Impact of Remittances on Household Welfare and Human Capital Formation

A Case Study of District Mirpur (AJ&K)

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Syeda Zahra Naqvi

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Supervisor:

Dr. Hafiz Muhammad Yasin

Co-Supervisor:

Mr. Malik Muhammad

INTERNATIONAL INSTITUTE OF ISLAMIC ECONOMICS

INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD

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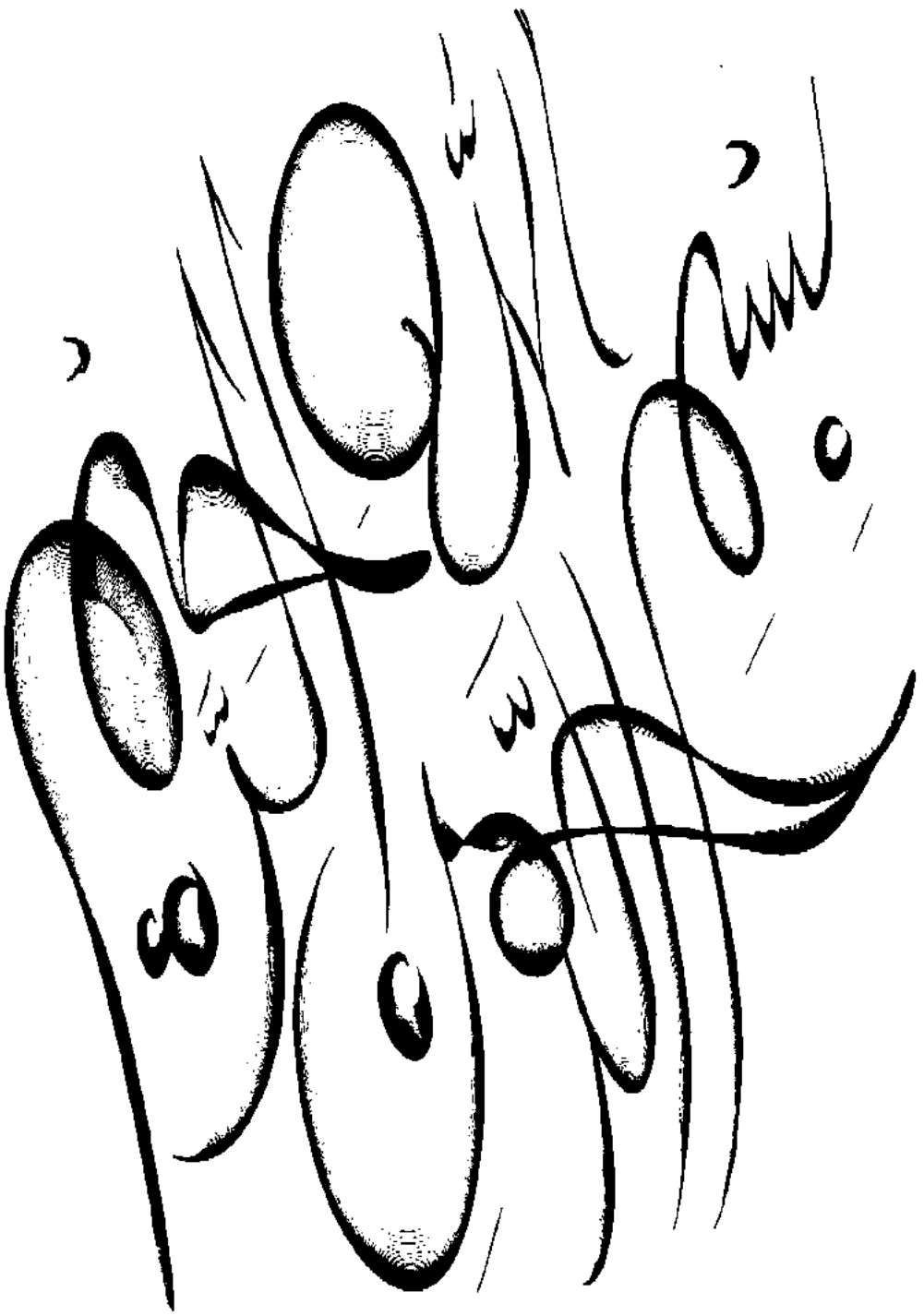
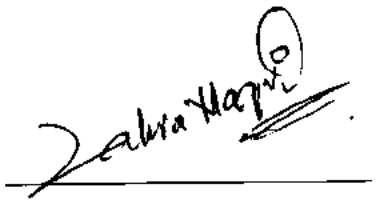


DECLARATION

I, Syeda Zahra Naqvi, do hereby declare that the work contained in this document is my own accomplishment and that the works of other scholars referred to here have been duly acknowledged. I also declare that this thesis is original and has not been submitted elsewhere for the award of a degree.



Syeda Zahra Naqvi

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ACRONYMS

NELM	New Economics of Labor Migration
ODA	Official development assistance
FDI	Foreign direct investment
GDP	Gross domestic product
P & D	Planning and development
AJK	Azad Jammu and Kashmir
NGO	Non-governmental organization
UC's	Union Councils
MC	Municipal committee
TC	Town committee
TEM	Treatment Effect Model
ATE	Avcrage Treatment Effect
%	Percent

ABSTRACT

Remittances not only increase the household budget and reduce liquidity constraints but also allow more consumption and investment. In particular, remittances enable the households to invest in human capital of children, a key outcome from the perspective of growth in a developing country. During the last three decades, the inflow of international remittance is continuously increased in Pakistan and has been estimated about 14 billion dollar in the fiscal year 2014.

The main purpose for the study is to check the impact of remittances on household welfare as well as investment in children education in remittance receiving and non-receiving households of District Mirpur AJ & K. Household consumption expenditure were used as a proxy to measure the household welfare and investment in children education. The primary data were collected from 12 union councils, 1 municipal committee and 2 town committees. The sample size was around 600; out of which 275 were remittances receiving and 325 were non-receiving households. The results derived by using the simultaneous equation model and to give support to these results, Treatment effect model was also used which deal with the selection biasness. The results of simultaneous equation model show that the overall consumption expenditure of remittance receiving households is Rs. 8509.606 higher than non-receiving households. Similarly, the investment in children education of remittance receiving households is Rs. 4724.78 higher than their counterparts. Moreover, the results of treatment effect model also reveal that household welfare and investment in children education is 58% and 113% on average higher in remittance receiving households than their counterparts respectively and the significant Inverse Mills ratio show that selection bias is corrected in the model.

In the model, age of household head, education of household head, nature of employment, household size, total income and asset possession positively affects whereas dependency ratio negatively affects the household overall consumption expenditure and investment in children education. The findings support the optimistic view that remittances improve the household welfare and investment in human capital of children in remittance- receiving countries.

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CHAPTER: ONE INTRODUCTION

1.1 Background of the study

Migration, whether internal or external, and whether willfully or forcefully, has been practiced throughout the world history. The movement of individuals or groups from backward and less developed to advanced countries usually takes place for economic benefits, better employment opportunities, higher living standard, and other kind of social and economic development[1]. The overall number of international migration has increased in the last few years from the estimated 152 million in 1990 to 173 million in 2000 and to 244 million by 2015. The number of persons migrating abroad increased by 41% over the last 15 years (Trends in Migration Stock, 2015).

The present study is intended to evaluate the impact of remittances by the migrants of District Mirpur Azad Jammu & Kashmir on the welfare of their families left behind in general and their children education in particular. The trend of migration from Mirpur to Europe started in the 19th century. According to an estimate, about one half of the population of this area is now living abroad. Some of the migrant families have settled in Europe permanently. About one third of a million of Britain's population belongs to this small area (Ballard, 2003)[2]. Mirpur was in a state of economic ferment during 1970's. However, no other section of South Asia now supports the more active

[1]Standard of living: "A level of material comfort as measured by the goods, services, and luxuries available to an individual, group, or nation". details www.investopedia.com/terms/s/standard-of-living.asp

[2] "Roger Ballard is the Director of the center for Applied South Asian Studies, University of Manchester, UK"

circulation of assets on global level than Mirpur. We highlight the historical sketch in some detail in the next section.

According to new economics of labor migration (NELM) theory "Migration is seen as part of a broader household livelihood strategy to diversify income sources and overcome social, economic and institutional development constraints in origin places". The idea was floated by analyzing the migrant's behavior in social context. Migration is not an individual decision but it is made by households mutually. This is because households act altogether to maximize their income and also minimize the risks and overcome the constraints occurred due to market inadequacies in the source area. Migration decision is also influenced by the behavior of other people within the migrant's social network. The theory focuses on risk sharing behavior of households and shows that migration and therefore remittances allow the families to reduce the credit constraints and insurance issues in case of shock (Stark, 1991).

Migration can affect economic conditions in the short run as well as in the long run, both positively and negatively. There are so many factors, which are important for the improvement of society's standard of living. One common factor that is associated with migration is the transfer of money to developing countries. Remittances not only include the money but also the goods that are transmitted by the migrant workers to their families left behind. It can lead to better standards of living and help improve the education and health standards of households. On the other hand, the movement of educated people from developing countries creates substantial deficiency of human capital at home. It is often referred to as the 'brain drain' in the sense that when large numbers of learned people, doctors, engineers and other skilled workers are constantly

emigrating in search of better jobs, the development of their home countries is adversely affected.

The impact of remittances on migrant's families and the home countries has been a matter of concern for the economists. Migration, and consequently remittances, has not only significant effects on the living conditions of recipient households at micro level but also have profound effects at macro level like eradication of poverty; economic growth etc. in developing countries. Ozden & Schiff (2006) argues that remittances enable the migrant households to invest more in human capital along with physical capital, which is important for long run growth prospects of the developing countries. According to Sen (1999), spending in children education is considered as a productive investment to enhance capabilities in the long-term and also as an income assurance strategy in the short run. De Hass (2007) summarized that households consider remittances as a co-insurance strategies, which have potential to improve the welfare of household's, boosts the economy and help in eradication poverty directly and indirectly.

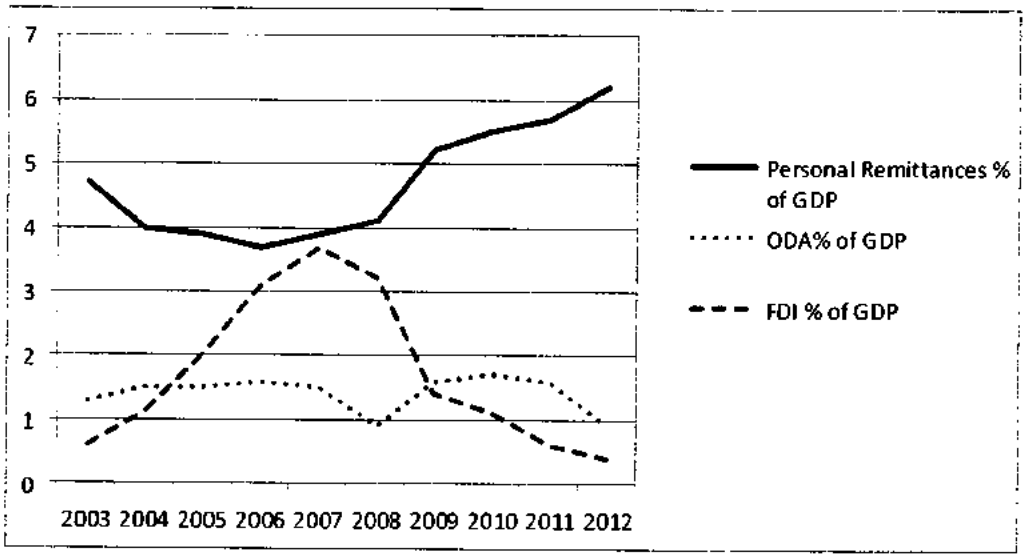
Table 1.1 Phases of Research Agenda in Migration, Remittances and Development

Years	Research Scheme	Policy Focus
Before 1970's	Optimistic views regarding migration, Remittances and Development.	Development take-off, through transfer of capital and knowledge by migrants.
1970 - 1990	A rise in pessimistic views due to dependency & brain drain.	A rise in Scepticism for migration in development field.
1990-2001	More pluralist & refined views on migration and development emerged and household livelihood approaches evolved	Immigration policies became more tightened.
After 2001	Mixed, generally positive views for remittances and development.	Increase in remittances led to optimism & turnaround from brain-drain to brain-gain.

Source: De Hass (2007)

Table: 1.1 shows that during 1950's and 1960's, the policy focus of development was predominated by the political moderators and patriots. From 1970's onwards, a drastic change has occurred in the views of optimists as they link remittances with the welfare of migrant's families, mostly in developing and third world countries. A lot of debate and research is gaining importance on the role of remittances in development process. The increasing flow of remittances to developing countries over the last three decades reveals its importance. In 2003, the developing countries were receiving about US$ 75 billion remittances. However, this flow increased to US $550 billion in 2013, out of which US $441 billion were transferred to developing countries (World Bank, 2013).

Figure 1.1 Shares of Workers remittances, ODA and FDI to GDP



Source: The World Bank, 2013

International remittances constitute the largest source of foreign exchange earnings. International remittances exceed even the Foreign Direct investment, Official development assistance and export earnings in many developing countries (see Fig.1.1).

In 2012, Pakistan received US $14 billion as against US $3 billion in 2003, which shows a positive and significant growth.

However, instead of nominal increase in monetary flow, researchers are always interested to know the real impact of these flows at micro and macro level. In past, studies showed the direct impact of remittances on income and hence on the eradication of poverty, which is obviously not controversial. However the matter of concern is the non-pecuniary consequences of remittances for health, education, and other socio-economic issues. In general, less attention has been paid to analyze the economic effect of remittances on household welfare and investment in human capital in particular despite the fact that spending on health and education is an important aspect of household welfare and a key determinant of future productivity. The current study is aimed to explore the consequences of remittances towards education in the area of district Mirpur, AJK.

1.2 History and consequences of emigration from District Mirpur AJK

There are ten districts in the state of Azad Jammu & Kashmir, and Mirpur is one of them with 1010 square kilometers of total area. The population of district is 0.371 million with a 2.09% per annum growth rate (P & D AJK, 2013). The literacy rate has increased from 55% to 74 % during the period 1998-2013. The unemployment rate per annum is 13%. The rural-urban ratio is 88:12. Area under cultivation is around 22019 hectares and the cultivable area is 92%, which is under rain-fed. The major crops in the district are bajra, maize, jawar, rice and vegetables. The income from agriculture and livestock constitutes 30-40% of total earning of households, whereas income from property, business, employment and remittances are other sources of income. It is

assumed that the high level of emigration from Mirpur district has resulted from submerging of cultivable land beneath the Mangla Lake in year 1960, but it is infact a process which had begun many years before the dam was even thought of. At the closing decade of 19th century, Mirpuri villagers worked as stockers on British merchant ships. During the early decades of 20th century, the demand for labor increased due to expansion of British coal-powered trade and seamen began to recruit ever large numbers of labor force. Migration from Mirpur and the neighboring areas started right after the II World War as majority of the population of this area and Potohar region were already working in British armed forces. After the post war boom they also called their kinsmen to join them, so the process of chain migration started. A large number of people migrated after the Mangla Dam project in 1960's and submerged over 1700 acres of fertile land and nearly 300 villages. The situation proved to be a new strong and prolonged push factor for migration.

As a result, over half of the population of many villages now lives abroad, while one third of a million of Britain's population belongs to this small area (Ballard, 2003)[3]. Mirpur was in a state of economic ferment during 1970's. No other section of South Asia now supports the more active circulation of assets on global level than Mirpur.

The area was considered to be a rural and conservative. However, after emigration the land was no longer the core mean and source of production. Cultivation was replaced by migration to Europe and remittances started flowing from UK to AJK since late 1960s onwards. According to Ballard (2003), the emigrants are in active communication with their families and remitting between £500 million and £1 billion

[3] "Roger Ballard is the Director of the center for Applied South Asian Studies, University of Manchester, UK"

back home annually. This flow has far reaching impact on the local economy of district Mirpur. The vacuum due to emigration of cultivators is being filled by the migrant's economy that has evolved over the past four decades through different phases, starting from property business and construction boom. Immediate effect of construction boom has also caused a rise in wage rates due to growing demand for labor. This is followed by construction of hotels, malls, banks, branches of branded outlets from Pakistan. The private schools, hospitals and clinics are also the two most thriving businesses. Though inflow of remittances provides a sharp boost to local economy, however the youngster's prefer to wait for a call inviting them to join their kinfolks abroad. Rather than regarding remittances as a source of capital to build a better future for them in Mirpur, majority consider the money as an opportunity to finance a more luxurious lifestyle.

So the district prosperity is sure enough in financial term but there is lack of productive investment, which is needed to be studied thoroughly. According to Hunzai (2010), remittances to households are 25% of total household income on the average in AJK. Remittances are the main sources of income in urban areas of district Mirpur in general and in rural areas specifically. It is matter of common sense that households receiving remittance are better off than those who do not receive remittances.

1.3 Problem Statement

Many studies have been carried out at micro level, which examined the relationship between remittances and the household welfare and found significant positive impact on the living conditions of recipient's households (Acosta,2007, Adams and page, 2005, Bouoiyour & Miftah, 2014; Niaz et al, 2010; Theodore & Torosyan, 2010; Khawar et al. 2014; Sarfraz et al, 2009). The results reveal that remittances

enable the households to meet their basic needs and increase their expenditure on food, clothing, health, education, housing and other durable and non-durable goods, all directed to enhance their life style. Some studies, however, consider investment in human capital to be a matter of prime importance since investment in health and education has not only strong positive relationship with long-term prosperity of migrants families at micro-level but also concerned with long run prospects of economic development at macro-level (Cox & Ureta, 2003; Adams and cuecuecha,2010; Gyimah-Brempong & Asiedu, 2014). These studies support the NELM theory that migration and remittance positively affects the growth through the medium of human capital development.

On the other hand, a few studies have shown contradictory findings. For instance, Jampakely (2006) concluded that migration had negative effects on the education of children left behind. McKenzie & Hildebrandt (2005) showed positive impact of migration and remittances on child health but no effect on education. Remittances provide the most tangible link between migration and development. According to some estimates, remittances contributed to approximately 10% of GDP in 24 countries in 2011 and more than 20% of GDP in 9 countries (The Migration Policy Institute, 2012). Despite the fact that remittance flows are increasing, there is deep concern with the productive use of these flows in developing countries. Many studies have been already taken out to see the effect of remittances on poverty eradication and household welfare. However, the impact of remittances on the social standards, gender issues, health, education and other productive areas still remains unexplored and needs to be investigated. Less attention has been given to the impact of remittances on human

capital of children, which has long term consequences not only for migrants' families but also for the development and growth of economy at large.

Mirpur is one of the highest remittances recipient districts of Azad Kashmir with quite a large number of people working abroad. However, the question as to how the money sent by the migrants is utilized by their families and how it affects their welfare in terms of human capital development is unexploited. The present research focuses on investigation of this important question.

1.4 Research objectives

- To analyze the impact of remittances on houschold welfare measured through overall consumption expenditure in district Mirpur, Azad Jammu & Kashmir.
- To analyze the impact of remittances on children's education by comparing the treatment and control groups.

The above objectives will be materialized by answering certain questions and testing certain hypotheses.

1.4.1 Research questions

- Do foreign remittances affect household welfare (measured in terms of overall consumption)?
- Do foreign remittances affect human capital formation (measured through expenditure on children's education)?
- Do the remittances recipient families spend comparatively more on education of children than the non-recipients?

1.4.2 Hypotheses

- H_o: Remittances have no impact on expenditure towards children education.

H_2: Remittances do have a positive impact on expenditure towards children education.

- H_1: Remittances recipient households do not spend more on children education as compared to their counterparts,

  H_2: Remittances recipient households spend more on children education as compared to their counterparts.

1.5 Significance of the study

The ongoing study is intended to find the impact of international remittances on household welfare. Consumption expenditure is used as proxy for the household welfare, i.e. Overall consumption expenditure of household, including food, non-food items, durable goods, health and expenditure on education in particular at monthly basis. There exists an extensive body of literature investigating the impact of remittances at macro-level as well as micro-level. We find some important studies that analyze the remittances and household living standards in general. However, there is no significant work available as far as our information is concerned that evaluates the relationship between remittances and household welfare in general and with human capital formation in particular in Azad Kashmir. So this study will be the potential contribution in examining the effect of remittances on welfare of household.

1.6 Scope and limitation of the study

Due to the time and resource constraints, the study is conducted in one tehsil of District Mirpur AJK. The study is based on collection of primary data through filling of questionnaire. Further, 7 union councils are selected out of 12 union council, one municipal committee and 2 town committees in the tehsil. To reduce the biasedness in

estimation, the households are selected randomly. In addition, only the most important socio-economic variables are included to observe the impact of remittances.

1.6.1 Field Experience

The area of study is basically hilly with only few plains. Due to lack of communication and infrastructure, it was not possible to reach all the far flung villages and widely dispersed households. However, with the help of union council sectaries and other local people, the task was completed without any major problem. Few difficulties did arise during the collection of data. For example, there is a large number of NGO's working in Azad Kashmir. Few are welcomed but mostly they are disliked by the people due to their cultural differences etc. In start, most respondents were hesitant to give information and they asked so many questions to get satisfaction that the questionnaires are only for the purpose of academic research. Later on the study purpose becomes clear; they not only appreciated but provided the required information in a friendly way.

1.7 Organization of work

This study has been divided into five chapters. Chapter one is an introductory part of the study. Chapter two reflects literature review on the impact of remittances on household's welfare and investment in human capital. Chapter three consists of econometric model and the research methodology. Chapter four analyses the descriptive statistics of remittance recipients and non-recipient families. Chapter five discusses the empirical results and analysis Chapter six concludes findings of the study and provides policy recommendations.

CHAPTER: TWO LITERATURE REVIEW

2.1 Introduction

Remittances typically act to ease the liquidity constraints of recipient households. Receipts of remittance not only allow households to increase their welfare by smoothing the consumption expenditure but also increase investment in human capital. It is belief that remittances are an effective instrument for income redistribution, poverty alleviation and growth of economy at large than bureaucratic development programs/development aid (Kapur 2003). Many studies have been carried out on the implication of migration and remittances at macro as well as micro level, which have shown mixed findings. Some of the empirical findings showed optimistic views about the effect of remittances at micro-level. However, certain researchers are showed pessimistic view about the effect of remittances at household level.

This section presents a review of past studies that assess the effect of remittances on household welfare and investment in children education. For the purpose of convenience, we divide the literature in to two parts. The first part refers to the studies held internationally whereas the second part concentrate on the studies related to Pakistan.

2.2 International studies

By using the basic growth-poverty model for 71 developing countries, Adams and Page (2005) estimated the impact of migration and therefore remittances on poverty. The results show that the depth and severity of poverty is decreased in these developing countries due to migration and remittances. Moreover, De Hass (2007) summarized from his conceptual study on migration, remittances and social

development that migration and remittances have potential to improve the welfare of household's, boosts the economy and help in eradication of poverty directly and indirectly.

A study like Raihan et al (2009) used data from HIES and explored the link between remittances and household welfare in Bangladesh by using household expenditure and poverty as proxy for household welfare. The results suggest that remittances positively affect the economy by reducing poverty. They showed reduction in headcount ratio of 1.70 out of 9 points due to increase in remittances. On the other hand, impact of remittances on household expenditure showed mixed findings like remittance had significant effect on household food and housing related expenditure but impact on health and education expenditure was positive but insignificant. Similarly, in eleven Latin American countries Acosta et al (2007) explores the impact of remittances on poverty, health and education by using nationally representative household survey. Their results indicate that about half of countries do not have significant impact of remittances on poverty. Their results appear significant for health and education. But these results also restricted to the specific group of population.

However, Theodore. Gerber & Torosyan (2010) tested as to how remittances affect particular type of household expenditure and other measures of well-being in Georgia. By using propensity score, they estimated the effect by matching remittances receiving household with those who do not receive. They found that remittances from abroad positively affect the household standard of living. At least in urban areas their savings increase due to remittances and also their expenditure on health and education increased.

A similar study by Bouoiyour & Miftah (2014) assessed remittances, household expenditures and poverty in Morocco. By using matching technique, they estimated that remittances increase households expenditure by 12,167*MAD (Moroccan dirham) per year in rural areas and by 21,799*MAD in urban areas.

A study by Anderson (2014) investigates the impact of remittances on household welfare by employing both objective and subjective measures of household economic well-being. By using matching approach, the findings show that remittances have positive impact on household subjective well-being. Likewise, the impact of remittances on asset accumulation has positive and significant, although the impact on productive assets is negligible. On the other hand, few studies showed negative views about the impact of migration and remittances on household welfare. In his study of Thailand, A. Jampakley (2006) concluded that migration has negative impact on the children left behind. Also Adams (2006) estimates a consumption function for non-recipients and by using OLS and a method of counterfactual, results suggest that effect of remittances on poverty and therefore welfare is generally low in Ghana.

Adams & Cuecuecha (2010) used nationally represented data from Guatemala and analyzed the effect of internal remittances and international remittances on the spending behavior of households. They found that at margin remittance recipients spend less on food, which they spend more without remittances. And remittance recipients spends 377% and 194% more on education, what they spent without remittances and on housing 136% more they spend.

A number of studies show that due to decrease in liquidity constraints, there is an increase in educational outcome for those who are left behind. Remittances promote

investment in the human capital by relaxing the budget constraint of families. Cox & Ureta (2003) using data from household survey of 1997 and investigated the impact of remittances and other sources of income on the school dropout in El Salvador. The results show a significant impact of remittances on school dropout. The impact in case of households receiving remittances of US $100 is greater for children in urban areas than in rural areas. For example, by receiving remittances, some of the financial difficulties faced by households and small businesses may be removed. A high rate of capital accumulation may be induced by remittances and the growth potential of the country is enhanced in the long-run.

Moreover, Yang (2008) analyzed the household investment and international migration in Philippine. The results of the study suggest that the remittances affect the household investment rather than consumption and remittances are used for investment in children education, to reduce child labor and increase self-employment.

However, Gyimah-Brempong & Asiedu (2014) estimate the impact of remittances on investment in education in Ghana by using cross section & panel data. They found that remittances have significant and positive effect on children education and this investment in human capital formation had long run impact on poverty reduction. Similarly, Kalaj (2010) examines the relationship between remittances and households decision about human capital investment in Albania. By using cox proportional hazard model, his findings suggest that hazard of school dropout increases in remittance recipient households after the end of secondary school.

Acosta (2006) analyze the impact of remittances and investment in human capital in El Salvador. Estimation suggests that positive effect appear in the age between 11-17

years old girls and 11-14 years old young boys. And results also suggest that remittances are negatively related to child labor. Similarly, Cordoba and Lopez (2006) found in Mexican households that, the more the transfers are higher the literacy and school attendance among 6-14 kids will be.

2.3 Studies Related to Pakistan

During the past decade and especially during the natural disaster of 2008, remittances to Pakistan have been increased. However, official transfers represent only the tip of the iceberg, up to 50% of recorded flows could be the cash shipments of unofficial remitted funds (World Bank, 2006). In the context of Pakistan, many studies have been conducted to see the effect of migration and remittances. The studies covered macro as well as micro-economic impact.

Available data indicates that most remittances to Pakistan are used in financing consumption, and only a small portion of inflows is spent on health and education. However, propensity to save on funds received in rural areas of Pakistan appears to be much higher as compared to other sources of income (Adams, 2002). The well-being of households is improved by the remittances in a way that their income and consumption is increased by the receiving of transfers.

Qayyum et al (2008) also examined the impact of remittances on economic growth and poverty in Pakistan for the period of 1973-2007. Their results suggest that increase in remittances reduces poverty in the long run, but in the short run remittances effect poverty negatively.

A study by Siddiqui and Kemal (2006) using a CGE model suggest that the income gap between urban and rural households is reduced by trade liberalization and remittances,

but for urban households the welfare gain from trade liberalization and remittances is larger than the households in the rural areas.

The study conducted by Arif (2004) suggests that remittances have positive effect on investment in children education in Pakistan. The expenditure of remittance receiving families is higher than the non-receiving families especially in investment related categories i.e., health education and housing rather than consumption categories. The results also suggest that for poor households migration decision is favorable for escaping from poverty.

Khan et al (2009) examine the remittances and the standard of living of families left behind by comparing before and after situation. McNamara chi-square test and Wilcoxon sign rank test were used to compare the difference in two situations i.e. before and after. Following a random sampling technique, data were collected from 100 emigrants' families. They reported a significant positive difference in living standard of emigrants' household before and after. Their statistical evidence cleared that monthly income of emigrants' families raised up to Rs.92640.00 after emigration as compared to Rs.11450.00 before emigration. Also expenditures on food, education, health and clothing increased from Rs.3595.00 to Rs.12240, Rs.796.00 to 4105.00, Rs. 604.00 to 1982.00 and Rs.875.00 to Rs.2257.00 respectively.

Niaz et al (2010) examined the role of remittances on migrant families left behind in strengthening the ability of left behinds against the risks of socio-economic life. For the purpose of their analysis, they sampled one hundred migrants' families from four villages of lower Dir of northern Pakistan. Their results suggest that remittances

positively affect the socio-economic condition of remittances recipient families by improving their standard of living.

Khan et al (2011) analyzed the effect of remittances on socioeconomic status of households in district Poonch of A J & K. The data were collected at household level. Their results suggest that remittances are main source of income in that area. Before migration abroad, the incomes of households concerned were very low, which significantly increased after emigration and hence their expenditure on durable and non-durable item also increased. The people were also satisfied with their current living standard. However, they also found a few negative impacts of migration and remittances like psychological disorder in women, children dropout from schools etc. Also, Khawar et al (2014) reached at similar conclusion about the remittances effect and household welfare in district Jhang and results reveal that foreign remittances receiving household spend more on food, clothing and education as compared to non-receiving household. Hence remittances are beneficial for improving the welfare of households.

By using Household Integrated Economic Survey (HIES) 2005-2006, Ahmed et al. (2010) examine the impact of remittances on household welfare in Pakistan. The study found that if the household receives remittance, poverty decreases by 12.7%. At macro-level, findings suggest that if remittances decrease, it tends to a fall in investment, household consumption etc. which in turn leads GDP to decrease and poverty to increase. The results also suggest that remittances increase the households' expenditure on food, education and clothing up to 74%, while an increase of 2.9% in education expenditure.

Another study in Pakistan Nasir et al., (2011) investigated the impact of remittances on school performance in Pakistan. Primary level data was collected from four major cities of Khyber Pakhtunkhwa; the OLS estimates show that there is negative impact of remittances on children performance. The results also show that the impact becomes insignificant when parental education is included as a control variable in the model. Their results suggest that for the academic performance of children, the low levels of parental education, income, assets possession, family type and household size play an important role. Chughtai (2012) analyzed the impact of migration on the living standard of households in district Bagh of AJ & K. The sample of 300 collected at household level. The results suggest that remittances constitute a major share of household's total income in the area, which showed positive and significant effect on income, consumption, asset ownership, education, health and housing status of migrant households.

On the other hand, in case of Mirpur Azad Kashmir Ballard (2003) found that Mirpuri people received huge remittances from abroad. Apart from benefits of remittances, few negative impacts of emigration have been noticed including children's education, socialization, insecurity and frustration among migrant families.

2.4 Gaps in the Literature

In conclusion, literature suggests that remittances reshape the households' expenditure by increasing their spending on food, non-food, durable & non-durable items. Remittances also enable the households to invest more in human capital along with

investment in housing and physical capital, which have long-term growth prospects of migrants' families at micro-level and also for the economic development of the country at macro-level. However, few studies show the pessimistic views regarding effect migration and remittances. But a large number of studies show optimistic view for migration and remittances, because they are considering remittances as a strategy to reduce poverty and unemployment through self-employment and also improve living standard of the families left behind. (Arif, 2004; Sattar and Iqbal, 2006; Qayyum et al 2008). So far as the case of Pakistan in general and that of AJK in particular is concerned, we do not find sufficient in-depth studies that concentrate on the impact of remittances on investment in human capital, particularly the education of children. The present study is an attempt to fill up the gap and draw some meaningful conclusions.

CHAPTER: THREE METHODOLOGY AND RESEARCH FRAMEWORK

The present research depends on the analysis of primary data collected from the rural and urban area of district Mirpur AJK. The main elements in this section includes universe of the study, selection of sample, construction of questionnaire, respondents and data collection, a econometric model for estimation, theoretical justification of the variables used and the methodology. These points are discussed below:

3.1 Universe of the study

According to Rubin & Babbie (2001), the study population is "that aggregation of elements from which the sample is actually selected".

There are ten districts in Azad Jammu & Kashmir, and Mirpur is one of them with 1010 square kilometers of total area. The population of district is 0.371 million (P & D AJK, 2013). Mirpur Geographically, Mirpur district is mountainous, with some cultivable plains, and lies at the point where the Jhelum River breaks out of the heavily forested foothills of the Pir Panjal mountains into the plains of the largely treeless Punjab. The city itself has passed through a process of modernization, while most of the surrounding area remains agricultural.

Mirpur district is divided into two sub-division, namely tehsil Mirpur and tehsil Dadyal (AJK at a glance, 2013). This study is restricted to tehsil Mirpur only. This tehsil is further divided into two subdivisions (called markaz), Mirpur and Afzal pur. Mirpur constitutes 8 union councils, 1 municipal committee and 2 town committees, whereas Afzal pur constitutes 4 union councils. For the purpose of this study, 4 union councils

have been chosen randomly out of 7 from Mipur markaz and 3 union councils out of 4 from Afzal pur. All the selected (4+3=7) union councils constitute about 70% of the rural areas of tehsil Mirpur. The urban areas included in the study comprise the single municipal committee of Mirpur city and two town committees of Mirpur. The layout is shown in the diagram.

3.2 Selection of Sample

Sample selection was based on multistage cluster sampling. For urban representation, the city is divided into 1 municipal committee and 2 town committees namely; Khaliqabad and Islamgarh. For representation of rural population, seven union councils of tehsil Mirpur were divided in to two sub-divisions listed below:

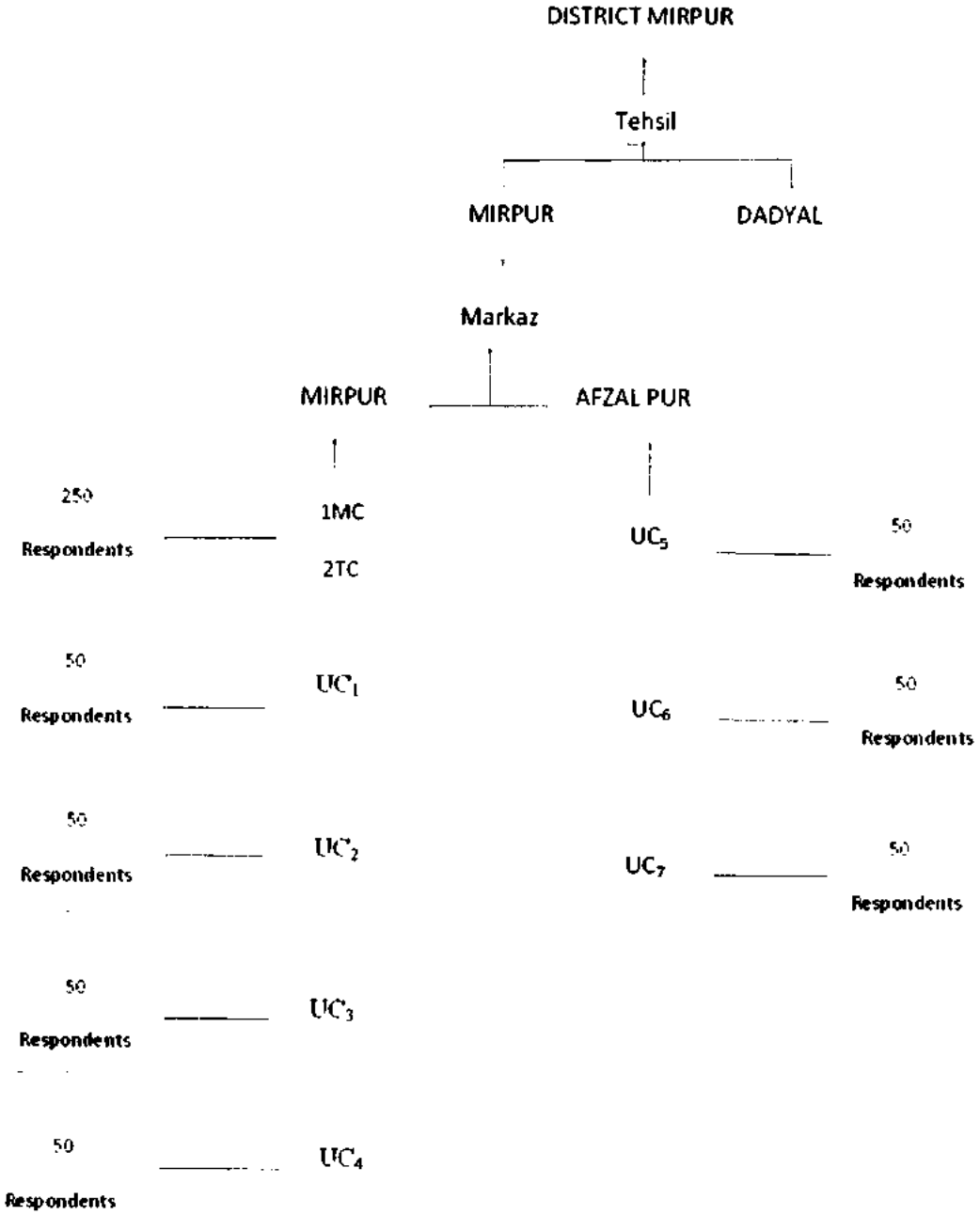
Mirpur: 4 union councils were selected randomly out of 8 namely Rathoa Muhammad Ali, Kharak, Chaksawari and Kaneli.

Afzal pur: 3 union councils were selected randomly out of 4 namely Afzal pur, Khari khas and Nawangaran.

There are about 180 small and big villages in the tehsil and the villages are selected randomly in the study. These includes: Malote, Barjun, Kanaili, Abdullah pur, Bothi, Kharak, Dheriramoo, Mola, Gaderi, Sebrajgan, Kalan, Nandwal, Rathoa.Mali, DheriRustam, Rangpur, Afzal pur, Chabrian Dattan, Seem, Alghar, Jhangian, KotlaDattan, ChakMughliani, Tarnal, Kangra, Khari Khas, Sahib Chak, Lehri, Chitter pari, Jaithu, Joiyan, Kalis, Naugaran, Khokhar, Jatlan, Goriyan, ChakGhaiyan, Titrot, Barsali,Bains, DheriThothal, Chaksawari, DheriBarwan, Hamid abad colony hamlet.

Using the random sampling technique and keeping in view the outreach, feasibility and convenience of the researcher, 600 households were selected from all the union councils. Out of the selected sample, 275 households were found to be remittance recipients and 325 were non- recipients, which comprised the control group. The following figure shows the number of respondents from different locations.

Figure 3.2 Selection of Sample With Respect to Area



3.3 Construction of Questionnaire

Questionnaire is considered to be the central part in a survey based research. The right information from survey respondents plays the important role in this type of research. We have gone through a few questionnaires related to different studies and surveys and then designed our own for the current study. The questionnaire is based on two main things, firstly; avoiding the confusion that possibly arise in respondent's mind which implies clarity in questions and getting the relevant information from the respondent which implies simplicity. To avoid any kind of ambiguity, the questionnaire is designed in simple language and the length of questionnaire i.e., number of questions is also appropriate for the survey respondents.

The entire questionnaire was divided into seven sections, ranging from the coverage of household identification to household information on monthly income, overall monthly expenditure on food and non-food consumables, durable goods, health and other expenditures. A special separate section was designed to get information on education; for instance, the number of school going children, the level of education they are attaining, the type of institution they are attending, and monthly expenditure on their education. The last section of the questionnaire covers detail regarding asset possession of households. All the questions were closely linked with one another, only a separate section was designed to get the data about the member working abroad, length of their service abroad, gender and age of migrant member and also the amount of remittance money they send back home monthly.

Interviews were conducted with all households personally (by the researcher) in Urdu and also in their native language i.e. Kashmiri or Pahari. The respondents of the study

comprised the household head, any senior or adult member of the household. Sample of the questionnaire is given in the appendix.

3.4 Respondents and Data Collection

The study includes those households within the study area from which at least one member was working abroad at the time of interviews and sending remittances to their families left behind, classified as "remittance recipient households" and those households who had no members working abroad and did not receive remittances, called "non-recipient households", the later constituted the control group.

The household level data was collected from the study area by using questionnaire. To find out the effect of remittances on household welfare and investment in children education, questions were asked from the houschold, both the remittance recipients and non-recipients.

After the collection of data, the results are obtained by using simultaneous equation model and treatment effect model. The households receiving remittances are considered as treatment group and the non-receiving as control group.

3.5 The Model

Our model consists of two equations. First equation represents household welfare of remittances recipients and non-recipients and the second equation represents investment in human capital.

$$CON = \alpha_o + \alpha_1 Rm + \alpha_2 Em_1 + \alpha_3 Em_2 + \alpha_4 Em_3 + \alpha_5 Em_4 + \alpha_6 Ag + \alpha_7 HS + \alpha_8 Y + \alpha_9 As + \alpha_{10} Gn + \alpha_{11} Ed_1 + \alpha_{12} Ed_2 + \varepsilon_1 \quad \text{.....(i)}$$

$$EDU = \beta_o + \beta_1 Rm + \beta_2 Ed1 + \beta_3 Ed2 + \beta_4 Sc + \beta_5 Lc + \beta_6 Ag + \beta_7 CON + \varepsilon_2 \quad \text{(ii)}$$

Where CON stands for overall consumption expenditure of the households, which is our dependent variable in eq. (i) and a proxy we used for capturing households welfare. EDU stands for household expenditure on children education, which is our dependent variable in eq. (ii). The explanatory variables (both continuous and dummy variables) in our regression analysis are explained as follows:

Y = total income of household.

Ag=stands for age of household head.

HS=stands for households size.

Sc= number of school going children in household

Gn= gender of household head (Gn=1, male and 0 otherwise)

As= other assets

Lc= location (Lc=1, urban and 0 otherwise)

Rm= is the dummy variable, which takes two values, if the household is recipient of remittances (Rm=1), and 0 otherwise.

The education level of household head plays important role as it influences not only the household consumption, investment and decision making process in social affairs but also the expenditure on children education significantly. Education level is divided into two categories, so we are assigning dummies to capture the relevant effects.

Ed_1= 1, household head up to matriculation and 0 otherwise

Ed_2= 2, household head with above matriculation and 0 otherwise

The illiteracy is used as reference category.

The nature of employment of the household head also affects the welfare of households. To capture this effect, four dummies are incorporated, with unemployed as reference category having value as 0.

Em_1= 1, the household head is a government employee

Em_2= 2, the household head works in a private company / firm

Em_3= 3, the household head is self employed

Em_4= 4, the household head is a daily wage earner (employment by chance).

$\varepsilon_1, \varepsilon_2$ are the stochastic terms with usual properties.

3.6 Variables used in the model and their theoretical justification:

The main objective of the current study is to examine the impact of remittances on household welfare and human capital investment. Welfare has both the subjective and objective dimensions. The current study focuses on objective dimension only. For capturing the effect on welfare different proxy variables can be used for example, utility, GDP, consumption etc. Consumption expenditure serves as a primary measure of houschold welfare. It is argued that consumption expenditure is better measure of welfare than income (Deaton and Grosh, 1998).Firstly, household do not hesitate to give data about their monthly expenditure and secondly, it is more reliable than data on income. It is important to determine the factors affecting welfare of households and to explore whether remittances variable appear to be significant explanatory variable.

Dependent variables:

- Consumption Expenditure is generally used as indicators of household (material) welfare.

- Expenditure on education of children is used as proxy for investment in human capital (Abdel Latif, 2013).

Explanatory variables:

Remittances (yes/no), total income of household, asset possession, household size, characteristics of the household head like age, gender, education, employment status; location and number of number of school going children in household.

3.6.1 Theoretical Justification of Selected Variables:

Earlier studies (e.g., Adams &Cuecuecha, 2000; Kalaj,2010; Quartey,2006; Niaz et al, 2010; Khan et al,2010; Abbas et al, 2014; khan et al, 2009; Acosta (2006); Quartey, 2006; Yang,2008; Brempong and Asiedu, 2014, Okojio,2002; Lu and Treiman, 2007; Cox Edward and Ureta, 2003) of remittances identified few categories of variables that explains the household welfare and human capital. Following these studies, household consumption expenditure (proxy for household welfare) and educational expenditure (proxy for human capital) is influenced by the following:

(a) Remittances:

Migrant remittances not only supplement the domestic resources but also have consumption smoothing function. However, the use of remittances may vary with respect to the migrant households. It is argued that well-off families invest the remittance mount on either productive or unproductive ways, while poor households are expected to meet their basic consumption needs. Thus, remittances amount is an important parameter for household consumption expenditure (houschold welfare) and investment (both physical capital and human capital) cox Edward and Ureta (2003); Adam and Cuecuecha (2006); Acosta (2007); Lu and Treiman (2007), Abbas et al

(2014); Brempong and Asiedu, (2014); Miftah and Bouoiyour (2014); Humayun et al (2011), Sarfraz et al (2009), Quartey (2006). Moreover migration and consequently remittances have positive relationship to poverty reduction and the economic development and also improve household standard of living (Hass, 2006; Raihan et al (2009).In the current study, remittances are used in dichotomous form i.e., Rm=1, if remittance recipient and Rm=0, if non-recipient.

(b) Gender of Household Head:

The gender of household head influences income and therefore welfare and human capital development. It suggests that the families with male-head are less likely to be poor than female-headed families. Also, the development studies suggests that households headed by females make decisions regarding expenditure differently than those families who are headed by males and this influences the household welfare and investment in human capital (Brempong and Asiedu, 2014; Lu and Treiman, 2007).Therefore, a dummy was employed to see the effect of gender on households welfare and investment in human capital (Gn=1, H.H is male and zero otherwise).

(c) Age of Household Head:

Age of household head is considered as an indicator of maturity and work experience and therefore an important variable in studies on impact assessment. The age of household head not only affects household welfare but also decision regarding investment in children education (Brempong and Asiedu, 2014). With an increase in the age of head their welfare increases because they acquire more education, experience and got maturity (Okojie, 2002).

(d) Household size:

The household size also affects the consumption expenditures. Quartey (2006) argues that working in a group is more productive through its supervision, pooling of experience and motivation. Khan et al, 2012 argues that larger household size means higher the labor force and hence more the income which in turns positively associated with the household welfare.

(e) Number of school going children (siblings):

The No. of school going children in the household is also an important variable that influences consumption expenditure of household. This is because families with larger dependent members are expected to finance higher consumption expenditure and thus low savings. These arguments are supported by the life-cycle hypothesis, "that demographic variable affects consumption or welfare of household" (Ando & Modigliani, 1963). According to Acosta (2006), "if the household have more siblings of school age, they are more likely to go to school, perhaps reflecting the existence of economies of scale in sending children to school".

(f) Education of Household Head:

Education level of head of the household have significant and positive affect on income, therefore welfare of the household and human capital development of children as it influences the investment and decision making process. The higher the education of household head is, less chances of being in poverty and the higher the household welfare will be. Also the human capital model associates education of household head with the children's education. It is also expected that parents with higher education would have children whose education is at least higher than their parents (Cox Edward

and ureta, 2003; Lu and Trieman, 2007). Two education dummies are used in the study with illiterate as reference category.

Ed_1=1, household head up to matriculation (it includes primary, middle and secondary education, Diplomas), 0 otherwise.

ED_2=2, household head above matriculation (it includes all the remaining level of education i.e., intermediate, C.T, B.A/B.Sc, M.A/M.Sc, MS/MPhil, Ph.D. and other technical and professional degrees), 0 otherwise.

(g) Total Income:

Income is major determinant of household welfare and investment in human capital (Lu and Trieman 2007). A positive relationship postulated between welfare and income according to the Keynesian consumption function and permanent income of Friedman. The permanent income hypothesis distinguishes between the permanent and transitory type of income, households spend the permanent income whereas the transitory income is used into savings and investments. Also it is argued that higher the household total income, lower will be the hazard of leaving school.

(h) Asset possession:

Asset possession also affects the household welfare. The variables include ownership of land, livestock, gold, jewelry, bank deposits, own residential house, commercial shops and vehicles. The No. of livestock and amount of land holdings is an important determinant of household welfare. As it is expected, households with large No. of livestock units and with larger land areas have more income than the households with fewer holdings which affects the household welfare directly Miftah (2014) and Quartey (2006).

(i) Employment Status of Household Head:

The nature of employment also affects the household welfare (total consumption expenditure of household) and human capital of children (total expenditure on children education). Because there are income variations in the different sector of employment (Okojie, 2002; clement, 2011). According to Quartey, 2006 and Abbas et. Al 2014 argues that household members engaged in manufacturing sector, govt. Services and industry have higher welfare. Four dummies are employed to capture the effect of employment status of household head, with unemployed as reference category.

E_1= 1, if household head is engaged in govt. services and, 0 otherwise.

E_2= 2, if household head is employed in private firm/ company and, 0 otherwise.

E_3=3, if household head is self-employed and, 0 otherwise.

E_4=4, if the household head is daily wage earner and, 0 otherwise.

(j) Location:

Location of the household such as rural or urban has a significant impact on the employment and hence on income of the household. Likewise, it has consequences towards children education since the facilities vary across locations Quartey, (2006). For this purpose, we used two categories, i.e. Urban=1, and 0 otherwise.

3.7 Methodology

For estimation of the model, we proceed in two steps:

(i) Both the equations are simultaneous in nature and can be estimated through the 2-SLS method since the model is not exactly identified.

(ii) In literature, the researchers have used different econometric models to see the the relationship between remittances and household welfare. Adams & Cuecuecha, (2010) used two step selection model because of presence of selection biasness occurred due to the transitory type of income, i.e., remittances. Bouoiyour and Miftah (2014) analyze the impact of remittances on the household expenditure and relative poverty in Morocco and used propensity score matching approach to see if there are significant differences in wellbeing of the households receiving remittances or otherwise. However, this technique gives just descriptive analysis. The Treatment Effect model due to Madala (1983) and Green (2003) provides much improvement. In current study treatment effect model is used to find out the impacts of remittances on household welfare in case of recipients households. The rationale for using the treatment effect model is briefly discussed.

The main reasons to use the Treatment Effect Model are:

1) Tackle the selection bias, and

2) Analyzing the counterfactual effects.

The effects of remittance income may be over or underestimated if the unobservable characteristics are ignored, which determine the decision to migrate or otherwise. If this aspect is not taken care of, there may emerge a problem of selection bias, it may give the biased results (Green, 2003). The treatment effect is preferable because it not only deal with the selection bias problem but also gives the treatment effect score or counterfactual effects that was missing in the conventional model of Heckman.

The researchers have made extensions in conventional models [Maddison, 2006; Tesso et al, 2012]. These extensions are known as "Hecket" Models suggested by Green,

2003. The Treatment Effect Model is an extended form of conventional models. It differs from the sample selection model in two aspects:

a) A binary variable is included which indicates the treatment condition (if member is in treatment condition or otherwise) and is directly entered into the outcome equation.

b) The dependent variable of the outcome equation is estimated for both treatment and control groups. The specification of the treatment effect model expressed in two equations as in the original Heckman sample selection model:

Outcome equation: $y_i = \beta x_i + \delta Rm + \varepsilon_i$ (3.1)

Where y_i is the dependent variable i.e., outcome variable, in the current study which is household overall consumption expenditures (proxy for household welfare) and expenditure on children education (proxy for human capital) and household consumption expenditures are in log form. β is parameters and x_i are explanatory variables such as: age of H.H gender of H.H, dependency ratio, employment sector of household head, education of head, No. of school going children in household, assets possession, total income. Rm is known as treatment effect[4] score and is a dummy variable coming directly from selection equation into the outcome equation. It gives the counterfactual effects and shows the significant differences of treatment and control group. In the selection equation, Rm is dependent variable and takes the values Rm=1, if household is remittances recipient or Rm=0, if non-recipient. Further ε_i error term of outcome equation.

[4] "Treatment Effect is the average casual effect of binary variable on outcome variable of interest. Here, it gives counterfactual analysis: significant differences of outcome variable (welfare of households) between treated households (those who receive remittances) and non-treated households (those households who do not receive remittances."

Probit model is estimated in the selection equation and similar to the conventional Heckman model the unobservable from the selection equation are estimated from where selection biasness is observed through inverse Mills ratio or Lambda. It is used as an explanatory variable in outcome equation automatically. As suggested by Green (2003), the Heckman sample selection model only shows the presence of selection bias whereas Treatment Effect model is appropriate to have treatment effect which is automatically adjusted in the selection equation. The treatment effect model deals with the treatment effect score and selection simultaneously.

Selection equation is formulated as follows:

Selection equation $$Rm_i^* = z_i\gamma + u_i \qquad (3.2)$$

Where, Rm_i=1 if $Rm_i^* > 0$ and $Rm_i = 0$ otherwise

Prob $(Rm_i = 1 \| z_i) = \varphi(z_i\gamma)$ and Prob $(Rm_i = 0 \mid z_i) = 1 - \varphi(z_i\gamma)$

Similar to the conventional model, Treatment Effect model use the probit model it is given the name of selection equation. The dependent variable is in dummy form i.e., remittance recipient=1 otherwise. In the selection equation, z_i' are explanatory variables i.e., household size, gender of H.H, employment status of household head, assets possession, and location variable respectively. However, γ is a vector of coefficients, ε_i and u_i are error terms of the two regression equation which is assumed to be normal with mean zero.

Selection biasness is captured through inverse mills ratio and the term calculated as $\lambda = \varphi(z_i\gamma / 1 - \varphi(z_i\gamma)$. However, ϕ is a density functions and γ shows the distribution of normal respectively. In the treatment effect model, Inverse Mills Ratio is computed

in the selection equation and automatically used in the outcome equation. Whereas, in the conventional selection model this variable is use as additional explanatory variable. If lambda or inverse mills ratio is found significant that means there was selection biasness and has been corrected in the model.

CHAPTER: FOUR Descriptive statistics: A comparison of Remittances recipient and Non-recipient households

4.1 Introduction

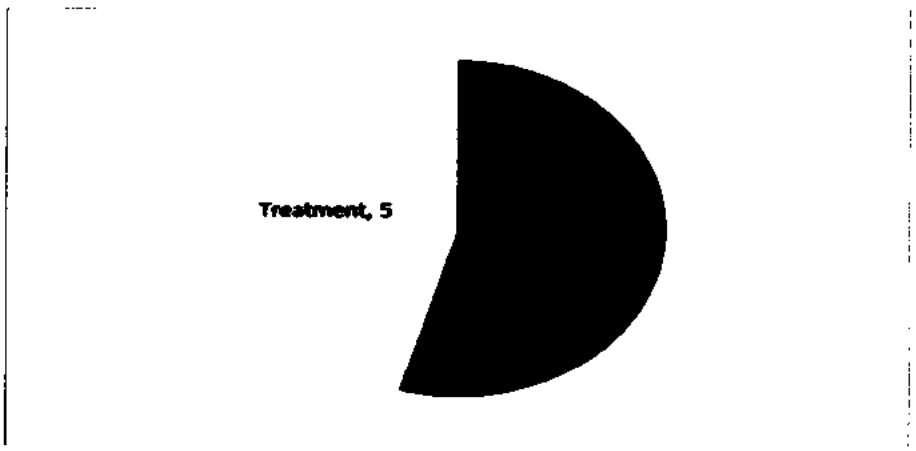
This section presents the important differences in the demographic, socio-economic and income-related variables of remittance recipient and non-recipient households in the sample that also inform the main results in next Section.

In the overall sample of 600, around 45.18% were remittance recipient households whereas non-recipients were 54.17%. The detail is provided in Table 4.1 given in the end to this chapter. Next we discuss the components of the survey.

4.1.1 Average Household Size of remittance recipients and non-recipients

To start out, the survey data showed that the average family size of treatment and control group remained almost similar: 5.4 persons in treatment group and 6.2 persons in control group (fig 4.1). This makes comparison a little straightforward with having less chance of distortions in outcome variables emanating from the household size.

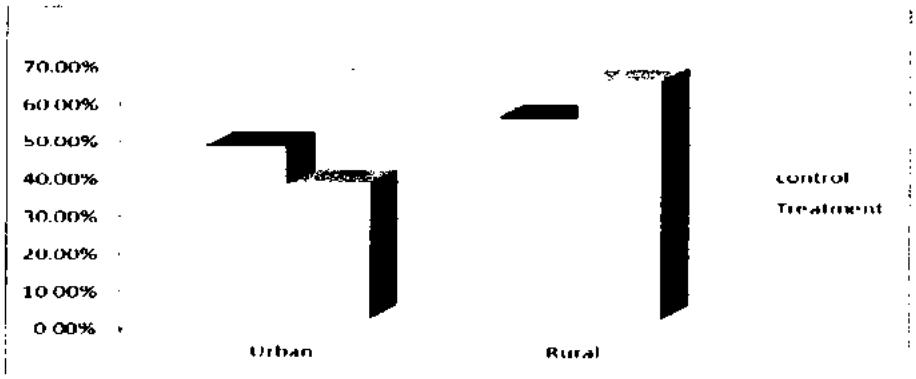
Figure 4.1 Average Household size



4.1.2 Location

Survey data showed that around 53.85% non-recipient households belong to rural area and 46.15% belongs to urban area. On the other hand, around 63.64% were remittance recipients who belongs to rural area whereas 36.36% from urban area (fig 4.2). It showed that households who belong to rural area are more likely to migrate and depends on remittance income. May be due to less employment opportunities available in rural areas.

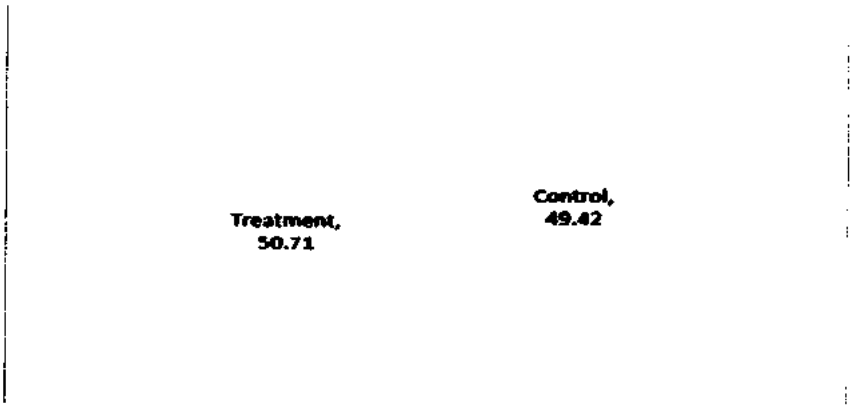
Figure 4.2: Location wise distribution of remittance recipients and non-recipients



4.1.3 Mean Age of Household head

The survey data showed that the mean age of the head in the treatment and control group are almost same i.e., 50.71 and 49.42 respectively (fig 4.3).

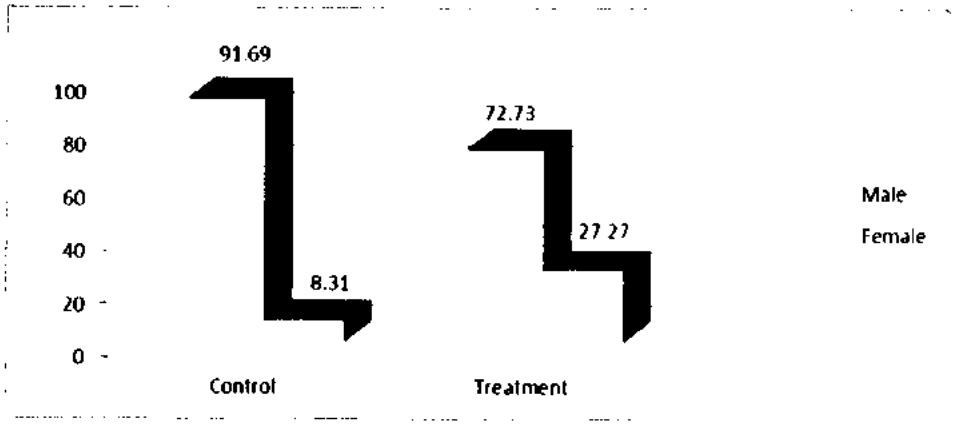
Figure 4.3 Mean age of Remittance recipients and Non recipients



4.1.4 Gender of Household head

Gender distribution of treatment and control group indicate that ratio of female headed household were greater in treatment group where 27.27% were female headed out of 275 remittances recipients households and 72.73% were male headed. On the other hand, in the control group 91.69% were male headed out of 325 non-recipient households and only 8.31% were female headed. Graph (fig4.4).shows the gender distribution of household head by remittance recipient and non-recipient households:

Figure 4.4 Gender of Household head

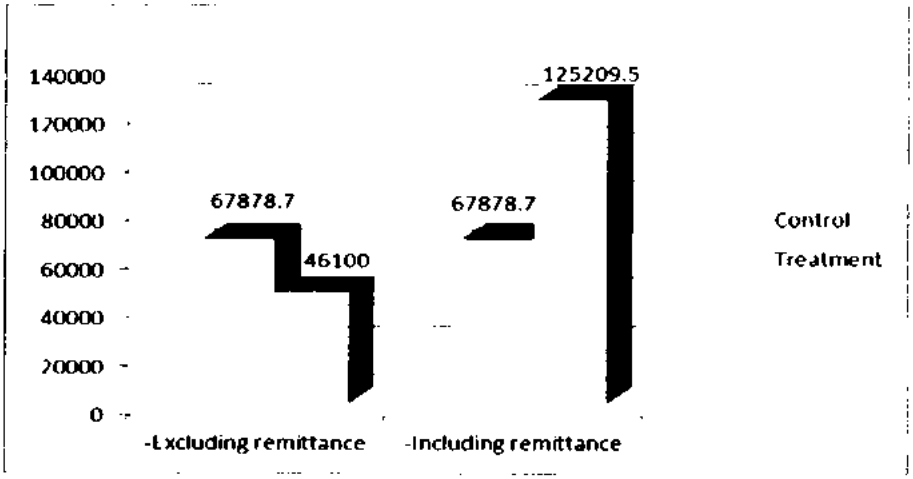


4.1.5 Total Income

The survey data show that the total income of non-recipient from employment, business, property and other sources is higher as compared to remittance recipients. It is shown by the mean income of the control group which is almost twenty one thousand higher than treatment group. Whereas, treatment group have higher income when the remittances are included, it changes the whole pattern of total income between treatment and control group. It is found that on average monthly household income of remittance recipient households have almost fifty seven thousand higher than non-

recipients. The graph below shows the comparison between remittance recipients and non-recipient households on the basis of mean income:

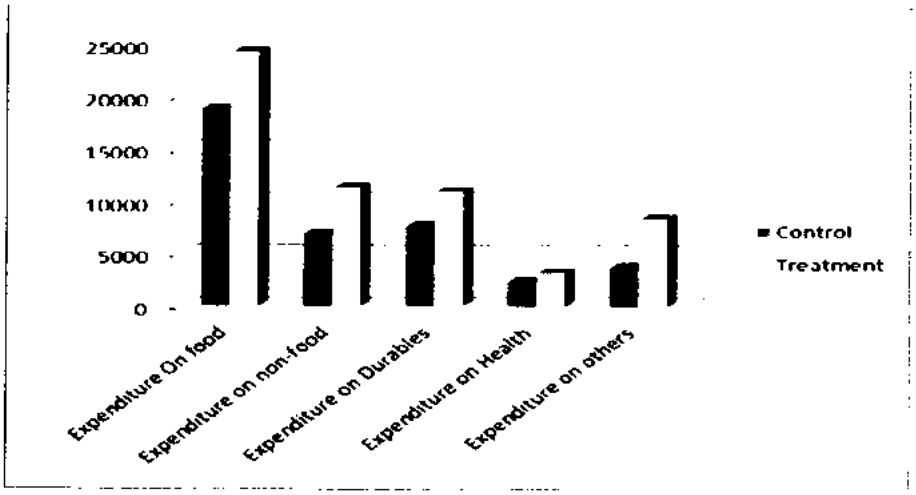
Figure 4.5 Average monthly Household Income of Remittance recipients and non-recipients



4.1.6 Consumption Expenditure per category

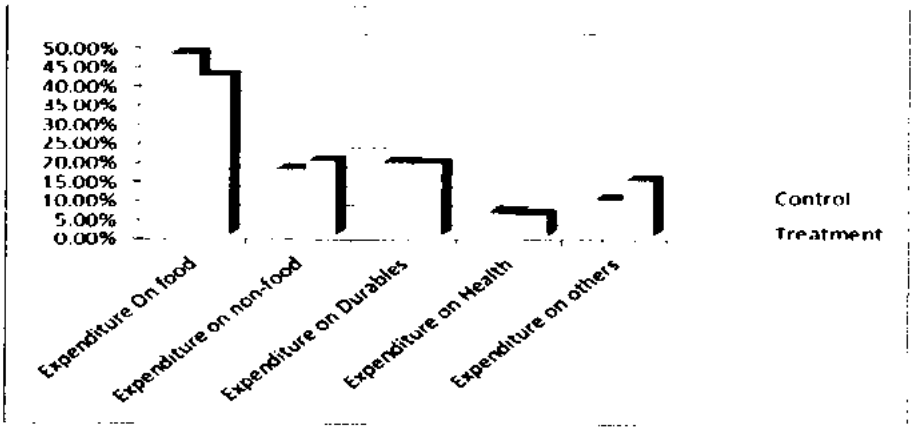
This shows the detail of total households' consumption expenditure (monthly in Rs.) on food, non-food, durable, health and other as shown in the following graph (fig4.6a). In consistent with the belief that the remittance-recipient households use their income mostly in consumption, the treatment households in the study area were found to consuming more than the control households. The average monthly household expenditure in treatment group, for example, stood nine thousands higher than it was in control group.

Figure 4.6 a. Expenditure of household



Item wise, the food stood the major component in which a significant amount of household budget was spent for both types of households: it was 41 percent for treatment group and 47 percent for control group. The expenditure on non-food items and durable goods are more or less equal in control and treatment group i.e., 17.51%, 19.47% and 19.16%, 18.80% respectively. In the treatment group, the expenditure on others such as weddings, festivals, entertainments and maintenance etc took a substantial share (nearly 14 percent) of total household expenditures. The expenditure pattern of treatment group indicate that remittance earnings are mostly being used for non-productive areas i.e., consumption (fig 4.6b).

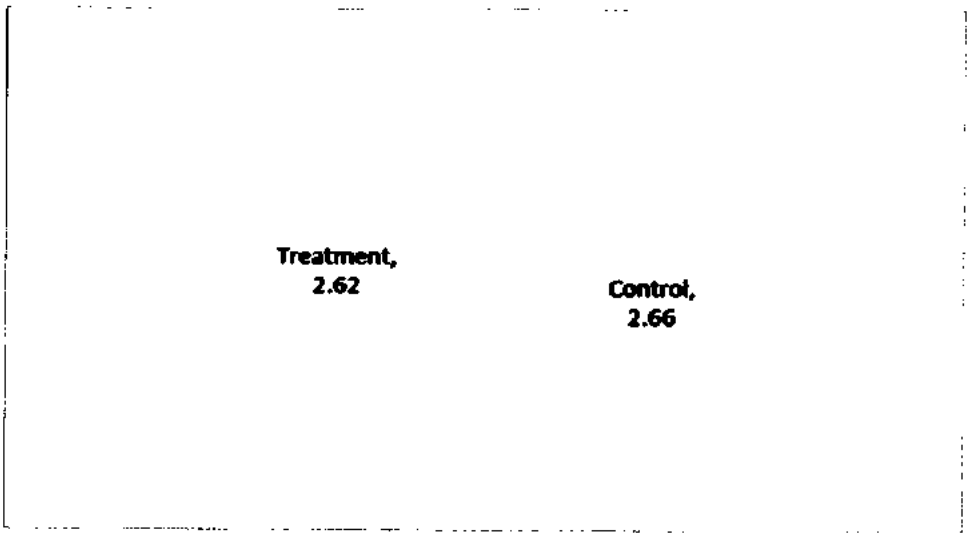
Figure 4.6 b. Average expenditures of Household



4.1.7 Average no. of school going children

Data shows that average number of school going children in remittance recipient households are 2.62 and in control group it is slightly high i.e., 2.66. A comparison of average number of school going children by remittance recipients and non-recipient households is shown in the following graph: Fig 4.7: Comparison between Average no. of school going children in remittance recipient and non-recipient Households:

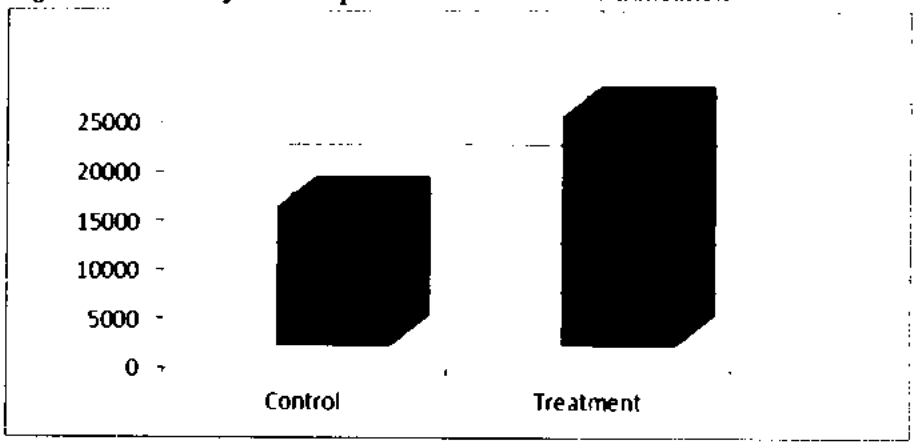
Figure 4.7 Average no. of school going children



4.1.8 Mean of total expenditure on children education

The impact of remittance on human capital such as the investment in health and education has taken the central space in debates among researchers and policy-makers. Many studies, as cited in Chapter 2, have revealed that the remittance-receiving households were observed to be spending a significant proportion of their income in health and education- related expenditure. The evidence was further supported by this study. Monthly average expenditure in education in treatment households, for example, was nearly nine thousand more in treatment households than in control households.

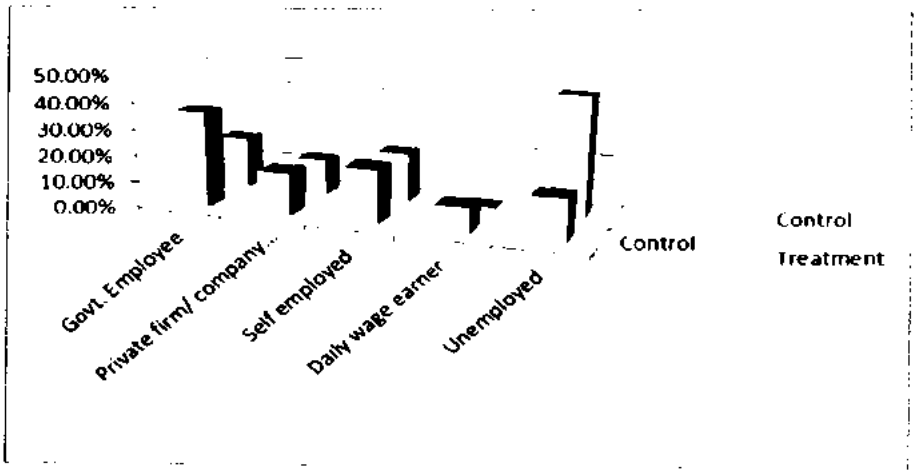
Figure 4.8 Mean Of Total Expenditures on Children Education



4.1.9 Employment status of household head

Fig 4.9 shows the employment status in remittance recipient and non–recipient households. The data shows that non-recipient households are more engaged in govt. services as compared to remittance recipients. It is also assumed that household heads with agriculture and non-agriculture sectors receive fewer remittances and the heads who are unemployed receive higher remittances. It is also shown by the graph household head with unemployed status receive higher remittances.

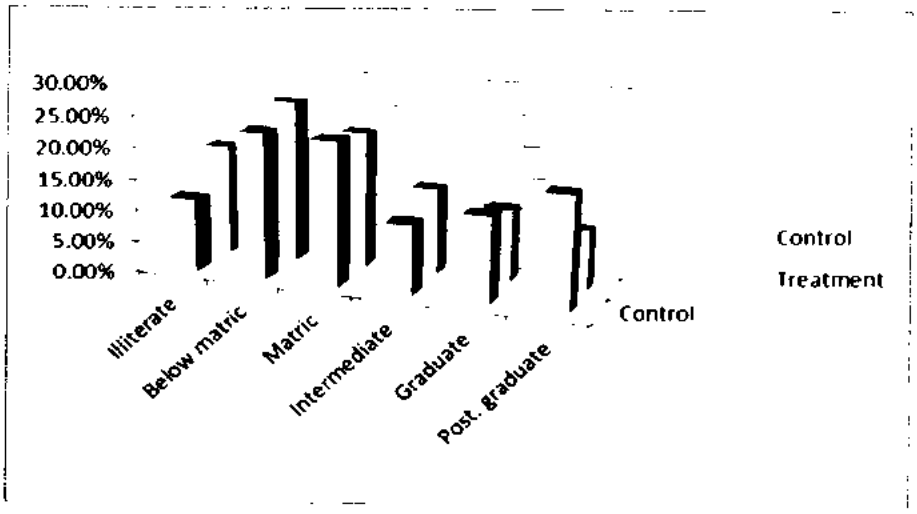
Figure 4.9 Employment Status of Household head



4.1.10 Education of Household Head

A comparison of household education attained by remittance recipients and non-recipient households is shown in the graph below:

Figure 4.10 Education of Household head



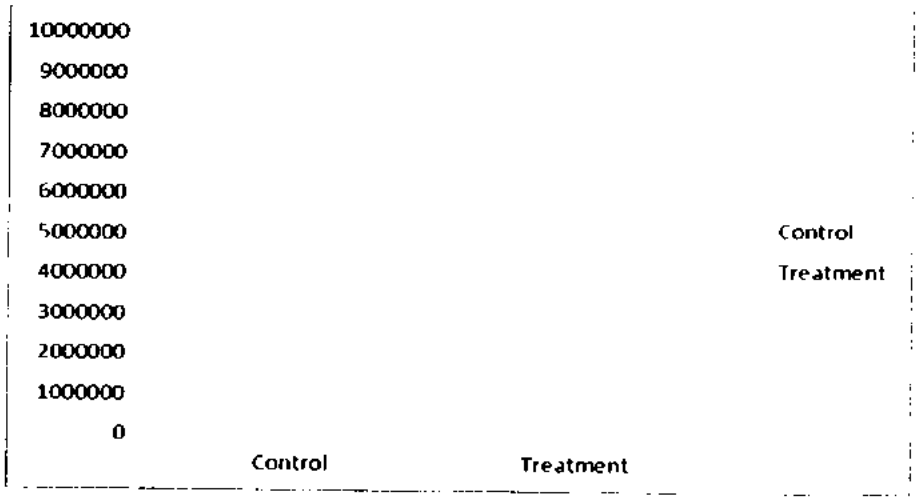
The survey data showed that education of household head in the treatment and control group are more or less similar. In control group almost 11.69% household head were illiterate where as in the treatment group this percentage was around 6% higher than control group. Both control and treatment group were not found to be different in case

of below matriculation and matriculation i.e., 23.08%, 25.82% and 22.77%, 21.82% respectively. 11.08% and 13.82% were completed intermediate level in the control and treatment group respectively and household head with graduation degree were also more or less similar: 13.54% and 11.64% for control and treatment group. Household head with post-graduation degree were found to be higher in control group than treatment group. 17.85% were reported to have post-graduation degree in the control group whereas 9.45% were reported in the treatment group fig (4.10).

4.1.11 Mean of household assets

Assets possessed by the remittance recipients are higher than the non-recipient households. The value of the assets possessed by the treatment group is 4,032,582 higher than control group. It is also evident that remittance recipients have higher income and more stable financial condition that they can get more land, livestock, own residential house, bank deposits, jewelry, vehicles etc than their counter parts fig(4.11).

Figure 4.11 Assets Possession



4.2 Summary

In the overall dataset of 600, 45.18% were remittance recipients and 54.17% were non-recipients. It can also observed that households located in rural areas are more likely to receive remittances as compared to the households in urban areas. The summary statistics of data set shows that there are no significant difference in household specific variables except the education level of household head and the employement status of household head. The household head of remittance recipient group has low level of education as compared to non-recipients also the household head with unemployed status are more likely to receive remittances. The impact of remittances become more evident when we compare the income of household with remittance income and without remittance income. The income of households that receive remittances is even more than double the income of the households that do not receive remittances.

Table 4.1: Descriptive statistics of Remittance recipients and non-recipients

Sr no	Variables	Non-Recipients		Remittance recipients	
		Mean	%	Mean	%
1	Age of household head	49 42	-	50.71	-
2.	Gender of H H head				
	Male	-	91 69	-	72 73
	Female	-	8 31	-	27 27
3.	Household size	6 2	-	5 4	-
4	Total Income				
	-Excluding remittance	67878 7	-	46100	-
	-Including remittance	-	-	125209 5	-
5.	Location				
	Urban	-	46 15	-	36.36
	Rural	-	53 85	-	63.64
6	Education of H H				
	Illiterate	-	11 69	-	17 85
	Below matric	-	23 08	-	25 82
	Matric	-	22.77	-	21.82
	Intermediate	-	11 08	-	13 82
	Graduate	-	13 54	-	11 64
	Post Graduate		17 85		9.45
7	Consumption Exp				
	Exp. On food	18901 54	47.60	24367 88	41 67
	Exp on non-food	6956	17 51	11388.5	19 47
	Exp on Durables	7677 692	19 16	10997 27	18 80
	Exp on Health	2417 262	6 08	3259 639	5.57
	Exp on others	3820	9 62	8453 865	14 45
8	Total Exp on children Education	14189.75	-	23453 68	-
9	Average number of school going children	2 66	-	2 62	-
10.	Employment status of Household head				
	Govt. Employee				
	Private firm/ company employee	-	36 62	-	20 00
	Self employed	-	16 31	-	13 82
	Daily wage earner	-		-	
	Unemployed	-	20 62	-	19 27
		-	9 85	-	1 09
			16 54		45 82
11.	Asset Possession	5077298	-	9109880	-

**Source: Based on field survey*

CHAPTER: FIVE EMPIRICAL ANALYSIS

5.1 Introduction

In the current chapter, the impact of remittances on the household welfare and investment in human capital estimated simultaneously. We also use the treatment effect model-two step procedure, which also facilitates the findings of the descriptive analysis in the previous chapter 4. The remaining chapter is organized as; the results of simultaneous equation model are discussed in the section 5.2, this is followed by the presentation and discussion of the results of treatment effect model in 5.3, section 5.4 is reserved for the conclusion.

5.2 Results of the Simultaneous Equation

As discussed above, we employed the 2-SLS estimation procedure using STATA software. The results are discussed below.

5.2.1 Impact of Remittances on the Overall Consumption Expenditure:

The results presented in Table 5.1 confirm the substantial improvement in the results than the results in the previous chapter.

The regression results show that the model is statistically significant at 0.000 level. The R^2 is 0.6231; it shows that about 62% variance of the dependent variable is accounted for in the model. The results reveal a strong positive and statistically significant impact of remittances on household total expenditure. The consumption expenditure of households receiving remittances is Rs 8509.606 higher than the non-receiving households. This shows a strong positive effect of remittances on household welfare.

Table: 5.1 Impact of Remittances on total consumption Expenditure

Covariates	Coefficients	Standard Error	Z	P>|Z|
Ag	243.2002*	78.46011	3.10	0.002
Gn	4160.807**	2322.785	1.79	0.073
HS	771.1187 *	344.2734	2.24	0.025
Employment status of H.H head				
Em_1				
Em_2	2523.457	2490.068	1.01	0.311
Em_3	6150.488*	2819.444	2.18	0.029
Em_4	5263.844*	2389.301	2.20	0.028
	-8926.635*	3768.727	-2.37	0.018
Education of H.H head				
Ed_1	-3289.592	2481.793	-1.33	0.185
Ed_2	6661.363*	2854.52	2.33	0.000
Y	.1850481*	.0102742	18.01	0.000
Remittance Dummy (Rm=1,remittances-recipient) and (Rm= 0, non-recipient)	8509.606*	1846.933	4.61	0 000
As	.00033*	.0000796	4.14	0.000
Constant	1045.576	5115.566	0.20	0.838
chi2 = 999.30 , R^2=0.6231	prob>chi2 =0.000*		no of observation= 600	

Note: *significance at 1%, ** significance at 5%, *** significance at 10%

Higher income and consumption are expected to reduce poverty and inequality and improve household's welfare (Siddiqui and Kemal, 2006). Based on the z (4.61) and p (0.000), the coefficient of Rm is statistically significant. The result is consistent with the findings of Acosta (2007), Adams and Page (2005), Miftah and Bouoiyour (2014), Khawar et al (2014), Awan et al (2015), Khan et al (2011), Niaz et al (2010), Humayun et al (2011), Sarfraz et al (2009), Quartey (2006). They argued that migrant remittances

tend to supplement domestic resources and also smooth consumption. This is also confirmed by the findings of Raihan et al (2009), which suggest a positive effect of remittances on household welfare in Bangladesh.

As discussed in the Chapter 3, there are other explanatory variables which determine household welfare besides remittances. These include age of household head, gender of household head, household size, education of household head, total income (including remittances), employment status of household head, asset possession etc.

Age of household head affects household welfare significantly; the coefficient of appears positive and also significant as it was expected. It shows that as the age of head increases, the household welfare also increases. This is consistent with the findings of Okojie, 2002; Mollers & Meyer, 2014. The positive sign of coefficient was also expected from labor market theories. It is also clear from the results that male- headed household positively affect the household welfare. These results also supported by the findings of Quartey (2006), who argued that families headed by females also have reduced welfare.

The coefficient of household size appears positive and significant showing that high household size means more labor force, and more income which in turn positively effects on household's welfare. This result is consistent with the previous findings of Khan et al, (2012) and Quartey, (2006). The nature of employment of household is strong determinant of household welfare. It is argued by Okojio (2002), that household welfare is low in families where the household heads are engaged in occupation of farming as compared to non-farming occupation. The argument is also supported by the study of Quartey (2006) that household heads who are working in manufacturing,

industry and services sector have higher earnings than the farmers. The result of employment status of household head in Table 5.1 shows that household heads whose occupation fall within private and self-employment are positively and significantly associated with household overall expenditure and therefore welfare. The coefficient of government services is positive but insignificant. However the coefficient of daily wage earner turns out to be negative, showing a negative association between household's employment as daily wage earners (insecure employment) and household welfare. This results is also supported by the findings of Quartey (2006, 2007), Okojio (2002), Abbas et al. (2014).

As expected, the coefficient of income turns positive and significant. The results show that 1% increase in household income increases the overall household expenditures by 0.18% on the average. The results of this study are also consistent with the findings of Abbas et al. (2014); Cox Edward and Ureta (2003).

Education level of household head is a significant determinant of the household welfare. However, the level of education is also important rather than merely education or literacy per se. It is expected that higher the education level of household head, higher will be their consumption expenditure, primarily on the education and studies. It is shown that illiteracy or little education of the household heads (who are matriculate or below) is negatively associated with household welfare. However, the result is insignificant although the sign of the coefficient is negative. As expected, higher level of education is associated with the higher household welfare. The coefficient appears positive and highly significant at 1% level, showing that the household heads

possessing higher qualification increases the welfare of their families. The result is in line with the findings of Okojie (2002), Abbas et.al (2014).

Other assets including jewelry, bank balance, livestock, land holdings, and other property; are positively related to the consumption expenditure and therefore household welfare. The coefficient is positive and significant, showing that increase in other assets of household also increases their welfare. Households with larger agricultural land holding have higher income than the households with fewer land holdings. The results are consistent with the findings of previous studies like Miftah (2014) and Quartey (2006).

5.2.2 Impact of Remittances on Children Education:

Regression results in Table 5.2 indicate that the overall model is statistically significant at 1% level. The R^2 is 0.5381; it shows that about 53% variance of the dependent variable is accounted for in the model. The results show that remittance recipient's families have higher expenditure on children education than non-recipients.

The estimates suggest that the effect of remittances on Children educational expenditure is positive and highly significant. The coefficient is positive and significant at 1% level. The result suggests that other things remaining same; the expenditure on children education of households receiving-remittances is Rs. 4724.78 higher than non-recipient. On the basis of z-value (3.72) and p-value (0.000) the coefficient is statistically significant. The results are also consistent with the optimistic view, that remittances have long run consequences for left behind families and also for the development and economic growth of the country. It is expected that higher income relax budget constraints faced by households and the amount allocated for education,

this may also negatively related to child labor (Brempong and Asiedu, 2014; Acosta, 2006). This shows a strong positive affect of remittances on investment in human capital.

Table: 5.2 Impact of Remittances on Children Education

Covariates	Coefficients	Standard Error	Z	P>|Z|
Ag	167.3956*	51.30687	3.26	0.001
Lc (Lc=1,urban otherwise 0)	2589.671*	1252.125	2.07	0.039
Education of H.H head				
Ed_1	-1012.873	1819.106	-0.56	0.578
Ed_2	6088.346*	1942.968	3.13	0.000
CON	.1169662*	.0070759	16.53	0 000
Sc	2871.859*	402.6774	7.13	0.000
Remittance Dummy (Rm=1,remittances-recipient) and (Rm= 0, non-recipient)	4724.78*	1269.243	3.72	0.000
Constant	-14080.52*	3334.825	-4.22	0.000

Note: *significance at 1%, ** significance at 5%, *** significance at 10%

The results are in line with the empirical literature on human capital, for example Cox and Ureta (2003), found significant effect of remittances on school retention. A similar study by Cordoba and Lopez (2006) found that there are greater chances for the children of remittance recipient households to complete more year of education than the children from their counterparts. Also, there is a positive relationship between remittances and human capital investment in education rather than consumption (Yang, 2008), as compare to non-recipient the remittance receiving families spend less on

consumption good i.e., food and spend more on investment good i.e., education (Yang, 2005; Adam and Cuecuecha, 2010). According to Brempong and Asiedu (2014), remittances effect children education therefore investment in human capital, which reduces poverty in the long run.

The results of other explanatory variables including household characteristics and demographic variable, which also effect the investment in children education are presented in Table 5.2, the results of all explanatory variables appear significant according to expectation. It was expected that the age of head positively affects the education of children. The significant and positive coefficient of age of head suggests that with an increase in age, the investment in children education also increases. As age of head is an indicator for experience and maturity, so with an increase in age they make better decision regarding investment in human capital (Brempong and Asiedu, 2014).

As it was expected that location variables such i.e., rural or urban explain household welfare. The coefficient of location variable turns out to be positive and significant. This is consistent with the previous findings of Litchfield and Waddington (2003).

The total consumption of household appears positive and significant, shows that household overall consumption plays an important role in investment in human capital. The estimate suggests that 1% increase in the overall household welfare/consumption raises the educational expenditure of children by 0.11% on the average. The result follows the findings of Cox Edward and Ureta (2003); Lu and Trieman, (2007); Adam and Cuecuecha, (2010); Brempong and Asiedu (2014); Abbas et.al (2014). The coefficient for number of school going children in household appears positive and

significant. One possible explanation is given by Acosta (2006), "if the household have more siblings of school age, they are more likely to go to school, perhaps reflecting the existence of economies of scale in sending children to school".

Education of head is significant determinant of investment in human capital. It is expected that higher the education level of household head, higher will be the investment in human capital. It is shown by the results that household heads with secondary or below education level negatively associated with the investment in human capital i.e., Ed_1, carries a negative sign and insignificant, showing that low level of education of household head decreases the expenditure in children education. As expected, higher level of education associated with the higher the investment in children education. The coefficient of Ed_2 appears positive and highly significant at 1% level, showing that the household heads that has higher level of education increases the expenditure on children education and therefore welfare of their families. (Okojie, 2002; Abbas et.al, 2014). It shows that higher education level of household head is associated with higher investment in children education. The results are consistent with the previous studies. As it is expected that, household head with higher education would have children's whose education is higher than their parents (Cox Edward and Ureta, 2003; Lu and Treiman, 2007; Abbas et.al, 2014; Asiedu and Brempong, 2014).

5.3 Results of Treatment Effect Model:

The results presented in Table 5.3 and 5.4 confirm the substantial support to the descriptive/statistical analysis of the data presented in Chapter-4. The treatment effect model also provides an improvement in the results given sections 5.1 and 5.2 above. The average treatment effect was found to be statistically significant for socio-

economic indicators. The results are more or less similar to results of simultaneous equation model.

5.3.1 Impact of Remittances on the Overall Consumption Expenditure:

The results are presented in Table 5.3 has an overall good fit. The results reveal a strong positive and statistically significant effect of remittances on household total consumption expenditure. It is shown by the average treatment effect (ATE) in the equation (statistically significant Rm), which shows the average difference between remittance recipient households and non-recipient households.

On the basis of ATE score, results suggest that other things remaining same, those families who are receiving remittances are gaining on average higher score 0.58 as compared to non-receiving families. It means that the overall consumption expenditure of households who are receiving remittances is 58% higher as compared to their counterpart. This shows a strong positive effect of remittances on household welfare. Higher income and consumption are expected to reduce poverty and inequality and improve household's welfare (Siddiqui and Kemal, 2006). Based on the z (3.76) and p (0.000), the coefficient of ATE is statistically significant following the results of Acosta (2007), Adams and page (2005), Miftah and Bouoiyour (2014), Khawar et al (2014), Awan et al (2015), Khan et al (2011), Niaz et al (2010), Humayun et al (2011), Sarfraz et al (2009), Quartey (2006), (Hass, 2006), Raihan et al (2009).

Table: 5.3 Impact of Remittances on Household Welfare: Treatment-effects model

Covariates	Coefficients	Standard Error	Z	P>|Z|
Ag	.008*	0.0017	4.61	0.000
Gn	.173*	0.0636	2.72	0.007
DR	-.0265*	0.0100	-2.65	0.008
Employment status of H.H head				
Em_1				
Em_2	0.220*	0.0771	2.86	0.004
Em_3	0.217*	0.0762	2.85	0.004
Em_4	0.158*	0.0657	2.40	0.016
	-0.195	0.1241	-1.58	0.115
Education of H.H head				
Ed_1	0.049	0.0551	0.90	0.369
Ed_2	0.272*	0.0642	4.25	0.000
Y	0.341*	0.0020	16.59	0.000
Remittance Dummy (Rm=1,remittances-recipient) and (Rm= 0, non-recipient)	0.584*	0.1552	3.76	0.000
Inverse mills ratio	-0.209*	0.0948	-2.21	0.027
Constant	9.256*	0.1773	52.20	0.000
Wald chi2 (16)= 722.82.	prob>chi2 =0.000*		no. of observation= 600	

Note: *significance at 1%, ** significance at 5%, *** significance at 10%

The results of other explanatory variables in the model suggest that age and gender of household head have significant effect on consumption expenditure and therefore welfare, which is similar to the results in section 5.1. The results of dummy variables used for capturing the effect of employment sector of household head are similar for the three categories Em_2, Em_3 and Em_4 But in TEM, Em_1 appears positive and highly significant at 1% level. This is consistent with the findings of Quartey, 2006 that household head whose occupation falls in the manufacturing and services sector have higher than the one who is engaged in farming. In this model dependency ratio is

included instead of household size. Quartey (2006), argued that young (<15) and the elderly (>65) are expected to consume more out of savings and households in the working age are expected to have more savings. Therefore, dependency ratio negatively influences the household expenditure and hence their welfare. Theoretically, it is expected that families with large number of dependents, are more likely that they will be poor or reduced welfare. It may be due to the reason that more resources are needed to meet the requirements of households then more the chance that they will be poor. In current study, dependency ratio carries a negative influence on the welfare of household, showing a highly significant association. The findings are also supported by the study of Okojio (2002); Abbas et.al (2014). The remaining explanatory variables also appear according to expectations and similar to the results presented in section 5.1 Lambda is found statistically significant at 1% level, showing that there was selection biasness and is corrected in the model.

5.3.2 Impact of Remittances on the Children Education:

Regression statistics in Table 5.4 indicate that the overall model is statistically significant at 1 percent level.

The estimates show that the impact of remittances on educational expenditure of children is positive and highly significant. As in the Table 5.4, the average treatment effect (ATE) i.e., Rm is positive and highly significant at 1 percent level. On the basis of ATE score, the result suggest that other things remaining same, remittances receiving households are gaining on average higher score 1.13 as compared to non-receiving households. It shows that the expenditure on children education of treatment

group (receiving remittances) is 113% higher as compared to control group (non-receiving).

Table: 5.4 Impact of Remittances on Children Education: Treatment-effects model

Covariates	Coefficients	Standard Error	Z	P>|Z|
Ag	0.015*	0.0028	5.33	0.000
Gn	0.105	0.1100	0.96	0.338
DR	-0.124*	0.0165	-7.48	0.000
Employment status of H.H head				
Em_1	0.458*	0.1321	3.47	0.001
Em_2	0.102	0.1308	0.79	0.432
Em_3	0.137	0.1131	1.21	0.225
Em_4	-0.116	0.2137	-0.55	0.584
Education of H.H head				
Ed_1	.149***	.0912	1.64	0.101
Ed_2	.686*	.1063	6.46	0.000
Y	0.41*	0.00341	12.20	0.000
Sc	0.223*	0.0218	10.25	0.000
Remittance Dummy (Rm=1,remittances-recipient) and (Rm= 0, non-recipient)	1.13*	0.2709	4.62	0.000
Constant	6.587*	0.3083	21.36	0.000
Lambda	-0.476 *	0.1656	-2.88	0.004
Wald chi2 (17)= 814.58,prob>chi2 =0.000* ,		no. of observation= 600		

Source: Authors Estimates (*significance at 1%, ** significance at 5%, *** significance at 10%)

The Results are also similar to the results presented in section 5.2 which is consistent with the findings of (Brempong and Asiedu, 2014; Acosta, 2006). This shows a strong positive affect of remittances on human capital of children.

The results of all explanatory variables are similar to the results of section 5.2. The dependency ratio effects human capital development adversely, as the number of

dependent increases in household, it puts burden on per capita income of household and reduces the income in the household and the amount allocated for education purpose (Nasir et al, 2011; Abbas et.al, 2014).

In current study, the coefficient of dependency ratio appears negative and significant, following the findings of above mentioned study that the dependency ratio negatively affects the human capital formation, by reducing the income allocated for educational attainment.

The term lambda or inverse mills ratio captures the selection biasness in the model. Inverse mills ratio is found statistically significant at 1 percent level, it shows that there was selection biasness and it is now corrected in the model.

5.4 Conclusion

In this chapter, results from empirical analysis are presented. We tried to investigate the impact of remittances on the household's consumption expenditure in general and the expenditure on children education/investment in human capital in particular. The results suggest that remittances play an important role in promoting the education of children. The results are according to our expectations and also the factual position in District Mirpur (AJK) where the trend of migration to Europe is quite high and the education level is comparatively better than other parts of the country.

CHAPTER 6 SUMMARY AND CONCLUSION

6.1 SUMMARY

The main purpose of the study is to investigate the impact of remittances on household welfare in district Mirpur, AJK. The main idea of is to see whether international remittances impact the welfare of households left behind or not.

A large number of studies have already carried out nationally and internationally to investigate the impact at macro level as well as household level. These studies used counterfactual analysis, GCE modelling, propensity score matching and other regression techniques. But there exists a problem of selection biasness in the studies. Propensity score matching deals with the selection biasness but it just gives descriptive analysis. The current study used the simultaneous equation model. To give support to the results of simultaneous equation model the current study also use the treatment effect model, which corrects the selection biasness in the model automatically and also gives counterfactual effects.

Questionnaire based survey was used for the collection of primary data from 600 respondents. The main respondents of this survey were the household head, any senior members of households or any available adult of that household.

The results show that the remittances receiving households have higher total income as compare to non-receiving households. Non-receiving households received more income from other sources like agriculture, livestock, salaries and pension but the amount of remittances played an important role in increasing the income of remittance receiving households. Similarly, by getting higher income, the consumption levels of remittance recipient household on consumer durables and non-durables were higher than non-

recipient's level of consumption. The remittance receiving households invested money by purchasing properties or constructing houses establishing businesses or depositing remittances in banks to get benefits out of saving and investment also have attained better educational level as compare to non-receiving households. The former could afford high fees of their children in different educational institutions. The analysis also shows that the children of remittance receiving households' took migration decision instead of going for higher education.

6.2 MAIN FINDINGS OF THE STUDY

The increase in the flow of remittances worldwide has drawn attention of both academic and policymakers in recent years. In the developing countries, the receipt of remittances is emerged as one of the stable source of external finance. The receipt of remittances not only effects at macro-level but also has direct effect at micro-level. A significant number of people are receiving remittances in the developing countries to finance their consumption expenditures, health and children's education.

Earlier studies on remittances and household welfare suggests that remittance income improves the living standard of households by relaxing the liquidity constraints, smoothen their consumption and by investment in children education.

The results of current study shows that on basis of ATE score, the total consumption expenditure of remittance receiving households are 58 percent higher than the non-receiving households. This also supports the results of simultaneous equation model. This is consistent with the previous studies by Acosta (2007), Adams and page (2005), Miftah and Bouoiyour (2014), Khawar et al (2014), Awan et al (2015), Khan et al (2011), Niaz et al (2010), Humayun et al (2011), Sarfraz et al (2009), Quartey (2006).

The empirical findings also suggest the positive effect of remittances on expenditure on children education. On the basis of ATE score, the expenditure on children education of remittance recipients is 113% higher as compared to the non-recipient households. The results are consistent with previous finding by (Brempong and Asiedu, 2014; Acosta, 2006; Yang, 2005; Adam and Cuecuecha, 2010). The estimates of other explanatory variables which positively effects expenditure on children education are age of head, gender of head. The household head with higher level of education also positively effects the investment in children education. And the household heads who is engaged in government services are positively impact the education of their children, and other categories appears insignificant. The result shows that dependency ratio negatively affects the investment in human capital of children.

The results indicates that the age, gender of head, household size, total income and asset possession are important determinants of the household welfare. The result also shows that household head with higher education level have high welfare level and positively contributes to children education. Also the employment sector of household head is an important determinant of household welfare and investment in children education and results also confirm the previous findings of Quratey, 2006 that household head engaged in services and manufacturing sector are better off than the households who are engaged in farming.

6.3 POLICY RECOMMENDATIONS

The study suggests that remittance is an important decision parameter for household consumption and migration and its consequent remittances have positive relationship to the country economic development and also improve household standard of living. Following recommendations may help to improve the impact of remittances on the household welfare and human capital development:

1. The study recommends that government and concerned institutions need to mobilize the heads of the remittance recipient families to utilize remittance amount in national interest.

2. Government should introduce various investment opportunities for the remittance recipient household. This will create more employment opportunities for domestic or local people and the amount of remittance will be used in productive way.

3. Government may establish counseling services or institutions for the families left behind.

4. To enhance the skills and capabilities of potential migrants, training or technical education may be provided through government and professional institutions.

REFERENCES:

Abbas, K., Sabir, H. M., Shehzadi, A., & Abbas, Q. (2014). Impact of Workers' Remittances on Household Welfare in District Jhang (A Case Study of Tehsil 18 Hazari). Journal of Finance and Economics, 2(4), 131-135.

Abdellatif. T., G. R. (2013). An Empirical Study of The Impact of Remittance, Educational Expenditure And Investment on Growth In The Philippines. Applied Econometrics And International Development, Vol. 13-1, pp. 1-14.

Acosta, P. (2006). Labor Supply, School Attendance, and Remittances from International Migration: The case of El Salvador. World Bank Policy Research Working Paper, (3903). 1-57.

Acosta, P. A., Fajnzylber, P., & Lopez, H. (2007). The Impact of Remittances on Poverty and Human Capital: Evidence from Latin American household surveys. World Bank Policy Research Working Paper, (4247). 1-36.

Adams Jr, r.H. (2002). Prccautionary Saving from Different Sources of Income: Evidence from Rural Pakistan.

Adams, R.H., & Page, J. (2005). Do International Migration and Remittances reduce Poverty in Developing Countries: World Development, 33(10), 1645-1669.

Adams, R. (2006). Remittances, poverty and investment in Guatemala. International Migration, Remittances and the Brain Drain Washington DC: World Bank, 53-80.

Adams, R. H. (2006). Remittances and Poverty in Ghana. World Bank Publications (Vol. 3838).

Ahmed, V., Sugiyarto, G., & Jha, S. (2010). Remittances and Household Welfare: A Case Study of Pakistan. Asian Development Bank Economics Working Paper Series, (194). 1-29.

AJK at glance, 2006, 2007, 2008, 2009, Planning and Development dept. AJK.

Anderson, L., (2014). Migration, Remittances and Household Welfare in Ethiopia. UNU-MERIT Working Papers, 4-25.

Arif, G. M. (2004). Effects of Overseas Migration on Household Consumption, Education, Health and Labour Supply in Pakistan. International Labour Migration from South Asia, Institute of Developing Economies and Japan External Trade Organization, Chiba, Japan.

Ballard, R. (1991). The Kashmir crises: A Review from Mirpur. Economic and Political weekly. 513-517.

Ballard, R. (2003). A Case of Capital-rich Under-development: The Paradoxical Consequences of Successful Transnational Entrepreneurship from Mirpur. Contributions to Indian sociology, 37(1-2), 25-57.

Borraz, F. (2005). Assessing the Impact of Remittances on Schooling: the Mexican Experience, Global Economy Journal, 5 (1).

Bouoiyour, J. & Miftah. A, (2014). Impact of Migrant Worker's Remittances on the Living Standards of Families in Morocco: A Propensity Score Matching Approach. CATT WP no.10, 1-18.

Clement, M. (2011). Remittances and Household Expenditure Patterns in Tajikistan: A Propensity Score Matching Analysis. Asian Development Review, vol. 28, no. 2, 58–87.

De Haas. (2007). Remittances, Migration & Social Development: A Conceptual Review of the Literature. Social Policy and Development Program paper no.34, 7-27.

Edwards, A. C., & Ureta, M. (2003). International Migration, Remittances, and Schooling: Evidence from El Salvador. Journal of development economics, 72 (2), 429-461.

Gerber, T. P., & Torosyan, K. (2010). Remittances in Georgia: Correlates, Economic Impact, and Social Capital Formation (No. 002-10). 1-40.

Gyimah-Brempong, K., & Asiedu, E. (2015). Remittances and investment in Education: Evidence from Ghana. The Journal of International Trade & Economic Development, 24(2), 173-200.

Hildebrandt, N., McKenzie, D. J., Esquivel, G., & Schargrodsky, E. (2005). The Effects of Migration on Child Health in Mexico. Economia 6(1), 257-289.

Iqbal, Z. and Sattar, A. (2005), The Contribution of Workers' Remittances to Economic Growth in Pakistan, Research Report No. 187, ISBN 969-461-125-3. Pakistan Institute of Development Economics, Islamabad

Jampaklay, A. (2006). Parental Absence and Children's School Enrolment: Evidence from a Longitudinal Study in Kanchanaburi, Thailand. Asian Population Studies, 2(1), 93-110.

Javid, M., Arif, U., & Qayyum, A. (2012). Impact of Remittances on Economic Growth and Poverty. Academic Research International Vol, 2.

Kalaj, E. H., (2010). Remittances and Human capital Investment from Albania. Munich personal RePEc Achieve, 49210, 1-21.

Kapur (2006). Remittances, Government Spending and the Global Economy. International Studies Association Annual Meeting. 1-29

Khan, S., Sajid, M .R., Gondal, M. A., & Ahmed. N., (2009). Impacts of Remittances on the Living Standard of Emigrants' families in Gujrat-Pakistan. European journal of social science.12 (2), 205-215.

Khan, H., Israr, M., Summar, M., Shaukat, S. N., Khan, M., Ahmad, N., & Karim, R. (2011). Impact of Remittances on the Socio-Economic Conditions of Rural Families in District Poonch of Azad Jammu and Kashmir. Sarhad J. Agric,27(4), 625-632.

Meyer, J. M. (2014). The Effects of Migration on Poverty and Inequality in Rural Kosovo. IZA Journal of Labor and Development, 3(16). 1-18.

Muhammad, N., Ahmad, N., Shah, M., Alam, I., & Jawad, M. (2010). The Impact of Foreign Remittances on the Socio-Economic Conditions of Households (A Case Study of Rural Areas of Dir Lower,NWFP). Sarhad J. Agric, 26(1), 141-145.

Nasir, M., Tariq, M. S., & Faiz-ur-Rehman, (2011). The Effect of Foreign Remittances on Schooling: Evidence from Pakistan. Working Papers & Research Reports.

Nisar Ahmad, Z. U. (2010). Econometric Analysis of Income, Consumption and Remittances in Pakistan: Two Stage Least Square Method. The Journal of Commerce, pp,1-10.

Nguyen, Q. T., Raju, D., Awan, M. S., Javed, M., Waqas, M., Shabbir, S & Shahzad, K. (2015). Migration, Remittances and household welfare: Evidence from Pakistan. The Lahore Journal of Economics, 20:1, pp.47-69.

Okojie, C. E. (2002). Gender and Education as Determinants of Household Poverty in Nigeria. World Institute of Development Economic Research. Discussion Paper No.37,pp, 1-31.

Ozden, C., & Schiff, M., (2006). International migration, remittances and the brain drain. A co-publication of the World Bank and Palgrave McMillan.

Quartey, P. (2006). The Impact of Migrant Remittances on Household Welfare in Ghana. Final report submitted to African Economic Research consortium, Nairobi, Keynia.

Raihan. S, Khondker. B. H. Sugiyarto, G., & Jha, S. (2009). Remittance and Household Welfare: A case study of Bangladesh. ADB Economics, working Paper Series, 189, 1-35.

Sen, A.1999. Commodities and Capabilities. OUP Catalogue.

Vidal, (1998). The Effect of Emigration on Human Capital Formation, In Journal of Population Economics, vol. 11, 589-600.

World Bank. 2008. Migration and Remittances Fact Book, 2008. Washington, D.C

World Bank. 2012. Development Prospects. Migration policy inst. Washington, D.C

Yang, D. (2008). International Migration, Remittances and Household Investment: Evidence from Philippine Migrants' Exchange Rate Shocks. The Economic Journal, 118(528), 591-630.

Yameogo, N. D. (2014). Analysis of Household Expenditures and the Impact of Remittances Using a Latent Class Model; The Case of Burkino Faso. African Development Bank Group, Working Paper 200, 3-25.

www.un.org/en/development/desa/population/migration/data/estimates2/data/UN-Migrationstock Total_2015xlsx.

QUESTIONNAIRE

Section: 1

1.0 Identification				**Codes**	
Q.No.1.1 Tehsil		Q.No.1.2 Name of respondent		**Codes for Q .No.1.3** Rural=1 Urban=2	**Codes for Q.No.1.9** Treatment=1 Control=2
Q.No.1.3 Location		Q.No.1.4 Age			
Q.No.1.5 Village/City		Q.No 1.6 Education Level			
Q No.1.7 Mother Tongue		Q.No 1.8 Household size			
Q.No 1.9 Group		Contact Information (Optional)			

Section: 2

2.0 Household roster (people who live together and eat together)							
S. No	Q.2.1 Name (Who usually lives and eat together)	Q.2.2 M/F M=1 F=2	Q.2.3 Age Years	Q.2.4 Relationship with household head (See codes below)	Q 2.5 Marital Status (See codes below)	Q.2.6 Education (Highest degree completed)(See codes below)	Q.2.7 Employment status (See codes below)
1.							
2							
3.							
4.							
5							
6							
7							
8.							
9.							
10.							

Codes

(See codes for Q. No 2.4 below) 1=Head 2=Wife/Husband 3=son/daughter 4=Grandchild 5=Niece/Nephew 6=Father/Mother 7=Sister/Brother 8=Son/Daughter/ m-law 9=Other (Specify)	**Codes for Q. No 2. 5** 1=Unmarried 2=Married 3=Divorced 4=Separated 5=Widow/ Widower 6=Other (Specify)	**Codes for Q. No 2.6** 1=primary 2=middle 3=secondary 4=high secondary 5=BA/B.Sc 6=MA/M.Sc 7=Technical/Diploma 8=Doctor/Engineers	**Codes for Q. No 2.7** 1.Govt.Employee 2.private company/firm employed 3.self Employed 4.Daily wage earner 5.Unemployed

Section: 3

Q.3.0 Whether you/your family receives remittances? Yes No

If No, Please move to Q.4.0 (Monthly Household Income) If Yes, then please explain

Sr.no	Q.3.1 Detail of members working abroad	Q.3.2 Gender	Q.3.3 Country	Q.3.4 Relation with household head	Q.3.5 Age	Q.3.6 Education of remitter	Q.3.7 Length of service Abroad	Q.3.8 Monthly remittances (Approx) Rs.
1.								
2.								
3.								
4								
5.								

Codes

Code for Q.No.3.2	Code for Q.No.3.3	Code for Q.No.3.4	Code for Q.No.3.6
Male=1 Female=2	Asia=1 Europe=2 Africa=3 Other=4	Son=1 Daughter=2 Husband=3 Father=4 Other=5	1=primary 2=middle 3=secondary 4-high secondary 5=BA/B Sc 6=MA/M.Sc 7=Technical/Diploma 8=Doctor/Engineers

Section: 4

	Domestic		Abroad		Total
Q.4.1 Number of earning hands in family	Male	Female	Male	Female	
Q.4.2 Total Income(include income from Abroad)					
Q 4.4 Sources of Income					

Codes

See codes for Q.No.4.4
1=Income from business
2=income from agriculture
3=income from property
4=Income from employment/ wage income
5=Income from charities/stipend/ pensions
6=Income from Remittances
7=other sources unspecified

Section: 5

Q.5.0 Monthly overall Expenditures (PKR)						
Q No 5.1 Food	Q No 5.2Non-food (Clothing, hoteling, travelling etc.)	Q.No.5.3Durable goods	Q.No.5 4 Education	Q.No.5 5 Health	Q.No.5.6 Others (entertainment, social activities etc.)	Total

Section: 6

Sr no	Q.6.1 School going children in the household (Relationship with the head)	Q.6.2 Gender	Q 6.3 Age	Q.6.4 Education phase	Q.6 5 Type of Institutes	Q.6.6 Expenditure Amount (Rs)	
1							
2							
3.							
4.							
5							
6.							
7							

Codes	
Codes for Q.No.6.4 1=primary 2=middle 3=secondary 4=high secondary 5=BA/B.Sc 6=MA/M.Sc 7=Technical/Diploma 8=Doctor/Engineers	**Codes for Q.No.6.5** 1=General 2=Technical 3=Professional

Section: 7

Q.7.0 Asset possession					Codes	
S. No	Q.7.1 Nature of Property	Q.No.7.2 Location	Q.No.7.3 How Acquired	Q.No.7.4Value (PKR)	**See codes for Q.No.7.2** 1=Rural 2=Urban	**Codes for Q.No.7.3** 1= By inheritance 2= By purchase 3= By Gifts/ transfer
1.	Agricultural Land					
2	Live stock					
3.	Own Residential House					
4.	Commercial shops (rentable property e.g. House, shops, plaza)					
5.	Gold, Jewellary, Bonds. Bank Deposits					
6	Others (vehicles, household durables, furniture)					