

NORWEGIAN UNIVERSITY OF LIFE SCIENCES



ACKNOWLEDGEMENT

This thesis is written for the fulfillment of Master's in Development and Natural Resource Economics at the UMB School of Economics and Business, Norwegian University of Life Sciences, Ås, Norway. This thesis is the outcome of the continuous support, encouragement and guidance of Associate Professor Roberto J. Garcia. I am indebted to his valuable suggestions, advices and help throughout the research process otherwise this assignment could not be completed.

I would like to thank to Mr Subahu Pandit who has helped in field study providing all the required logistic support.

I would like to express my sincere gratitude to my family and friends for their encouragement and support during my study period in UMB.

Samir Dhakal
Ås Norway

ABSTRACT

This thesis examines the general relationship between remittances and household expenditures and savings in Nepal by doing a cross sectional analysis of the household survey conducted in 2012 by the researcher. It provides a comprehensive overview of the effect of remittance on spending behavior by looking at common categories like food, non- food and education, and the saving behavior of the remittance receiving households against the non-remittance receiving households by using the matching methods. The study found that the households which receive remittances and which do not receive remittances are different in terms of their income sources. The remittance receiving households depend primarily on non-farm income like remittances unlike the non- remittance receiving households which depend on the on farm income for their livings. The remittance receiving households spend more and save more. The remittance income alone cannot explain the difference in the household expenditures and savings between the remittance receiving and non- remittance receiving households.

Key words: international migration; remittances; household expenditure; saving; Nepal

CONTENTS

Acknowledgements

Abstract

LIST OF TABLES

1. INTRODUCTION	1
2. CONTEXT OF THE STUDY	5
2.1. History of migration in Nepal.....	5
2.2. Pattern of migration.....	7
2.3. Transition in the survey area.....	9
2.4. Changes in social structures.....	10
3. THEORY AND LITERATURE REVIEW	12
3.1. Background theory.....	12
3.1.1. Why does migration occur?.....	12
3.1.2. Why are remittances important?.....	14
3.1.3. How are remittances spent?.....	15
3.1.4. What are the effects of remittances on major macro-economic variables?.....	16
3.2. Literature Review in context of Nepal.....	19
4. DESCRIPTIVE ANALYSIS	22
4.1. Background of the study area	22
4.2. Field work organization and data collection.....	22
4.2.1. Field work organization.....	22
4.2.2. Data collection.....	23
4.3. Definitions and descriptions of variables used	24
4.3.1. Household characteristics.....	24
4.3.2. Household income and expenditures	25
4.3.2.1. Household income.....	25
4.3.2.2. Household expenditure.....	26
4.3.3. Household wealth position.....	27
4.4. Description analysis.....	27
4.5. Aim of the study.....	35
4.5.1. Income gain versus production loss.....	35
4.5.2. Savings in households with and without a migrant.....	35
4.5.3. Household expenditure.....	38
5. RESULTS	41

5.1. Results for household savings.....	42
5.2. Results on the effects of remittance income on household expenditure.....	45
6. CONCLUSIONS, LIMITATIONS AND POLICY RECOMMENDATIONS.....	49
6.1. Conclusions.....	49
6.1.1. Conclusions regarding household saving.....	49
6.1.2. Conclusions regarding household expenditures.....	50
6.2. Limitations.....	51
6.3. Suggestions for further research.....	52
BIBLIOGRAPHY.....	53
APPENDICES.....	80

LIST OF TABLES

2.1. Some macroeconomic indicators of Nepalese economy.....	8
4.1. Household expenditure and wealth position.....	29
4.2. Household characteristics.....	31
4.3. Methods of receiving remittances.....	32
4.4. Destination of migrant.....	34
5.1. Change in asset holding.....	42
5.2. Results on the effects of remittances on household expenditures.....	46

1. INTRODUCTION

The migration of a member has a dual effect for the households. First; it reduces a household member or the household labor force. The decrease in the household member means the decrease in the household production of goods and services as all members are jointly involved in economic activities within the household. Second, the migrated household member will be employed in another occupation and makes cash income and sends back to the household. The money sent back by the absentee is known as remittance income. So, a household has to decide whether to employ all of its household labor locally especially in agriculture or to send one or more members abroad to earn cash income. This complicates the portfolio management of a household in terms of the household's sustainable livelihood.

The portfolio management is difficult for the households in the rural areas because households have a low level of cash income. This is because there is underemployment of household members in the agricultural sector and/or because earnings from off-farm income are limited because of the relative scarcity of local jobs in the non-agricultural sector. When the internal capacity to create alternative employment is stagnant, rural households' only option is to have some of their members migrate to earn cash income.

In the Nepalese economy, job creation became a buzzword in the political platforms of all political parties after the political movement of 1990s. Out-migration evolved to be the inevitable consequence of the inability of private sector development and government policies to create jobs domestically to keep up with the excess labor supply. As a result, within two decades after 1990s, more than one fifth of Nepalese labor force is thought to have moved to live abroad, mainly to Middle East, India and South East Asia as low-paid, unskilled temporary laborers (Khatri 2009).

The temporary emigration of the labor force was thought to reduce domestic unemployment, to import foreign wealth, and to fulfill the foreign exchange gap. Moreover, temporary migration is thought positively to enhance asset positions and productivity levels of poor households, either through remittances from migrants or human-capital accumulation and savings abroad. Domestic credit constraints can be minimized by the remittances or savings abroad. So, remittances allow poor households to spend and invest in activities that may have been impossible without access to cash flows.

Migration is a major determining factor of Nepali economy which has suffered from prolonged conflict, political instability, and unrest. The number of Nepalese going overseas in search of job alongside their income has been growing though marginally (NMYB, 2008). The remittances impact on the economy in Nepal has been more significant. At least two

reasons are provided for this dependency of the economy on remittances to happen: (1) the country is poor and per capita income is low; and (2) labor productivity is low (Khatri 2009). As the country is poor, even a small increase in per capita income seems to be higher in the growth terms. Nepal Living Standard Surveys conducted by the central bureau of statistics consistently demonstrate the substantial growth of both volume of remittance income and the number of recipients from abroad reducing poverty even in internal conflict situations. Households receiving remittances increased from 23.4 percent to 31.9 percent to 55.8 percent households in the studies held on 1995/96, 2003/04 and 2010, respectively. International remittance income increased from 7 to 35 to 208 billion rupees (Gill & Institute 2003) in the corresponding time periods (NLSS 1996, 2004 and 2010).

The studies on migration and remittances focus on major four strategic questions: (1) who migrate and why?; (2) why do migrants send back money to the remaining household members; (3) how do the household members back in the origin spend remittance money; (4) what are the implications of the remittance flows at the origin. Out of the these broad areas of research, the thesis tries to pinpoint on the major question- what are the implications of the remittance income in the origin household.

The study of migration decision and the impact of remittances on recipient households and society have taken focus among researchers. There has been a tendency to study causes and impacts of migration separately. However, the study of migration and remittances in Nepal is still in the initial stage and is increasing with the increase in the value of remittances into the economy and the economy is turned towards a remittances economy. Most studies based on Nepalese migration and remittances are descriptive in nature where the focus is primarily on the socio-economic composition, particularly in describing the condition and the process of migration, the flow of remittance income and problems faced by migrants (E 2001; Endo & Afram 2011). An important issue on use of remittances is: Do the migrants channel international remittances into productive investments at home, or do they use such monies merely for consumption of consumption goods? There are not many studies on this salient issue.

This thesis intends to answer two basic issues on this conjecture of implication of remittance income to the households in the origin. Firstly, how the households manage their household labor endowments in various occupations so that they can assure sustainable livelihoods. In other words, how the households compensate the reduced household labor in their agricultural activities in their place of origin. Secondly, what are the economic effects of

remittances on the households regarding expenditure and saving decisions? The specific objectives of the thesis are categorized in two stages.

In the first stage, the thesis tries to ascertain whether the value of remittances exceeds the value of lost production due to migration of work force. In the rural areas, there may be surplus labor in the agricultural sector which has a zero or negligible marginal products and the reduction of the labor force would not decrease production, but rather the productivity of existing workers could increase. If the household head realizes that the reduction of household labor supply does not reduce the production possibility of the household, the second stage objectives will be employed. The second stage objectives are related with the use of the remitted money in the household. The thesis mainly focuses on the second stage objectives. The specific second stage objectives are:

The remittance-receiving households experience higher savings than the non-remittance-receiving households.

The remittance-receiving households will spend more than the non-remittance receiving households for both consumption and investment purposes.

The thesis tries to answer these research questions by a household survey conducted in January 2012 in two villages of *Chitwan District*, in the mid- south of Nepal, which provides the real-time migratory experiences happening in Nepal. For this purpose, 148 households were chosen randomly in the two villages and interviews were held with the household head regarding the general information about the household including number of household members, sex, age, education and occupation; detailed information on wealth, income and expenses of the household; and information on migratory experiences of the family members and income remitted or brought by the immigrant during the previous 12 months. The households were chosen from the villages are homogeneous with respect to infrastructure (e.g, access to all-weather roads, electricity, drinking water, communication etc.). Moreover, all households had migrated from other parts of Nepal within last 50 years. Out of the 148 households interviewed, 36 percent households have one household member migrated outside the country for work and 64 percent of the households do not have a labor migrant. Actually the study has not make the distinction among the reasons of migrations but all the migrants are for work related migration and there were no households with more than one migrant household member.

The thesis is structured as follows. The second chapter deals with the context of migration and remittances in Nepal. Chapter three discusses the literature and describes the relevant past literature regarding migration and remittance and its practice in a Nepalese context. The

fourth chapter presents the data and the methodology used in the survey and the descriptive analysis. The fifth chapter reports the results and the sixth chapter provides the conclusions, policy recommendations and limitations of the study.

2. CONTEXT OF THE STUDY

2.1. History of migration in Nepal

International migration has a long history in Nepal, dating back to the early 1800s when men from the hill region of Gorkha were recruited into the army of the Sikh ruler Ranjit Singh in Lahore, then a part of India. This service, followed by a war in Gorkha with the British East India Company, earned the soldiers a reputation for bravery. The Anglo-Nepal Treaty of Peace and Friendship signed in 1816 after the war recruited 3,000 Nepalese soldiers in British Gorkha Regiment and inaugurated a culture of labor migration from Nepal, which continues to the present (Seddon et al. 2001).

In the 1980s the booming East Asian economies as well as the Gulf countries, which were undergoing a construction boom, increased demand for cheap labor from Nepal. The higher demand for labor in the international market coupled with the Foreign Employment Act of 1985, which licensed non-governmental institutions to export Nepalese workers abroad and legitimized certain labor contracting organizations, further facilitated migration (Bohra & Massey 2009). Peoples' expectations of better life have increased due to popular political changes in 1990 which introduced multi-party democracy. The new government adopted liberal economic policies which have opened up the country to the rest of the world. From the mid-1990s the Maoists has started armed insurgency which displaced many rural people from their origin. This has increased the pace of migration on both internal and international destinations. The internal destinations were the urban or semi urban areas where there was relatively strong presence of government and the international destinations included India, Middle East and South East Asia.

Migration to other regions of Nepal, especially to Kathmandu, rose dramatically, with Kathmandu alone estimated to have hosted up to 100,000 internally displaced people (NMYB 2007). Although researchers claim the official statistics to be a gross underestimation of reality, even the underestimated data show a surge in migration, with the total migrant workers abroad (excluding those to India) increasing from 1,926 in 1992/1993 to over a million by the end of 2007 (Shrestha et al. 2008). At the same time, remittances from expatriates grew at 30 percent per year and from less than 3 percent of GDP in 1995 to about 15 percent by the end of 2003, exceeding the combined share of tourism, foreign aid and exports (WorldBank 2004). The ratio of worker's remittances to gross domestic product (GDP) is gradually increasing except a marginal drop to 13.8 percent in the 2006/07 from 14.9 percent in the 2005/06. It has increased 21.8 percent in the 2008/09 against 17.4 percent in the 2007/08 (NMYB 2008). In 2009, foreign remittance flow into Nepal was US\$ 3

billion. These figures show that Nepal stands as the fifth largest recipient when remittances are expressed as a share of GDP, making 23 % of GDP from remittance in 2009 (Ratha et al. 2009).

There was a shift in the destination for Nepalese migrants from 1995/1996 to 2003/2004, with a decrease in the share of internal migration as well as migration to India and a corresponding increase in the share of overseas migration. Nevertheless, among the international destinations, India has been the major destination for Nepalese labor migrants since the signing of Peace and Friendship Treaty between India and Nepal in July 1950 (Shrestha 2004). Given the low costs of migrating due to open borders and free movement, along with common culture and proximity, Nepalese migrants in India are estimated to be one million by some accounts and even as high as three million by others, although the current population census states that less than 600,000 Nepalese reside in India (Garner & Seddon 2004). Work-related migration to India has been substantial, but has steadily decreasing. It has decreased from 93.1 % of total international migration in 1981 to 89.2 percent in 1991 to 77.3 percent in 2001 (NMYB 2008). After India, the Gulf region has emerged as a major destination since the mid-1990s, and many Nepalese from urban areas and relatively wealthy backgrounds are increasingly migrating to the United States, Australia, Canada, and Europe. Nevertheless, there is an absence of reliable data on Nepalese migrants overseas as government data and census reports seem to grossly underestimate the actual numbers reported in research studies (NMYB 2008). The unreported illegal migration to all around the world and open border to India exacerbates the problem.

The major reasons for out-migration from Nepal include education and work (NMYB 2008). Typically, education-related out-migration occurs from the relatively wealthy households and the work related out-migration happens from the relatively less wealthy households. The major destinations for education related migration are the US, Australia, the UK and other European countries. The work related migration destinations are India, the Middle East and East Asia.

In the macroeconomic context, the percent of households receiving remittance has increased from 23 percent in 1995/96 to about 56 percent in 2010/11 and the share of remittances in household income increased from about 27 percent to about 31 percent during the same period (MOF 2012). The composition of remittance receipts has changed as the remittances received from India has decreased by about 22 percentage points and increased by 47 percentage points from other countries. The total amount of remittance has increased by about five and a half fold from about Rs 46 billion in 2003/04 to Rs 259 billion in 2010/11

(NLLS 2010). This increase is coupled by both exchange rate depreciation of Nepalese currency and increase in the number of remittance senders. The exchange rate of Nepalese currency was 0.013 (1 \$= Rs 75) in 2001 and 0.0117 (\$1 = Rs 85) in 2012 (NRB 2012).

2.2. Pattern of Migration

Labor migration has been a feature of Nepalese livelihood strategies for at least 200 years (Gill & Institute 2003). The temporary and seasonal migration to India is a generational livelihood strategy adopted by many Nepalese rural households making the rural Nepalese economy as “agri-migratory”(Bruslé 2008). Agriculture provides a livelihood to 80% of the households and contributes to half of the national income (Karki & van Wissen 2009). Yet most farmers have increasing difficulty ensuring a sustainable livelihood. The majority of the farmers are unable to cope with the declining agricultural yields, shrinking landholdings due to partition of inheritance, debt clearance, illiteracy, and limits to labor market (Graner 2001). The daily wage difference between agriculture and non-agriculture labor exacerbates the vulnerability of agricultural sector (Graner 2001). So, the occupational diversity is the necessary household strategy for a majority of Nepalese farmers. Among the available livelihood strategies, labor- related migration is a major adaptable strategy by rural (i.e., agriculturally-based) households. So, the temporary and seasonal international migration from rural Nepal are still dominant than the migration for permanent basis (Seddon et al. 1998).

Between the two nation- wide national surveys conducted in 2004 and 2010 (NLSS, 2004 and 2010), the absolute poverty has decreased from 31.5 percentage points to 18 percentage points; incredible decrease of 3 percentage points per year. The nominal household income increased by 153 percent. As the average household income of the poorest and richest 20 percent households increased by 297 percent and 133 percent respectively, migration is pro-poor. The per capita consumption has increased by 165 percent for the poor and 66 percent for the rich. The average daily wage in agriculture has increased by 127 percent and non-agricultural sector by 98 percent (Sapkota 2011).

The composition of income sources has experienced the significant change as the share of farm income in total income has decreased from 61 percent to 28 percent while that of non-farm income increased from 22 to 37 percent and of other sources including remittances have increased from 16 to 35 percent (MOF 2012).

In Nepal, the increasing remittances at the household level have led to high consumption demand, high imports and appreciation of real exchange rate. This may result in the erosion

of domestic manufacturing and its competitiveness (Sapkota 2011). The symptoms of Dutch Disease are already realized which may have dangerous effects in the coming futures.

Table 2.1: Some macroeconomic indicators of Nepalese economy

Year	GDP	Agriculture	Agriculture as share of GDP	Remittance
2001/02	0.1	3.5	36.15	-
2002/03	3.9	3.5	-	2.04
2003/04	4.7	4.3	-	2.0
2004/05	3.5	3.9	-	1.9
2005/06	3.36	1.67	33.09	82.60
2006/07	3.41	0.94	32.05	5.26
2007/08	6.10	5.80	31.22	40.0
2008/09	4.53	2.98	32.54	50.0
2009/10	4.82	1.99	35.0	9.5
2010/11	3.88	4.47	36.54	7.5

Source: MOF 2012 (the values of GDP, agriculture and remittances are the percentage change over the previous year)

Table 2.1 shows that the remittance flow shows a rapid growth from 2005/06. At that year, the internal conflict was at a peak and people wanted to migrate temporarily to escape from the rural areas where the war was widespread. Migration and hence remittance was adopted as the livelihood strategy by the rural areas. After that time, internal economic activities slumped and the job-creating capacity of the economy diminished. The available livelihood strategy to the rural households was to adopt the migration of at least one household member.

The GDP growth is always sluggish in the last decade in Nepal. Except in 2007/08, the GDP growth is less than 5 percent over the previous year. The peace treaty between the government and the Maoist rebels made the positive impact for higher economic growth along with favorable weather condition for the agriculture sector. The fluctuation of agricultural growth is related with the weather variability and so only temporary in nature. The share of agriculture on GDP is increasing in the economy not because agriculture has positive structural changes but because the other sectors like industry are collapsed. For example, the share of industry to GDP was 17 percent in 2000/01 which has decreased to 14 percent in 2010/11 (MOF 2012).

The agriculture sector has witnessed a sharp increase in the wages (MOF 2012). The result may be due to that many households quit the agriculture sector and become only consumers of agricultural goods. Or the people who were agricultural wage earners have migrated. The internal conflict caused many households to migrate to urban areas. So, the economy has become more remittance dependent from agriculture dependent.

Between 2004 and 2010, the head count poverty of Nepal has decreased from 31.5 to 18 percentage point with the economic growth rate being below 5 percent on every year. These positive changes have been achieved at the household level at a time when major macroeconomic variables are either stagnant or deteriorating. The uncertain political situation cannot bring such a massive change in the economy by the policy changes. The only convincing factor for the change is remittances sent to the households by their migrant household members.

The domestic production of agricultural goods has decreased and the whole economy has converted into import or remittance based economy. There is tendency of shift of Nepalese economy from agricultural economy to remittance economy. Out of the two major possibilities of the outcome observed between the two survey periods, migration of the working age people is the dominant one.

2.3. Transition in the survey area

The thesis is based on the household survey conducted during January 2012 in two villages – Gunjanagar and Divyanagar village development committees of Chitwan district of Nepal. The survey area is mainly farming area and all the households are involved in the agricultural activities. They hire in and out farm labor in the season of farming just as the other farmers do in other locations of the agricultural dominant area. The agriculture is the main source of livelihood for all the households and the other sources of income are the subsidiary sources. All the households are involved in selling of agricultural products in the nearby market places to the local businessmen who, in turn, pays back money to the farmers whenever the farmers need. The farmers get their money back when they have to harvest the crops in another farming cycle. The money they receive by selling the agricultural goods is very small because the surplus they generate is very small. This is because they are small landholders with low productivity. The income from the surplus products is cash earnings, but these earnings are mainly used for other agricultural activities. Hence, household savings from agricultural activities are very limited. Instead, off-farm income is very important for long-term household savings for farming households.

Off-farm income is very important for the households in the rural areas like the survey area of *Chitwan District*. The off-farm labor supply in the local agriculture and city center is limited as the people hesitate to do the hard work and physically demanding jobs such as construction, cleaning, warehousing, agricultural labor etc. in nearby areas due to social stigma these jobs carry in society. The same social limitation is the main reason for unskilled labor migration between Nepal and India, especially from Bihar. There is two-way movement of unskilled laborers between Nepal and India because people from both areas hesitate to do unskilled physically demanding labor jobs in their local area. So, people from poor households migrate to India to do these physically difficult jobs like construction and agriculture.

Migration to India typically is seasonal. Remittance income is mainly spent for consumption purposes as the income from these jobs are very low. There is shift in the migration destination after the 1990s as the economy has become more open from one side and, from the other, the oil rich Gulf countries has experienced rapid growth and labor scarcity. These countries not only attracted labor from poor households but also from more well to do households. The migration to these new destinations is typically temporary. Although the migrants can renew their working visa, the initial contract is normally of 3 years. As the contract time period is relatively short, even the persons from well-off families also want to migrate once. Hence, migration has become common phenomenon for the households.

The average income is Rs 423,000 in the survey area against the national average of Rs 202,000. In the per capita term, the survey area has average per capita income is Rs 102,000 against the national average of Rs 42,000 (NLSS, 2010). So, the survey area is better off in terms of income in the comparison to national averages.

2.4. Changes in the social structures

The social indicators of Nepal have improved in the last 20 years. For example, the education indicators show a very noticeable improvement between 1995/96 and 2010/11. The overall literacy rate of population has increased from 36 percent in 1995/96 to 57 in 2010/11. Female literacy increased by some 25 percentage points (MOF 2012). Overall 72 percent of currently school/college enrolled populations attended community/government schools and 27 percent in private school. The private school participation has increased from 7.5 percent in 1995/96 to 26.8 percent in 2010/11 (NLSS 2010). This shows that the private schools are spreading throughout the country. There are many factors which has made the increasing private school participation such as feeling of gain in social status by the parents; decreasing quality of education in community schools due to politicized management, lack of seriousness of

teachers, old fashioned traditional teaching and learning modules, lack of extra-curricular activities, lack of qualified English and Science teachers. English is taught as optional subject in the community schools but the parents understand the importance of English and practical science subjects. In short, the parents have become serious about the quality of education of their children. These reasons helped to increase the participation of private schools.

The social distinction of poor or rich can be measured by whether the household sends the children to private school or to government school. The household which sends their children to public schools are regarded as the poor households than the others. So, in urban or semi-urban areas where the household income is relatively high and higher demonstration effects, the government schools lack sufficient numbers of students. In the rural areas, the private schools are not developed due to less profitability to the private investment as the population is sparse and peoples' capacity to pay for education is low, the government schools are also insufficient. Mainly, the rural area government schools lack the qualified teachers as the qualified teachers want to stay in the urban areas where they can earn extra income through private tuition.

In the household survey area, there are seven primary schools and three high schools run by government. Out of seven primary schools, none has more than 10 students per class. All of these students were dummy students to show on the paper so that the school is not shut down formally. There is no single school in which the classes are run effectively. At the same time, there were 12 private primary schools which are full of their capacity.

The case for high school was quite different as they have students to run classes in both private and government schools. The government high schools are running the higher secondary levels and in order to be admitted for higher secondary level, they have made their own rule that the students who had studied the high school in the same school are only qualified. So, the participation in private schools is high until class 8 and from class 9, the students are moving to the government schools. Only the students who are intended to migrate to local city to study the higher secondary level are going to the private school. There are no private higher secondary schools in the survey area. To run the higher secondary level, the private schools have to offer many optional subjects which are costly and less profitable to the owners. One reason for the larger number of students in government high schools may be the compulsion of the students to study higher secondary level in the local village.

3. THEORY AND LITERATURE REVIEW

The majority of remittance and migration literature available focus on the transnational population movements. The economic and social impacts on the area of origin and destination due to flow of human resource is less understood and studied as compared to goods and capital flows among the countries in the era of globalization. The detailed studies on remittances are encountered by controversies. First, whether or not migration and remittances decisions are separable or not is not clear. When a migrant does not send any money in the form of remittances, the economic effect of remittance to the place of origin becomes non-measurable. Second, whether or not the remittance income is different to any other source of income or not is subject to debate. If remittance income is different to other sources of income for the household, how and why it is different but it is different to the financial or capital flows in the international level as the remittance income receipts are the households and the capital flow receipts are the businesses or the government. So, remittances will have direct impact on the household level.

Although there is paucity of literature regarding remittances, this chapter will review research on four broad aspects including reasons of migration, reasons for remittance transfers, the economic impact of remittance on economic variables and the migration-remittance studies in Nepal. The rationale to split the existing literature into sub- groups is that without migration, there is no possibility of remittance income. So, the necessary condition for remittance income is migration of a household member who sends back the money. After migration, the migrant decides whether to send money back to the household members or not. If the migrant decides to remit money back to the origin place, what will be the impacts of that money to that particular household which receives the remitted money and how they use the money they receive. And lastly, what is happening in Nepal in terms of all these issues whether the migrants are sending money or not; how the remittance receipts of the households are being spent and what are the economic implications of the remittances income to the households and the overall economy of Nepal.

3.1. Background Theory

3.1.1. Why does migration occur?

The main motives of migration are survival and mobility. Survival migrants are persons pushed abroad by the paucity of alternatives at home; mobility migrants are pulled abroad to better themselves (Papademetriou & Martin 1991). There are pull, push and mix theories of migration. The traditional Harris-Todaro model (Harris & Todaro 1970), is based on the pull factors for occurring migration. According to these theories, migration proceeds in response

to urban rural differences in expected income. If the expected income from the urban area is higher than the rural area, there will be migration from rural to urban areas even though there is widespread unemployment in urban areas. The only motive for migration is to maximize the expected utility (EU) at the end of the relevant time period. So, $EU = EU(Y)$. Let Y_1 is the expected income from migration and Y_0 be the expected income without migration, then a person will migrate if $EU(Y_1) > EU(Y_0)$. The same hypothesis can be applied to the international migration that if the expected income from the host country is higher than the expected income in the origin country, there will be international migration. In short, there will be pull factors in urban areas or the host countries to attract migrants. According to neoclassical economic theory, migration occurs when there is chance for the workers to take advantage from migration from low-income to high-income areas/countries, from high-unemployment to low-unemployment countries, larger the expected income differentials.

On the other hand, the new economics of labor migration focuses on the push factors for migration decision. Relative deprivation is the root cause for migration of the individuals from one place to another. People compare with their reference group or their neighborhood and the comparison generates psychological costs or benefits- feelings of relative deprivation or relative satisfaction. A person migrates to change his relative position in the same reference group or to change his reference group. So, when a person psychologically feels more deprived, that person is more likely to migrate (Stark & Bloom 1985). Income remittances from household members who migrate will have a dual impact on household welfare: first, by contributing to its absolute income; and second, by improving its income position relative to that of other village households (Stark & Taylor 1991b).

A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood encompasses the household's Income generating activities along with social institutions, intra household relations and mechanisms of access to resources (Ellis 1998). So, a livelihood strategy is the deliberate choice of a combination of economic and social activities by households and their individual members to maintain and improve their livings. A particular household choose a particular strategy depending on their resource endowments. Hence, different households will adopt different livelihood strategies. Among the different livelihood strategies, migration is one of the options in order to diversify, secure and sustainably improve their livelihoods.

Therefore, although the circumstances of the migrant may be different, the anticipated gap in income; the prospects of greater household security; the existence of social networks; the

availability of information about migration outcomes at origin and destination; the personal feeling of asset humiliation are the major motives to migrate.

3.1.2. Why are remittances important?

Migration can take many forms. Essentially, the forms are divided into two broad groups, temporary and permanent. The migrant who completely leaves the place of origin is permanent migrant whereas the temporary migrant leaves the place of origin for some definite time period and returns to the place of origin (Dustmann & Weiss 2007). Some individuals, especially the temporary migrants, migrate to accumulate financial assets to make specific investments. They are not likely to invest in host community, are more frugal on current expenditure but remit the maximum amount of their income. Their main motive is to save as much as they can. Future consumption is preferred to the current consumption. So, the intention to return positively affects financial transfers from immigrants to their home country (Glytsos 1997; Sinning 2011). The main aim of a permanent migrant is to integrate themselves into host-country circumstances. Remittances for family support is of minor importance since the family members join the migrant abroad sooner or later (Glytsos 1997). In the new economics of labor migration, the household determines the decision to migrate. In this respect, the family manages the transaction cost required to migrate at the first instance and expects some reciprocal behavior from the immigrants later. Even though a selfish migrant can violate the family contracts, which are never in written form, the migrant would have to cut the ties with the family. However, an implicit family contract can be enforced because of mutual altruism and social connectedness with the origin community (Stark & Lucas 1988). The family or household left behind expects transfers of fund by the migrant. The expectation of remittances by the family depends on various motives such as altruism, self-interest, Family loan and insurance arrangements, social status and prestige in the origin community etc.

Altruism seems to be the most important motive for remitting. The logic is very simple. Within a family, a person who can support has to support others. Altruism or solidarity motive is expected to be an important factor in a worker's decision to remit. Many workers partly send money home to support their family. The amount of money flow depends upon the economic condition of both host and origin countries. When there is hard economic situation in the origin country, the amount of remittance is expected to increase and vice versa. However, remittances may decay in the long run because the household ties will weaken with time diminishing the altruistic transfer.

Migrants send back remittances for mainly three purely self-interest purposes which are:

-The migrant supports the left household members for inheritance. Particularly this payment is made to the parents so that they will provide more of their property to the migrant.

-The family members are the most trustworthy agent for the migrant to invest and to maintain the asset. The migrant saves in the destination country. If the migrant is temporary, virtually all the savings are converted into investment in the origin country. The household members left behind can administer the saving or investment during the emigration period.

-If the migrant is temporary, s/he does not want to lose the existing relationship with the family members, want to make the investments in fixed assets and social assets to increase his own prestige.(Lucas & Stark 1985)

The new economics of labor migration argues that the decision to migrate is taken by the household regarding who, when and for what time period (Stark & Taylor 1991a). The household decision making on migration depends upon the family loan situation, the household decision of portfolio management and the insurance scheme the household wants to make. So, the household expects that the loan or the expenditure incurred during the migration process to be repaid by the immigrant. Moreover, the remittance is thought to be the insurance against shocks. The portfolio management by the household diversifies the income sources and if the internal sources are not sufficient to deal with the expected shocks, remittances serve as insurance for the household. So, “the remittances flow are negatively correlated with the home country economic shocks” (Lucas & Stark 1985). Moral hazard may be the problem on insurance motive to remit.

The relative deprivation theory addressing ‘why to migrate’ pinpoints the issue of social status and prestige in the origin community. The migrants want to be relatively better off in the social stratification on wealth distribution. As the migrants are relative to their own origin community, they want to spend their earned money abroad on their origin community. Remittances contribute to the underwriting of pre-existing class locations and the formation of new social hierarchies (Bracking 2003).

3.1.3. How are remittances spent?

In the literature, there are at least three views on how remittances are spent and their effect on economic development. The first view see remittances as fungible and are spent at the margin just like income from any other source. For example; a dollar of remittance income is treated by the household just like a dollar from wage income (Adams & Cuenca 2010). Empirical studies generally do not count the remittance income as a separate and different source of income. So, the distinction between the effects of remittance income and other source of income is not made explicit.

The second view argues that the receipt of remittances can cause behavioral changes at the household level and that remittances tend to get spent on consumption rather than on investment goods like the purchase of a livestock unit or setting up a small retail shop. The significant and even the majority portion of the remittances are spent on status oriented consumption goods like buying a television or radio (Chami et al. 2003). The explanation of moral hazard problem highlights this view. The proponents of this hypothesis focus on the negative effects of migration and remittance on the economies of origin. According to Lipton (1980), migration is concentrated among young men and requires harder work by the women and children to replace absent young men. The remittance income is spent on everyday needs and the received remittance encourages leisure for work (Lipton 1980). Survey data from western Mali shows that the more insurance is provided by the migrants in the form of remittances, the household members left behind will have an less incentive to work (Gubert 2000).

The third, and more recent view, is that since remittances are a transitory type of income, households tend to spend them more at the margin on investment goods-human and physical capital investments- than consumption goods(Edwards & Ureta 2003). For example; Adams (2010) using nationally representative household data set from Gautemala finds that households receiving international remittances spend marginally less on consumption goods like food and spend marginally more on investment goods such as education and housing compared to what they would have spent on these goods without the remittances (Adams & Cuecuecha 2010). A study in the uses of remittance income in rural Pakistan, Adams (1998) concludes that the availability of remittance income helps to increase investment in rural assets by raising the marginal propensity to invest for migrant households. The external remittances have a more important statistical effect on the accumulation of rural assets than total labor income has excluding remittance and rental income (Adams 1998).

3.1.4. What are the effects of remittances on major macroeconomic variables?

The effect of remittances on economic development is often controversial regarding the valuation of brain drain or income gain. Through the brain drain, a poor country loses a scare factor (e.g., human capital), but gains another scare factor, financial resources. The detrimental effect of brain drain is that in underdeveloped countries migration mainly happens with person who are in the upper end of the human capital distribution (Kapur 2009).

The effects of remittances to the macroeconomic variables are always debatable because the remittances are the flow of money from one individual to another individual. The use of these

funds depends on household decisions. So, remittances will always have microeconomic effects but the total volume of individual transfers may indicate different situations. The remittance income can affect the receiving country's economy in many spheres both at the macro and micro levels. At the macro level, the flow of remittances can influence the determination of inflation, exchange and interest rate, and the growth rate of the economy. At the micro level, an increase in the flow of remittances can contribute to reducing liquidity constraints of the household, which often prevail in rural areas of most of the developing countries.

Modern migration economics considers migration as an exchange of abundant unskilled labor for scarce foreign exchange in the form of remittances (Glytsos 2002). A monetary transfer in the form of remittance directly increases the availability of foreign exchange in the country of origin. A positive transfer of resources like remittances to a country hurts its competitiveness in world markets by reducing the value of export as the remittances increases the real exchange rate (Amuedo-Dorantes & Pozo 2004). Appreciation of exchange rate is thought to harm the tradable sector of the economy. Remittances tend to increase household aggregate wealth which leads to decrease in household labor supply. The decreased labor supply, in turn, puts upward pressure on wages; and hence to production costs and reduction in competitiveness.

The economic shocks are frequent in underdeveloped countries because of normal business cycles, imported business cycles from the donor/developed countries, financial shocks and economic restructurings. Such shocks make many individuals and households experience periods of unexpected reduction in income. In the periods of shocks in the developed countries, these countries cannot finance their international aid. So, the flow of foreign aid tends to decline. The official foreign aid flows tend to rise during the favorable economic conditions and fall in bad times, remittances appear to react less violently and show remarkable stability over time (Ratha 2003). Even in the economic shock in the origin country, the remittances flow may be rising showing the countercyclical flow of funds as the family members back to the origin are in financial problem and the emigrants think that it is their responsibility to help to the left behind members in the situation of hardship.

The major impacts of remittances on origin occur directly through changes in the patterns of expenditure and investment of the household members having migrant members and indirectly through multiplier effects. Remittances serve as the market flow of foreign exchange, it is used partly for consumption and partly for investment and have strong positive and negative effects on development (Glytsos 2002). If remittances are invested, they

contribute for output growth, and even if they are consumed, they generate strong positive multiplier effects (Stahl & Arnold 1986).

Remittances can have a positive impact as a development tool for the recipient countries with effects on saving, investment, growth, consumption, poverty, and income distribution. The impact on growth of remittances in receiving country is through saving and investment as well as short run effects on aggregate demand and output through consumption. Workers' remittances are a component of foreign saving and they complement national savings by increasing the total pool of resources available to investment (Solimano 2003).

Recent evidence reveals that the significant portion of the international remittances are invested in the origin community (Adams 1991; Osili 2007). Remittances may finance investments in the country of origin in the form of land and housing acquisition, financial assets and microenterprises (Adams 1991). The temporary and permanent migrants may have different motives to remit the savings made in the host country but the migrants always face a trade-off between saving in host country and remitting the money to the origin country (Galor & Stark 1990). Migrants send remittances not only to provide economic support to their origin households but also to accumulate savings in the origin country often in the form of investments such as land, housing, microenterprises, and financial assets (Osili 2007).

According to permanent income hypothesis, individual households should be able to smooth consumption by saving in the normal times and depleting savings during shocks so that they can maintain their consumption level constant for their whole life period. When a household has a migrant household member, it is the prime period to make savings as they have regular income in the form of remittances. Saving as the method to smooth consumption is used by the rural households. Consumption smoothing is achieved not only by the relatively liquid financial saving and credit transactions, but also by lumpy and possibly costly changes in stocks of physical assets (Zimmerman & Carter 2003). The choice of saving instrument depends on access to credit and other economic circumstances. So, household's saving or dis-saving in terms of financial and physical assets depends on the economic condition and the nature of economic shock which the household anticipates (Alderman 1996). There is debate whether the international transfers are saved and if they are saved whether they are used in the form of durables or not.

Development theory highlights that the propensity to save out of transitory income is higher than the propensity to save out of permanent income. Empirical evidence shows that saving out of remittances, which is one of the forms of temporary income, is higher than savings from regular earnings in the origin country. The intention of return makes the temporary

migrants save more than the permanent migrants (Constant & Zimmermann 2005; Galor & Stark 1990) .

An important question in remittance literature is whether the remittance flow is spent for future income generation or not? It can be assumed that if the remittance flows are spent on the education expenditures of the children, the investment fulfills the criterion of future investment. Edwards and Ureta (2003) studies the effect of remittances on households' schooling decisions using data for El Salvador. They concluded that remittances have a large significant effect on school retention (Edwards & Ureta 2003). Hanson and woodruff (2003) found that children in migrant households complete significantly more years of schooling (Hanson & Woodruff 2003). Adam (2005) reveals that large proportion of remittance money goes into education. The increased expenditure on education represents investment in human capital (Adams Jr 2005). Adams (1998) using a large household data set from Guatemala argues that households receiving remittances tend to spend more on investment goods like education, health and housing. At the margin, households receiving international remittances spend 58 percent more on education than do households with-out remittances(Adams Jr 2005).

3.2. Literature review in the context of Nepal

The empirical studies in Nepal and Nicaragua support the poverty reducing role of remittances. Data show that almost 20 percent of the decline in poverty in Nepal between 1995 and 2004 can be attributed to increased work related migration. Without migration, poverty in Nepal would have been more than 10 % higher than it is now. The poverty rate without remittance, would be 4% points higher in Nicaragua during the same period of time(Murrugarra et al. 2010 p 2)

In rural Nepal, where food demand is always higher than the food supply, migration for work is the main livelihood strategy of the rural households. Thieme and Wyss (2005) explain the reasons to migrate, choice of destination and financing of migration cost in the Nepalese context. According to the study, the main reason to migrate is to increase the living standard of the household such as paying the debts, buying house or land, financing education of children, fulfilling the current expenses. Not only are the economic reasons, but there are social attributes which encourages the migration of the young people. Migration is institutionalized in rural Nepal and the young people have no incentive to work in agriculture. Regarding the choice of destination, the household decides where to migrate and the main consideration is the investment requirement for migration and the migration networks (Thieme & Wyss 2005). The main findings include the method of transferring remittance,

uses of the transfer by the households and contribution of remittance on the rural economy of Nepal. The international migration contributes to sustainable livelihood by increasing social capital, education of children, financial capital and lowers the investment cost and risk of migration of potential migrants (Thieme & Wyss 2005).

Bohara and Massy (2009) tried to evaluate the leading theories of migration and asserted the consistency of all the leading theories in Nepalese migration dynamics (Bohra & Massey 2009). Bhandari (2004) tried to evaluate the new economics of labor migration hypothesis of relative deprivation as the cause of migration from the agricultural households and concluded that the households with relatively less access to cultivated land are more likely to migrate and that the fragmentation of land holdings encourages work-related migration (Bhandari 2004). Bohara (2011) from household data of Nepal concludes that the migrants send remittance to the origin motivated by self-interest to inherit parental property and to return home. The return motive is most plausible in the context of Nepal as majority of international migration is work related and temporary. The migration to India is mostly seasonal and the strict immigration policies in the Middle East and the Gulf makes the return motive dominating other motives to remit not only in present but can be expected to be continued in the future as well if the current trend of migration destinations continue (Bohra-Mishra & Massey 2011).

Wagle (2012) analyzing the international migration using the macroeconomic data from living standard survey suggests that the international migration explains the decrease in poverty and inequality in the last decade in Nepal (Wagle 2012). However, Wagle (2009) found a decrease in poverty from remittances and the beneficiaries are mostly the socio-economically most advantaged sections of society (Wagle 2009).

Thapa (2009) analyses the Nepalese migration and its effect on work of the household members of remittance receiving households by using the secondary panel data from different living standard surveys concludes that the remittance income is like the same as of non-farm income (Thapa 2009).

The World Bank studied the challenges and constraints of migration and remittance process in the migration corridor of Nepal to Qatar. The report descriptively identifies the challenges in the migration process as high transaction costs, presence of too many middlemen, informal flow of money on both ways and migration of low paid unskilled manpower to Qatar. Inadequate banking transfer system exacerbates the remittance transfer process (Endo & Afram 2011).

In a descriptive analysis Pant (2011) states that remittance flows are crucial policy concern since they are large in size, relatively stable and provide direct benefit to households. But for the economy remittance do not automatically contribute to national development. So, government needs to provide incentives to direct remittance to productive investments so that the families of migrant workers are able to undertake small businesses (Pant 2011).

Shrestha (2011) from Nepal's macroeconomic data concludes that expenses on education in the underdeveloped countries does not finance brain drain but highlights the potential role of skilled emigration in improving human capital investment in developing countries like Nepal. Moreover, wage gap between the developed and underdeveloped countries enhance the private investment for children education in the underdeveloped countries so that the new generation can compete in the global market (Shrestha 2011).

It is estimated that about 15 % of the total economically active male population (older than 15 years of age) in Nepal were involved in international migration in 2003-04 but for the females, its merely just above 2 percent (NLFS 2008). So, the Nepalese migration is male dominant keeping the females in the origin. Maharjan et al (2012) examines the impact of male out migration on the workload and status of women left behind in rural Nepal. The study using the survey data concludes that the expansion of workload due to out- migration of male household members have broadened their involvement in household decision making; access and utilization of resources; and involvement in social activities (Maharjan et al.).

4. DESCRIPTIVE ANALYSIS

4.1. Background of the Study Area

The study area is the villages of Gunjanagar and Divyanagar in the western *Chitwan* valley of south-central Nepal, a wide and flat valley approximately 450 feet above sea level. Until the 1950s, Chitwan was covered by dense forests, infested with malaria-carrying mosquitoes, and home to many dangerous faunas including rhinos, poisonous snakes etc. From the mid-1950s, the Nepalese government began to clear forests eradicate malaria and distribute the cleared forest to migrants from the highlands. However, about one third of the original forests were kept as Chitwan National Park.

The opening of Chitwan due to technically advanced transport has contributed to the region's attractiveness for traders, businessmen and job seekers. Chitwan is well connected by roads to the wider region. Virtually all traffic from Kathmandu, capital city of Nepal, to India goes through Chitwan and hence it has developed to the point of being main transportation hub of Nepal. So, the main cities of Chitwan represent a vibrant, constantly growing center of trade, business and administration. Chitwan is in comparison to other parts of Nepal, extraordinarily well developed in terms of infrastructures (Müller-Böker 2000). The change in transportation system has expanded business through commercial enterprises- from grain mills and retail outlays to services such as schools, health clinics, post offices etc. The immense agricultural potentiality of the flat terrain has attracted highland farmers into the valley. As a consequence, the population of the valley has increased rapidly (Müller-Böker 2000).

According to the 2001 census data, between 2.5 percent to 5.0 percent of *Chitwan* residents were living abroad in 2001 (CBS 2002). The significance of Chitwan in national figures on remittances is highlighted by the fact that yearly remittances from about 450 migrants out of about 2000 households in Western *Chitwan* totaled over US\$ 1 million in 2008 (Massey et al. 2010). So, within this last 100 years, *Chitwan* experienced exodus of both in-migration and out-migration. Hence, it is the unique place to study the real- time migratory processes happening within Nepal

4.2. Field work organization and data collection

4.2.1. Field work organization

A structured questionnaire (the sample questionnaire is presented in the appendix) was developed for the household survey and attention was paid to keep the questions simple and unambiguous to avoid confusion. The questionnaire was field tested along with the field workers. Wherever possible, the questions were converted into multiple choice questions.

The survey questionnaire was initially developed in English and later translated into Nepali before the survey was conducted.

The field team for the survey was constructed in December 2011 to conduct the field survey in January 2012. The field team consisted of 5 persons including the researcher. The field workers were appointed according to their previous field study experiences as suggested by the local people. The field workers were working for a local NGO which is involved in local development. The field team was divided into two groups consisting of two persons in one group. Each team was assigned to fill out the questionnaire in the households of one village. The interviewers were instructed about the questionnaire. The researcher was responsible for supervision and was available every time to suggest the interviewers if they needed any help regarding the questionnaire. After completing the survey, data entry was done by the researcher himself.

4.2.2. Data collection

There is a deficiency of official data regarding migration information in Nepal. The migration to India is never documented officially because the workers do not need any travel or labor-related documents to work in India. The seasonal character of work related migration between Nepal and India lacks any official documentation. So, Nepal manages the work-related migration data through rough estimates excluding the collection of statistics migration to and from India. In the government statistics, only the persons who are migrating for work are documented excluding the illegal migrants, family members of the immigrants, students and their cohorts and migrants to India. The central bank documents foreign currency obtained from other countries from the citizens of Nepal as remittance income but the problem again remains as there is a dual-currency regime, undocumented money transfers and an illegal money transfer system.

This study is based on the primary data collection through household survey. The questionnaire was devoted to the migration of household members and remittances. The sample size of the survey is 148 households. The questionnaire was developed to collect three types of information including- general information about the household including the number of household members, sex, age, education and occupation; detailed information on the wealth, income and expenses of the household; and information on outward migratory experiences of the family members and income remitted or brought back by the immigrant during the past 12 months.

For the data collection purpose, 148 households were randomly selected from these two villages. Out of these households, 56 households have a migrant household member while the

92 households have no migrants. Among the migrant households, no household has reported to have more than one migrant abroad. The fact is that if a member migrates for work, there is the tendency to split the household and form a nucleus household. The joint family arrangement in traditional Nepalese culture is changing towards nucleus family composition. The information on income of the migrant used here is obtained from responses given by the head of household. The head of the household is assumed to be the person in the household acknowledged as head by other members and can make decisions regarding family matters. Obtaining the information directly from the emigrants themselves would be more accurate, due to data limitations, the data are collected from the household head.

4.3. Definitions and description of variables used

The household survey has collected household information regarding household characteristics; wealth composition of the household and the migratory experiences of the household members. The definitions and description of variables used are as follows:

4.3.1. Household Characteristics

The household survey has collected information about the household characteristics regarding household size, number of persons involved in economic activities, age of household head, sex of household head, and education level of the migrant at origin.

a. Household size: It is measured by the number of members in the household. There is controversy in considering the migrant as household member because the migrant is not present in the household but the migrant is constantly helping the household by providing money in terms of remittances. The study includes the migrant as a household member as the migrant is also involved in income- generating purpose. But the migrant does not make the expenditures in the household as the migrant is absent from the origin.

b. Household head: The household head is the person who is considered head by the other household members. The questionnaire interviewed the head of the household about all the information of that household. It is assumed that as the manager of the family, the household head maintains all necessary information for the survey purpose.

c. Dependency ratio: It shows the number of household members who are involved in the economic activities. It considers the number of children and elderly household members above the age of 60, who cannot work on agriculture as dependents. The number of persons involved in economic activities includes the number of migrants as the household member as their contribution is included in the household income. So, the dependency ratio is the total household size divided by the economically active persons within the household.

d. Household head education: It shows the highest level of education the household head has finished. The education of household head is categorized into three groups- having no formal education or education less than secondary level; having education of secondary level; and having education more than secondary level.

e. Age of household head: The age of household head is categorized into three groups- age below 35 years, age between 35 and 55 years, and age above 55 years.

f. Sex of Household Head: It shows the sex of household head. It is categorized as a binary variable having value of 1 if the household head is male and zero if the household head is female.

g. Migrant Education: The migrant education is categorized into three groups: having primary education or less indicated as 0; having education more than primary but less than or equal to secondary level indicated as 1; and having education more than secondary level indicated as 2. The education of the migrant is attained in the home country and does not include if the migrant gets any education after migration.

h. Migration of a household member: It provides the information whether the household has a migrant household member at present or not. The variable is binary having value of 1 if the household has a migrant and 0 if the household does not have a migrant household member. For all the households with migrant, there was no household to report more than a single migrant.

4.3. 2. Household income and expenditure

Remittance income is realized in the household level. It affects the household income, saving and expenditure patterns. So, remittances are the private transfers from the members who are absent from the families.

4.3.2.1 Household income

The survey includes the following five sources of income:

a. Agricultural income includes market prices of the agricultural crops produced by the household during the period of last 12 months. The values of the quantities are computed using the average market selling prices and the prices are imputed accordingly for self-consumption.

b. Livestock income includes the average market value of the quantities of livestock products sold e.g., poultry, milk products and cattle, and imputed values of self- consumption. The households from which the data are collected generally maintain some livestock and the income from them are constructed separated with agriculture even though they are closely related.

c. Non-farm income includes wage earnings by the household members from non-farm labor, government or private employment, and profits from non-farm enterprises within the origin place.

d. Other income includes pensions.

e. Remittance is the income for the households with migrant member. If the household receives any gifts or money from the other persons except their own household member from abroad, it is not included as remittance income because it is very difficult to recall the small gifts received and the frequency of these receipts are never measureable. So, only the income remitted by the migrant household member is included as remittance income. The households are divided into two groups, remittance receiving and non-remittance receiving households.

4.3.2.2. Household expenditure

Household expenditures are constructed by adding the expenses together on the various goods and services by the household during a period of 12 months. Various components of expenditure are grouped into 3 namely- expenditure on food, expenditure on non-food and expenditure on children education. All the expenditures are calculated in the current Rupees value.

a. The questionnaire collects information on expenditure of major food items and the regularity of the expenses: daily, weekly, monthly and non-frequent. The non-frequent expenditure is also included in the questionnaire because these expenses are irregular but a household may have been spending some money on it. The food items included are rice, wheat, maize, millet, potato, cauliflower, tomato, meat, egg and any others if they are produced.

b. The non-food expenditure aggregates the expenses on fuels, transportation, and entertainment, expenditure on utilities, personal care items, other frequent items and non-frequent items. Expenditures on marriage, dowries, funeral and other social and religious functions are excluded as they are short lived and are not a common characteristic of all the households. They are very rare and happen in some households only. They cannot influence the regular expenditures of the household. Even though health expenses are very important on its own, it is excluded from the study because almost all expenses occur in response to health shock and it is not practical to assume the health shock to all surveyed households.

c. Expenditure on education is constructed in a separate category. The variable expenditure on education is constructed from the information on educational expenditures in the past 12 months. The expenses per person include monthly fees, admission fees, uniform, textbooks and supplies, transportation, private tuition and other expenses related with education.

4.3.3. Household wealth position

The survey included information regarding the two indicators of household wealth position.

a. Landholding- The questionnaire was developed to measure the landholdings of the households. It does not consider the involvement in the contractual land market such as hiring in or out of land. The purpose of the study is not to study the income of the households from the farm income but to identify the position of asset of the household. So, the contractual land market involvement is excluded. The land-holding is measured on *katta*, popular way to express the land holding in practice (where 1 hector = 30 *katta*). The quality of land may produce different output of agriculture but for simplicity the quality of land is ignored and only the quantity of land holding per household is measured.

b. The change in asset holding- The change in asset holding is measured as the monetary value of the assets the household has changed in last 12 months. It excludes the land purchase or sale but includes the other assets value like television, radio, mobile telephone, refrigerator, cycle, motorcycle, tractor, water pumps, jewelries etc. The variable is measured in the current Rupees value by adding the monetary values of the items the household owns. The difficulty to measure the variable is the depreciation of the capital goods the household owns so the variable is constructed without calculating the depreciation value of the goods and only calculating all the values of the goods in the current prices. Even if the household has changes in the area of landholding, the current landholding at the time of survey is included.

4.4 Descriptive Analysis

For the empirical analysis, propensity score matching approach is being employed. Under this approach, we can compare the remittance receiving households with other households that share similar characteristics but do not receive remittance. Although the cross sectional data set cannot examine the situation before and after the remittances receipts, the matching is possible among the households which have similar characteristics except some households receive remittance income while some others do not.

Therefore, this approach examine an outcome of interest, to the household e.g., income gain, more education for children, savings, and expenditures in various items etc, by direct comparisons among households that receive remittances with households that do not. All the systematic differences between remittances receiving and non-remittances receiving households can be explained by a set of characteristics of the migrant household and community, and then estimates the impact of remittances on an outcome of interest through ordinary least squares (OLS) regression of the equation:

$$\text{Outcome} = \mu + \beta \text{remittances} + \lambda X_i + \varepsilon_i \dots \dots \dots (i)$$

Where, remittances is a dummy variable taking the value of 1 if a household has a migrant and 0 otherwise. The coefficient β captures the impact of remittances. It determines whether the sign of the coefficient differs from what would be expected from the impact of remittances. To address the potential biases in the estimation of standard errors, the white's heteroscedasticity robust standard errors are estimated.

To assess the effects of remittances on the saving and consumption of a household, we have to compare the observed outcome with the outcome that would have resulted if the remittance income is not received by the household. But in reality, we observe only one outcome, which is the factual outcome. The counterfactual outcome, which we do not observe, is that which would have been resulted if the household does not receive remittance. The major challenge of impact studies like this study is to estimate this counterfactual scenario in a reliable way. If we can make sure that receiving remittances is truly random, we can estimate its effects by comparing the outcomes of recipients with that of non- recipients. Such natural experimentation is not a feasible approach in the practical research. In such situation in which the random assignment of treatment is not possible, non- experimental methods are to be applied to evaluate the impact of receiving remittance against non- receiving remittance. The widely used non- experimental methods for impact evaluation are the difference in differences estimation, the instrumental variable technique and matching. Considering the difficulties associated with random sampling, difference in differences and instrumental variable methods, a matching method has been applied in this study.

If the household has a migrant household member, they are entitled the remittance income. The small gifts from the non- household members are not included in the non-remittance receiving households because it is very difficult for the household heads to measure the value of the gift and the frequency of the receipt is very rare. The memory recalls for the small gifts is difficult and are excluded in the study. There are 92 households (62 percent of all households) which received no remittances and 56 households (38 percent of all households) in the survey area received international remittances.

Household expenditures are divided into three major sub-groups namely: food, non- food items and education of children. The household wealth is measured by the landholding and the change in asset holding during past 12 months. The composition of household expenditures and the wealth position is presented in table 4.1. The column 1 shows the averages of the remittance receiving households (RRHHs) while the column 2 shows the

averages of the non-remittance-receiving households (NRRHHs) and the column 3 represents the difference between the remittance receiving and non- remittance receiving households.

Table 4.1. Household expenditure and wealth position

Variables	RRHH (1)		NRRHH (2)		Difference (3)	Two sample t statistic (4)
	Mean	Std. dev.	Mean	Std. dev.		
Expenditure total (000 rupees)	437.64	113.49	352.28	122.41	75.36	4.22*
Expenditure on food (000 rupees)	260.19	68.90	240.80	77.33	19.39	1.54**
Expenditure non-food (000 rupees)	103.33	45.60	73.22	40.47	30.11	4.18*
Expenditure on education	74.11	39.07	38.25	29.80	35.25	6.29*
Change in asset holding (000 rupees)	70.64	77.22	20.16	76.12	50.48	3.89*
Landholding (katta)	22.87	6.73	25.75	11.58	-2.88	-1.69**
Income (000 rupees)	508.28	132.57	372.44	107.48	135.84	6.81*
Per capita income	120.88	32.22	90.57	21.42	30.57	6.87*
Remittance income	170.67	78.49	-	-	-	

Source: household survey, 2012

* Significant at 1 percent level

** Significant at 5 percent level

The household expenditure of the remittance receiving households is higher than the non-remittance-receiving households. For all categorizes of expenditure, the remittance-receiving households spend more than the non-remittance-receiving households. The household income of the migrant household is higher than the non-migrant household. The household income per capita is higher for the household with migrant but all the households in the survey area

are above the national average of about 41.6 (NLSS 2010). As the survey area is an economically developed area of Nepal, the majorities of the households are above the national average. The revenue from remittances represents more than 38 percent share to the total income for the households which receive remittances.

The wealth composition of the households reveals that the remittance-receiving households are better in the change in asset holding while the non-remittance-receiving households are better in landholding. One possible explanation for the difference is that migration takes place from the households who are worse off in the landholding. That is, the small landholders have a higher possibility of migration for work related activities.

The statistical significance of the control and treatment group is presented in the column (4) which shows that the t- statistics of the difference in the mean of the sample groups are statistically different for all variables of concern. Landholding and household expenditure on non- food items are significant at 5 percent level and all the other variables are significant at 1 percent level. This shows that the control and treatment groups have statistically different attributes. The conclusion from the two sample t- statistic is that the households with migrant spend more on every items considered, save more but have less landholdings. So, the households with less landholding have a higher possibility to have a migrant household member. The migrant household makes income from non- farm sources like remittances while the non- migrant households have the income from agricultural activities.

The demographic characteristics of the households in the survey area are presented in table 4.2. The household characteristics include household size, dependency ratio, sex of household head, age of household head, and education of household head along with the education of migrant at origin. The age of the household head, household head education and education of migrant at origin are dummy variables. The age of household head is categorized into three groups: (1) below the age of 30, (2) between the ages of 35 and 55, and (3) above the age of 55. The majority of the household head are at the age between 35 and 55 years. The average age of household head is slightly higher for the migrant households than the non-migrant households.

Table 4.2. Household characteristics

Household characteristics	Remittance-receiving households		Non-remittance-receiving households	
Household size	4.35		4.17	
Dependency ratio	1.92		1.80	
Sex of household head	Male	Female	Male	Female
	26	30	87	5
Age of household head	1.16		1.14	
Household head education	1.19		1.14	
Education of migrant at origin	1.34		-	

Source: household survey 2012

The household head education and migrant education in home country both are dummy variables categorized into 3 groups- having education of primary level, having education more than primary but less than or equal to secondary education and having education more than secondary education. The data shows that the household head education is marginally higher for the migrant households.

The households with larger household size tend to have migrant household member as the average household size of the migrant household is higher than the non-migrant household. The migrant is also included as the household member for the purpose of study. One explanation for the higher household size for the migrant household is that the larger the household size, larger will be the expenditure requirements and a household member has to migrate to earn off-farm income for the household. Moreover, the dependency ratio is higher for the migrant household than the non-migrant household. The higher the dependents in the household, there is higher requirement of expenditures. In order to fulfill the requirements, the household has to diversify their income sources and, hence, they have higher possibility of migration.

The household sex composition of the household reveals that the migration is dominated by male members of the household. Out of 56 households with a migrant, the majority of the households are female headed while the households without migrant are almost male

headed. While the male counterpart migrates for the work, the female becomes the head but when the male is back to the household, he will take the responsibility of head. That is, in the absence of male members in the household, the females become head in the household. Moreover, the data shows the patriarchal hierarchy in the family structure of Nepalese society.

The methods of receiving remittance income have implications for the households actually receiving the funds. Most of the migrants in the study area are temporary and the temporary migrants generally bring back money with them when they come back to home. This form of money transfer is included in the informal source but they cannot bring all the money at the time when they return to their origin country. The breakdown of households by form of money transfer is presented in table 4.3.

Table 4.3: Methods of Receiving Remittances

Household profile	Number of households	Percentage
Non remittance receiving HHs	92	62
Remittance receiving HHs, only from formal sources	9	6
Remittance receiving HHs, only from informal sources	14	22
Remittance receiving HHs from formal and informal sources	33	10
Total	148	100

Source: household survey, 2012

To fulfill the family obligations of money transfers, the financial transfers are a very important aspect in the studies of impacts of remittances. The money transfer mechanism is vital for the immigrants. The informal source of money transfer represents a higher risk than the formal sources. The exchange rate differentials and the transaction cost of transferring money makes the difference in saving of the immigrant and the actual receipt of remitted money. But insufficient formal money transfer services in the host country and the requirements of these service providers might exclude some of the migrants from using the formal channels of transferring money between countries. This can push the migrant into using more informal money transfer mechanisms. The higher transaction costs in the formal

sector pushes the migrants to use the informal sector but when the financial systems are more developed and exchange rates less volatile, the negative impact of transaction costs on remittances transfer will be reduced (Freund & Spatafora 2008). When the banks are involved in the money transfer systems, the transaction costs can be lowered substantially (Orozco 2003).

For the purposes of the survey, the questionnaire was developed to receive the gross value of remittances the household receives and not how much the household receives from formal and informal sources. As the objective of the study is to identify only the value of remittances received by the households, both sources are summed up and the households were asked only about the methods of remitting money.

In the case of Nepal, the transaction cost of remitting money is high. The banking sector is involved in the money transfer system but the city centered nature of banks make the prevalence of informal sector in money transfers.

The destination of migrants is important aspect to identify the income of the migrants. The potential migrants choose their destination depending on the asset holding of the household, migration networks, income differentials between the origin and destination area, social proximities and availability of amenities (Fafchamps & Shilpi 2008).

Table 4.4 shows the choice of destination of the migrants in the survey area. India is the traditional destination for work related temporary migration and the easiest destination as the travelling to India does not need any travel document and it has the similarity on culture and language. But after the opening up of the economy with other world, the share of migrants to India is decreasing in the national level (NMYB 2008) and in the survey area also. Middle East includes the countries on the Persian Gulf including Qatar, Kuwait, Saudi Arabia, UAE etc. The East Asia includes the migrants to Malaysia, Japan, Hong Kong and Singapore. In the survey area, the highest number of migrants is found in Golf countries followed by East Asia especially in Malaysia and then only to India. The migration to other countries except these locations is categorized into others which include Europe, North America and Australia.

Table 4.4 Destination of Migrants

Destination	Number of migrants	Percent
India	11	20
Middle East	23	41
East Asia	14	25
Others	8	14
Total	56	100

Source: household survey, 2012

The household survey mainly collected information about the household characteristics, income and expenditure of the household and the wealth position of the household. Besides these variables, the survey tried to collect the information about the migrants but the information about the migrant is difficult to obtain from the origin as the additional information which the migrant can provide cannot be obtained by the household head. Especially what kind of work the migrant is doing in the host country is difficult to obtain which information is generally not shared with the household members back to the origin. The working environment cannot be identified from the origin. Moreover, the additional education the migrant obtains in the host country is difficult to identify.

The survey tried to identify the changes in the workload to other household members as there is reduction in the household members in the origin. As all the households are engaged in at least some types of farming activities, the survey tried to identify the change in household labor supply and the local market changes in the wage labor situation but all the households has emphasized only on the remittance income. They are not concerned with the lost labor and changed labor supply in the local market. As the migration is mainly male dominated, the wage differential between male and female laborers has been reduced but it is not so much emphasized by the household heads with which the interview was conducted. Rather they recognized the situation as the changing social values and perceptions regarding female wage labor.

In the Nepalese economy, the wage rate has increased more rapidly than the prices of goods and services in the last decade (Sapkota 2011) but no household head has recognized this situation as the shortage of local labor supply. They have taken the increased wages as the result of increased prices of other goods and services. The changing role of women in social

activities due to male migration is also viewed as the changing social values and empowerment of women on economic activities.

The reasons for migration was tried to identify in the survey. The main reasons for migration are both push and pull factors. The push factors dominate lack of employment opportunities in the origin and the low level of wages and income while to see the developed countries and to again earn some money has pulled the migrants in the host country. The migrants are motivated to migrate as they can save and bring back bulk amount of money at a time. As they earn small amount of money, they cannot invest that money for productive activities and if they travel for some years, they can save the money in bulk amount and can start small business. The motivation to save money is the main motive to migrate in the survey area.

4.5. Aim of the study

The thesis has aimed to measure the cost and benefit of migration of a household member.

4.5.1. Income gain versus production loss

The first aim of the thesis is to evaluate the income gain of remittances to the household. The assumption is that the income gain from the remittances will outstrip the income/production loss due to decrease in the household labor. All the household heads were interviewed and not a single household head noticed a loss of output due to the decrease in household members. In the informal talk with them, the main reasons for ignoring the income loss was the difficulty to count the marginal productivity of a single household member as all the household members work together for agricultural activities, the potential migrants are primarily male and they are involved mainly in outdoor activities. Indoor activities are thought to be done by the female household members. In short, the cash money which comes from the migration in the form of remittances were given much higher value than that income generated in the production activities in the place of origin.

4.5.2. Savings in the households with and without a migrant

The rural households are characterized by low level of income, but there is also very high variation in income. The predominance of agriculture for on-farm and off-farm income makes them vulnerable to shocks such as changes in the weather, illness of a household member, and price changes of the goods and services the rural households purchase. The insurance and capital markets in the developing countries like Nepal are incomplete; many risks cannot be diversified due to the absence of financial assets. Borrowing and credit constraints limit the ability to smooth consumption or finance investment. In such a situation, migration of a household member is an available strategy to diversify the risk to shocks.

Rural households are poor households and have very limited risk mitigation options in case of shocks. At such a situation, the households develop their own risk coping strategies based on two stages- production and consumption stages. First, the household can smooth income or production which can be achieved by diversifying economic activities. Migration of a household member is an example of ex-ante income smoothing alternative mostly accepted by the rural households. Second, households can smooth consumption by borrowing and saving, depleting and accumulating non- financial assets, adjusting labor supply etc. These are the ex- post measures for shocks which are more difficult for the rural households as the rural market is credit constrained. Both types of smoothing are employed extensively in low income economies (Morduch 1995). Remittances are one major strategy of consumption smoothing adopted by the rural households.

Emigration as a co-insurance strategy, remittances play the role of insurance claim. The enforcement of the insurance contract is very easy and feasible because the family members are tied up very closely and it is the responsibility of any household member to support other members at hardship caused by shocks.

In the rural areas of underdeveloped countries, the data regarding savings of the household are very difficult to measure. The marginal propensity to save from different sources of income may be different (Alderman 1996) because of the variability or uncertainty of income. So, income from less certain and less regular source is saved more. Remittances are the uncertain and income source for some years only; there is higher propensity to save out of the remittances income.

Saving is measured as the residual between observed income and observed expenditures. Household surveys collecting data on income tend to have underreported values. If income is underreported, saving is also underreported. So, to measure the savings made by the households during the past 12 months, the change in household asset holding per capita is used as proxy of savings. As the household heads may be reluctant to exactly answer about their household savings, the change in asset holding is assumed to be a proxy of savings. And it is assumed that the households do not keep their remittance income idle; rather they spend on consumer durables or on the agricultural property. Moreover, remittance income is fungible and very difficult to separate to other sources of household income. The change in asset holding includes the addition/ subtraction of consumer durables of the household during the last 12 months' time period.

The model for saving is constructed as:

$$S_i = \beta_0 + \beta_1 RI_i + \gamma X_i + \varepsilon_i \quad (1)$$

Where, S_i is the saving of the household; RI_i is the remittance received in the last 12 months; X_i is the household characteristics; ε_i is the error term. The independent variable is the dummy variable which enables to compare between the remittance receiving and non-remittance-receiving households. The benchmark group is the non-remittance receiving households whose value is zero against the remittance receiving households whose value is 1. The explanatory variable X_i includes the household size, method of remitting, education attained in home country before migrating, land holding by the household, the total household income from all the sources together including remittances if the household receives.

With the model, the change in asset holding by the household is measured as the proxy of household savings. So, the dependent variable is the change in household asset holdings. The model estimates the impact of remittances on change in asset holdings by the household. The separate regressions are run for the remittance receiving households and the non-remittance receiving households.

The remittances income has a positive relationship with savings or change in the asset of the households. Higher remittance income means the household can purchase more than basic necessities. If the household has sufficient money for the basic necessities, it will spend to increase the assets. The households with remittance income can afford such comfort goods or they will have positive change in household assets.

The household income is expected to positively affect the saving rate. So, the households with higher income are expected to have higher change in asset holdings. Higher income households will have larger amount of non-land assets.

The landholding is expected to positively affect the savings. The household with larger amount of landholding can make income from that landholding and can diversify their expenditure to maintain the other non-land assets with the household. The income from the agriculture from their land can add to the non-land assets.

The household size is expected to negatively affect the savings. The larger household size means that they have to spend more amount of money on basic necessities of the members and little income will be left with the household to purchase the comfort commodities. The per capita asset holding will be less for the households with larger household size.

The number of members involved in economic activities is expected to affect positively to the savings. If the number of member involved in economic activities are higher, they can make more income and they will add to the non-land asset holdings by the household.

The education attained in home country is expected to positively affect the savings. The more educated migrants are assumed to earn more than less educated migrants. So, the highly educated migrants would send more remittance income and the household could spend that money in asset building.

The main interest of the study is to examine the effect of remittance on saving made by the households but the household survey lack sufficient information about the savings made by the households in the specified period of time. That is, the households always underreport their income and over report the expenditures and hence, the residual income after expenditure cannot represent the true value of saving. So, the proxy variable is used for the saving made by the households. Here, it is assumed that the households hold their saving in the form of physical assets as there is lack of financial assets on which the households can invest and diversify their asset holding. So, the underlying assumption of the saving is that it is saved in the form of physical assets and the change in asset holding in the past year is the representing proxy variable for the saving habit of the households. The assumption is valid as the household head want to keep the money sent by the migrant in the form of assets instead of cash money and they can preserve the value in one side and can show where the sent money is used in the other side when the migrant comes back to the origin and wants to see where the money sent is used.

The change in asset holding has the advantage of being uncorrelated with errors in estimating income. Moreover, they have the capacity to be sub-divided into categories such as financial savings and purchase of physical capital.

4.5.3. Household Expenditure

The relationship between remittance and expenditure can be explained theoretically by treating remittance as a source of income of remittance receiving households. Consumption models such as the life-cycle hypothesis and permanent-income hypothesis maintain that source of income does not matter in consumption behavior. The only objective of the household is to smooth income and consumption. Since remittances are a source of income among many sources for a household, the survey does not ask how households spend income according to the source. Moreover, since remittance income is fungible, it does not make sense to ask questions regarding which source of income is used for purchasing of what kind of goods.

The majority of the research on remittances is devoted on for what purpose the remitted money is used. The thesis also tries to identify the uses of remittances by classifying the household expenditure mainly on three sub headings: expenditures on food, expenditures on

non-food items and expenditures on education. The expenditure on food is assumed to be consumption expenditure while the expenditure on non-food and expenditure on education is assumed to be investment expenditures.

The hypothesis is that the remittance-receiving households spend less proportion of their remittance income for the consumption purpose and more on investment purpose. That is, the proportion of expenditure on food by the remittance-receiving households will be lower than the non-remittance-receiving households while the remittance-receiving households spend higher proportion on the non-food and education items than the non-remittance receiving households. This hypothesis is analyzed by using the following regression equation:

$$\text{Outcome}_i = \beta_0 + \beta_1 \text{RI}_i + \varepsilon_i \quad (2)$$

$$\text{Outcome}_i = \beta_0 + \beta_1 \text{RI}_i + \gamma \text{X}_i + \varepsilon_i \quad (3)$$

where outcome_i is total expenses by the household on the purposes; RI_i is the remittance income; ε_i is the error term; and X_i is the other characteristics of the households. Two types of regressions are used for all categorizes of expenditure, without control variables expressed by equation (2) and with control variables in equation (3). The primary interests of the thesis are the sign and magnitude of β_1 which is the coefficient for remittance income. The control variables in the analysis are the household characteristics and wealth variables. The household characteristics include the household size, dependency ratio, age of household head, sex of household head, education of household head, destination of migration and education of migrant at origin. The wealth position of the household includes the change in asset holding during the past year and landholding.

All the survey households are separated into one of two groups: remittance-receiving and non-remittance receiving households. The model makes possible a comparison of how the remittance and non-remittance-receiving households spend at the margin on a broad range of consumption and investment goods including food, non-food, health and education expenditures. Specifically, it is necessary to estimate a counterfactual scenario in which the households do not have a migrant household member and, hence, do not have access to remittance income. This approach becomes problematic if households with and without remittances differs systematically in the unobserved characteristics such as skills, ability, motivation, because then the regression results becomes biased. So, this problem of selection bias is omitted as the survey was conducted in the otherwise identical community. The main difference in the households in the survey area is created by migration of household member. In developing the empirical model, three possibilities are considered: (a) education decisions within households are treated as investment, (b) the expenditure on food constitutes the

consumption expenditure, and (c) in the developing countries such as Nepal the cost of foregone earnings may be high. So, the household characteristics, household head education and household income are key determinants of household expenditure.

The explanatory variable is the remittance income which is supposed to be positively related with expenditure on all types of expenditures- food, non-food and education. The households with remittance income would spend more on non-food and education of their children as compared with the households which does not receive remittance income.

The remittance income is expected to have impact on wealth composition of the households. The remittance-receiving households will have higher positive change in the asset holding while the larger landholders have fewer tendencies to receive remittance income. Landholding is the long term investment decision made by the households while the change in asset holding is the short term investment. The logic of the hypothesis is that the migration takes in the household which are small landholders and the change in asset holding is short term investment for which the remittances received helps the households to achieve.

5. RESULTS

The first hypothesis of the thesis was to evaluate the income gain in the form of remittance income against the production loss due to decrease in number of household labor but all the households had not calculated the production loss in the household due to the decrease in number of workers in their household. Even though the Nepalese economy has experienced the growth of wages in agricultural sector higher than the growth of wages in non-agricultural sector (Sapkota 2011), the households were unconcerned about the rising wages in the agricultural sector and only calculating the income gain they receive in certain interval from abroad. The main concern of the households is cash income which comes in a bulk amount if a household member is migrated to earn money. If the money is received regularly, the money will be spent on consumption purpose and if money is received in bulk amount, it can be invested for productive purposes from which the productivity will be higher than the little amount of money received regularly. Moreover, the rise in wage in agricultural sector does not affect to the rural agricultural households as they supply their own household labor for agricultural purposes even if one of the household member is absent.

All the households in the survey area are involved in at least some kind of agricultural activities. They use their own land for their own farming and usually employ very less amount of hired labor. The landholding size of the households is too small (less than 1 hectors). So, the households are less concerned with the rising wages in the agricultural sector. At the same time, there are some observable changes which made the households less concerned with the lost labor value of the household labor. The number of females engaged in the farm labor has increased and the wage rate of the female workers has increased more rapidly almost eliminating the gender difference in the agricultural wages. The households has emphasized the changing social value regarding female work and the women empowerment as the reasons for such increase in the female wage rate more rapidly than male. Moreover, the inflation rate is very high about 10 percent per year (MOF 2012) and along with other prices, the farm wage is increasing. The households are not concerned with the increasing wage rate as their purchasing power to hire labor has increased due to extra income in the form of remittances in one side and they don't have enough information and enthusiasm to distinguish the reasons for increasing wages in the agricultural sector as all the prices are increasing.

In conclusion, the lost labor has negligible opportunity cost. Sacrificing a worker to migration does not require suffering a loss of production. If there are labor shortages in the migrant sending areas, those who migrate would have made a positive contribution in the form of

remittances. The measurement in quantities of lost labor effect is very difficult and the household heads are incapable to quantify the lost labor in monetary terms.

5.1 Results for household saving

The household saving includes the change in asset holding in the last 12 months except the agricultural landholding. The results for the change in asset holding is presented in the table 5.1 in which the results are presented on their Individual t, F statistics and R square are expressed from the whole model. The majority of variables have shown the desired signs with the change in asset holdings. The remittance income is significant for the households with migrant. About 30 percent change in asset holding is described by the remittance income for the households with migrant household member. The remittance income is significant at only 95% level of significance. The non- migrant households are not entitled to make remittance income.

Table 5.1 Change in asset holding (dependent variable is change in asset holding)

Independent Variables	Migrant HH member		Non- migrant HH	
	Coefficient	Robust std. error	Coefficient	Robust std. error
Remittance income	0.295	0.13**	-	
Household income	0.303	0.085*	0.102	0.067
Household size	-4.34	8.24	-23.67	7.45**
HH Income per cap	1.51	0.19*	1.82	0.46*
Dependency ratio	1.55	11.94	-1.25	10.13
Landholding	0.39	1.69	0.838	0.67
Education of migrant	-7.49	14.47	-	
HH head sex	51.49	20.38**	46.73	13.40*
HH Expenditure	-0.05	0.092	-0.307	0.062*
F-statistic	19.66		10.29	
R-square	0.5604		0.3927	
No. of observations	56		92	

**significance at 1 percent level*

***significance at 5 percent level*

The household income significantly explains the change in asset holding positively for migrant and non-migrant households. It is more significant for the households with migrant household member than non-migrant household. The households which receive remittance

depend largely to the remittance income which is also included in the household income. For the non-migrant household, the household income does not explain the change in asset holding even at the 10 percent significant level. That is, the households without migrant have no significant change in the asset holding during the last 12 month time period. But for the both groups, it affects the change in asset holding positively. About 30 percent change in asset holding is explained by the household income to the households with migrant and only 10 percent to the households without a migrant household member. So, the share of remittance income is very important for the households with migrant household member.

Household income is significant for household with migrant but not significant for household with-out migrant; and household size is not significant for migrant household and significant for without migrant household. But if household income is measured in per capita terms, the result turns to be significant even at 1 percent level of significance.

The household size is negatively related to the change in asset holding. Higher the size of the household, the lower will be the change in asset holding and hence, the household savings. The household size does not significantly explain the change in asset holding for the household with migrant but significantly explains the change in asset holding for non-migrant households. So, the non-migrant households depend more on the economic activities at the origin while the households with migrant depend more on the remittance income. Remittances are very important for the households with migrant household member because the change in asset holding is not affected by the economic activities made by the household members left behind. The households with migrant are remittance dependent.

The dependency ratio shows that it affects change in asset holding positively for the households with migrant and negatively for the non-migrant households. For the households with migrant, this is against the model specification that greater the dependency ratio, the less saving and lower change in asset holding is ought to be. But as the migrant is also included as the economically involved, the change in asset holding also includes the migrant's income and hence the household experiences significantly positive change in the asset holding. For the non-migrant household, the change in asset holding is negatively associated with the dependency ratio even though it is insignificant to explain the saving of the household. Hence, higher the household size, lower will be the saving and hence change in asset holding.

The landholding explains positively to the change in asset holding but the variable is not statistically significant for both groups of households. The marginal effect of landholding is higher to the households without a migrant member than to the households with migrant. The higher the landholding, the higher the change in asset holding is expected to be for both

groups of households. The landholding is less important source of income for the households with migrant member whereas it is the more important source of income and saving for the households without migrant household member. The households without migrant are dependent upon the landholding for their economic activities whereas the main source of income for the migrant household member is the remittance income. The larger the landholding, the greater the opportunity cost of a loss in a working member of the family.

Education of migrant is a dummy variable that takes on a value of 0 for those who have only primary education; takes on a value of 1 for those who have more than primary but less than higher secondary education; takes on a value of 2 for those who have more than higher secondary education in the origin place. The variable education of migrant at home is statistically insignificant. Controlling for other variables, people who have received more education in origin place, earn less than the base group, having primary education at origin. So, it is contrary to the model specification that the highly educated migrants make higher income at abroad and send more money back to origin and their households experience positive change in asset holding could not be approved by the data and the model. The reason may be that the majority of the migrants are migrated as non-skilled laborers in India, Middle East or East Asia. All the migrants in these locations do the same type of work and the wage differential is not dependent on the formal education the worker has received. The level of education attained in the home country does not make difference in the earning of money and the type of job they do in the destination.

The household head sex is a binary variable having value of 1 if the household head is male and 0 otherwise. The household head significantly affects the change in asset holding and, hence, household saving. The households with male head tend to have positive change in asset holdings than the female headed households. The result shows that the male household heads are good managers of money they receive than the female household head. For a given level of other variables in the model, the male are expected to earn 51 percent more than female counterparts for the migrant while for the non-migrant households if the household is male headed, they are expected to earn 47 percent more income. The both types of households will have higher saving if they are male headed.

Household expenditure is negatively related with the change in asset holding as the model specified. Higher the expenditure, lower will the change in asset holding for both remittances receiving and non-remittance receiving households. But the household expenditure is significant for the non-remittance receiving households than to the remittance receiving households.

5.2. Results for effects of remittance income on household expenditures

Before estimating the formal model, the thesis tries to identify whether the remittance receiving and non-remittance receiving households are systematically different. To identify the differences in the household demographic characteristics, the first column of table 5.2 shows the dependent variables in question. The explanatory variable is the remittance income which is a dummy variable having value of 1 if the household receives remittance income and 0 otherwise. The second column shows the effect of remittance income to the dependent variable in question when no other control variables are considered. The third column represents the effect of remittance income if the control variables are included in the model. The control variables are the household characteristics such as household size, age of household head, sex of household head, dependency ratio, education of household head, education of migrant at origin, and methods of remitting money. The explanatory variable is the dummy variable. The robust standard errors and the level of statistical significant of coefficients better than 10% are reported. The first model is constructed without considering the control variables using the ordinary least squares method while the second model introduces the control variables.

The household expenditure depends on remittance income positively as the model has assumed. If other control variables are not included, the remittance income explains that the households with remittance income spend about 40 percent higher than the non-remittance receiving households. But when the demographic characteristics of the household are introduced, the remittance receiving households spend 18 percent higher than the non-remittance receiving households. The difference between these groups decreases when the household characteristics are introduced into the model. That is, if remittance income is considered alone, the differences seems to be higher but the expenditures depends on the household size and composition as well and these variables reduce the difference between the control and treatment group.

Table 5.2: Results on the effects of remittances on household expenditures

Dependent variables	Without control variables		With control variables	
	Coefficient	Robust std error	Coefficient	Robust std error
Total expenditures	0.401	0.179*	0.189	0.114***
Expenditures on food	0.227	0.126*	0.092	0.073
Non-food expenditures	0.050	0.072	0.006	0.061
Expenditures on ed	0.123	0.079***	0.09	0.108
Landholding	-0.0018	0.010	-0.0032	0.010
Change in asset holding	0.295	0.137**	0.322	0.126*

**significance at 1 percent level*

***significance at 5 percent level*

**** significance at 10 percent level*

The household expenditure on food shows that the remittance-receiving households spend about 22 percent more on consumption of food items than the non-remittance receiving households. If the household characteristics are introduced, as in second model, the remittance receiving households spend 9 percent more than the counterfactual group, i.e., the non-remittance-receiving households. The first model explains the difference in the expenditure between these groups statistically significantly but the second model is not statistically significant even at 10 percent level of confidence. When the control variables are not incorporated, the remittance income affects the expenditure on food but when the demographic variables are included into the model, there will not be any statistical difference between the control and treatment groups. Hence, the difference between the remittance receiving and non- remittance receiving households disappears if the demographic characteristics are introduced.

The household expenditure on non-food items is statistically insignificant for both models. The remittance-receiving households spend marginally more than the non-remittance receiving households for the non-food goods. So, for the non-food expenditures, the remittance income does not significantly explain the difference between the control and counterfactual groups.

Household expenditure on education is positively affected by the remittance income. The remittance receiving households spend about 12 percent more for the education purposes as compared to the counterfactual group namely, i.e., the non-remittance-receiving household. If the control variables are included in the model, the difference becomes about 9 percent. The

remittance income is statistically significant at the 10 percent level if the control variables are not included in the model while it turns statistically insignificant if the control variables are included in the model.

The wealth positions of the households are affected by the remittance income. Generally in the rural areas like the survey area, landholding is the main source of livelihood as all the households are involved in at least some kind of farming activities. The households regard the landholding as the long-term investment and source of income. In the portfolio management, all the households want to keep some part of their wealth in the form of landholding. The remittance-receiving households have less landholding than the non-remittance receiving households. As the non-remittance receiving households have larger land holdings; they are reluctant to send their household member abroad as work related migrant.

Migration takes place from the households which feel that they are relatively poor and deprived in the society. Landholding represents the traditional source of wealth and the households with fewer landholdings feel that they are deprived and have higher possibility of migration. So, there is negative relation between landholding and remittance income. Even though the effect of remittance on landholding is not statistically significant, the remittance receiving households are expected to have less landholding than non-receiving households. Alternatively, it can be explained that the remittance receiving households invest their income in non-farm activities, so, they do not want to invest their income for landholding. That is, the remittance receiving households do not involve themselves on agricultural activities and want to change their occupation from farming to other activities. Moreover, the remittance-receiving households are remittance dependent and do not want to be involved in agriculture. Although the households are not classified precisely as agriculture based or non-agriculture based, but generally the households which has migrant are less dependent upon agriculture. They have small landholdings and so want to search for other livelihood strategies and migration is one very commonly available livelihood strategy they can adopt.

The change in asset holding during the past 12 months shows the short-run changes in the wealth position of the households. It represents the immediate change in the wealth of the households and hence the changing economic status in the recent past due to the presence of remittance income. The result shows that the remittance receiving households have about 30 percent higher change in non-land asset holding than the non-remittance receiving households. If the control variables are included in the model, the difference becomes stronger and more statistically significant.

Regarding the effects of remittance on household expenditures, remittance income affects all kinds of household expenditures but the effect is mostly visible for consumption uses. So, mostly the remittance income is spent for consumption purposes. The remained money is spend for accumulating wealth in the form of non- land assets such as television, motor cycle, water pumps, jewelries etc. These assets are partly productive and partly unproductive. For example, if the asset is accumulated in the form of jewelries, the investment does not help to accumulate wealth in next period of time and, hence, this investment is unproductive. On the other side, if the asset is accumulated in the form of tractors or water pumps or making toilets in the household, they are regarded as productive as they help to improve the productivity.

6. CONCLUSIONS, LIMITATIONS AND POLICY RECOMMENDATIONS

6.1. Conclusions

The thesis has examined the role of remittances in the household savings and expenditures of the remittance receiving households by comparing the treated and control groups-remittance receiving and non-remittance receiving households. The impact of remittances is measured on certain dependent variables- household expenditures on different regular items (food, non-food and education) and saving. The impact of remittances on the dependent variable gives the partial results as the remittances income is entitled only to those households which have a migrant household member. The households without a migrant member do not receive remittances, so, the impact of remittances on dependent variables for the non-remittance receiving households is not directly measurable. Therefore, the results and conclusions are based on dual conditions: whether the remittance income has an effect on the dependent variable; and whether the other explanatory variables have a different effect on the dependent variable for the remittance-receiving households and non-remittance receiving households. Matching of remittance receiving households with non- remittance receiving households make the job easy to compare these groups.

6.1.1. Conclusions regarding household saving

The household saving, measured by the change in non-land asset holding, is positively related with the remittance income, household income, landholding, dependency ratio and household head sex; and negatively with household size, education of migrant at home and household expenditures. The education of migrant at home has taken the unexpected sign than the model predicted. The reason for the negative sign of previous education attained by the migrant at the origin country may be that majority of the migrants are work related migrants and the previous education does not play a major role in the level of income in the host country rather the more educated migrants may have less motivation to work.

The household income includes the income from remittances as well. As the household income does not explain significantly the change in asset holding for the non- migrant households, the saving amount of these households is lower than the households with a migrant household member. The conclusion is that the remittance income, if not included, cannot influence the change in asset holding. That is, the remittance income is the only variable which explains the change in asset holding for the households with migrant.

The productivity of the domestic economic activities is lower than the productivity of the migrants. As the economically involved household members are making positive change in the savings only for the migrant households, remittance income has a significant role on those

households. For the non-migrant households, the number of persons involved in the economic activities is negatively associated with the household savings. The meaning is that the household members who are involved in the economic activities in the origin are unable to make their livings by the economic activities that they are doing. So, the marginal productivity of the domestic activities is less than the marginal productivity of migrants.

The household size of the migrant households does not explain the change in asset holding. The landholding is less important to the households with migrants than to the household without migrants. So, the domestic economic activities as well as the availability of agricultural land have less importance to the savings for the households with migrant. Only the remittance income is their source of livelihood.

6.1.2. Conclusions regarding household expenditure

After controlling for household's characteristics, migrant households who receive remittance income spend 18 percent more than the non-remittance receiving households. Remittances are associated with larger amount of spending on all major spending items although they are statistically significant for food items only. Because of the increase in their incomes, the remittance receiving households save more primarily on non- land assets.

The households which receive remittance spend more on consumption purposes and less for investment goods. Only the difference between the remittance receiving and non- remittance receiving groups in the consumption expenditure is statistically significant and explains the much variation for consumption while for other investment purposes, they are not significantly different. So, the conclusion is that remittance income is spent for consumption only and not for investment. There is no clear evidence that remittances increase spending on education.

Regarding the effects of remittance income on household expenditures, remittance income affects all kinds of household expenditures but the effect is mostly visible for consumption uses. So, mostly the remittance income is spent for consumption purposes. The remained money is spent for accumulating wealth by the household either by spending for education of children or by increasing the non- land asset holdings. The non- land asset holdings are partly productive and partly unproductive. For example, if the asset is accumulated in the form of jewelry, the investment does not help to accumulate further wealth in next period of time and, hence, is unproductive. On the other side, if the asset is accumulated in the form of tractors or water pumps or making toilets in the house, they are regarded as productive as they help to improve productivity for future.

The households receiving remittances save their remitted money in the form of non-land assets which are only partially productive. The majority of the non-land expenditure is spent for the jewelry, television, motor cycle and other unproductive purposes.

The Nepalese economy is converting towards the remittance dependent economy from agriculture dependent economy. Government initiatives regarding foreign employment has encouraged many young job seekers to search for job around the major labor markets. Nepal Rastra Bank (Central Bank of Nepal) has introduced remittance laws, 2010 with the objective of making remittance transactions transparent and simple to remit money to Nepal in simple, secured and economic way. The foreign employment agencies can exchange the required foreign currencies for promoting their business. Moreover, money changer rules are also introduced in 2010 for making foreign exchange transactions more secure, transparent and simple (MoF 2012). Such policy changes show clearly that the foreign employment is one of the major priorities of the government. The foreign employment is regarded as a viable alternative to provide employment opportunities.

6.2. Limitations

First, the study has taken the information about the migrant from the household head. The household head may not have enough and adequate information regarding the absent household member. If the data are collected by the migrants themselves about their characteristics, more reliable data may be obtained.

The data was collected in the origin of the migrants and not on the place where the migrants are staying currently. The household head may not receive the remittance income the migrant sends because if the migrant is investing secretly without informing the household head, there is the possibility that the remittance income is underreported and underestimated.

The study of remittance and its use requires a long-term study of the household regarding their migration history and their investment history. Study of remittances for one year time period is not enough to visualize all the investment behavior of the household. So, the studies on remittances are required to have a long time span including all the lifetime migration and remittances flows. The study is based on the cross sectional data but migration and remittances are long term variables. The variable representation may not have been completely satisfactory. The panel data studies are more suitable for these variables.

This study is based on the cross sectional data which lacks the information about how many years a household is receiving remittances. The time dimension of the receipt of such transfers could not be included due to lack of past recall capacity of the informant.

The results are obtained by separating the total households into remittance receiving and non-remittance receiving households. The impact of remittance income for the non-remittance receiving household is not measurable. So, all the analysis is based on the systematic different behavior of the households on variables except remittance income. The assumption is that the households are selected randomly and the other variables except remittance income are homogenous for both groups.

All the migrants that are surveyed had temporary migrants. Not a single household mentioned the permanent migrant from the household. The remaining household members also follow the migrant in case of permanent migration and the household no longer remains in practice.

6.3. Suggestions for further research

The further researches can be directed towards the study of migrants themselves rather than relying on the household head for the information. More detailed information can be obtained from the migrant themselves than the household members left behind.

The remittance sending behavior of the permanent and the temporary migrants are different as the temporary migrants want to earn as much money as they can and save the majority portion of that income but the permanent migrants spend money in order to socialize in the new society. If a household member is permanently migrated to another country, the other household members also follow the migrant and hence the household itself disappears. The remittance study on the origin cannot capture the true picture if the household itself disappears. So, a combination of study in the origin and in the host country may be another approach for the research to study the migratory behaviors.

Bibliography

- Adams, J., R.H. (1998). Remittances, investment, and rural asset accumulation in Pakistan. *Economic Development and Cultural Change*, 47 (1): 155-173.
- Adams Jr, R. (2005). Remittances, household expenditure and investment in Guatemala. *World Bank Policy Research Working Paper No. 3532*.
- Adams, R. H. (1991). The economic uses and impact of international remittances in rural Egypt. *Economic Development and Cultural Change*, 39 (4): 695-722.
- Adams, R. H. & Cuecuecha, A. (2010). Remittances, household expenditure and investment in Guatemala. *World Development*, 38 (11): 1626-1641.
- Adhikari, J. (2001). Mobility and Agrarian Change in Central Nepal. *Contributions to Nepalese Studies*, 28 (2): 247-267.
- Alderman, H. (1996). Saving and economic shocks in rural Pakistan. *Journal of Development Economics*, 51 (2): 343-365.
- Amuedo-Dorantes, C. & Pozo, S. (2004). Workers' remittances and the real exchange rate: a paradox of gifts. *World Development*, 32 (8): 1407-1417.
- Bhandari, P. (2004). Relative Deprivation and Migration in an Agricultural Setting of Nepal. *Population & Environment*, 25 (5): 475-499.
- Bohra-Mishra, P. & Massey, D. S. (2011). Individual Decisions to Migrate During Civil Conflict. *Demography*: 1-24.
- Bohra, P. & Massey, D. S. (2009). Processes of Internal and International Migration from Chitwan, Nepal. *International Migration Review*, 43 (3): 621-651.
- Bracking, S. (2003). Sending money home: are remittances always beneficial to those who stay behind? *Journal of International Development*, 15 (5): 633-644.
- Bruslé, T. (2008). Choosing a destination and work. *Mountain Research and Development*, 28 (3): 240-247.
- CBS (2002). Population census, 2001. *Central Bureau of Statistics*, Kathmandu
- Chami, R., Fullenkamp, C. & Jajah, S. (2003). *Are immigrant remittance flows a source of capital for development?:* International Monetary Fund.
- Constant, A. & Zimmermann, K. F. (2005). Immigrant performance and selective immigration policy: a European perspective. *National Institute Economic Review*, 194 (1): 94-105.
- Dustmann, C. & Weiss, Y. (2007). Return migration: theory and empirical evidence from the UK. *British Journal of Industrial Relations*, 45 (2): 236-256.

E, G. (2001). labor markets and migration in Nepal. *mountain research and development*, 21 (3): 253-259

Edwards, A. C. & Ureta, M. (2003). International migration, remittances, and schooling: evidence from El Salvador. *Journal of Development Economics*, 72 (2): 429-461.

Ellis, F. (1998). Household strategies and rural livelihood diversification. *The Journal of Development Studies*, 35 (1): 1-38.

Endo, I. & Afram, G. G. (2011). *The Qatar-Nepal Remittance Corridor: Enhancing the Impact and Integrity of Remittance Flows by Reducing Inefficiencies in the Migration Process*: World Bank.

Fafchamps, M. & Shilpi, F. (2008). Determinants of choice of migration destination. *World Bank Policy Research Working Paper No. 4728*.

Freund, C. & Spatafora, N. (2008). Remittances, transaction costs, and informality. *Journal of Development Economics*, 86 (2): 356-366.

Galor, O. & Stark, O. (1990). Migrants' savings, the probability of return migration and migrants' performance. *International Economic Review*: 463-467.

Garner, E. & Seddon, D. (2004). Nepal's Remittance Economy: A Decade of Change. '' *Nepalese Economy: Towards Building a Strong Economic Nation-State*. Tribhuvan University: Central Department of Economics

Gill, G. J. & Institute, O. D. (2003). *Seasonal labour migration in rural Nepal: a preliminary overview*: Overseas Development Institute London, United Kingdom.

Glytsos, N. P. (1997). Remitting behaviour of "temporary" and "permanent" migrants: The case of Greeks in Germany and Australia. *Labour*, 11 (3): 409-435.

Glytsos, N. P. (2002). The Role of Migrant Remittances in Development: Evidence from Mediterranean Countries. *International Migration*, 40 (1): 5-26.

Graner, E. (2001). Labor markets and migration in Nepal. *Mountain Research and Development*, 21 (3): 253-259.

Gubert, F. (2000). *Migration, Remittances and Moral Hazard. Evidence from the Kayes Area (Western Mali)*.

Hanson, G. H. & Woodruff, C. (2003). Emigration and educational attainment in Mexico. *Documento de Trabajo del IR/PS*. Disponible en http://irpshome.ucsd.edu/faculty/gohanson/working_papers.htm.

Harris, J. R. & Todaro, M. P. (1970). Migration, Unemployment and Development: A Two-Sector Analysis. *The American Economic Review*, 60 (1): 126-142.

- Kapur, D. (2009). *Remittances-The new development mantra: XVIII G24 Technical Group Meeting*.
- Karki, B. K. & van Wissen, L. (2009). Exploring Internal Migration behavior in Nepal.
- Khatri, S. K. (2009). *Labour Migration, Employment, and Poverty Alleviation in South Asia: South Asia Centre for Policy Studies*.
- Lipton, M. (1980). Migration from rural areas of poor countries: the impact on rural productivity and income distribution. *World Development*, 8 (1): 1-24.
- Lucas, R. E. B. & Stark, O. (1985). Motivations to remit: Evidence from Botswana. *The Journal of Political Economy*: 901-918.
- Maharjan, A., Bauer, S. & Knerr, B. Migration and Household Food Security Interlinkage: A Case Study in the Mid Hills of Nepal.
- Massey, D. S., Axinn, W. G. & Ghimire, D. J. (2010). Environmental change and out-migration: evidence from Nepal. *Population & Environment*, 32 (2): 109-136.
- McKenzie, D. J. (2005). Beyond remittances: the effects of migration on Mexican households. *International migration, remittances and the brain drain*: 123-147.
- Morduch, J. (1995). Income Smoothing and Consumption Smoothing. *The Journal of Economic Perspectives*, 9 (3): 103-114.
- Murrugarra, E., Larrison, J. & Sasin, M. (2010). *Migration and Poverty: Towards Better Opportunities for the Poor*: World Bank Publications.
- Müller-Böker, U. (2000). State intervention in Chitwan: On the historical development of a region in Southern Nepal. *Studies in Nepali History and Society*, 5 (2): 173-200.
- MOF (2012). Economic Survey, *Ministry of Finance*, Government of Nepal, Kathmandu, 2012 <http://mof.gov.np/files/economy/2011/pdf/chapter6.pdf>
- NLFS (2008). Nepal Labor Force Survey. *Central Bureau of Statistics*, Kathmandu.
- NLSS (1996). Nepal Living Standard Survey. *Central Bureau of Statistics*, Kathmandu.
- NLSS (2004). Nepal Living Standard Survey. *Central Bureau of Statistics*, Kathmandu.
- NLSS (2010). Nepal Living Standard Survey. *Central Bureau of Statistics*, Kathmandu.
- NRB (2012). Quarterly Economic Bulletin, *Nepal Rastra Bank*, Kathmandu, Nepal, 2012.
- NMYB (2006). Nepal Migration Year Book, *Nepal Institute of Development Studies*. Kathmandu, Nepal.
- NMYB (2008). Nepal Migration Year Book, *Nepal Institute of Development Studies*. <http://www.nids.org.np/publications.htm>
- Orozco, M. (2003). Worker remittances in an international scope. *Inter-American Dialogue*.

- Osili, U. O. (2007). Remittances and savings from international migration: Theory and evidence using a matched sample. *Journal of Development Economics*, 83 (2): 446-465.
- Pant, B. (2011). Harnessing Remittances for Productive Use in Nepal. *NEPAL RASTRA BANK* (23): 1.
- Papademetriou, D. G. & Martin, P. L. (1991). *The unsettled relationship: Labor migration and economic development*: Greenwood Pub Group.
- Ratha, D. (2003). Workers' remittances: an important and stable source of external development finance. *Global Development Finance*, 157: 75.
- Ratha, D., Mohapatra, S., Silwal, A., Irving, J. & Plaza, S. (2009). Migration and development brief. *Outlook*.
- Sapkota, C. (2011, August 13, 2011). Cost and Benefit of Remittances. *My Republica*.
- Seddon, D., Gurung, G. & Adhikari, J. (1998). Foreign labour migration and the remittance economy of Nepal. *Himalaya, the Journal of the Association for Nepal and Himalayan Studies*, 18 (2): 7.
- Seddon, D., Adhikari, J. & Gurung, G. (2001). *The new Lahures: foreign employment and remittance economy of Nepal*: Nepal Institute of Development Studies.
- Shrestha, B. (2004). Foreign Employment and the Remittance Economy of Nepal. *The Nepalese Economy: Towards Building a Strong Economic Nation-State*. Tribhuvan University: Central Department of Economics
- Shrestha, B., Shrestha, R. P., Wagle, A., Pant, B., Subedi, B., Gautam, B. P., Koirala, T. & Dangol, J. (2008). Contribution of foreign employment and remittances to Nepalese economy. *Economic review*. Kathmandu: Nepal Rastra Bank in Kathmandu. Available online at <http://red.nrb.org.np/publica.php>.
- Shrestha, S. A. (2011). Human Capital Investment Responses to Skilled Migration Prospects: Evidence from a Natural Experiment in Nepal.
- Solimano, A. (2003). Remittances by emigrants: issues and evidence. *Santiago, Chile: Series in Macroeconomía del Desarrollo by the Economic Development Division of the Comisión Económica para América Latina y el Caribe (CEPAL)*.
- Stahl, C. W. & Arnold, F. (1986). Overseas workers' remittances in Asian development. *International Migration Review*: 899-925.
- Stark, O. & Bloom, D. E. (1985). The New Economics of Labor Migration. *The American Economic Review*, 75 (2): 173-178.
- Stark, O. & Lucas, R. E. B. (1988). Migration, Remittances, and the Family. *Economic Development and Cultural Change*, 36 (3): 465-481.

- Stark, O. & Taylor, J. E. (1991a). Migration incentives, migration types: The role of relative deprivation. *The economic journal*, 101 (408): 1163-1178.
- Stark, O. & Taylor, J. E. (1991b). Relative deprivation and migration: theory, evidence, and policy implications. *Policy Research Working Paper Series*.
- Thapa, S. (2009). Three Essays on Nepalese Development: Technology Adoption, Agricultural Risk and the Effects of Remittances on Recipient Households.
- Thieme, S. & Wyss, S. (2005). Migration Patterns and Remittance Transfer in Nepal: A Case Study of Sainik Basti in Western Nepal. *International Migration*, 43 (5): 59-98.
- Wagle, U. R. (2009). Experience of Nepali Families with Foreign Remittance: Evidence from the Nepal Living Standard Survey.
- Wagle, U. R. (2012). Socioeconomic Implications of the Increasing Foreign Remittance to Nepal: Evidence from the Nepal Living Standard Survey. *International Migration: no-no*.
- WorldBank. (2004). Nepal development policy review- restarting growth and poverty reduction. *Development Policy Review (DPR)*, 1: 138.
- Zimmerman, F. J. & Carter, M. R. (2003). Asset smoothing, consumption smoothing and the reproduction of inequality under risk and subsistence constraints. *Journal of Development Economics*, 71 (2): 233-260.

Appendices

1. Questionnaire Sample

Household No:	Interviewer:
Household head Name:	Date of Interview:

A. Household Characteristics

1. Number of Household members....

Serial number	Relation to head	Sex	Age	Occupation	ethnicity
1					
2					
3					
4					
5					

2. Did any member of family live outside home during the last year for more than 1 month?

Yes... No.....

3. If yes

S. N	Name	Relation to head	Sex	Age	Marital status	Education	Destination	Period	Remittances
1									
2									
3									
4									

B. Type of migration

Permanent migration.....

Temporary migration.....

1. If temporary migration, for how many years? (specify?)....

2. What are the reasons for migration?

a.....

b.....

c.....

3. Have you any member of the family who migrated few years ago, came back? Yes... No...

If yes, why?.....

4. After returning back, does s/he has migrated again? Yes... No...

5. If yes, why?

6. What are the negative effects when a person migrates from the family?

7. Specify effects...

a).....

b)....

c).....

8. How does workload in household change when the person moved out?.....

9. Who gets the higher workload?.....

10. Who gets the lower workload?.....

11. If children get higher workload, does this affects.....

a) School attendance? Yes... No....

b) Time spent on homework? Yes... No

c) Drop out of school? Yes.... No....

12. After the move out of the family member, does there any change in consumption per person? Increased.... Constant.... Decreased.....

13. Do you have any household member who wants to migrate abroad currently?

If yes, Information about the prospective migrant

Serial number	Relation to head	Age	Marital status	Sex	education	Prospective destination
1						
2						

C) Household Consumption Expenditure

a. Food Items

Commodity	Quantity			If bought Price (per unit)	Source of income
	Own production	bought	total		
Rice					
Wheat					
Maize					

Millet					
Potato					
Cauliflower					
Tomato					
Meat					
Egg					
Other (specify)					

b. Non- food items

Commodity	Quantity	Frequency of purchase	Price (per unit)	Source of money
Medicine				
Clothing				
Education				
Stationary				
Cigarette/ tobacco/alcohol				
Fuel				
Cosmetics				
Others (specify)				

c. Assets/wealth change in last one year

Form of asset	Last year quantity	Last year price	Current year quantity	Current year price	Variation in quantity	Current value of the asset
Agricultural land						
Livestock						
Small business						
Gold jewelleryes						

14. If there is increase in quantity of asset holdings, why?

a.....

b.....

c....

15. If there is decrease in quantity of asset holding, why?

a...

b...

c...

16. Is there any negative effect of decrease in that particular asset holding?

a....

b...

c...

17. What are the reasons for this particular set of assets?

a.....

b....

c....

D. Sources of Income

Sources	Last year income	Current year income	Difference (current year – last year)
Sale of Agricultural goods			
Livestock sale			
remittances			
Credit			
Others (specify)			

18. If remittance income, for how many years are you receiving it?.....

E. Expenditure of remittance income

19. For what purpose you are using your remittance income?

a. Repay the debt Yes..... No.....

b. Education of children Yes..... No.....

c. Purchase of agricultural goods Yes..... No.....

d. Purchase of agricultural land Yes..... No.....

e. Purchase of consumer durables Yes..... No.....

f. Purchase of other goods, if yes (specify)..... No.....

g. Hiring labor Yes..... No.....

h. Saving for future Yes..... No.....

Appendix 2

Map of the survey area

