

REMITTANCES IN NEPAL: ITS IMPACT ON LABOR SUPPLY RESPONSES

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ABSTRACT

This thesis examines the relationship between remittances and effects on household labor supply by the left behind in Nepal by using cross-sectional analysis of the data from a household survey conducted in 2016 by the researcher. It provides a comprehensive overview of the effects of remittances on the labor supply by the left behind household members.

The study finds that the households, which receive remittances, and those, which do not receive remittances, are different in terms of their income sources. If the income from remittance is excluded, the sources of income are not systematically different for both remittances receiving and non-remittance receiving households. Remittance income is the major source of income for those households who receive remittances. For the household expenditure, receiving remittance does not make a difference in the expenditure patterns of the households in the survey area.

The labor supply is divided into wage earning and non-wage-earning activities. The study, using simple regression with binary explanatory variable, concludes that as a household member migrates, the remaining household members reallocate their labor supply. The household members supply less labor in the wage earning activities; the household head's supply of work on non-wage earning increases whereas the other members non-paid work decreases. The report supports the traditional economic theory as the receipt of remittance income increases the leisure of the remaining household members and the labor supply curve is upward sloping.

The labor supply response is examined in both extensive and intensive margins. In the extensive margin, the database is not suitable because of presence of non-monetized labor market where labor exchange is a common practice. In the intensive margin, the receipt of remittance alone cannot explain the difference in the labor supply responses between the remittance receiving and non-remittance receiving households.

Key words: international migration; remittance; labor supply; Nepal.

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CHAPTER 1: INTRODUCTION

The study examines the effect of Nepalese emigration on labor supply of household members left behind in Nepal using primary data collected in a selected area of Nepal. The migrants are migrated on temporary contractual basis. The questions addressed are: What are the implications of emigration for household livelihood strategies in the origin country? What will be the impact on the labor supply of the household members who are left behind in the origin country?

The influence of migration on production is complicated by the fact that migration of household members alters the labor endowment of the household. If the labor market is well functioning, the migrant sending household can substitute the reduced labor endowment by hired labor in the local market but in the underdeveloped countries the local labor market is imperfect and as workers have emigrated, the local labor market becomes distorted. So, with imperfect labor market, there may be negative consequences on household production. Indirectly, the income effect of remittances may affect labor supply decisions of the remaining household members, as they may reallocate human resources away from productive economic activities towards leisure (Antman, 2013).

In agriculture-based economies, changes in the labor supply of families with migrants may occur because of two factors: a) a decrease in the number of members who can work. But b) the flow of remittance- a non- migrant will reduce the supply of labor when he receives income in the form of non-labor income. These two factors are closely related but separate and jointly they can cause increase or decrease in the labor supply in the households depending upon which factor is more weighted.

Nepalese migration is supposed to increase the agricultural productivity in the medium and long term even though the household labor is withdrawn in the short run (Sapkota, 2013; Tuladhar, 2014). The decreased household labor in the short run brings back not only cash money in the form of remittances which eases the financial deficiencies but also increases the agricultural productivity in the long run through know- how of new technologies abroad.

In Nepal, the rural agricultural sector has a surplus of labor, so the opportunity cost of migration in terms of production in the origin is about zero (Ranis and Fei, 1961). When this surplus labor are migrated abroad, the reduction of production in the origin is negligible. In other words, the change in the rural labor supply does not affect the production in the agriculture sector. Therefore, the short run decrease in the labor supply is not so obvious and is always compensated.

The actual happenings of these effects are time sensitive. First, labor migration is realized and after certain period, remittances will be realized. Thirdly, the realization of the adoption of new technologies takes relatively a longer period of time. Remittances inflows are realized after a certain specifically short period as majority of Nepalese emigrants migrated after having agreed in a predetermined wage, tenure and place. The realization of the exposed new technology is a debated issue in Nepalese case. As the majority of the emigrants are unskilled and uneducated, their gain of new technology is completely unknown. In order to study the impact on exposer of new techniques in rural agricultural activities, time series data is necessary which studies the activities of post emigration period of the returnees.

After the realization of the positives of labor migration, it is necessary to study the impacts in labor market participation of the returnees and the family members back at home. The debate on Nepalese international migration and remittances is focused on:

- a. Does migration lead to a loss of family labor? How do the households compensate the loss of family labor?
- b. Are remittances being used to purchase the labor from the labor market or is the workload transferred to the remaining household members?
- c. What is the impact of international migration on the extent of subsistence crop production?
- d. Do migration and remittances help to commercialize the traditional way of farming in the agriculture in the rural area?

Among these debates, this report tries to investigate the effects on labor supply changes in the rural area leaving the effects on productivity of agriculture for

further research. In these conjectures, this report adds to the available literature in migration, remittances and the labor supply responses of the left behind household members in the rural areas. The previous studies have studied the effects of migration and remittances and their resulting effects on the household livelihood aspects such as investment, saving, consumption, poverty reduction, education of children (Dhakal, 2012, Islam, 2014, Kollmair et al., 2006, Sapkota, 2013) , but the effects on the labor supply changes of the remaining household members are not sufficiently documented in Nepalese economy.

In the neo- classical labor economics, remittances can be interpreted as non-labor income. Theoretically, an increase in non- labor income should increase household purchasing power and reservation wages, and result in the decreased need of employment and the number of hours worked by remittance receiving individuals. When migration occurs, non-migrant household members receive easy additional non- labor money. An increase in non- labor money reduces their participation in local labor market and hence reduces labor supply. In turn, the local wage rate increases as the local labor market is not well integrated.

The non- labor income raises the budget constraint of the households because their reservation wage rate increases. The reservation wage rate is the minimum wage rate at which a worker would be willing to accept a particular type of job (Brown and Taylor, 2015), local wage in this context. This reservation wage determines the conditions of participation in the labor market. If the current wage rate falls below it, the worker does not supply any hours of work. Meaning, the worker is not participating in the labor market. Therefore, decision to participate in the labor market depends on reservation wage. According to the neo-classical model of labor supply, setting aside any change in consumers' tastes, the only parameter capable of modifying the reservation wage is non-wage income (Rosenzweig, 1980).

There are two schools of thought regarding household decision-making. Pluralist school of thought claims that the individuals within a household are different and decide their production-consumption as well as work- leisure decisions separately (Blundell et al., 2007). These models focus on the different bargaining power of individuals, separable utilities and preferences of individuals, risk sharing and risk distribution etc (McPeak and Doss, 2006, Doss, 2013a). Income

pooling and intra-household inequalities among the household members are the challenges of unitary decision making model (Blundell et al., 2013). Household members may have different interests and differing abilities to realize these common interests. The harmonization in thinking and action among the household members is a very difficult task. In such a case, assuming unitary household decision-making is a mere simplification of the issue.

Some empirical studies suggest that the work decisions made by a person are a mutually interdependent decision of the family as a single decision making unit. Migrants and non-migrants in a family jointly decide migration, costs incurred on that process and the returns are also equally shared (Mincer, 1977). The net family gain in terms of utility rather than net personal gain motivates migration of households (Mincer, 1977). If labor supply is determined by the family decision, the family also implicitly decides migration decision. So, who will migrate, how long will the member remain abroad, how the remittance money is utilized are jointly determined by the household decision. In this model of household decision-making, all the household members value the well-being of others in the household as much as their own.

The unitary decision making school of thought states that it is not an individual who decides how much to work but the household which determines who will work and how much (Taylor, 1999). In such a case, the labor supply decision of a person is inseparable with the household decision. The distribution of income or assets or labor supply or other economic variables within the household does not affect the outcome of the household. Generally, a unitary model implies that the measures of bargaining power within the household does not affect outcomes (Doss, 2013b). There are alternative models for unitary model of household decision-making based on bargaining power of the household members (Bourguignon and Chiappori, 1992). A general finding of these bargaining models is that the unitary method typically fails to explain true household decisions where bargaining power and other factors within the household frequently affect the outcomes of household decisions (Doss, 2013b).

The potential challenge to use unitary model of household decision-making is that the altruism and harmony among the household members may not remain for a long term (Bourguignon and Chiappori, 1992). This is because the income

earner is absent from the household and that person does not have a direct control over the income s/he earns. Then the emigrant has to completely rely on the information provided by other household members on how the money is being used. This may create some informational gap and this lack of information may exacerbate the potential problem. The person who earns income in the form of remittances abroad has to believe on what the other members say about the use of the monies remitted. Therefore, there is possibility that the amount of remittance decays over time when an emigrant is absent for a long period.

If this unitary intra-household model is accepted, whether the migrant previously was working or not working, the decrease in the household member does not make any impact in the household labor supply as the household itself makes the labor supply decision. However, if the migrant was active in the labor market, the remaining household members can substitute his work by increasing their labor supply or by hiring the outside labor and hence reducing their own supply. In short, migration and remittance can affect labor participation and hours worked by the non-migrant individuals.

As the study assumes family as a single decision making unit, the information provided by the non- migrant household members can be used on the data analysis and interpretation purpose. It makes the report interpretable. Otherwise, the report should have access to the information in the destination and with the migrants themselves.

This report aims to provide a micro perspective on both participation in the labor market and the working hours' decisions. The expectation in the study is that the households who have migration (reduction in the household labor supply) will compensate the reduction in household labor supply constraint by the counter income in terms of remittance income, which, in turn, leads to more choices to the households, and those choices are positive for the overall economic performance of the household.

The income sources in the rural areas are limited. Traditionally they are classified as farm, off-farm and non-farm income sources (Saith, 1992). Farm income refers to livestock and crop income from output sold. Off –farm incomes include wages or exchange of labor in the rural area whereas non-farm incomes refer to non-agricultural income sources. Several non-farm income categories can be

identified which are- non-farm rural wage employment, non- farm rural self-employment, property income and remittances from the absent family members (Ellis, 1998). This report focuses on the role of migration and remittances in the income diversification in the rural economy so that the households can enlarge their choices to improve livelihood security and to raise living standards.

This thesis assumes for simplicity that the transaction cost of migration is zero. This is assumed because the transaction cost differs for person-to-person and destination-to-destination. As the cost of migration is different from income potential of the migrant, it is very difficult to generalize this transaction cost (including the travel cost). The household members in the origin cannot precisely estimate the total transaction cost. If transaction cost is included in the analysis, information about the transaction cost of sending money from the destination, the possible foreign exchange rate fluctuations and about other costs which are borne by the migrant is to be collected which is impossible because the data collection is made on the origin. Inclusions of these transaction costs require collecting information from the destination also.

The information is collected from the household members who are left behind in the rural area. If all the household members are also migrated, the information on those households cannot be collected. Therefore, the absent household is not included. Only the households that are present in the survey area are included for the analysis purpose. For example, if a member is migrated abroad and the remaining household members are migrated either internally or externally even in the temporary basis, those households are assumed to be absent. If the absent households are to be included, data should be collected from the urban areas or in the destination where the once migrated persons reside. This effect is excluded in the report.

The remaining sections of the report are organized in a way that second section includes structure of Nepalese economy, migration and remittances; third section examines the theoretical aspects of labor force participation and labor supply with migration followed by descriptive analysis. Fifth section includes results and discussions; and the sixth section concludes the report with recommendations.

CHAPTER 2: STRUCTURE OF NEPALESE ECONOMY, MIGRATION AND REMITTANCES

In the last 25 years, the economic climate of Nepal has changed dramatically. Multiparty democracy opened the economy to the third world beyond India. At the same time, the domestic economy became stagnant due to the internal conflict lasting for 10 years. In such a condition, foreign employment became an important source of employment and income generation.

Even though over 300,000 people enter the labor force every year (Islam, 2014), the main labor market challenges in Nepal are caused by slow pace of economic development- almost three quarters of workers continue to be employed informally in agricultural sector (Sijapati et al., 2015). In response to the lack of domestic job opportunities, Nepalese continue to seek employment outside the country, mostly in India, the Gulf Cooperation council (Middle East Countries) and more recently in Malaysia. Estimates indicate that, in 2011, there were approximately 1.92 million worldwide international migrants (including labor migrants) from Nepal (Sharma et al., 2014). This figure has grown significantly from 762,000 in 2001. The majority of international migrants from Nepal head to India (37.6 percent), the Middle East (30.0 percent) and ASEAN countries (13.0 percent) (Sharma et al., 2014).

Due to absence of employment opportunities generated within the country and the dysfunctional domestic labor market, foreign employment has been a major alternative option but the characteristic of Nepalese international labor export is that these work related migrants are mostly unskilled. The Nepalese government issues the labor permits for the individuals to work outside the country (except India) and among those permits distributed in fiscal year 2014/15, 74 percent has been for unskilled labor, 25 percent for semi- skilled and remaining 1 percent for skilled workers (DoFE, 2014).

The number of labor migrants given permits each year increased from 35,543 in 2000/01 to 527,814 in 2013/14. Based on 2013/14 data, the top destination countries for labor migrants through the permit system, which excludes India given the visa/permit free access, are Malaysia (40.6 percent), Qatar (23.7 percent), Saudi Arabia (16.4 percent) and UAE (10.3 percent) (DoFE, 2014).

The gender gap is visible in Nepalese international migration as 87.6 percent of international migrants were male in 2011/12 (Sharma et al., 2014) even though there is very little gender difference in the labor force participation in Nepal. The proportion of the population aged 15 and older and who are working or actively searching for work, were 80.1 percent female against 87.5 percent for men in 2013/14 in Nepal (Sijapati et al., 2015).

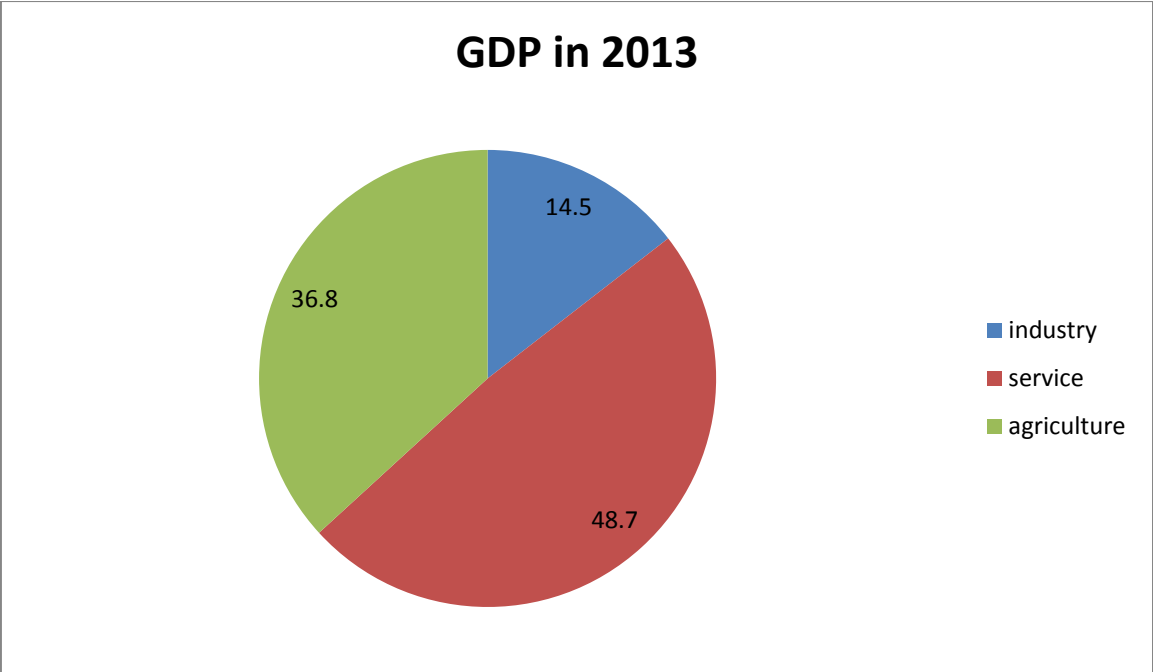
The migration and remittances data are generally underreported in the official statistics (Ratha and Shaw, 2007). The official statistics reports only those migrants who are migrated for work purpose, not other migrants. On the other hand, the remittance flows are reported through the official or banking channels, excluding the money workers bring themselves when they go back in the vacation or the money sent through informal channels. The total amount of remittances from India is unreported in the official statistics as both Nepalese and Indian citizens do not need work permits in both countries, and Nepal uses double currency system. Therefore, it is not reported how much money is remitted from India to Nepal or from Nepal to India.

The International Monetary Fund (IMF) keeps annual records of the amount of worker remittances received by each labor exporting country (Adams and Page, 2005). However, as IMF only reports data on official flows; it underestimates the remittances monies which are transmitted through unrecorded channels (Adams and Page, 2005, Kollmair et al., 2006). According to a report of IMF, the total remittance receipt in Nepal in 2015 is estimated to be about \$7 billion which is about 29 percent of GDP against about 25 percent of GDP in 2012 (Ratha et al., 2016). Remittances inflows to Nepal reached US\$5.55 billion in 2013, representing 28.8 percent of GDP while in 2003, these inflows amounted to just \$771 million (Sijapati et al., 2015).

In the Nepalese context, a study by Kollmair and others estimated the number of migrants and the remittances flow in Nepalese economy and concluded that the total number of migrants calculated by the official statistics are close to the reality but the amount of remittances seem to be higher (Kollmair et al., 2006). A descriptive study suggests that the scale of remittances is at least ten times greater than official estimates and quite possibly twenty times greater (Seddon et al., 2002).

People generally underreport the remittances income to the officials because they fear that the government can impose taxes on their income if they report actual or higher income from remittances. Therefore, there is possibility of underreporting income in the government financed data collection. This study is free from this potential problem in the data collection as the respondents are assured that the information will be private and, thus, provides the actual reporting of incomes. Hence, the information becomes real and representative to the population. The primary data collection is essential for the true and accurate estimates of remittance income.

Figure 1: Composition of Nepalese Economy



From: (economy, 2016)

Any transformation in Nepalese economy is the withdrawal of employment and contribution of agrarian agricultural sector to productive industrial and service sectors. More than 60 percent of the households make a living in agriculture sector and their contribution in GDP is 36.8 percent in 2013 (MoF, 2016).The productivity in agriculture is less than other sectors. So, development of any other sector is expected to withdraw the workers from agriculture as people move from low productivity sector to high productivity sector.

The service sector seems to be the largest sector in Nepal but the reality is that workers' remittances are included in this sector. If remittances sector, which has about 29 percent contribution in GDP (Ratha et al., 2016), is omitted from service sector, agriculture has the largest contribution to GDP.

Economic review of Nepal Rastra Bank noted that a tremendous amount of remittance inflows and foreign assistance contributed towards surplus in current account as well as in balance of payment (NRB, 2015). The share of remittance income in current transfer income has been consistently greater than 80 percent since 2009/10 (NRB, 2015).

According to Millenium Development Goals progress report 2013, foreign employment and remittances accounted for a considerable portion of poverty reduction among those households that send members abroad to work (NPC, 2016) but the poverty reduction is not so successful on those households who are involved in other economic activities within the country.

The major impacts of remittances on poverty reduction are evident at household levels (Tuladhar et al., 2014). According to National Living Standard Survey 2010/11, the household receiving remittances increased from 23.4 percent in 1995/96 to 55.8 percent in 2010/11. Remittances constitute a considerable share of total income of the recipient households, with a 30.9 percent in 2010/11, while it was only 17.6 percent for all households (NLSS, 2011).

Remittances, in the fiscal front, have been indirectly contributing to the steady growth of tax revenues because imports are largely financed by remittance income and consumption taxes account for about 72 percent of total tax revenue (MoF, 2016).

Migration is believed to provoke consumerist, non- productive and remittance dependent attitudes in migrant sending communities (De Haas, 2010). The exposure to the wealth of return migrants and the goods and ideas they bring with them, would contribute to changing rural tastes, lowering the demand for locally produced prods, increasing the demands for imported urban or foreign produced goods, and thereby increasing the general cost of living in sending communities (Lipton, 1980).

According to Lipton, investments only comes as a fourth priority of the remittances monies (Lipton, 1980). The first priority is to repay the migration cost of the emigrant, followed by education of children. The third priority of the remittance is to hire local labor (Lipton, 1980). The left behind household members hire local labor for those works, which were performed by the household labor if the remittances monies were not available. This view of remittances stresses the negative aspects of migration and remittances and concludes that receipt of remittances reduces the labor supply of the left behind household members. This pessimistic aspect of remittances is identified in Nepalese economy as Sapkota pointed out the 'Dutch disease' effects of remittances (Sapkota, 2013). Due to high inflows of remittances, there is little pressure to improve macroeconomic environment leading to poor domestic investment climate. This eventually results in low job creation and hence increased migration (Tuladhar et al., 2014). Therefore, the circle of push migration and dependence in migration and resulting remittance is complete.

CHAPTER 3: THEORY ON LABOR FORCE PARTICIPATION, LABOR SUPPLY WITH MIGRATION AND REMITTANCE

3.1 Labor Supply with migration

In the literature of labor economics, usually the labor supply studies are made in two margins- participation in the labor market and the working hours' decisions who are working. Therefore, it is external margin deciding whether a person participates in the labor market versus internal margin deciding how much a worker will supply labor when the wage rate or income is changed. Meaning is that the labor supply elasticity has to consider both internal and external margin. The distinction between these two concepts depends on time- before or at the point of participating in the labor market (extensive margin) and after starting to work (intensive margin) .“Participation elasticities seem to be very large for certain subgroups of the population, typically people at the lower end of the earnings distribution. By contrast, hours- of work elasticities estimated conditional on working tend to be very close to zero across different demographic subgroups and earnings levels” (Kleven and Kreiner, 2006).

The decisions about the production of goods and services at home and about leisure are family decisions. A change in income of some family member will result in a changed consumption of leisure for the family as a whole. An increase in one individual's income may not result in a decrease in his hours of work but in those of other family members. Thus, the effect of increased income of an individual within a family may have substitution effects to other family members. The remaining family members will have a higher reservation wage rate if income level of a family member increases.

In short, international migration affects the labor supply decision of other family members in two channels. First, the effect depends on which tasks the migrant performed before departure. If the migrants are substitutes for non-migrants in HH production, migration would decrease the labor supply of non-migrants in the local labor market but if migrants are complements, their departure causes an increase in the labor supply of non-migrants in the local labor market. Second, when migration occurs, the non-migrants receive remittances, which is non-labor income for the members left behind. This increase in non- labor income

decreases their participation in local labor market (Rodriguez and Tiongson, 2001).

Researchers in this area stress the importance of the remittance channel for generating a positive income effect that would raise the reservation wage of the non-migrants, and thus potentially decrease labor force participation. The impact of international migration on spouses may come down to a question of short- and long- term effects. Of course, if the migrant is not successful in obtaining a regular job to generate remittances over and above his earnings in the home country, a spouse might be induced to remain in the labor market over the longer term. Regardless, the overall impact remains an empirical question to which researchers have turned their attention (Antman, 2013).

Remittances may reduce or increase work hours depending on the gender of the recipient, the location of the household, and the type of work (Amuedo-Dorantes and Pozo, 2006). Most studies present evidence of a negative effect of migration on labor supply of non-migrants. This relationship is robust across a wide range of settings. A study in Armenia finds a decrease in hours of work for the left behind household members who receive remittances from migrants abroad (Grigorian and Melkonyan, 2011). In Jamaica, a study shows that remittance income reduces labor market participation for non-migrants (Kim, 2007). Migrants reduce the labor participation and hours of work of non-migrants in the Philippines (Rodriguez and Tiongson, 2001). Remittances have a negative effect on labor force participation in Nicaragua (Funkhouser, 1992). In Mexico, remittances are accompanied by an overall drop in female labor supply resulting from reductions in informal sector and nonpaid work in the rural areas (Amuedo-Dorantes and Pozo, 2006). In the Nepalese case, male migration negatively affects the labor market participation of women left behind (Lokshin and Glinskaya, 2009).

3.2: Methodological Issues on migration and remittance studies

There are at least four methodological problems that confront any economic work on international remittances. These problems include: simultaneity, reverse causality, selection bias and omitted variable bias (Adams Jr, 2011).

Many of the decisions on international migration, remittances, labor supply and other related variables are made simultaneously (Adams Jr, 2011). The variables that cause international migration or remittances also cause or explain household patterns of consumption and production. So, it becomes difficult to determine whether migration is causing the outcome of interest or whether it is some other variables that are correlated with both migration and the outcome of interest.

Another problem is reverse causality wherein the observed outcome is actually causing the migration event, rather than the other way round (Antman, 2012). This could be the case in cross-sectional datasets where migration occurred before the start of the survey and thus researchers may be observing the circumstances which precipitated the migration, rather than the effects of migration on the family's circumstances. Longitudinal data where researchers can observe outcomes before and after the migration event takes place pose a possible solution to this problem but again are still vulnerable to the possibility that some unobserved time-varying shock is responsible both for the migration event and the outcome of interest (Antman, 2012, Antman, 2013).

Selection bias refers to the selectivity of migrant member of the household and remittances income. This selection problem happens in various stages: First, households select into migration; second, households choose whether to migrate en masse or send some subset of members abroad; third, some emigrants choose to return home and, fourth, emigrants decide when to return, creating a further selection problem (Bartram et al., 2014). When the migration is associated with transaction cost, only the households with access to financial resources are able to send migrants and these households, by receiving remittances, become more equipped with the resources. This makes the problem to compare migrant sending household with non-migrant sending households would not be valid.

Fourth, when households produce migrants or receive remittance on the basis of unobservable characteristics such as income shock or heterogeneous production shock within the household – then the problem of omitted variable bias arises. For example: if migration is costly, families who are better off socio-economically may be better able to afford migration for one of their members

and also pay for educational expenses of their children. Thus, a cross sectional comparison of households with migrant members and households without may pick up the effect of higher socio- economic status instead of the effect of the actual migration. While some researchers have used propensity score matching methods to address the endogeneity problem (Adams Jr, 2011), these approaches assume that selection into migration is based on observables, and thus, are still vulnerable to the omitted variable problem.

The problem of simultaneousness is taken for granted and this problem remains in this study by the assumption that household decides who will migrate, how long will that person remain in abroad, who will compensate the household activities that emigrant was doing before emigration took place etc simultaneously by the household decision maker as a livelihood strategy. Therefore, migration is a part of household livelihood strategy and the existence of the problem of simultaneity remains in this study.

Even if the other circumstances such as household economy, lack of local employment and income sources has caused migration to happen for the diversification in livelihood strategy, when migration takes place, there will be effects of that migration in other variables such as household income, employment of other household members left behind etc. As migration has already realized before the data collection, the problem of reverse causality is ruled out. Because it is the study of post- migration effects, not the causes for migration.

Moreover, the problem of selection bias is also ruled out in the same reasoning of household livelihood strategy adopted by the household. Selection bias is obvious if some of the working age people do not participate at all in the labor market, but the household makes the decision who will participate and who does not participate in the labor market. Moreover, self- selection bias occurs when some policy action determines whether they belong to control group or treatment group. As the migration and remittance decision is private decision made by the family, there is no policy action involved, which focuses a particular group to send abroad for a foreign employment.

Other studies have used some variant of fixed- effects estimators to net out any observed and unobserved variation that is common within families or to

individuals (Antman, 2012). These methods are only helpful, however, if the omitted variable is thought to be constant at the family or individual level, and not expected to vary over time. For example, if migration is again assumed to be costly, a family with an unexpected improvement in the socio-economic status would be better able to finance both migration and children's education or health investments. But if the improvement in socio-economic status were not observable to the researcher, he might falsely conclude that migration has caused the improved outcomes for children in the household, when in fact it should be attributed to the positive economic shock (Antman, 2012).

If migration is costly, only the better off families can send their household members abroad, which creates problem in identifying the effects on labor supply of the left behind members. Only the households with abundant financial resources can send their member in foreign employment and typically their left behind members do not supply so much labor as compared with those households who does not have adequate financial resources to afford migration. Therefore, the initial financial resources of the household determine migration itself. This creates selection error in migration and labor supply decisions.

Endogeneity appears in two conditions in this study. First, migration and labor supply in the household are simultaneously determined. Migration reduces the number of persons in the household who can work reducing the labor force within the household. Secondly, the households simultaneously decide about migration and domestic employment as an income diversification strategy.

This study employs the concept of impact evaluation on the neoclassical model of labor leisure choice to examine the role of remittances in labor supply responses in the study area. The neo-classical model isolates the factors that determine whether a particular person works and, if so, how many hours she chooses to work (Borjas, 2000). The assumption of the study is that the receipt of remittance by the households in the study area is regarded as a treatment and those households who falls on this group are known as treatment households. The counterparts who do not receive any remittances offer the basis for providing a comparative judgement with treatment households and these households are called control households. Evaluations of such type are viewed

as a state-of-the-art approach in order to achieve best evaluation in the study area.

In case of impact evaluation, the potential problem that may arise in survey studies is the possibility of confounders. The confounders are those variables that affect outcome variables in the absence of treatment and cause variations in those outcome variables, ie, the confounders are correlated with the interventional variable and may affect the outcomes. For example, the variables that affect the decision to migrate may have influence on the labor market participation decisions. It may affect the socio-economic status of the household members such as income, education, health etc. The confounders may result to omitted variable bias but the study adopts random sampling method, the problems caused by confounders are assumed to be eliminated.

The approach used in the report is straightforward. Households as a single decision making unit maximize their joint utility- $U(C,L)$ where C and L stand for consumption and leisure respectively. Hours worked can be defined as, $h = L_0 - H_0 - L$, where L_0 is the total amount of time and H_0 is the hours of non-paid household activities. The leisure hours are the residual hours after paid and non- paid work. It is assumed that a household desires to consume the greatest possible quantity of goods and leisure, so, the joint utility function increases with each of them. Mathematically, $\frac{\partial U}{\partial C} \geq 0$ and $\frac{\partial U}{\partial L} \geq 0$, the household maximizes utility subject to a budget constraint of their full income, determined by wage rates, non-labor income, transfers, taxes etc. The family's income derives from their activity as wage earners and from their non- labor activities. If the wage rate is W , the income from wages is Wh . The budget constraint of the household can be expressed as:

$$C \leq Wh + R \dots (1)$$

Meaning that consumption of the household cannot exceed their full income. The non- labor income such as remittances, rent from past savings, returns from wealth or returns from investment income etc are all included in R . Equation (1) can be written as

$$C \leq W (L_0 - H_0 - L) + R$$

$$\text{Or, } C + WL + WH_0 \leq WL_0 + R \dots (2)$$

Interpretation of equation (2) involves two parts; a. the individual's disposable income arises from labor and non-labor incomes; b. the wage is the price of the labor as well as the opportunity cost of leisure (Cahuc et al., 2014).

The household as a single decision making unit determines consumption and leisure decisions of each household members, ruling out the possible intra-household discrepancies. Therefore, the equations are expressed without subscripts. It is more important to maximize the joint satisfaction from consumption than to distribute the goods among the household members (MIT, 2016).

Under this specification, the reservation wage rate is defined as $w > \frac{U_L}{U_C}$ which shows that reservation wage depends only on the form of utility function (U)(MIT, 2016) at $w = \frac{U_L}{U_C}$, and on the value of non-labor income (R). It determines the conditions of participation in the labor market. When $w < \frac{U_L}{U_C}$, the person is not participating in the labor market at all. Under this formulation, the only parameter capable of changing the reservation wage is the non-labor income. This allows to conclude that, as long as both leisure and consumption are normal goods, an increase in non-wage income increases the reservation wage. This is the incentive or disincentive effect on the entry into the labor market (MIT, 2016).

The simplest empirical method to estimate labor supply response is to estimate the parameters of ad-hoc labor supply functions that does not require any constraints. Different aspects of labor supply (both participation and hours of work) are dealt with in a piecemeal manner. It is assumed that the error is randomly distributed and does not create problem on unobservable characteristics. In reality, these unobservable characteristics may result not only a loss of information about some aspects of labor supply (especially in the external margin) but also leads to biased estimates of the participation wage rate because a large number of observations have exactly zero hours of labor supply. Following the methodology of Heckman, (Heckman, 1974),

$$h_i = \alpha_0 + \alpha_1 W_i + \alpha_2 Z_i + \varepsilon_i \quad (3)$$

Where, h_i is the hours of work, W_i is the wage rate in the local area, Z_i includes non-labor income and the taste variables such as age, education, remittance received, family structures (having small children) etc. ε_i is the unobserved person specific factors towards tastes and preferences for work. The subscript is used for the individual household. Equation (3) is the structural labor supply equation.

Although family characteristics may not affect the potential market wages, they influence the decision to stay home by increasing or decreasing the reservation wages. The behaviors of men and women are known to differ with respect to forms of participation in family life and responsibilities for child care (Rodriguez and Tiongson, 2001). In a traditional society married women with small children participate less in paid employment (Rodriguez and Tiongson, 2001) but individuals participate more in paid labor market when market wages are enough higher than reservation wages.

The taste variables may have different consequences in the outcome of labor force participation. Bowen and Finegan (Bowen and Finegan, 2015) provided a detailed review of different forms of tastes and their effects on labor force participation which includes tastes for money work, tastes for market work, expected market earnings, expected non-market earnings and available family resources as the sources of differentials on labor force participation.

Wealth or non-labor income reduce labor participation as families demand more goods and leisure (leisure is also a normal good). Given the magnitude of international migrants' remittances (a major source of non-labor income for households with migrant), a positive income effect is expected which tends to reduce labor supply of non-migrants. This positive income effect is strongly visible when the families are tied closely. When the migration decision is a family decision, close ties can be expected which reduce the labor supply of non-migrants.

The wage equation is:

$$W_i = \beta_0 + \beta_1 X_i + \mu_i \quad (4)$$

Where X is productivity, human capital variables (age, education, years of experience etc) and demand for labor. μ_i is the unobserved wage-earning ability of the workers. Equation (4) is the structural wage equation.

The problem with both equations (3 and 4) is that sample includes only those with positive hours or the samples include only those with wage above their reservation wages. Therefore, these equations include only the internal margin excluding the external margin.

By substituting equation (4) into (3),

$$h_i = \alpha_0 + \alpha_1 W_i + \alpha_2 Z_i + \varepsilon_i$$

$$h_i = \alpha_0 + \alpha_1 [\beta_0 + \beta_1 X_i + \mu_i] + \alpha_2 Z_i + \varepsilon_i$$

$$h_i = [\alpha_0 + \alpha_1 \beta_0] + \alpha_1 \beta_1 X_i + \alpha_2 Z_i + [\varepsilon_i + \alpha_1 \mu_i]$$

$$h_i = \theta_0 + \theta_1 X_i + \theta_2 Z_i + \eta_i \quad (5)$$

Where, $\theta_0 = \alpha_0 + \alpha_1 \beta_0$; $\theta_1 = \alpha_1 \beta_1$; $\theta_2 = \alpha_2$; and $\eta_i = \varepsilon_i + \alpha_1 \mu_i$

It is plausible that taste for work and ability to work may be correlated to each other but for simplicity, it is assumed that η_i is normally distributed. With this assumption, equation (5) or reduced form hours equation defines that the dependent variable (h_i) captures not only wage but also non-labor income as well as taste and preference variables. All the variables are observed for both workers and non-workers. So, the parameters of the equation can be estimated consistently.

As ε_i is uncorrelated with Z_i and μ_i is uncorrelated with X_i , the reduced form error η_i is also uncorrelated with Z_i and X_i . Therefore, we can consistently estimate θ_1 and θ_2 (Wooldridge, 2010).

The labor force participation rate is equal to the ratio between the labor force (aged between 15 and 60 both employed and unemployed) and the total population (MIT, 2016). The international migrants are categorized as employed and included in the population. Size of the labor force (LF) is

$$LF = E + U$$

Labor force participation rate = $\frac{LF}{PoP}$, where E = number of employed persons, U = number of unemployed persons and PoP = size of population (Borjas, 2000). The labor force participation is the choice between work or not work. Mathematically, work iff:

$$h_i > 0, \text{ or, } \eta_i > -\theta_0 - \theta_1 X_i - \theta_2 Z_i \quad (6)$$

Wages are missing for non- workers which is the major problem in the empirical studies. The major problem in empirical studies is that what wages would have been had nonworking persons worked (MIT, 2016). For this, strong assumptions are necessary to be made. The neo-classical theory of labor supply states that a person's labor force participation decision is dependent upon a comparison of market wage the person can obtain and the reservation wage of that person. The reservation wage is related with the opportunity cost of that person's time in unpaid work, potential income as well as other factors that may affect the preference for paid work, relative to other time uses. So, labor supply function may be expressed as a function of wage rate, other earnings and preferences. While an increase in wage clearly increases the probability of labor force participation, the effect on the number of hours is not obvious since both income and substitution effect come into play.

The responsiveness of wages and non-labor income (remittances) to the hours worked and participation in labor force is very important as change in non-labor income affects both in the same time. The elasticity in the intensive margin is measured by the Marshallian elasticity of labor supply. Marshallian elasticity describes how hours of work within a period change with relation to the wage rate holding the full income available within the period as constant (defined as the value of consumption plus the value of leisure) (Attanasio et al., 2015). Elasticity of participation is $\frac{\partial \Pr(h>0)}{\partial W} \frac{W}{P}$ where P = participation.

The elasticity of participation is positive indicating that increase in wages leads to an increase in participation, but there is no income effect in this margin. Participation decisions generally manifest greater responsiveness to wage and income variation than do hours- of- work for workers (Heckman, 1993). The elasticity of labor force participation measures the responsiveness of hours worked with response to the change in the wage rate in the market. It measures

the response in the external margin, as the change in wage rate is the change in the reservation wage rate.

Migration of a household member is one of the available income diversification strategy adopted by the households. The objective of income diversification is the joint utility maximization of all the household members. As a household is a single decision making unit, migration, remittances and the labor supply of the left behind household members are simultaneously and jointly determined by the household decision. At such a condition, all these decision variables (migration, remittances and labor supply of left behind members) are systematically influenced by one and another.

The income effect, implies that an increase in non-labor income, holding the wage rate constant, reduces hours of work (Borjas, 2000). On the other hand, the substitution effect implies that an increase in the wage rate, holding real income constant, increases hours of work (Borjas, 2000). As the wage rises, a worker faces a larger opportunity set and the income effect increases the demand for leisure and decreases labor supply. As the wage rises, however, leisure becomes more expensive and the substitution effect generates incentives for that worker to switch away from the consumption of leisure and instead consume more goods; this shift frees up leisure hours and thus increases hours of work (Borjas, 2000).

To summarize the relation between hours of work and the wage rate, an increase in the wage rate increases hours of work if the substitution effect dominates the income effect; and, an increase in the wage rate decreases hours of work if the income effect dominates the substitution effect (Borjas, 2000).

If inputs in home production are complements, total effect of migration on market participation of the left behind would be ambiguous;- some would work more than before to pay the migration costs or for other reasons while others would work less enjoying more leisure. But if the migrant is substitute for left behind, which is more likely in subsistence economy (Rosenzweig, 1980) like Nepal, migration of a family member makes left behind's work at home more valuable, so, participation in wage- labor market reduces.

In the analysis, the subgroups are created in the remittance receiving households such as- labor force participation of males, labor force participation of females and the labor force participation of never migrated family members. The effect on labor force participation is evaluated with the control group which does not have migration history.

3.3: Empirical methodology

In order to understand the effects of migration in the labor supply response, the overall level of work activity is to be divided into the number of individuals in work and the intensity of work supplied by those in work. At the aggregate level, the former is typically measured by the number of individuals in paid employment and the latter by the average number of working hours (Blundell et al., 2013). The elasticity at the extensive margin has been found to be somewhat larger than the elasticity at the intensive margin (Blundell et al., 2013). The external margin is basically analyzed in the macro perspective in the whole economy by analyzing how much people are in work, how much of population are in the labor force while internal margin is analyzed in the micro perspective; how many hours a person supplies labor at the ongoing wages.

In order to analyze the labor supply response to migration and remittances, equation (4) is redefined as:

$$\text{variable of interest} = \beta_0 + \beta_1 W + \beta_2 M + \beta_3 X + \mu_i \quad (8)$$

Here, the variables of interest are the labor supply variables whereas M is the binary variable for migrant households and hence remittance recipients. The remittance receiving households are compared with the non-remittance receiving households in different situation with the help of the equation (8). For example, household labor supply for wage earning, household labor supply on non- wage activities, quantity of hired labor, agricultural production of the household etc. In case of hours worked, the equation becomes

$$h = \beta_0 + \beta_1 W + \beta_2 M + \beta_3 X + \mu_i \quad (9)$$

In case of household income, the equation becomes

$$Y = \beta_0 + \beta_1 W + \beta_2 M + \beta_3 X + \mu_i \quad (10)$$

Where Y is the household income. The empirical model of labor supply in the internal margin tries to estimate the elasticity of hours worked with respect to wage in the local labor market and non- income sources uses the log linear model of

$$\ln h = \alpha_1 \ln W + \alpha_2 R + \theta x + \varepsilon \quad (11)$$

Where W is wage in the local labor market, R is the remittance income which is binary variable and, x is the vector of individual characteristics or control variables used, θ is the parameters of x variables. The coefficient α_1 , the wage elasticity of hours worked, is the parameter to be estimated. ε is the random error term reflecting individual heterogeneity not observed in the model.

This elasticity equation includes only those who are already in the labor market excluding the aspect of participation in the labor market because for the non-participants ($h=0$) and the equation has the problem of specification errors. In other words, the equation is valid only for the wage rate above the reservation wage or to them who are already in the labor market.

The coefficient α_1 measures the impact of a wage increase on hours of work, holding non- labor income and other household characteristics constant. The sign of coefficient α_1 depends on the domination of income or substitution effect. α_1 is negative if income effect dominates and positive if substitution effect dominates (Borjas, 2000).

CHAPTER 4: DESCRIPTIVE ANALYSIS

4.1: Background of the study area

A survey entitled “Remittances in Nepal: Its impact on Labor Supply Responses” was conducted in 158 households in three village development committee (VDC)s of Tanahun district in June/July 2016 by the researcher by taking help of five local school teachers. The survey aimed to gather information on multiple dimensions of socio-economic aspects of the households of both remittance-recipient and non- remittance- recipient households. At least 50 households were randomly chosen in each VDCs. Information about the households were obtained by the respective VDC offices.

The sample size was set as 158 households from 3 VDCs in Tanahun district. The map of the research area is provided in appendix 2. The VDCs were chosen according to convenience for the researcher, but the households within the VDCs were randomly chosen.

Out of 158 households selected, about 65 percent households do not have any absent household member who is working abroad. Any member who is absent but working within the home country is not considered as migrants. If all the absentees are included as migrants, the analysis becomes vague and cannot distinguish between the internal and international migration. As the objective of the study is to analyze the impact of international migration to household choice variables, internal migrants should be either included as regular members or have to be analyzed their impact on the choice variables. So, for simplicity, the internally migrated members are also included as the regular members. The rest 35 percent households have at least one member working abroad. Out of the 61 migrants, they are from 58 households. Out of 58 households with migrants, 3 households have 2 migrants.

Table 1: Number of samples in the survey

VDC	Sample households	Number of migrants
Satiswara	53	22
Basantapur	50	20
Tanahunsur	55	19
Total	158	61

Data collection was held in 2016 summer by the researcher and his team. 5 local people who are high school teachers in the local area were appointed for the data collection purpose. The employees had little prior experience regarding primary data collection and they are from the same locality.

During the field survey, a pilot like survey was conducted so that the originally designed questionnaires does fit the requirements of the survey. After the first 20 households the sequence of questions were changed according to the need of the survey. The STATA statistical software was applied for processing the quantitative data.

The data are collected from the rural area in Mid- Nepal hills in three village development committees (VDCs) in Tanahun district. This region has the highest concentration of households with at least one member currently living outside with 40 per cent (CBS, 2009). Tanahun is the district of Nepal with the highest intensity of international migration in the hilly region. According to Department of Foreign Employment, 2.16 per cent of total migrants between 2008/09 and 2014/15 are from Tanahun (DoFE,2015), whereas share on total population is about 0.8 per cent (CBS,2012). This statistic is the indication that international migration and remittances have an impact on the local economy.

The villages in Tanahun district are joined with the rest of the country with a fair season road connecting to Dumre in the Prithvi Highway. Bus services are available from Dumre from which buses are available in the day time every day in the fair season. During the rainy season, people have to walk for about 3-5 hours to reach the all season road in Dumre which is one of the major highway station between Kathmandu and Pokhara. The distance to Kathmandu, capital of Nepal is about 140 km and Pokhara, the second largest city of Nepal, is about 60 km. Therefore, the area is not completely rural if we compare with other parts of Nepal but, if road connectivity is the factor determining rural versus urban area, this place is also rural area. The total population of the data collection area is about 20,000 with about 3500 households. Out of those 3500 households, 158 households are randomly selected so that at least 50 households are selected from each VDC. At least 50 households are selected from the each VDC, the rest households are selected randomly from the total households. About 75 percent of households are involved in agricultural activities. The agricultural land holding

per capita is very low accompanied by a low level of mechanization and modest use of purchased inputs.

4.2: Questionnaire

An English version of questionnaire used in the data collection is provided in the appendix 1.

The questionnaire was designed in such a way that it became possible to obtain as much information in the socio-economic aspects as possible and the migration and remittances histories of the households. Majority of the questions were structured along with some open- end questions, which provided flexibility in the responses from the household heads.

The entire questionnaire was divided into six sections that included household characteristics to wealth composition of the household, income sources to household head characteristics. Moreover, it included the migration and remittance history of the family included in almost all sections. Categorically the questionnaire includes: a) household characteristics including size of household, age pattern of the members, economic activities of each members etc; b) household head characteristics including age, education, occupation etc; c) income sources of the household such as agricultural output, labor income, other sources except remittances; d) household wealth position including owned-land size, household labor size, and total cultivated land; e) household expenditures including food and non-food items such as education of children, health services etc, and f) migrant related information such as number of migrants, age of migrants, number of years the migrants are abroad, annual remittance receipts by the household.

The economic activities of all economically active household members who are working within the economy are added to obtain the total labor supply of the household. The separate information is collected for the economically active and economically inactive household members because even the children and the elderly people who are inactive in economic sense are also helping other members in the household activities. For example, a child may help by fetching water or collecting fodder or the elderly helps with preparing meals or by monitoring the wage- workers. The working hours for the economically inactive

are approximated because they are not involved in the regular activities rather help to other members in need.

For the data collection process, agricultural activities are sub divided into various parts such as cereal and cash crops production, poultry and meat production, milk related production. The sub division can be utilized to classify the income source and the sustainability of the household incomes. In the rural setting, milk market is completely subsistence. So, in the data collected households all the households have maintained at least one cow or buffalo for milk production.

The information about the households and the population is obtained by the local VDC offices, which has collected information in 2015 after the earthquakes. As the data collected area is heavily affected by the devastating earthquake, the local offices have maintained the updated information about the households. All the households are assigned number and the households are selected with their respective numbers. Hence, the data collection is based completely on the random sampling method.

4.3: Destination of the migrants in the sample area

The destination of the migrants can be divided into four sub-groups according to the intensity of migration destinations. Nepal has a historical migration ties with India. Geographical proximity, language similarity, low cost of transportation, no legal restrictions and seasonality makes India an attractive migration destination. The other destinations are opened after the restoration of multiparty democracy and adoption of liberal policies in the early 1990s. The increasing oil price and development in the infrastructures in the oil rich Middle East countries such as UAE, Qatar, Saudi Arabia opened a new arena for hard working Nepalese migrants. In the recent days, the development activities in the East Asia specially Malaysia became a hot spot for the Nepalese migrants. Moreover, the other countries are categorized as the rest of the world. This includes the emigration to Europe, America and Australia which is rapidly growing among the educated young Nepalese. The survey area also has the persons in every major destination. The destination of the migrants is presented in table 2.

Table 2: Destination of the migrants

Destination	female	male	Total
Middle East	5	8	13
South Asia (India)	0	32	32
East Asia	3	7	10
Rest oftheworld	2	4	6
Total	10	51	61

Middle East includes the oil exporting countries like Qatar, UAE, Saudi Arabia etc. At present, the decreasing oil prices and resulted decreased economic activities made the demand for labor lower and the wages lower. Even though the migrants are in fixed wage and time contract, their income is variable due to the decreased overtime work. South Asia basically India is the traditional migration destination for rural Nepalese people because there is no need of work permit to work in India, the border is open and Nepal uses double currency in practice. Generally, the migration to India is seasonal but their remittance income is never reported in the official statistics. The workers go and come back without registering and they do not need to exchange the currency. Therefore, the government statistics excludes the remittances from India but in the rural areas a substantial percentage of people migrate to India. India is still a major destination because the cost of migration is very low and the workers does not have any language barriers. As the study represents the remittances receipts from India also, it can over-represent the remittances inflows within the economy. The people who migrated to East Asia specially migrated to Malaysia, Singapore and South Korea.

The international migration from Nepal is, in general, a temporary phenomenon. A typical migrant migrating to Middle East and East Asia is a bounded labor with pre-contracted work. So, the family members behind in the origin has nearly perfect information regarding the nature of work, hours to work, living conditions, overtime payments and hence they generally know the exact amount of income the migrant makes and the remittance income they receive.

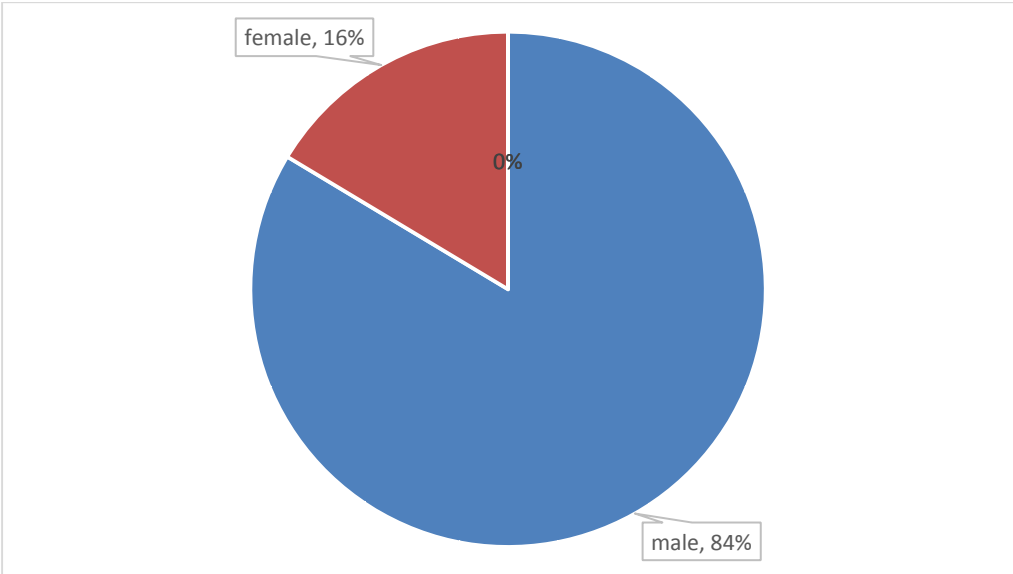
The contract is made primarily for 2 years in the Middle East and for 3 years in the East Asia. The migrant has the option to accept the same job for next period

if they are satisfied with the job but they cannot change the job when they are abroad for that particular contracted period. In the surveyed households, 21 households have the migrant for more than one period. Among these emigrants, 9 persons were working in the same company for the second or third time period. The others have changed their destinations after coming back to the home country.

4.4: Gender and skill distribution of migrants

The migration in Nepal and in the survey area is male dominated. Out of the 61 absentees, 51 were male. Therefore, female participation in the international migration is very low. In the percentage terms, female participation in international migration and foreign employment is about 16 percent.

Figure 2: Gender distribution of migrants



As the majority are contract laborers abroad, they usually start working from the first week of their departure. There is no frictional unemployment abroad.

The household heads, informant in the survey, had good information regarding the type of job the migrants are doing except in the rest of the world which includes Europe, America and Australia. The absentees who are in the rest of the world are migrated for other grounds than work for example student or permanent settler. The migrants do not share the labor market situations with

the left behind household members. Therefore, there is no information about the skill of these migrants who are migrated to rest of the world. The paradox in the study area is that the households who have migrants in the rest of the world received the least remittances. Even if those households received, it is for emergencies. On the other hand, the household head has good information regarding skills and work environment of the migrants in other major destinations.

Table 3: Skills of the migrants

Destination	skilled	unskilled	total
Middle East	3	10	13
South Asia (India)	7	25	32
East Asia	1	9	10
Rest oftheworld	N/A	N/A	6
Total	11	44	

The unskilled migrants work especially in construction, agriculture, security and personal assistance activities. The majority of migrants from the survey area are unskilled. The national average of unskilled labor in total emigrants is about 78 percent (MoF, 2016). In the survey area, even excluding migrants to rest of the world, about 80 percent of migrants are unskilled. The individuals in the Indian Army are categorized under skilled migrants. The wage rate of the unskilled laborers is always lower than the skilled. As the migrants earn less, so are the amount of remittances received.

4.5: Local economic activities

Agriculture and other seasonal works dominate the local economic activities. The land and agriculture market is unique in the survey area. The households who own large land size does not involve themselves in agricultural activities. Agricultural market is characterized by sharecropping instead of fixed-rent. The tenancy is not permanent but renewed every year. The tenants cultivate the land until they receive the job opportunity abroad. Although there is scarcity of labor force, the wage rate is not upward adjusted as suggested by the economic theory; rather the sharecropping pattern is changed. The share in the sharecropping has changed in the recent years. 30 years before, the share

cropping percentage was 2/3 to the landlord and 1/3 to the tenant. Now both tenant and landlord receive equal share of paddy production. If the tenant produces any other crops except paddy, the whole output belongs to the tenant. This situation shows that the agricultural sector is facing a shortage of labor force and the stagnant productivity has exacerbated the problem.

One explanation provided in the informal talk with the local people is that the agricultural productivity is low. If the wage rate is increased from the level that is prevailing in that area, the landlords will prefer to sell the agricultural land. Therefore, when asked what you would do if the wage rate increases by Rs100 per day per worker, almost everybody suggested that they would probably leave the agricultural activities. Therefore, the problem is not only lower local wages for the wage earners but also the lower productivity and lower returns from agriculture for the property-owners. The productivity enhancing government policies are either ineffective or unavailable. The wage rate is not flexible to seasons.

4.6: International migration and internal migration

Interesting thing realized during the data collection process is that the immediate household members of the skilled migrants have migrated from the rural areas to the urban areas. This condition increases the complexities in the migration and remittances studies. The major reasons for this internal migration due to international migration of a household member are numerous including better quality life in the cities, education of children, better health facilities etc. Therefore, international migration breeds internal migration in the rural area.

The data are collected with those households whose remittance receipt are either negligible or the capacity to send remittances are low. Therefore, the potential problem of the study has become the potentiality of choosing the worst-case scenario of remittances. This is because of: a) The migrants with highest potentiality of sending remittances (those who are migrated to the rest of the world) do not send remittances at all; b) the migrants with skill are already migrated to the urban areas, so, those households are completely absent in the area. Resulting the effects of migration and remittances realized in the urban cities instead of the rural areas. This problem shows that the data collection only in the rural area may underreport the remittances income. The recommendation

for further research is to include the information mix from all areas- rural areas, urban areas and with the migrants themselves in their destinations.

CHAPTER 5: Results and Discussion

This section reports the comparative analysis of the various socio-economic and labor market participation of the treatment and control households. First, the comparisons are made on tabular presentation. All the information are produced by using STATA program.

5.1: Household Characteristics

5.1.1: Household composition

The survey data showed that the average family size of the treatment and control groups are 5.19 and 5.36 respectively. Households were from all types of ethnicity and there is no difference created by the ethnicity in the decision to migrate and remittance decisions.

The household size in the treatment group does not include the absent household member who is migrated abroad. In the limitation of the study, the households who have internal migration are overrepresented because their household size is higher than they actually are in the survey area. The migrant is included in the labor force of the household but s/he is excluded in the household size in the treatment group. The reason is that the emigrant is involved in income generation of the household but excluded in the household size because s/he is absent from the household in the time of data collection.

Table 4: Household composition in the survey area

	households without migrants		households with migrants	
	mean	s.d*.	mean	s.d.
No of observations	100		58	
Dependents	2.78	0.15	2.94	0.33
Adults	2.37	0.19	2.40	0.14
total	5.36	0.17	5.19	0.21

*s.d. means standard deviation

The dependents and adults are defined from the age of the household members. The number of dependents include both number of children as well as the number of elderly in the household. The adults are of age between 16 and 60.

5.1.2: Household Head Characteristics

The household head, who decides in the overall household activities, is economically active. If the household comprises three generations with first generation as elderly and second generation as economically active with the third generation being children below age 16, the household head is a member in the second generation, irrespective of gender.

Table 5: Gender distribution of household head

	households with-out migrants	households with migrant
Male	89	25
Female	8	33
Total	97	58

In the survey area, households without migrants are mostly male headed while the households with migrants are mostly female headed. When the husband is present in the household, he is generally the decision maker in the household matters. When the male member is absent due to international migration, the females play his roles. Therefore, the households with migrant are mostly female headed which reflects the male dominated foreign migration and patriarchal society in Nepal.

Average age of the household head are 42.32 and 38.42 respectively for without migrants and with migrant, but there is larger deviation in the age in the households with migrants.

Table 6: Age and Education of household head

	households without migrants		households with migrants	
	mean	s.d.	mean	s.d.
Age	42.32	14.54	38.42	18.37
Education	14.40	2.4	11.74	3.67

The education, in table 6, is the years spent in the formal education institutions. The education for household heads in households without migrants is higher as compared with their counterparts. This shows that the household heads with lower education of the household head generate more migrants.

5.2: Income sources of the households

More than one-third of household income arises in the form of remittances for those households who have migrant member. This shows that the households who receive remittances depend on the remittance income for their livelihood. Moreover, if the remittance income is excluded, the total income of the households without migrant is higher. This result should be explained with caution because if the migrant has worked within the home country, his/her contribution in household production may have increased their household income. That is, the opportunity cost of the decreased household member on a temporary basis cannot be measured even in the surveys. The potential income loss at home is always unreported as the person is not active in the local labor market.

Table 7: Household incomes (in ,000 NRS)

	households without migrants		household with migrants	
	mean	s.d.	mean	s.d.
No of observations	100		58	
Wage income	20.44	1.04	19.29	1.23
Agricultural income	23.49	5.86	20.73	6.64
Livestock income	35.61	7.13	24.91	4.42
Savings	333.75	91.09	309.12	64.63
Remittances	0	0	72.72	11.58
Other incomes	72.49	12.08	76.32	14.30
Total incomes	152.06	12.89	213.97	17.37
savings in last year	39.33	11.1	97.8	16.92
Incomes without remittances	152.06	12.89	141.25	7.23

The agricultural income and income from livestock is reported as the household head calculated their annual turnover.

In the survey area, wage rate is on the daily basis instead of hour. The working day consists of seven hours. There is widespread non-wage labor practice, in which labor is exchanged for labor instead of money. The wage income includes both paid and exchanged labor hours. The wage income is measured by multiplying the days worked in the last month in the labor market, assuming them as average for the whole year.

The identification problem in wage arises from the gender wage differentials between male and female workers. The ongoing rural wage rate is Rs. 600 and Rs.400 per day for male and female workers respectively. Therefore, the total wage income is calculated according to the wage rate and the total hours/days worked by each persons.

From the table 7, it is obvious that the households with migrant saved more in the last year, but the accumulated saving is higher for the households without migrants. The households with migrants may have less accumulated saving due to the cost of migration incurred in the migration process.

The temporary migrated are migrated for 2.61 years in average with the maximum of 8 years. The permanently migrated are excluded in measuring the time of migration because these permanently migrated will never be a part of the household in the origin in the near future also. Moreover, if household member is permanently migrated, only the received remittances are included excluding when s/he is migrated. The behaviors of temporary and permanent migrants are different towards the origin because the attachment of permanently migrated to their origin decreases over time (Dustmann and Mestres, 2010).

5.3: Household expenditures

Household expenditures are classified into food and non-food expenditures. Non-food expenditures are further classified into expenditures on education of children (if any), health related expenditures and other expenditures. Even though the size of households with migrants is marginally less than that of the non-migrant households, the former spend marginally more in the food items in monetary terms but less in the percentage terms.

Table 8: Household expenditures (in,000 NRS)

	without migrants		with migrants	
	mean	s.d.	mean	s.d.
No of observations	100		58	
Food items	21.84	1.72	22.36	2.25
Non- food items				
Expenditure on education	12.29	1.53	15.45	2.21
Expenditure on health	13.23	1.56	16.36	2.73
Expenditure on other non-food	25.35	3.11	22.86	2.72
Food items as percentage of total	29.16		28.58	
Total expenditures	72.73	47.57	77.05	54.06
Savings in last year	39.33	11.1	97.82	16.92

The expenditures on food items include both purchased in the local market as well as self- produced. The self- production is the market value of the produced quantity, and total expenditures are obtained by adding market value of both self-produced and purchased quantities.

Many previous studies have found that remittances have a positive effect on the expenditure on non- food items such as education of the children or the left behind household members receive better health facilities (Vogel and Korinek, 2012, Ratha et al., 2016). In this study area, the households with migrants spend marginally more on education of children and health facilities but marginally less on other non- food items. These annual household expenditures are not systematically different from receiving or not receiving remittances.

5.4: Labor force participation in the survey area

For the labor force participation in the survey area, the per capita hours of work is calculated in the both control and the treatment groups. Table 9 shows the labor force participation of different household members in different types of work. All the adults are involved in both paid and non- paid work in the local labor market. The non-wage labor exchange in this rural area is adjusted in the paid work because the labor is not paid in cash but paid back in labor itself. Non-paid work is the necessary household activities such as fetching water, collecting fodder for livestock, cooking food, etc. On the average, the working hours are

evenly distributed among the economically active members for both paid and non- paid work.

Table 9: Hours worked by the household members

	without migrants		with migrants	
	mean	s. d.	mean	s.d.
Household head paid work	4.64	0.091	4.52	0.16
Other members paid work	4.89	0.46	4.47	0.54
Non paid work per day	3.37	0.16	3.4	0.23

Hours worked differs from month to month depending upon the agricultural cycle but still can be generalized. It is assumed that if persons in one group do not participate in the local labor market, they will continue their behavior in other months as well.

5.5: Effects of remittances in different variables

As remittance is binary variable, it shows the difference between the control and treatment groups.

5.5.1: Impacts of remittances on income

The model in equation (10) is estimated in order to find the impact in the household income. The independent variables are the remittance income, local wage rate, household size, number of economically active members in the household, and other sources of income. Table 10 gives the results. The households who receive remittances has a positive impact on the household income, but effect is not significant.

Table 10: Impact of remittances on domestic income

remittances	household size	no. of dependents	agriculture income	livestock	Other income	saving	wage rate	constant	R ²
.07 (.11)**	.039 (.13)	.27 (.19)	-.038 (.35)	.021 (.036)	.008 (.005)	.34* (.07)	.01 (.11)	5.59* (2.04)	.82

*p-value less than 0.05 (statistically significant)

** The values in the parenthesis are the standard error.

The households with migrants have higher average income as compared with households without migrants. Higher savings from the past periods brings about higher income at present time. The other variables do not make the significant effect on the household income.

5.5.2: Impacts of remittances on expenditure

The household expenditure depends positively on remittance income, savings, household size, local wage rate and the number of dependents in the household whereas total household income has a negative impact. However, only household size and the past savings significantly affect household expenditure, see table 11.

Table 11 : Impact of remittances on household expenditure

remittance	rural wage	household size	no of dependents	Household income	saving	constant	R ²
.058 (.05)	.02 (.07)	.73* (.09)	.2 (.09)	-1.07 (5.4)	.0015* (.0002)	11.01 (.21)	.32

*p value<0.05

In short, remittance income does not systematically affect both household income and household expenditure. Therefore, it can be said that remittance income alone cannot explain the differences in the household expenditure between the remittance receiving and non-remittance households.

5.5.3: Impacts of remittances on labor market variables

Various paired t- tests are performed to identify the mean difference between the remittance receiving and non- remittance-receiving households on hours of work in paid work and non- paid working hours for both household head and other economically active household members, but no variables differ significantly between the control and treatment groups (not shown in table).

Equation 11 is plotted for the labor market variables against the independent variables. The first column represents the dependent variables whereas the other columns are for independent variables. In this model, variables except remittance are log transformed. Coefficients, except remittance, represent partial elasticity. Partial elasticity is the percent change in the dependent variable while independent variable increases by one percent, holding other

variables constant. As remittance income is a categorical variable, it shows that a movement from 0 (non-remittance receiving) to 1 (remittance receiving) produces a $(100 * \beta)$ percent change in the dependent variable (Wooldridge, 2010).

Table 12 presents four dependent variables namely- paid work by the household head, paid work by other members of the household, non-paid work by the household and non-paid work for other members of the household.

The paid work by household head is positively correlated with local wage rate, household income, household expenditure and household size. Among them, local wage rate, household income and household size are statistically significant. When the local wage rate increases, the household head significantly increases the hours of work in the labor market.

When the household size increases, the head should have to supply more hours on the labor market. On the other hand, higher the number of dependents in the household, lower will be the work by the household head. Remittance income shows that as the household receives remittance income, it brings about 9.8 percent decrease in the paid work but this value is not statistically significant.

As the coefficient of remittance income, a major source of non-labor income, is negative, the increase in non-labor income increases the leisure of the household members. The coefficient for the local wage rate is positive indicating the dominance of substitution effect. Therefore, the labor supply curve is upward sloping. The hours of work are less responsive to the changes in the local wage rate as the coefficient is about 0.2. In other words, there is relatively little change in hours of work for a change in the local wage rate. The labor supply is inelastic in the local labor market.

Table 12: Impact of remittances on labor market variables

	remittance income	local wage rate	household income	household expenditure	number of dependents in the hh	household size	R ²
Paid work by head	-0.098 (0.094)	0.19 (0.08) *	0.074 (0.035)*	0.11 (0.10)	-0.71 (0.089)*	1.25 (0.14)*	0.51
Paid work by other members	-0.13 (0.12)	0.06 (0.049)	0.068 (0.049)	-0.16 (0.15)	-0.95 (0.13)*	1.87 (0.24)*	0.52
Non-paid work by head	0.24 (0.11)*	-0.027 (0.045)	-0.024 (0.056)	-0.12 (0.14)	-0.015 (0.28)	-0.034 (0.34)	0.14
Non-paid work by other members	-0.11 (0.16)	0.037 (0.065)	0.044 (0.065)	0.18 (0.21)	0.36 (0.16)*	0.086 (0.26)	0.09

*p<0.05 (statistically significant at 5 percent level)

The paid work by other household members have the same direction as of with household head except for household expenditure. The effects of local wage rate and household income turn to be insignificant. This equation shows that other household members work less when the household expenditure increases, but the value is not significant. The variables are inelastic with the paid work by other household members. In case of remittances, if a household receives remittances, it is estimated that the paid work of the other household members decreases by 13 percent.

For non- paid work by the household head, remittance income has a positive and significant effect. If the non- remittance receiving household starts to receive remittance, it is supposed that the household head would increase non-paid work by 24 percent. As the household receives remittances, the non-paid working hours will increase considerably. They will substitute paid work by non-paid work if they start to receive remittances. The remaining variables does not have a considerable effects on non-paid work by the household heads.

For the non- paid work by the other members except household head, only number of dependents in the household is significant. If the non- paid work behavior is analyzed for the household head and others in the household, the direction of relation is opposite. For the household head, statistically significant variable is remittance income only. For the other members, if they receive remittance income, this causes a decrease in non- paid work. However, for the other members in the household, the number of dependents in the household has a positive and significant effect.

In the rural area, leisure is not the sole alternative to wage labor. Time devoted to household tasks such as caring dependents, fetching water, caring livestock, preparing food etc are not unavoidable. Therefore, a household member chooses among work on paid labor, unpaid labor (non-paid working hours) and leisure.

5.6: Labor force participation

The questionnaire has included the question for non- participants in the reservation wage rate but all the persons in the survey area are involved in the local labor market either in paid work or in unpaid household work.

The reason for the participation of all persons in the local labor market may be the inclusion of non-wage labor participation. In the rural areas, it is a common practice of labor exchange in which local wage is not defined explicitly. Moreover, the labor is split into paid and non-paid work. All the persons are involved at least in the non-paid household work. The household decides who will work in paid work and who will do the non-paid work in the household. As the household decides and allocates all the members in the household work, it is difficult to classify locally employed and unemployed persons.

In the process of interview, all the household heads classify the reasons for international migration as lower local wage rate, unavailability of domestic employment opportunities, receipt of money at bulk, social stigma on being local wage earner, but they do not have a clear idea on what wage rate would the migrants participate in the local wage market. The reservation wage for the non-participants is unavailable in the survey area.

CHAPTER 6: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

6.1: CONCLUSIONS

The study tries to study the effects of migration and resulting remittances on the labor supply of the household members in the origin. The conclusion from the study is that the households who send one of their member abroad for work depend on the remittances income. Only the income of the household who sends their member abroad is statistically significant, while other variables are not influenced by the remittance and migration. So, migration and remittances helps to diversify the source of income to the households who sends their household member abroad for work related activities. The households who send their member abroad depend on the remittance income for their livelihood. But there is no systematic difference in the expenditure pattern among the remittance receiving and non- remittance receiving households.

The households who receive remittances due to migration of their household member, these households depend on the remittance income as the major source of income while other variables are not significantly affected by this migration process. Therefore, the conclusion is that remittance is the source of livelihood for them who receive them but it does not create any systematic effect on the other variables in the study area.

At present, the households who does not have migrated household member have a higher accumulated saving but the current saving for the households with migrants is higher. The remittance receivers receive the income in bulk from abroad when they receive. This makes them able to save some money out of their remittances. In the long- run, it can be generalized that the disparity between migrant sending and non-migrant sending households will cancel out. Moreover, the migrants are produced from those households whose accumulated savings are low. In other words, the poor in the society migrate and the remittance, that migration generates, helps to equalize the income and saving in the society in the long run.

International remittances have increased the income of the household and they become able to live in the urban areas where they can find more facilities for

example better education for the children, better health facilities etc. The international migration has fueled the internal migration in Nepal from the rural to the urban areas. This reduces the impact of remittances in the rural labor market as the household members who receive remittances not only reduce their hours of paid work but also are absent from the local labor market. One of the explanation for the negligible effects on labor market variables may be the withdrawal of labor supply of the left behind household members in the rural area.

With the remittance income, participation in paid work for both household head and other members decreases whereas the non- paid working hours for the household head increases. The number of dependents has negative effects on paid jobs but has positive effect on non- paid work for the other members of the household. However, the local wage rate has a positive and significant effect on paid working hours of household head but insignificant for other members.

In the case of reservation wage and labor supply in the extensive margin, the data base is unsuitable. The reasons for this unsuitability can be outlined as; a. Every person in the society are involved in the local economic activities; b. The wage rate does not reflect the work or not- work decision in the rural area; c. The reservation wage of the migrants is not measurable for the non-present household members; and d. The household head decides who will be assigned for what kind of work. Moreover, for some busy days, the dependents also help other members in the easy household work. As a single decision making unit, the household members help to each other. Therefore, the choice between work and not-work is irrelevant in the survey area.

The conclusion of the study can be summarized as: First, due to migration of a household member, the left behind household members reallocate their working hours. Secondly, remittance income does not affect the domestic income sources. Thirdly, remittance income does not affect the expenditure patterns of the left behind household members in remittance receiving and non-remittance receiving households. Fourthly, to participate or not in the labor force is not relevant in the study area as all the economically active persons are involved in the economic activities in one or another way. Fifthly, for the work by the remaining household members, receiving remittances reduces paid work

by the left behind (for both household head and other members) whereas non-paid work by the household head increases and non- paid work by the other members decreases.

The labor supply elasticity in the intensive margin is about 0.2 for the paid work by the household head and 0.06 for the other members. The elasticity of labor supply is negative for the non- paid work for the household head (0.02) and positive for the other members (0.03). Among these elasticities, only the paid work of the household head is significant. The other elasticities are not significant. The conclusion is that the work of the left behind members is irresponsive to the changes in the change in the local wage rate. Moreover, the report supports the traditional economic theory as the receipt of remittance income increases the leisure of the remaining household members and the labor supply curve is upward sloping.

6.2: LIMITATIONS

The thesis is based on primary data collected in a rural area of Nepal. The study is data and location sensitive to make useful for external validation.

The definition of household in the study makes overrepresentation of the household size which has internally migrated household member. For example, if a household member is migrated abroad, the migrated is not included in the household but the internally migrated are included in the household. The internally migrated does not participate in the local labor market in the full time basis but that individual is included in the household size. Therefore, the household size of the internally migrated is overrepresented as compared to those households which has migrant abroad. The internally migrated participate temporarily in the local labor market whenever necessary or whenever s/he is present in the household. Therefore, it is difficult to measure the contribution of the internally migrated person in the household variables such as production, consumption or labor supply.

The major limitation of the study is that the data collected is not suitable for the analysis of labor supply responses in the external margin. As all the persons in the location are involved in economic activities, the entry or exit from the labor market is irresponsive to wage fluctuations in the local labor market. Non- paid

works and the social practice of labor exchange are equally important for the labor force participation. The recommendation to overcome this problem is to use a data mix from urban and rural areas. In the rural areas, the external margin is useless due to social structure of Nepal where labor exchange is a widespread practice.

The survey is conducted in the rural area. There is high possibility that households who receive remittances are absent in the rural area. This problem is realized in two- fold situations. Firstly, the immediate household members follow the migrant abroad. This problem is more acute if the migrant is migrated to the rest of the world (in the developed countries). Secondly, the left behind household members migrate domestically to the urban areas for better education, health and other economic and social services. The households who receive the larger amount of money in terms of remittances, they tend to migrate internally. Therefore, only the households who receive less amount of money remain in the rural area. In this sense, the analysis depends on the collection of data from the worse-off households. In short, the actual effects of remittances on household variables are underreported.

The report has included the labor exchange as the wage labor. The method used on this study has made the problem to address the distinction between these two concepts. In the rural areas, the labor exchange is so popular that the inclusion of labor exchange with wage labor creates an over- representation of the people in the wage labor participation.

6.3 RECOMMENDATIONS

The study is based on a survey conducted in a rural area. The potential problem of the study based only on rural area is of representativeness as the migrant households who receive larger amount of remittance income tend to migrate to urban areas or the immediate household members follow the migrant abroad. The households who receive the least amount of remittances may have the least impact on the household variables. In order to overcome the problem, it is recommended to have a data mix from both rural and urban areas.

The study has become less useful to study the labor supply responsiveness in the external margin where the decision to participate on wage earning labor is

decided. This is because of the social and cultural values, norms and practices in the rural Nepal. The main reason for this is the culture where homogenous population live and constitute a society. The heterogeneity of society with heterogeneous values and norms may be useful to employ the methods applied in this report. The data from the urban areas may be useful in this regard, as the population is more heterogeneous and almost all activities are monetized.

One of the major limitation in the study is to include labor exchange with wage labor. Therefore, all the economically active people have been engaged in the local labor market. So, the recommendation to further research is to split the wage labor with labor exchange.

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APPENDIX 1: Questionnaire Sample

Household No: Interviewer:

Household head Name:

Date of Interview:

A. Household Characteristics

1. Information of Household members....

Serial No	Relation to HHH	Sex	Age	Occupation	ethnicity
1					
2					
3					
4					

2. Did any member of family live outside home country for more than 1 month?

Yes...

No.....

3. If yes

Serial No	Name	Relation to HHH	Sex	Age	Marital status	Education level	destination	Period
1								
2								
3								

3. Household head information

Name	Age	Sex	Occupation	Ethnicity

B. Migration and labor supply

1. Type of migration

Permanent migration..... Temporary migration.....

2. If temporary migration, for how many years? (Specify?)....

3. If your household has a migrant, what was the emigrant working before the emigration?

a. Working as a local wage earner.....

b. Working only in the non- paid work.....

c. Not working at all.....

4. How do you compensate his/her working after the emigration?

Give the reasons.....

5. What are the reasons for migration?
 - a.....
 - b.....
 - c.....
6. Have you any member of the family who migrated few years ago, came back? Yes..... No.....
If yes, why?.....
7. After returning back, does s/he has migrated again? Yes... No...
8. If yes, why?
.....
9. What are the negative effects when a person migrates from the family? Specify effects...
 - a).....
 - b)....
 - c).....
10. How does workload in household change when the person moved out for example: preparing food, feeding the cattle and agricultural work?
 - a) The household members
 - b) Hired labor
11. If the household member, who gets the higher workload?
 - a) spouse
 - b) children
 - c) parents
12. If somebody gets higher workload, please specify in hours per week.....
13. If children get higher workload, does this affects.....
 - a) School attendance? Yes... No....
 - b) Time spent on homework? Yes... No
 - c) Drop out from school? Yes.... No....
14. Who gets the lower workload?.....
15. After the move out of the family member, does there any change in consumption per person?
Increased.... Constant.... Decreased.....
16. After emigration, does there any change in work participation?
Yes..... No.....
17. If yes,
 - a) Have the spouse started to work as wage earner? Yes.... No.....

- b) Have any new member started to work as wage worker? Yes..
No....
18. If yes, please specify the hours per week?.....
 19. If no, please specify the reason.....
 - a. lower wage.....
 - b. family reasons and so cannot work at all.....
 - c. others (specify).....
 20. If lower wage is the reason for non- participation, at what wage would you be ready to work in wage earning activities? (Specify the wage rate per hour/day.....)
 21. What was the amount of per week work before the emigration has happened for each household members?
 - a.
 - b.
 - c.
 22. To the wage earner, have the emigration made change in working hours?
Yes..... No.....
 23. If yes, how the working hours are changed?
Increased..... Constant Decreased.....
 24. If changed, by how much, can you quantify in hours per week?
Increased by Decreased by.....
 25. Do you have practice of non-wage labor exchange?
Yes..... No.....
 26. If yes, how many days
 27. Do you have any household member who wants to migrate abroad currently?

If yes, Information about the prospective migrant

Serial No	Relation to HHH	Age	Marital status	Sex	Education	Prospective destination
1						
2						
3						

C. Household Consumption Expenditure (in current price)

1. Food Items

	Self- production	bought	quantity	expenditure
Rice				
Wheat				
Maize				
Millet				
Potato				
vegetables				
Meat/ egg				
milk				
others				

For others specify the goods and their quantities.....

2. Non- food items

Items	Medicine	Clothing	Education*	Alcohol**	Fuel	Cosmetics	others
Self production							
Bought							
Total quantity							
Frequency of purchase							
Total expenditures							

*Education includes stationary expenditures as well

**Alcohol includes expenditures on alcohol, tobacco and cigarettes.

For others, specify the goods, their quantities, and frequency and total expenditures

3. Assets/wealth position of the household

Form	land	Livestock	Business	Gold/jewelries	Others
Quantity					
Value of the asset					
Change in the quantity in last 2 years					

4. If there is increase in quantity of asset holdings, why?
5. If there is decrease in quantity of asset holding, why?
6. If there is change in the asset holding in the last 12 months, please quantify the amount.....
7. Is there any negative effect of decrease in that particular asset holding?

8. What are the reasons for this particular set of assets, for example, why are you holding livestock or land or gold? Specify.....

D. Sources of Income

Sources	Agriculture*	Livestock**	Credit	Remittance	Business***	Rural wage	others
Current year							
Previous year							
Change in income							

*Agriculture related includes products sale as well as land sale.

**Livestock related includes products sale as well as sale of livestock.

***Business includes service income as well.

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

E. Use of remittance income

1. 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 assets Yes.... No.....
- g. If yes (specify).....
- g. Hiring labor Yes..... No.....
- h. Saving for future Yes..... No.....
- i. Small business Yes..... No.....
- j. Purchase of commercial land Yes..... No.....
- k. Other purposes (specify).....

2. Do you think that migration of your family member is adding in your household income?
Yes... No...

3. Are there any problems in your household because of the migration of your household member?
- a. Decrease in agricultural production
 - b. Agricultural productivity decline

- c. Conflict within family members
- d. Others (specify)
- a..... b..... c..... or d.....
- 4. How often do you receive remittances?
Monthly.... Quarterly.... Yearly.... Not specified
- 5. How do you receive remitted money?
a. Banks....
b. Remit companies....
c. Hundi...
d. when the immigrant comes back....
e. Others.....
a..... b..... c..... d..... e.....
- 6. Which method of sending remittances is most suitable for you?
a..... b..... c..... d..... e.....
- 7. Why do you prefer the particular way of sending remittances? specify

Thank you for your kind cooperation.

