having such insignificant variables, it is possible that the other variables might be affected adversely. Therefore, it is necessary to eliminate these variables which are either statistically insignificant or they have opposite relationship against economic theory. For this purpose, a step-wise manual process is adapted to drop out such variables through the help of Thiel's Benchmark Criterion. According to this rule, all variables are dropped from the equation if the t-value of the regression coefficient is less than 1 and model is re-estimated again. This process is also known as general to specific calculation in econometrics.

Applying this procedure and after dropping out each one variable the model is re-estimated. All the variables which have less than 1 t-value and insignificant at 1%, 5% and 10% are dropped out. Repeating this process, we come with the final and specific model in which mostly variables are statistically significant at 1%, 5% and 10%. All the variables in the final specific model are theoretically justifiable and having signs which support the economic theory, and presented in Table 6.3.

Table 6. 3

Analysis of Restricted Model for Household Education, Wealth Status and Food Consumption Score

	Section A		Section B		Section C	
Models	1. Household Education		2. Household Wealth Score		3. Household Food Consumption Score	
	Coefficient	t-stats	Coefficient	t-stats	Coefficient	t-stats
Independent Variables: Economic Status of Household						
HHT	.084	(1.613)*	.152	(3.103)***	.144	(2.779)***
TMI	.126	(2.262)**	.196	(3.768)***	.171	(3.034)***
TL					.096	(1.945)**
Independent Variables: Households Education Status						
FEP_1	.070	(1.487)	.078	(1.733)*		
FES_2			.197	(4.359)***		
$FEHS_3$	.066	(1.384)	.155	(3.362)***		
FEG_4	.048	(1.028)	.132	(2.933)***	.049	(1.047)
FEM_5	.187	(3.617)***	.121	(2.433)**	.093	(1.802)*
MEP_1			.053	(1.158)	.070	(1.455)
$MES\&HS_{23}$	.051	(1.087)	.110	(2.414)**	.198	(4.301)***
$MEG\&M_{45}$	.210	(4.178)***	.068	(1.441)*	.159	(3.148)***
Independent Variables: Households Demography						
HS	.145	(2.871)***	.215	(4.509)***	.060	(1.161)
R^2	.190		.300		.200	
F-test	10.105		15.164		10.775	

Note: The statistics significance at 10%, 5% and 1% are indicated by *, ** and *** respectively. Figures in the parenthesis show t-statistics of regression coefficient.

6.1.1 Regression Analysis for Household Education Status

Section A of Table 6.3 presents the restricted model which has been regressed for total monthly expenditures on education. Explanatory variables are categorized as household type (HHT), total monthly income (TMI), father's education (FE), mother's education (ME) and Household size (HS). Father's education and mother's education is further categorized into five dummy variables which are: primary, secondary, higher secondary, graduation and masters with the base category of no formal education. In the remaining part of this Section, the interpretations of all these explanatory variables with respect to the dependent variable of education status are given on the bases of Table 6.3.

The main and important explanatory variable is a household type (HHT), the household type is also having a positive (0.08) and significant impact on educational expenditures. This means that foreign remittances have a positive impact on monthly educational expenditures. In other words, remittances receiving household spend more on education than non-receiving household. If there is one unit increase in remittances receiving household, monthly educational expenditures increased by 0.08 unit compare to non-receiving household.

Total monthly income (TMI) of household is also one of the most important explanatory variables regarding household monthly expenditures on education. The total monthly income of household shows positive (0.13) and significant impact on educational expenditures, an increase in monthly income leads to increase the household monthly expenditures on education. One unit increase in household monthly income causes 0.13 unit increase in household education expenditures. In other words, if household monthly income increases thousand (1000) PKR,

education expenditures also increases by one hundred and thirty (130) PKR. This shows a positive relationship between income and education expenditures, if household income increases education expenditures also increases.

Parent's education status plays an important role regarding household monthly expenditures on education. If parents are well educated then household gives more preference to children education and invest more in education due to good income status. When a father has a master degree as compare to no formal education then it shows a positive and significant impact on total monthly expenditures on education. While in case of other three categories (primary, higher secondary and graduation), there is also a positive but insignificant impact on monthly expenditures on education. Due to the low frequency of mothers' education are analyzed by merging these categories (i.e. secondary, higher secondary and graduation & masters). It is found, that graduate and master category of mother's education has positive (0.21) and significant impact on educational expenditures as compare to no formal education. Secondary and higher secondary category of mother's education has a positive, but an insignificant impact on monthly expenditures on education. Mothers with higher education contribute to household income and hence participate in children educational expenses. However, less educated mothers are mostly unemployed, therefore their education does not affect the educational status of the household. It means that if parents are well educated then household invest more in human capital for better education.

Total family members in the family or household size (HS) has a positive (0.15) and significant impact on monthly educational expenditures. It shows that with large family system,

people spend more on monthly educational expenditures, because it is expected that a large number of children exist. Therefore, these families spent more on monthly educational expenditures.

The result shows that the overall impact of father and mother higher education on monthly educational expenditures is positive and significant. In the same way, the other three variables which are the household type, total monthly income and household size also have a positive and significant impact on monthly educational expenditures.

6.1.2 Regression Analysis for Household Wealth Status

Section B of Table 6.3 presents the restricted model which are regressed for household wealth score, mostly on same explanatory variables which are already used in the first model of monthly educational expenditures. The dependent variable is changed from monthly educational expenditure to household wealth score. Explanatory variables are categorized as household type (HHT), total monthly income (TMI), father (FE) and mother's education (ME) and Household size (HS). Father's education and mother's education is further categorized into five dummy variables which are: primary, secondary, higher secondary, graduate and masters with the base category of no formal education. In the remaining part of this Section, the interpretations of all these explanatory variables with respect to the dependent variable of wealth score are given on the bases of Table 6.3.

The first explanatory variable is the household type (HHT) which shows a significant importance regarding household wealth score. A household type having a positive (0.15) and significant impact on the household wealth score. Household type is based on remittances receiving and non-receiving household, it means that foreign remittances have a positive impact

on the household wealth score. In other words, remittances receiving household have good wealth status and have more assets than non-receiving remittances household. Total family members in the family also have positive (0.22) and significant impact on wealth score. This shows that with the large family system, household has more income earners and own more assets, that is why it leads to having a positive impact on household wealth score.

The second explanatory variable and most important determinant of wealth score is total monthly income (TMI) of the household. Total monthly income has positive (0.17) and significant impact on the household wealth score. It shows that increase in total monthly income leads to pushing up the wealth score of the household. Total monthly income of the household is positively correlated to wealth score, if income of household increases household wealth status also increases.

The other important explanatory variable in the wealth score analysis is father's education (FE) and mother's education (ME). All five categories (primary, secondary, higher secondary, graduate and masters) have a positive and significant impact on the household wealth score as compare to base category of no formal education. In case of mother's education, four categories (secondary, higher secondary, graduate and masters) except primary category of mother's education has been found to have a positive and significant impact on the household wealth score as compared to no formal education. Both father and mother's education almost has a positive effect on the household wealth status. It shows that if household parents are well educated they earn more income and it further leads to good wealth status.

The result shows that the overall impact of father and mother's education on the household wealth score is positive and significant. In the same way, the other three variables which are the household type, total monthly income and household size also have a positive and significant impact on the household wealth score.

6.1.3 Regression Analysis for Household Food Consumption

Section C of Table 6.3 presents the restricted model which is regressed for household food consumption score. Explanatory variables are categorized as household type (HHT), total monthly income (TMI), total livestock (TL), father's education (FE), mother's education (ME) and household size (HS). Father's education and mother's education is further categorized into five dummy variables which are: primary, secondary, higher secondary, graduate and masters with the base category of no formal education. In the remaining part of this Section, the interpretations of all these explanatory variables with respect to dependent variable of food consumption are given on the bases of Table 6.3.

First and most important explanatory variable regarding household food consumption score is household type (HHT). The results show that household type has positive (0.14) and significant effect on household food consumption score. Household type is based on remittances receiving and non-receiving household it means that foreign remittances have a positive impact on household food consumption score. In other words, remittances receiving household spend more than non-receiving household for the purpose of food expenditures.

The second explanatory variable and most important determinant of household food consumption score is total monthly income (TMI) of the household. Total monthly income has positive (0.09) and significant impact on household food consumption score. It shows that increase in total monthly income pushes up food consumption score of the household. The third explanatory variable is household total livestock (TL) which is directly connected to household food items or household food consumption score. Some major food items like milk, cheese, yogurt, butter are mostly connected to household livestock. Livestock also shows the positive and significant impact on household food consumption score.

Parent's education shows a positive relationship between well education status and household food consumption score as compared to no formal education. Last two categories (graduate and master) of father's education have a positive impact on food consumption score as compare to no formal education. However, father's education has a very negligible association with the food consumption. In case of mother's education, it is found that all categories (primary, secondary, higher secondary, graduate and masters) of mother's education have a positive and almost significant impact on household food consumption score. Basically, food consumption score is directly related to mother's education. If a mother is educated then she provides balance food items to family. However if a mother is not educated then it will not be easy for her to provide balance food to the family. On the other hand, father's education is indirectly related to have an impact on food consumption score, if a father is educated then household income increases which has a positive impact on food consumption score. A balanced diet is the responsibility of mothers that is why mother's education shows more strong impact on food consumption score with respect to father's education.

Total family members in the family have positive (0.06) and insignificant impact on household food consumption score. It shows that most people live in the large family system, it is expected to have more income earners and more food availability that is why it leads to having a positive impact on total monthly income and household food consumption score.

The results show that the overall impact of mother's education and master category of father's education shows a positive and significant impact on household food consumption score. In the same way, it is also analyzed that other three variables which are the household type and household size also have a positive impact on household food consumption score.

6.2 Logit & Probit Analysis

The Logit & Probit analysis is used for household poverty and household health status. Therefore, this section is further divided into two subsections i.e. Logit & Probit analysis of household poverty and Logit & Probit analysis of household health status. However, before discussing these two subsections we first want to presents the following. First, we discuss two binary choice models of household poverty and health status. Second, a description with measurement of dependent and independent variables are given for both models in Table 6.4.

Table 6.4 represents the list of two models of household poverty (HHP) and household health status (HHH). Household poverty (HHP) has been used as dependent variable which has a binary response (0, 1), zero represents poor household and one represents non-poor household. Household poverty is measured according to international standard of WB definition about poverty. According to WB, if a person income is below 1.25 US$ per day, it means that person living in extreme poverty (WB, 2013). If a person income is below 2 US$ per day, then it is

considered moderate poverty. Poverty analysis is developed on the basis of moderate poverty which is below two US$ per day (< 2US$). This means that we consider a household poor if the income is below 2 US$. When households are below the poverty line zero (0) is given and one (1) is for above poverty line.

Household health status has been used as dependent variable which has a binary response (0, 1). Zero represents that household monthly income cannot fulfill their monthly health expenditures and one represents that the monthly income of the household can fulfill healthcare needs. If household monthly income fulfills the needs of healthcare (i.e. doctor fee, medicine cost, diagnostic test charges of healthcare, transportation cost on health) value 1 is assigned, otherwise, zero (0) value is given.

Other main explanatory variables are also mentioned which have been used in both the models. Explanatory variables are divided into three main categories (economical, educational and demographic) which are household type (HHT), total monthly income (TMI), number of income earners (NIE), agriculture production (AP), total livestock (TL), father's education (FE), mother's education(ME), numbers of children (NCH) between 5 and 18 years of school going age, household size (HS) and food consumption (FC). Father's education and mother's education are further categorized in five dummy variables (primary, secondary, higher secondary, graduate and master).

Table 6. 4

Description and Measurement of Dependent and Independent Variables for Poverty and Health Status

Notation	Description	Measurement
Dependent Variables: Household Poverty and Household Health		
4 HHP	Household poverty status	= 0 If the household is poor = 1 If the household is not poor
5 HHH	Dues monthly income fulfill the basic needs of health care (Doctor fee, medicine cost, diagnostic test charges, transportation cost on health)	= 0 If household does not fulfill the needs of healthcare = 1 If household fulfills the need of healthcare
Independent Variables: Economic Status of Household		
HHT	Household type	= 0 If household are non-receiving foreign remittances = 1 If household are receiving foreign remittances
NIE	No income earners	Counts
AP	Agriculture production	Counts in PKR/Month
TL	Total livestock	Counts in PKR
Independent Variables: Households Education Status		
FEP_1	First category of father's education	If father has primary education = 1 Otherwise = 0
FES_2	Second category of father's education	If father has secondary education = 1 Otherwise = 0
$FEHS_3$	Third category of father's education	If father has higher secondary education = 1 Otherwise = 0

Continues…….

……. Continued

Notation	Description	Measurement
FEG_4	Fourth category of father's education	If father has graduation = 1 Otherwise = 0
FEM_5	Fifth category of father's education	If father has masters level education = 1 Otherwise = 0
MEP_1	First category of mother's education	If mother has primary education = 1 Otherwise = 0
MES_2	Second category of mother's education	If mother has secondary education = 1 Otherwise = 0
$MEHS_3$	Third category of mother's education	If mother has higher secondary education = 1 Otherwise = 0
MEG_4	Fourth category of mother's education	If mother has graduation = 1 Otherwise = 0
MEM_5	Fifth category of mother's education	If mother has masters level education = 1 Otherwise = 0
NCH	Number of children between 5 and 18 years of school going age	Counts
Independent Variables: Households Demography		
HS	Household size	Counts
FC	Food consumption	Counts in PKR

6.2.1 Logit and Probit Regression Analysis for Poverty

Table 6.5 represents a general model regression analysis of household poverty. Logit and Probit models have been used to estimate the impact of all explanatory variables on household poverty. The result shows that foreign remittances, household total monthly income and number of income earner have a positive relationship with household poverty reduction. On the other hand,

agriculture production and total livestock of household show negative relationship with household poverty reduction. Due to the low frequency of father's education and mother's education education categories are merged i.e. a) secondary and higher secondary, b) graduate and masters). All categories of father's education and mother's education show a positive relationship with poverty reduction. The number of children between 5 and 18 years of school going age, household size and total monthly food consumption show a negative relationship with poverty reduction.

Since there is the presence of highly statistically insignificant variables in the regression, which further leads to few theoretically wrong signs of the variables. Having such insignificant variables, it is possible that the other variables might be affected adversely. Therefore, it is necessary to eliminate these variables which are either statistically insignificant or they have opposite relationship against economic theory. For this purpose, a step-wise manual process is adapted to drop out such variables through the help of Thiel's Benchmark Criterion. According to this rule, all variables are dropped from the equation if the z-value of the regression coefficient is less than 1 and model is re-estimated again. This process is also known as general to specific calculation in econometrics.

Applying this procedure after dropping out each one variable the model is re-estimated. All the variables dropped out because they are insignificant at 1%, 5% and 10% and which have less than 1 "z-value". Repeating this process, we come with the final and specific model in which almost all variables are statistically significant at 1%, 5% and 10%. All the variables in the final specific model are theoretically justifiable and having signs which support the economic theory, and presented in Table 6.6.

Table 6. 5

Probability Estimates for General Poverty Models (Logit and Probit)

Explanatory Variables	Logistic Probability Model (Logit)	Normal Probability Model (Probit)
HHT	4.706 (2.1975)**	2.400 (2.3283)**
TMI	7.302 (6.6108)***	7.787 (7.2152)***
NIE	2.335 (2.9950)***	1.563 (2.9054)***
AP	0.882 (-3.6032)***	1.000 (-3.5727)***
TL	0.998 (-0.8735)	.999 (-0.9421)
FEP_1	1.036 (0.0613)	1.043 (0.1314)
$FES\&HS_{23}$	1.101 (0.1278)	1.138 (0.3179)
$FEG\&M_{45}$	3.105 (0.9613)	1.968 (1.1077)
MEP_1	2.348 (0.6054)	1.495 (0.6888)
$MES\&HS_{23}$	1.360 (0.2148)	1.195 (0.2362)
$MEG\&M_{45}$	6.548 (0.8777)	2.774 (0.8824)
NCH	0.867 (-1.1997)	.929 (-1.3042)
HS	0.571 (-5.4206)***	.756 (-5.9194)***
FC	0.999 (-0.1230)	1.000 (-0.2377)
Log Likelihood	429.709	427.834

Note: The statistics significance at 10%, 5% and 1% are indicated by *, ** and *** respectively. Figures in the parenthesis show z-statistics of the regression coefficient.

Table 6. 6

Probability Estimates for Restricted Poverty Models (Logit and Probit)

Explanatory Variables	Logistic Probability Model (Logit)	Normal Probability Model (Probit)
HHT	6.776 (3.1971)***	2.989 (3.4321)***
TMI	18.581 (6.9232)***	4.403 (7.6195)***
NIE	1.921 (2.6708)***	1.394 (2.5642)***
FEG&M_{45}	3.123 (1.2741)	1.894 (1.3497)
MEG&M_{45}	7.994 (1.2009)	3.237 (1.2201)
NCH	0.881 (-1.2702)	0.939 (-1.2743)
HS	0.638 (-5.4980)***	0.801 (-5.9510)***
Constant	0.000 (-7.3313)***	0.000 (-8.1688)***
Log Likelihood	403.343	400.209

Note: The statistics significance at 10%, 5% and 1% are indicated by *, ** and *** respectively. Figures in the parenthesis show z-statistics of the regression coefficient.

Table 6.6 represents the restricted models of Logit and Probit regarding poverty status of the household in the research study. Explanatory variables are household type (HHT), total monthly income (TMI), number of income earners (NIE), father's education (FE), mother's

education (ME), numbers of children (NCH) between 5 and 18 years which is going to school and household size (HS). Due to low frequencies of father (FE) and mother's education (ME) graduate and masters categories are analyzed by merging into one variable. Logit and Probit models show consistency in their results. There is no major difference between the variables across the Logit and Probit models. Results of the explanatory variables are according to the economic theory.

The interpretation of Table 6.6 represents the odd ratios (exponential values) of regression parameters which are estimated for all explanatory variables. Some researchers used odd ratio or (exponential values) for interpretation in times. To calculate the impact of one unit change in the explanatory variable on the probability of the dependent variables, the odd ratios are used. The dependent variable is a binary response variable, if the household poverty level goes from zero to one or from a poor household to non-poor household, these estimates/ratios measure the change in the probability. These odd ratios are directly represented by the regression coefficients in the case of OLS. However, Logit and Probit Model are none-linear so these odd ratios are represented by the exponential values, which are based on the units and are not constant in none-linear regressions. Due to this nonlinear relationship, marginal effects or probability derivatives are estimated through the mean of sample size. These results are given in Table 6.7 for both Logit and Probit models.

Table 6.7 shows the final results of probability derivatives or marginal effects of explanatory variables with respect to household poverty (HHP). Results are almost consistent and there is a little difference in both Logit and Probit models.

Table 6. 7

Probability Derivatives for Poverty with respect to Independent Variables

Explanatory Variables	Logistic Probability Model (Logit)	Normal Probability Model (Probit)
HHT	0.5161	0.4937
TMI	0.0397	0.0155
NIE	0.1804	0.0758
FEG&M$_{45}$	0.2269	0.1382
MEG&M$_{45}$	0.4079	0.2550
NCH	-0.0010	-0.0025
HS	-0.2398	-0.0966
Constant	-0.3840	-0.4044

First and most important variable of the research study is the household type (HHT), it explains that a family receiving foreign remittances or not. Result outcomes show that the one unit increase in the household type from remittances none-receiving household to receiving household leads to enhancing the probability of the household being non-poor by 52% in Logit model and 49% in the Probit Model. It means that if a household receives foreign remittances his chances of poverty decline by about 52 or 49% in both the models respectively. In other words, as the household turns from a non-receiving remittances to a remittances receiving household its probability of being non-poor also rises.

The second explanatory variable is total monthly income (TMI) regarding household poverty. Total monthly is also one of the most important and obvious explanatory variables from

the results. The results show that as the total monthly income rises by one unit (1000PKR) it leads to reducing the probability of household poverty by almost 4% in the Logit and 2% in the Probit model. It clearly indicates that the income of the household can play an important role in the reduction and elimination of household poverty. This variable is the significant one, as the monthly income of the household raises the household can easily afford the basic needs of the family. When income rises then the living standard of the family will also improve. In other words, household's total monthly income has a negative relationship with poverty, it means that if household monthly income increases, it reduces household poverty.

Similarly, the number of income earners (NIE) in the family can also play a vital role in the household poverty reduction. The outcome indicates that a unit (one earner) increase in the total number of earners in the family decreases the probability of household poverty by 18% in Logit and 8% in Probit model. It is obvious from the results that more the number of earners in the family, less the chances of poverty for the household.

Status of the Parent's education also plays important role related to household poverty reduction. Father's education (FE) when he is graduate and master category ($FEG\&M_{45}$) as compared to no formal education reduces the probability of poverty of the household by 23% in Logit model and 14% in Probit model. While in case of mother's education (ME), when she is graduate and master category ($MEG\&M_{45}$) as compare to no formal education also reduces the probability of poverty of the household by 41% in Logit and 26% in Probit model. In the area, where the study is conducted mothers who are highly educated (i.e. having graduation or master degree) are mostly employed which also contributing to eliminate poverty in the household and

have brought out the family from poor to non-poor category. This shows that both father and mother's education can play important role in the reduction and elimination of poverty of the household. Mother's education shows a stronger impact than father's education. Mostly fathers are responsible for income earning and when mothers are also contributing to household income, then it is easier for household to come out of poverty. If father is well educated and skillful then it is understood that he earn more income for his family to remove poverty. Regarding poverty line, the father's education is also important, but the mother's education can play a very crucial role. If the mothers are more educated, then she can handle all economic and social problems of her family and also play a positive role in family income. She can manage the whole family budget in an appropriate way towards poverty reduction, take care of education and other expenditures of the family.

Number of children (NCH) between 5 and 18 years of age who are going to school are negatively related to non-poor as compared to poor household. Results in Table 6.7 shows that if there is a unit increase in the number of children below eighteen years and above five years who is going to school, it leads to reduce the probability of non-poverty household as compared to poverty household by 1 percentage point in the Logit model and by 3 percentage points in the Probit model. If the number of children rises, it leads to increase poverty level due to increase in the expenditure of education on human capital. Household size (HS) or numbers of family members is also an important variable. Results obtained in Table 6.7 clearly indicate that there is an inverse relationship between the household size and non-poor status of the household. It means that as the number of family members raises the household moves from non-poor to poor. The

results show that if there is a unit increase in the number of family members it leads to enhancing the probability of household poverty by 24% in the Logit model and by 10% in the Probit model. The result shows that foreign remittances, total monthly income, number of income earners show a positive and significant impact on poverty reduction. Father and mother's who are graduated or having master degree shows a positive impact on poverty reduction. In the same way, it is also analyzed that other two variables which are number of children between 5 and 18 years and above of school going age and household size have a negative and significant impact on poverty reduction.

6.2.2 Logit and Probit Regression Analysis for Health

Table 6.8 represents a general regression analysis of household health status. Logit and Probit models have been used to estimate the impact of all explanatory variables related to household health. The result shows that foreign remittances, household total monthly income and number of income earner have a positive relationship with household good health status. On the other hand, agriculture production and total livestock of household shows negative relationship with household good health status. Due to low frequency of fathers education and mothers education are analyzed by merging these categories (i.e. a) secondary and higher secondary b) graduate and masters). All categories of father's education and mother's education as compared to no formal education also shows a positive relationship with household good health status. The number of children between five years to eighteen years of school going age and monthly food consumption shows a positive relationship with household good health status. Household size shows a negative relationship with good health status.

Table 6. 8

Probability Estimates for General Health Status Models (Logit and Probit)

Explanatory Variables	Logistic Probability Model (Logit)	Normal Probability Model (Probit)
HHT	6.114 (6.1612)***	3.107 (6.8802)***
TMI	1.007 (1.8582)*	1.003 (1.7259)*
NIE	1.072 (0.4898)	1.029 (0.3574)
AP	0.960 (-2.0277)**	0.981 (-1.9512)**
TL	1.000 (-0.7258)	1.000 (-0.5790)
FEP_1	1.543 (1.3286)	1.270 (1.2768)
$FES\&HS_{23}$	1.355 (0.7641)	1.226 (0.8965)
$FEG\&M_{45}$	2.656 (1.9353)**	1.846 (2.0809)**
MEP_1	1.063 (0.1131)	0.967 (-0.1098)
$MES\&HS_{23}$	5.363 (1.9314)**	2.653 (2.0910)**
$MEG\&M_{45}$	3.297 (1.0607)	1.973 (1.2121)
NCH	1.059 (0.8635)	1.018 (0.4863)
HS	0.940 (-1.4022)	0.971 (-1.1750)
FC	1.037 (2.1930)**	1.020 (2.2018)**
Log Likelihood	141.428	137.709

Note: The statistics significance at 10%, 5% and 1% are indicated by *, ** and *** respectively. Figures in the parenthesis show z-statistics of regression coefficient.

Those variables are dropped out because they are insignificant at 1%, 5% and 10% and which have less than 1 z-values according to Thiel's Benchmark Criterion. Repeating this process, we come with the final and specific model in which mostly variables are statistically significant at 1%, 5% and 10%. All the variables in the final specific model are theoretically justifiable and having signs which support the economic theory, and presented in Table 6.9.

Table 6.9 represents restricted models of Logit and Probit regarding household health status. Both models in this table show consistency in the results of analysis. Explanatory variables are the household type (HHT), total monthly income (TMI), father's education (FE), mother's education (ME), household size (HS) and food consumption (FC). Father's education are further categorized into three dummy categories, i.e. 1) primary 2) secondary and higher secondary and 3) graduate and master. Mother's education is also further categorized into two dummy categories, i.e. 1) secondary and higher secondary and 2) graduate and master. Both Logit and Probit models show consistency in the results of the analysis. There is no major difference between the variables across the Logit and Probit models. Most of the explanatory variables are significant and they have theoretically correct signs which support the economic theory.

The interpretation of Table 6.9 represents the odd ratios (exponential values) of regression parameters which are estimated for all explanatory variables. Due to the nonlinear relationship marginal effects or probability derivatives are estimated through the mean of sample size. These results are given in Table 6.10 for both Logit and Probit models.

Table 6. 9

Probability Estimates for Restricted Health Status Models (Logit and Probit)

Explanatory Variables	Logistic Probability Model (Logit)	Normal Probability Model (Probit)
HHT	3.594 (3.6710)***	2.131 (3.7030)***
TMI	1.431 (3.0753)**	1.252 (3.3562)**
FEP_1	1.621 (1.5067)	1.312 (1.4737)
$FES\&HS_{23}$	1.649 (1.3053)	1.348 (1.3610)
$FEG\&M_{45}$	2.278 (1.7391)*	1.645 (1.8092)*
$MES\&HS_{23}$	4.004 (1.6669)*	2.206 (1.7422)*
$MEG\&M_{45}$	3.403 (1.1056)	1.946 (1.1851)
HS	0.948 (-1.6807)*	0.968 (-1.7321)*
FC	1.000 (1.9768)**	1.000 (1.9045)**
Constant	.073 (-5.4430)***	0.205 (-5.7299)***
Log Likelihood	143.709	143.636

Note: The statistics significance at 10%, 5% and 1% are indicated by *, ** and *** respectively. Figures in the parenthesis show z-statistics of regression coefficient.

Table 6. 10

Probability Derivatives for Household Health Status with respect to Independent Variables

Explanatory Variables	Logistic Probability Model (Logit)	Normal Probability Model (Probit)
HHT	0.4109	0.2616
TMI	0.0011	0.0010
FEP_1	0.1221	0.0695
$FES\&HS_{23}$	0.1341	0.0818
$FEG\&M_{45}$	0.2245	0.1417
$MES\&HS_{23}$	0.3479	0.2097
$MEG\&M_{45}$	0.3116	0.1730
HS	-0.0085	-0.0051
FC	0.0080	0.0045
Constant	-0.3300	-0.1934

Table 6.10 shows the final results of probability derivatives or marginal effects of explanatory variables for dependent variable (household health status). Results are almost consistent and there is a little difference in both models of Logit and Probit.

Outcomes of Table 6.10 show that the one unit increase in the household type (HHT) from none remittances receiving household to remittances receiving household leads to enhancing the probability of fulfillment of health care expenditures by 41% in Logit model and 26% in the Probit Model. This means that if a household receives foreign remittances its chances of weak health status declines by about 41% in Logit and 26% in Probit model. In other words, as the household

turns from a non-receiving to a receiving household its probability of better health status arises from 26 to 41%.

Total monthly income (TMI) is the most important explanatory variable for determining the household health status. Results show that as the total monthly income rises by one unit (1000PKR) it leads to reducing the probability of household poor health status by 1 percentage point in the Logit and 1 percentage point in the Probit model. It clearly indicates that the income of the household can play an important role in attaining the better health care of the household. If a household has a good income status, then that household can easily fulfill the basic needs of health care that is (doctor Fee, medicine cost, transportation expenditures on health). On the other hand, if household having week income status, then it is very difficult to fulfill the basic needs of health care.

Similarly, parent's education is also important explanatory variable regarding household health status. If the father has primary education (FEP_1) as compared to no formal education then the probability of poor health status of the household decline by 12% in Logit model and 7% in a Probit model (Table 6.10). Secondary and higher secondary category of father's education ($FES\&HS_{23}$) as compare to no formal education reduces the probability of being poor health status by 13% and 8% in Logit and Probit models respectively. In the same way, graduation and master degree of father's education ($FEG\&M_{45}$) as compare to no formal education also reduces the probability of having poor health status by 22% and 14% in both Logit and Probit models. It means that if father's education increases, the probability of being good health position increases. While in case of mother's education, secondary and higher secondary category ($MES\&HS_{23}$) as

compared to no formal education reduces the probability of being non-poor by 35% and 21% in Logit and Probit models respectively. In the same way, graduation and master degree of mother's education(MEG&M$_{45}$) as compare to no formal education also reduces the probability of having poor health status by 31% and 17% in both Logit and Probit models. Mother's education shows stronger impact than father's education for bringing out the household from the poor to non-poor health condition and having better health status. If fathers are well educated and skillful then it is expected that he earn more income for his family to fulfill the basic needs of health care. Mother's education can play a very crucial role, if mothers are more educated, then she contributes more, in the best way she can handle all economic and social problems of her family and also play a positive role in family income. She can manage the whole family budget in an appropriate way towards the fulfillment of basic needs of health care. In conclusion, we can say, that overall parent's education can play important role in the fulfillment of basic needs of the household health care.

Results show that there is an inverse relationship between the household size and good healthcare of household. It means that as the number of family members raises the household moves form better health position to a weak health status. Results in Table 6.10 show that if there is a unit increase in the number of family members it leads to enhancing the probability of household weak health care by 9 percentage points in the Logit model and by 5 percentage points in the Probit model.

Similarly, the food consumption expenditures in the family can also play its vital role in household better health care. The outcomes of Table 6.10 indicate that a unit (1000PKR) increase in the total food consumption expenditures of the family leads to decrease the probability of

household poor health status by 8 and 5 percentage points in both Logit and Probit models respectively. It is obvious from the result that more the food consumption expenditures in a family, less the chances of poor health in the household. If a household is spending more on food/diet then it means that there are better chances of a balanced diet. Subsequently, there are fewer chances of illness of family members and also easy for them to fulfill the needs of better health care. On the other hand, if there are more expenses on food, then it is quite possible that the household also have the ability of more expenditures on health care.

The result shows that foreign remittances, total monthly income, number of income earners show a positive and significant impact on household good health status. It is also shown that almost all categories of father and mother's education show a positive impact on household good health status. In the same way, it is also analyzed that household size has a negative and significant impact on household good health status. Total monthly expenditure on food consumption also shows a positive and significant impact on household good health status.

CHAPTER 7

CONCLUSION AND POLICY RECOMMENDATIONS

7.1 Conclusion

The research study investigated the impact of foreign remittances on household welfare. Five dependent variables, i.e. education, wealth score, food consumption score, poverty and health status are used to investigate household welfare and its relation with foreign remittances. All of these variables are discussed one by one and detailed conclusions are given.

7.1.1 Education

On the basis of our results, we conclude that remittances positively and significantly affect household education. Remittances raise the income of remittances receiving households and help these households in financing the educational expenditure. Therefore, remittances receiving households comparatively spend more income on education. It also means that as compare to non-receiving households, remittances receiving households relatively acquire more human capital. This idea also certifies the concept that higher income leads to more investment on human capital. School enrollment of children between 5 and 18 years of school going age are also found to have a positive relationship with foreign remittances. On the other hand, the impact of control variables such as total monthly income and father and mother's education on education are also analyzed. Total monthly income has a positive impact on household education expenditure which leads to an increase in the household education status. Parental education level is also significant variable which positively affect the total monthly expenditures on education. Thus parental education level creates positive externalities which lead to educated society.

7.1.2 Wealth Status

The results show that foreign remittances have a positive and significant impact on household wealth status. Remittances receiving households have been found with good wealth status and more assets than non-receiving households. The most important determinant of wealth score is total monthly income of a household. Total monthly income has a positive and significant impact on household wealth score. It shows that increase in total monthly income pushes up the wealth score of a household. Father's education also has a positive and significant relationship with household wealth status. Similarly, higher education status of master level for mothers also has a significant and positive relationship with household wealth status. In addition, household size has a positive and significant impact on household wealth status. This shows that most of households live in an extended family system in the research area where this study is conducted. The extended family system leads to more income earners and hence it positively affect the total monthly income and household wealth score.

The wealth score is divided into five different categories of wealth (Lowest, Lower, Medium, Higher and Highest), to investigate the presence of household type in these categories. In a lowest group of wealth status, the presence of non-receiving household is greater than receiving, whereas in highest wealth group the presence of remittances receiving households is greater than non-receiving household. Furthermore, the research study develops a comparison between wealth status and food consumption. It is concluded that poor performance household in wealth score is also weak in food consumption score. It means that a low level of wealth status household also leads to weak in food consumption. If households have a high level of wealth status then their food consumption also be on the extreme.

7.1.3 Food Consumption

The results show that foreign remittances have positive and significant effect on household food consumption score. In other words, remittances receiving households spend more than non-receiving household for the purpose of food expenditures. A big share of incoming remittances is used for the purpose of food consumption. It has been noted that foreign migration improves the quality and quantity of food consumption. Total monthly income of the household and total monthly expenditure on food consumption have a positive and significant impact on household food consumption score. Father's education is not an important variable determining food consumption, on other hand mother's education shows a positive and significant relation with food consumption. Basically, food consumption score is directly related to mother's education, if a mother is well educated then she provides balanced food items to the family. However, if a mother is not educated, then it not easy for her to provide balance food to the family. On the other hand, father's education is indirectly related to affect food consumption score. If a father is well educated then household income increases which in turn positively affects food consumption score. Besides that, household size also shows a positive and significant relationship with food consumption. It suggests that remittances receiving households are more secure than non-receiving households in food consumption.

7.1.4 Poverty

Household poverty is measured according to international standard of WB definition about poverty. Poverty analysis is developed on the basis of moderate poverty which is below two US$ per day (< 2US$). Results show that 76% of the remittances receiving household are above the poverty line, whereas only 8% of non-receiving households are above the poverty line. It should be noted that the overall percentage of the above poverty line in both households is 58%. This

means that foreign remittances have a negative impact on household poverty level, if a household receives foreign remittances then that household has fewer chances to be below the poverty line. In other words, as a household turns from non-receiving to a receiving household its probability of being non-poor also rises. Results obtained clearly indicates that there is an inverse relationship between the household size and non-poverty status of the household. This means that as the number of family members rises the household moves form non-poor to poor.

Results show that total monthly income has a negative relation with poverty. In addition, the increase in income leads to reducing the probability of household poverty. It clearly indicates that income of the household can play an important role in the reduction and elimination of household poverty. Similarly, number of income earners in the family can also play a vital role in household poverty reduction. The outcomes indicate that an increase in the total number of income earners in the family leads to decrease the household poverty. It is obvious from the results that more the number of earners in the family, less the chances of poverty of that household. Father's and mother's education also play a significant role in poverty reduction if father and mother are more educated then that household is more likely to be non-poor.

7.1.5. Household Health Status

Household health status is measured in order to determine that whether households can fulfill the basic healthcare needs or not. The separate results for remittances receiving and non-receiving households show that 83% of remittances receiving household can afford the basic healthcare needs. On other hand only 36% households among non-receiving households are able to fulfill the basic health facilities. These statistics show that foreign remittances improve the

household health status. As compared to non-receiving households, remittances receiving households can easily purchase the health services. The higher income level of remittances receiving households enable them to get better health services. While on the contrary, it is very difficult for non-receiving households to purchase the basic healthcare needs. In Pakistan, where public hospitals are not well equipped with the modern technology, often provide low standard health services. Most of the remittances receiving households avail better health services of private hospitals. On the other hand, non-receiving households get low-standard services of public hospitals and they can't afford the private hospitals. Total expenditure on health services are higher for remittances receiving households.

The results further reveal that for remittances receiving households the chances of being weak health decline. In other words, as a household turns from non-receiving to a receiving household its probability of better health status rises. Monthly income and good health status of the household are positively correlated. The results clearly indicate that household income can play the main role in attaining the better health care facilities. The results further show that parental education increases the probability of being good health position. Thus, levels of parental education positively contribute in attaining better health status. Household size adversely affects the household health status. Increase in household size increase the number of dependent members in household which in turn reduces the probability of better health status. Thus rise in the household size pushes household from better health position to weak health status. It is obvious from the result that more the food consumption expenditures in the family less the chances of poor health in the household. The more the household is spending on food/diet, there are more chances of a balanced diet. Subsequently, fewer chances of illness of family members and easy to fulfill

the needs of better health care. On the other hand, if there are more expenses on food then it is quite possible that the household also have the ability of more expenditures on health care.

7.2 Policy Recommendations

This research study is about the incoming foreign remittances and its contribution to household welfare. The research study concluded that foreign remittances contributing well to household welfare, but still have some deficiencies or weak points and problems which needed more attention and consideration from related government authorities. There are still rays of hope for more development that it can contribute more at household level, locally and nationally. The main points of policy recommendations are based on our study area and other important aspects of this research study, i.e. migrated country, migrant skills & qualification, nature of the job and channels used for incoming remittances.

The study shows that most people of the study area migrated to KSA, i.e. 92%. Indeed, the initial visa cost of most of the migrant is paid by family members, relatives, friends, and the villagers. Therefore, most people who are going to the migrated abroad initially they are engaged up to two years in returning the initial cost of visa due to higher prices of visa almost 600,000 PKR. Hence, it is needed on behalf of the policy makers to develop a proper policy, which should reduce the role of agents (due to which the price of visa rises). This will make it possible for the immigrants to settle in a foreign country in less time. In addition, this will also allow to poor income household to bear the initial migration expenditures.

The study discloses that major portion, 40% of the immigrants have a primary level of school education, 26% have no formal education and only 4% of immigrants have a qualification of graduation and post-graduation. Therefore, this low level of qualification adversely affects their earnings and most of the immigrants are employed as a laborer. The government should initiate as a policy steps to provide better formal education and educational facilities for the young generation of the country. In addition, the country also needs to give technical education in order to generate more skilled workers. Good education and technical skill improve the communication skill, competence, productivity and output of the workforce. The people who are going abroad are more educated and have technical skills, then it is more likely that they will get good jobs or considered skilled workers. Hence, they will earn more money and will have good status in the migrated country. Subsequently, this will also increase the overall remittances of the country.

This study also revealed that 36% of migrants are working as a labor, 24% delivers private services, 21% are employed as drivers and only 5% working as plumbers & electration. However, only 7% of migrants have their own business and that is not too much impressing. The major share of labors leads to lower income earnings and as a result the total volume of incoming remittances is adversely affected. While they are working hardly and working in a more risky environment, but they are still earning less. Thus, it is needed to train these labor force through a proper program of technical training, which will definitely improve their competence & their earnings. In addition, the government also needs to make such policies which encourage that migrants to start their businesses in order to generate more remittances.

It is identified in this research study that the major portion of the remittances received was spent on nonproductive and capital intensive sectors like real estate, construction of houses, vehicles, home appliances etc. A big share of this major portion is invested in the real estate business sector, which is capital intensive and nonproductive business. If this massive amount is used in the labor intensive sector, then it will create a lot of jobs and providing funds to all of the developmental projects within the country. Therefore, it is very important and needs of the time to design a policy for the better utilization of remittances. The migrants should be guided properly where they can invest their incomes in some profitable and productive businesses. This will not only enhance the profits but also provide employment to the local people. They are need to be advised to save their money for future investments in order to contribute to the domestic and the national economy.

This research study analyzes that most of the migrants are young. According to the data presented almost 58% of migrants belong to the age between 22 to 35 years. This high ratio of youngsters has the ability to contribute long-term incoming remittances for their families as well as for the country's economy. Therefore, policies need to be made regarding the young migrants so they may be able to earn more and send home in a safer way in the long run. On the other hand, some kind of compensations should be enforced on the relevant authorities so that they may return home with proper rewards.

Indeed, migrants living abroad for more than 10 years have a share of 29% in our total sample size of migrants. These migrants are contributing to the economy for a long time period. In case of any abnormal situation, they are not treated in a proper way because there are no clear

policies to solve the problems migrants have. Although the overseas foundation has been playing its role to a very limited extent. There should be some dedicated department or ministry so that the issues regarding migrants be tackled in a more serious way. In this way, they may be encouraged by facilitating them properly.

Previous government established a policy related to incoming foreign remittances with the cooperation of SBP and WB where the authority was given to commercial banks to deal with incoming remittances in the interest of formalize the channel. Incentives were provided to both money transfer agencies and remittance senders. The procedure was made easier, more secure and legalized. But, still maximum numbers of the migrants almost 68% in the survey area are using the informal and illegal way (Hawala/Hundi) to send the remittances. Hence, more awareness and facilitation is required for the attraction of formal channel.

After 2000 foreign migration increased rapidly and also further increasing with respect to time. Due to this rapid increase in migrant numbers, the volume of remittances is also affected positively. For policies making authorities, it is also important to develop a proper plan for the future that how to utilize the inflow of remittances for development. Institutions and organizations need to work regarding this issue to develop proper planning and strategies for economic development.

Some of the migrants lost their lives during foreign migration which also create many social and economic problems for leaving behind families. One of the main reasons is that there is no clear policy about life insurance in most of the countries regarding migrants and specially

labors. Therefore, it is needed that there must be some policy regarding compensations to the migrants along with the health and other facilities. This policy will allow a family who lost their relative during migration can fulfill the economic needs.

Some migrants are migrating illegally to developed countries through illegal channels and illegal way, sometimes it leads to loss of migrant's life. This illegal migration negatively affects the dignity and respect of the country. On the other, this also increases the problems of legal immigrant because the host countries adopt strict policies even for legal migrants. The government should take steps against the agents (who send people abroad through illegal ways) in order to control illegal migration.

Some of the migrants are involved in illegal activities in host countries, which also earns a bad name for the nation. The government should take steps to ensure check and balance and give proper training related to migration laws and income earning related activities. This will allow in order to demoralize a short term way of wealth earning in an illegal way.

There are some problems in a research study area that are lack of agricultural land, inappropriate infrastructure for industries, fewer business opportunities, lack of jobs in private sector & government sector and only 6% of individuals earn 60,000 PKR locally. Therefore, most of the individuals in the study area choose to migrate abroad for better opportunities. As a policy, it is needed to develop infrastructure for industries, power generation, mining and tube wells for agriculture sector. In addition, it is also needed to provide incentives to the private sector for

business development. This will provide employment opportunities locally and as a result the prosperity might be possible at locally in the long time period.

The other main problem in the study area is the female participation. Due to lack of educational facilities for female and the traditional way of life style where females are usually not allowed to work and also lack of job opportunities. The contribution of household female members is very low and in total sample size only 10 females are doing job. It is needed from policy authorities to provide better educational facility, motivation, other technical skills and vocational training programs on their doorstep. So that they can able to contribute to the economic prosperity of their families.

7.3 Future Research Work

The main and important aspect of this study is to review and explore the existing scenario in the area and to examine the relationship among the variables and their socioeconomic impacts. However, this study still has some gaps, which will be addressed in future. Current study which is based on one district, therefore it is quite possible that this kind of studies is made on divisional, provincial, national and regional levels in more details addressing different other aspects as well. Such studies might also be made in order to capture the role of remittances in the national and regional economies at the macro level and under international scenario where macro indicators can be used like imports, exports, savings, investment, employment, national incomes, the balance of payment etc. Similar studies might be conducted where the existing variables may be taken along with different other variables and in different aspects and dimensions, where the indicators might be different for socioeconomic impacts. Studies addressing long run immigration policies may be

conducted where the pre and post migration processes can be studied and recommendations be put forwarded accordingly. Similarly, the pre and post immigration socioeconomic conditions of the migrant's families can also be examined in future. On the other hand, a study can also be done in order to investigate the reasons behind the use of informal remittances channels. This study will answer the questions such as why people send remittances through the informal channel and how the migrants can be attracted to the formal channel. Besides that, a study can be also be performed in order to examine that how foreign remittances can be made more productive.

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APPENDIX

QUESTIONNAIR

Section.1. Basic Information/ Background Information

Q.1.1. Name of the respondent_____

Q.1.2. Age_____

Q.1.3. Gender

a. Male
b. Female

Q.1.4. Educational level of respondent

a. No formal education
b. Primary school
c. SSC
d. HSSC
e. Graduate
f. Master & higher

Q.1.5. Tehsil

a. Adanzai
b. Balambat
c. Khaal
d. Lal Qilla
e. Munda
f. Samarbagh
g. Timargara

Q.1.6. Type of household

a. Remittances receiving
b. Non-receiving

Q.1.7. What is the type of your family?

a. Nuclear
b. Joint
c. Extended

Q.1.8. How many family members (including children) do you have? _____

Q.1.9. Total monthly income of household in PKR _____

Q.1.10. What is your total monthly expenditures in PKR _____

Section.2. Educational Status of Household

Q.2.1. How many children below 18 year school going age _____

Q.2.2. Male children_____

Q.2.3. Female children_____

Q.2.4. How many of male children are currently going to school _____

Q.2.5. How many of female children are currently going to school _____

Q.2.6. Total monthly expenditures on education PKR _____

Q.2.7. Father's education_____

a. No formal education
b. Primary school
c. SSC
d. HSSC
e. Graduate
f. Master & higher

Q.2.8. Mother's education _____

a. No formal education
b. Primary school
c. SSC
d. HSSC
e. Graduate
f. Master & higher

Section.3. Information about Migration

Q.3.1. Number of family members working abroad _____

Q.3.2. Migrant gender

a. Male _____ b. Female _____

Q.3.3. Migrant age 1._____ 2._____ 3._____ 4._____

Q.3.4. Migrant's educational level (You can encircle more than one option)

a. No formal education
b. Primary school
c. SSC
d. HSSC
e. Graduate
f. Master & higher

Q.3.5. What is the nature of work of earning persons overseas? (You can encircle more than one option)

a. Govt. Service
b. Private Service
c. Driver
d. Business
e. Plumber
f. Electrician
g. Labor/Daily Wage labor
h. Other_____

Q.3.6. Duration of stay abroad

a. 2-5 years
b. 6-10 years
c. 11-15 years
d. 16- 20 years
e. 21-25years
f. 25-30years
g. above

Q.3.7. Who is sending remittances to the family? (You can encircle more than one option)

a. Father
b. Brother
c. Uncle
d. Son
e. Others _____

Q.3.8. Total amount of remittances received per month by the family in PKR _____

Q.3.9. What proportion of your monthly expenditure is financed through remittances?

a. Less than 25%
b. 25% to 50%
c. 51% to 75%
d. Above 75%

Q.3.10. What was the cost of migration/ cost of Visa PKR _____

Q.3.11. What is the maintenance cost of visa per year PKR _____

Q.3.12. What is the income of migrated person per month PKR _____

Q.3.13. Living cost of migrated person per month PKR _____

Q.3.14. In which country he/she (they) work(s)?

a. Saudi Arab
b. Arab Emirate
c. Other _____

Q.3.15. Channel used for remittances

a. Bank
b. Money transfer agency
c. Hundi
d. Relative/friend
e. Other…….

Section.4. Information about Domestic Earnings/ Home Country Earnings

Q.4.1. Total numbers of domestic earning persons other than overseas _____

Q.4.2. What is the nature of work of domestic earning persons male? (You can encircle more than one option)

a. Govt. Service
b. Private Service
c. Labor/Daily Wage labor
d. Business
e. Agriculture/Livestock
f. Other_____

Income in PKR.1._____2._____3._____4._____

Q.4.3. What is the nature of work of domestic earning persons female?

a. Govt. Service
b. Private Service
c. Labor/Daily Wage labor
d. Business
e. Agriculture/Livestock
f. Other_____

Income in PKR.1._____ 2._____ 3._____

Q.4.4. Total production of wheat (in Kg) _____

Q.4.5. Cost on wheat production PKR _____

Q.4.6. Which quantity of wheat do you use for home Kg _____

Q.4.7. Total production of maize Kg _____

Q.4.8. Cost on maize production PKR _____

Q.4.9. Which quantity of maize do you use for home Kg_____

Q.4.10. Total production of rice Kg _____

Q.4.11. Cost on rice production PKR _____

Q.4.12. Which quantity of rice do you use for home Kg _____

Q.4.13. How many livestock do you own?

a. Large animals'_____
b. Small animals' _____
c. Poultry _____

Q.4.14. Income from any other business or source _____ PKR per month

Section.5. Wealth Status of Household

No	**Assets**	How much you own currently?	No	**Assets**	How much you own currently?
5.1	Sewing machine		5.8	Cooking range/Cooking stove	
5.2	Cloth presser/Iron		5.9	Cell phone	
5.3	Fans		5.10	Juicer machine	
5.4	Motorbike		5.11	Animal Shelter	
5.5	Heavy vehicle		5.12	Fridge	
5.6	Car		5.13	Television/Computer	
5.7	UPS/Generator		5.14	Washing machine	

Q.5.15. What is the type of your house?

a. Lenter/cement made
b. Mixed from cement and mud
c. A house made with iron sheet roof
d. House made by mud

Q.5.16. Numbers of rooms in your house _____

Q.5.17. Do you have a separate washroom?

a. Yes
b. No

Q.5.18. Do you have a separate kitchen?

a. Yes
b. No

Q.5.19. Any other type of assets _____ PKR

Section.6. Food Consumption Status of Household

No	Items of food eaten inside the house	No. of days (From the whole week)
6.1	Cereals: wheat, bread , rice, maize	
6.2	Dhal, beans, lentils, peas, nuts	
6.3	Vegetables	
6.4	Fruits	
6.5	Meat, poultry, fish, eggs	
6.6	Milk, cheese, yogurt	
6.7	Sugar, honey	
6.8	Oil, ghee, butter	

Section.7. Health Status of Household

Q.7.1. During last month, how many times children of this household fell ill? _____

Q.7.2. During last month, how many times elders of this household fell ill? _____

Q.7.3.In case of illness of children whether go to?

a. Govt hospital
b. Private appointment
c. Dispenser/local doctor
d. Homeopathic/Hakim
e. Self-medication.

Q.7.4. In case of elders whether go to?

a. Govt hospital
b. Private appointment
c. Dispenser/local doctor
d. Homeopathic/Hakim
e. Self-medication.

Q.7.5. Does monthly income fulfill the needs of health care?

a. Yes
b. No

Q.7.6. Distance of hospital from your house _____ Km.

Q.7.7. Access to the health care

a. Easy
b. Somewhat difficult
c. Difficult
d. Very difficult

Q.7.8. Which type of water do you use for drinking?

a. Govt Tubewell
b. Own water well
c. Hand pump water
d. Water Springs
e. Other…….

Q.7.9. Total cost on health per month PKR _____

Q.7.10. Total cost on food consumption per month PKR _____