CHAPTER ONE
INTRODUCTION

1.1 Introduction

Globalization is liberal economic system in which there is free flow of capital, technology, labor, raw materials, information and transportation. Distribution and marketing are integrated or interdependent on global scale. International labor migration has been highly increasing at present. In 2010, out of the total population of the world, 215.8 million (or 3.2%) were immigrants. South-South migration is nearly as large as South-North migration. Developing countries are main labor migration countries. In 2010 stock of emigrant people in developing nations was 171.6 (3.0% of total population of developing nations). Similarly, in South Asia stock of immigrant is 26.7 million, which is 1.6 percent of total population of developing nations. In SAARC region top five immigration countries are India, Pakistan, Bangladesh, Nepal and Sri Lanka (Ratha et al, 2011). Although the main outcome of foreign migration is remittance, there are various pros and cons of foreign migration.

In a general term, remittance is money transferred by foreign workers or remitters from host countries to their home countries to support their families. Although remitters sent their earning in term of kind and cash, the term remittance is generally limited to denote only monetary and cash transfers from host countries to home countries by migrant workers. According to the IMF Balance of Payment Manual 5 (BOPM5), total remittance is constructed of the sum of three items 1) “Workers’ Remittance,” 2) “Compensation of Employees,” and 3) “Migrant Transfers.” The definition of remittance given by IMF has been given in Annex A.

Although the essence of foreign saving was discussed in classical era as well, the comprehensive study about impact or role of remittance upon national economy, especially in underdeveloped economies, is the emergent phenomenon in the present world. The macro economic effect of remittance enjoys a strong theoretical tradition dating back to the time of

Adam Smith, David Ricardo and the Labor Theory of Value and Comparative Advantage (Pant, 2006).

Nepalese people started foreign employment by traveling to Lahore in early 19th century joining the Sikh ruler Ranjit Singh. Foreign migration started from Sugauly Treaty of 1814 A.D. and remittance has shown its presence in Nepalese economy since it started to receive remittance formally by exporting brave Nepalese Soldiers known as 'Gurkhas' to Britain. However, remittance has become one of the major components of GDP of Nepal since 1990s. In the fiscal year 2009/10 remittance reached to NRs. 231 billion, which is 19.94 percent of GDP of the country (MoF, 2010). Amount of remittance received in Nepal is significantly higher and has left positive impact to reduce problem of unemployment and poverty in the nation but its impact on the domestic consumption, saving, investment and growth is questionable.

The role of remittance and its volume is significant not only in Nepalese case but also common throughout the world. According to World Bank, the total volume of remittance has been increasing steadily over the past decades and the Bank estimated that volume of remittance would be $440.1 billion in 2010 in the world. Newly available data shows that officially recorded remittance flows to developing countries have reached $325.5 billion in 2010 and $82.6 billion in South Asia (Ratha et al, 2011) alone. The estimation of remittance in 2010 has summarized in following Table 1.1

Table no.1.1

Remittance inflow in 2010 (Estimated)

World	$ 440 billion
All Developing nations	$ 325.5 billion
South Asia	$ 82.6 billion
Nepal	$ 3513 million

Source: Ratha et al (2011), *Migration and Remittance Fact Book 2011*, World Bank

India has placed itself in the first position to inflow remittance receiving $55 billion in 2010 followed by China receiving $51 billion. Mexico, the Philippines and France have received $23 billion, $21 billion and $16 billion respectively in 2010. Bangladesh, Nepal etc. are other major remittance earning countries in the world (Ratha et al, 2011). Remittance is an important financial inflow into many least developed countries (LDCs). In terms of share of remittance in GDP, Nepal tops in 20 remittance recipient countries like Bangladesh, Lesotho, Yemen in the world. In many other underdeveloped countries also remittance constitutes one of the major sources for external financing. Remittance is significant and vital financial source for labor exporting economies either to correct their Balance of Payments (BOP) or to maintain foreign exchange reserve. According to the World Bank, remittance is currently exceeding export revenue, foreign direct investment (FDI) and other capital inflows. Not only has the volume increased but also the importance of remittance as percentage of GDP (World Bank, 2005). In most of the LDCs poverty reduction has been accepted as major outcomes of remittance although the impact of remittance in inequality is so controversial since various researches have shown negative impact of remittance in income inequality. While the developed community continues the search for additional resource to finance the millennium development goal remittances, pro poor and cyclically sTable capital compared to other capital flows seem to be a promising source (Pant, 2006).

1.2 Problem Statement

Various studies, evidences and numeric data have proved that remittance has played significant role not only in correcting BOP and maintaining foreign reserves but also in minimizing the problem of unemployment and poverty in LDCs including Nepal. The overseas migration and remittance has been instrumental in poverty alleviation as well as in improving the living standards of the people (Seddon et al 1999). Remittance has played momentous role in poverty reduction in Nepal from 42 percent to 31 percent in past decades (Sharma, 2006). The relevant literatures discuss particularly the impact of remittance upon poverty and inequality. Likewise, growth generation capacity of remittance is much more debaTable issue since it has played positive role in enhancing growth in some LDCs and negative role in some other LDCs as well. Shrivastav and Chaudhary (2007) outline impact of remittance has been seen remarkable on the GDP and GNP in both real and nominal term. But Sharma (2006) argues that since most of the remittances have been used for consumption purpose, it has a negative impact on growth of GDP in Nepal. Again some studies or papers have argued that remittance earning is finished upon consumption purpose and it has no any significant effect to enhance domestic investment in the nation. But Dustmann and Kirchamp (2001) have found that 50 percent of a sample of Turkish emigrants returning from Germany started a micro enterprise within four years of resettling in Turkey using money saved while working abroad. Similarly Woodruff and Zenteno (2001) also found that remittance was responsible for almost 20 % of the capital invested in micro enterprises through urban Mexico. In general the anecdotal reports observe that recipients use remittance to increase family consumption rather than to invest in business or other productive assets. Academic papers have investigated the claim made in the anecdotal reports generally using survey data. The picture that emerges on the use of remittance is somewhat confusing (Chami et al, 2008). These contradictions have left room for further investigation or researches in the field since various works have been completed with distinguished results. Again most of the researches have pointed out to the necessity of further comprehensive and statistical investigation about the impact of remittance upon economy of the nation. Most of the works done on the macro economic of remittance and their impact is qualitative (Giuliano and Arranz, 2005). Just the theoretical discussions are not sufficient to assess the impact of remittances unless and until the results become valid through econometric and statistical investigation. Further there is a lack of the literature and analysis based on real data of Nepal in assessing the actual status of one of the major contributors of GDP, which is remittance. In Nepalese economy remittance has emerged as a new economic phenomenon. Share of remittance to GDP is increasing year by year. Passing throughout the time size of domestic product, size of domestic investment and size of domestic consumption are also in increasing trend. Remittance may have played a positive role in bringing positive change in these macro economic variables. So to assess the impact of remittance upon macro economic conditions of the economy and to establish the validity of the impact, econometric analysis is a must, which this study has tried to do.

1.3 Justification of the Study

Economic growth is one of the most important and powerful instrument in reducing the level of poverty in the nation. But growth depends upon various elements like saving, investment, labour force, technological advancement etc. No doubt, after 90s, remittance has increased in the nation and its share to GDP has also increased up to 17.4 percent (MoF, 2007). Remittance has reduced foreign exchange constraint in the nation. But one of the bitter facts that all of us must accept is that the country has not experienced remarkable progress in economic sphere including economic growth. Although volume of remittance has mounted in the nation, investment has not been boosted up; acquisition and diffusion of technology is very limited and brain-drain of national manpower is increasing day by day. All of these may be the cause of low growth rate of Nepalese economy. So, this study has tried to look into the issues such as:

- The role of remittance on enhancing GDP in Nepal and
- The contribution of remittance on domestic consumption and domestic investment in the nation.

1.4 Objectives of the Study

The general objective of this study is to assess the role of remittance in domestic investment and thereby macro economic scenario in the nation. The specific objectives are:

- To assess the impact of remittance in domestic household consumption expenditure in the nation
- To find out the impact of remittance in domestic investment expenditure and
- To explore the influence of remittance upon GDP of the nation.
- To recommend possible guidelines to overcome various gaps based on the findings of the analysis.

1.5 Significance of the Study

Remittance has become one of the emerging and burning issues in Nepalese economy. It can play significant role in making overall development of the nation if inward remittance is used to enhance domestic investment level and domestic consumption level of the nation. So to advocate about impact of remittance upon national economy, it is necessary to assess the impact of remittance on domestic investment and domestic consumption level of the nation and both of which are equally important to enhance the domestic product of the nation. So, this study has tried to assess the exact status of the remittances in Nepal and its contribution in investment and consumption as well as in total GDP of the country. This study is strictly based on the exact data provided by the various governmental agencies including the NRB and has used the sophisticated econometric model. This study is based on the strong analytical tool of econometrics and has tried to find the impact of remittance on domestic consumption and investment and thereby GDP of Nepal. Furthermore, this study may be helpful in formulating suiTable policy to divert remittance toward domestic investment to foster economic growth of Nepal and may be important in further comprehensive research on making remittance a strong instrument for investment. The study gives the short snap shot of the use of remittance upon domestic consumption and domestic investment and its impact upon GDP of Nepal.

1.6 Limitations of the Study

Various types of constraints or limitations are very common in both types of research be it micro or macro natured. Main limitations of this study are as follows:

- Remittance is one of the most important components of GDP of Nepal which inflows within the nation mainly through two channels. One channel is formal channel and the other channel is informal one which includes various channels like *hundi*, personal contact, relatives, friends, etc. Larger proportion of remittance enters into Nepal through these informal channels compared to formal channel (NRB, 2007). But actual and reliable data of remittance which enters into Nepal through informal channel is not available; and therefore just some estimation has been made. So, this study has used only data of remittance entered into Nepal through formal channel.

- Whatever might be the definition of remittance as given by IMF, the study makes use of the data of remittance published in Balance of Payment Summary of Nepal.

- Being this the macro level study, it has used secondary data. Required secondary data have been obtained mainly from government publications. So, accuracy of data used in this study fully depends upon the accuracy of data published in government publications.

- Key informants survey has been made in this study just to get quick reference of the fact. So statistical analysis of information obtained through key informant survey has not been made and statistical analysis of just secondary data has been made.

1.7 Organization of the Study

The first chapter deals the introduction of the study, statement of the problems, justification of the study, objectives of the study, significance of the study and limitations of the study. The second chapter shows current status of remittance in Nepal including total number of Nepalese working abroad, destination of Nepalese migrant workers, etc. The third chapter reviews the literature. It contains conceptual framework, theoretical and empirical literatures from national and international perspectives.

The fourth chapter deals with the methodology incorporated in the study. It contains research design, sources of data, data analysis tools and techniques, etc. The fifth chapter includes the data analysis and interpretation of the result. Finally, the sixth chapter is related with summary, conclusion and recommendation.

CHAPTER TWO

CURRETN STATUS OF REMITTANCE IN NEPAL

International migration has become one of the main sources for earning foreign currency and it has played pivotal role in minimizing the unemployment problem in Nepal. Earning of migrant labors called 'remittance' entered into Nepal long ago when Nepalese youths joined British Army known as 'Gurkhas'. But the Labor Act 1985 came as a boon for facilitating foreign employment and opening up avenues for the private sector (Shrestha, 2008). Enactment of foreign Employment Act 1985, provision of distributing passport from related district administration offices and high demand of labor in foreign labor market, especially in Gulf countries added fuel to the growth of international migration of Nepalese labor force. According to CBS (2008), out of the 23 percent of the households receive remittance and per capita remittance in Nepal is 4,042 Nepalese rupees. Following detail shows short snap-shot about the fact of remittance in Nepal.

Table 2.1

Remittance in Nepal

Description	Value
Percentage of household receiving remittance	23
Average remittance received by households receiving remittance (NRs)	80,462
Average remittance received by overall households in Nepal (NRs)	16,355
Per capita remittance amount for overall Nepal(Nominal NRs)	4,042
Share of amount of remittance by households from outside Nepal(In percent)	
From India	13.4
From Malaysia	19.2
From Saudi Arabia	14.9
From Qatar	21.3
From United Kingdom	2.2
From Other countries	29.0
Total	100

Note: Remittance includes just remittance earned from outside the nation

Source*: Report on Nepal Labor Force Survey, 2008,* CBS, NPC

This chapter gives a snap-shot of the number of Nepalese workers working abroad, main destination trend of growth of remittance and ratio of remittances to GDP of the Nepal.

2.1 Number of Nepalese Migrating Abroad

The trend of Nepalese workers migrating to foreign countries especially to India is very old. But due to the open border between Nepal and India, there is free flow of labor force between the two nations and there is no official and authentic record of the number of migrants to India. The presence of Indian labor in Nepal is also a serious issue. In the year 1994/95 the number of workers going abroad as job seekers was just 2,159 and it increased to 1,04,739 in 2001/02. The number of migrant workers had reached up to 2, 04,533 in the year 2006/07. According to ministry of finance, number of persons issued permits for foreign employment up to mid-March 2010 has reached 1,73,239. Number of workers migrating abroad per year is shown in Table 2.2 and in fig.2.1:

Table 2.2

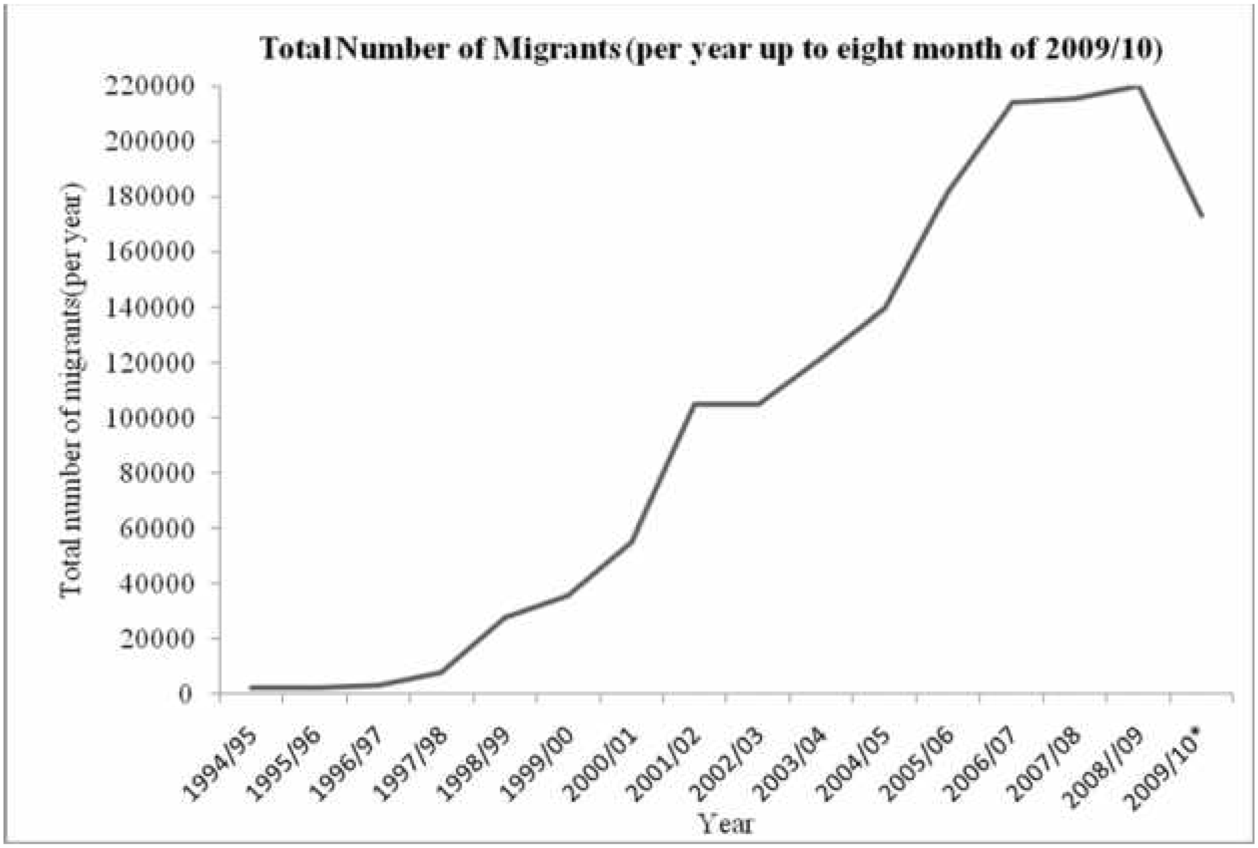
Total Number of Migrants (Per Year)

Year	Total number of migrants
1994/95	2159
1995/96	2134
1996/97	3259
1997/98	7745
1998/99	27796
1999/00	35543
2000/01	55025
2001/02	104739
2002/03	105055
2003/04	121769
2004/05	139696
2005/06	182043
2006/07	214094
2007/08	215268
2008//09	219965
2009/10*	173239

*: First eight month

Source*: Economic Survey* from 1994/95 to 2009/10 MoF Kathmandu

Fig. 2.1



Source: Based on the Table 2.2

Above Table and Figure show that total number of workers migrating abroad has been increasing continuously and the trend of increment has been seen higher after 2000/01. There are two responsible factors for such a growing trend of Nepalese workers going abroad for employment. These factors are pull factors and push factors. High demand of labor in industrialized and developed nations like East Asian nations, Middle East nations and Gulf nations are main pull factors. Dearth of employment opportunity in the nation, distorted peace and security, low wage level, lack of agricultural development in rural areas, scarcity of basic services needed for survival, liberal policies of government and demonstration effect are main push factors.

2.2 Destination of Nepalese Migrant Worker

Outflow of Nepalese labor force from the nation includes not only unskilled labor force but also includes skilled, efficient and trained manpower like doctors, engineers and other professionals who can contribute significantly to overall progress of the nation.

Because of the open border, cultural as well as religious similarities, easy entrance and for other reasons, a large portion of Nepalese people are working in India (But the issue remains untouched in most of the studies). According to a survey, more than half a million to 1.3 million of Nepalese people are working in India (Graner et al 2002). Another study reveals the fact that around 0.2 million Nepalese workers are working in New Delhi alone (Theime 2004). Foreign migration has become one of the popular dreams of Nepalese youth. Main destination of migrated professionals in the name of higher study (but who are in fact reported to have involved in various types of labor works) are developed countries like USA, UK, Canada, Australia, etc., whereas main destinations of unskilled and semi skilled labor are countries like Malaysia, Qatar, UAE, Korea etc. Main destination of Nepalese migrant labor force up to first eight month of 2010 is shown in the following Table 2.3 and Tigure 2.2.

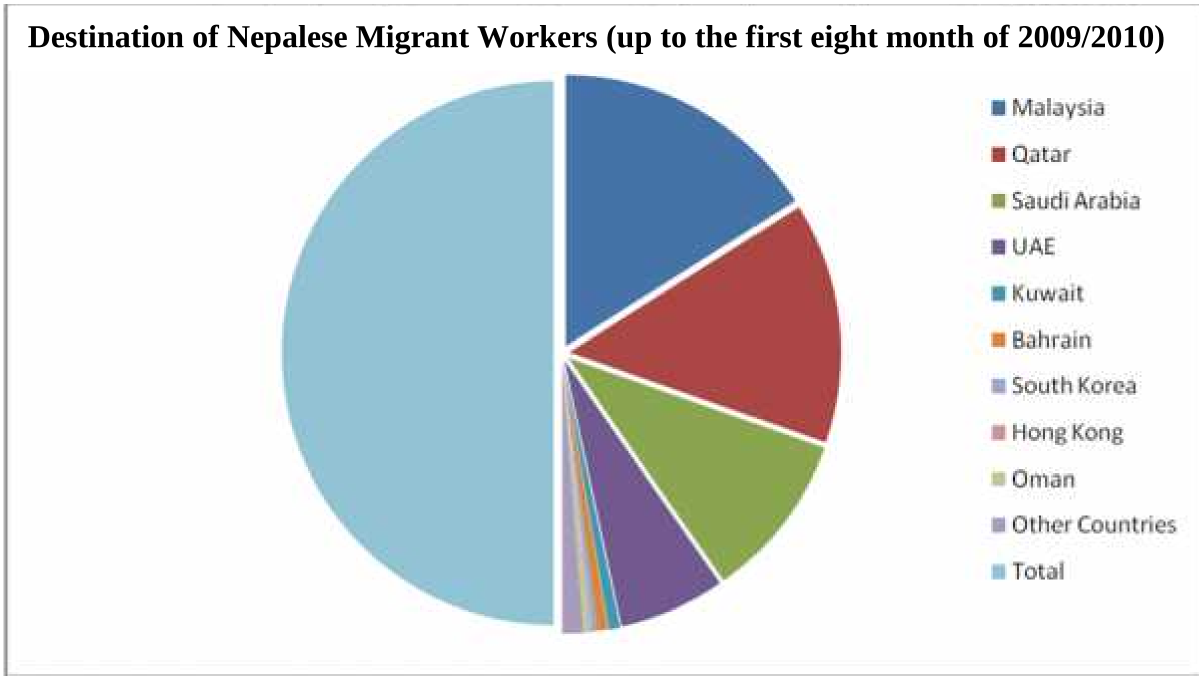
Table 2.3

Destination of Nepalese Migrant Workers (up to first eight month of 2009/10)

S.N.	Country/ region	Percent	Total number
1	Malaysia	32.04	519145
2	Qatar	28.71	465289
3	Saudi Arabia	19.81	321063
4	UAE	12.68	205537
5	Kuwait	1.38	22376
6	Bahrain	1.29	20934
7	South Korea	0.65	10461
8	Hong Kong	0.25	4450
9	Oman	0.65	10456
10	Other Countries	2.53	41059
	Total	100	1620370

Source*: Economic Survey* 2009/10 MOF Kathmandu

Fig .2.2



Source: Based on the Table 2.3

From the illustration as furnished above, it can be deduced that the maximum number of migrants 519145 (32.04% of the total) have gone to Malaysia followed by 465289 (28.71% of the total) to Qatar and 321063 (19.81 % of the total) to Saudi Arabia. Till the first eight month of 2010, the total number of Nepalese who have migrated to foreign nations for employment opportunity has reached 1620370. Such a huge number of labor migration has taken place because of the various push factors like lack of employment opportunity in the nation, lack of political stability in the nation and lack of feeling of security and because of various pull factor like easy availability of high job opportunity in those host nations where high construction work is in increasing trend.

2.3 Remittance and Its growth in Nepal

Remittance is an important source of foreign exchange for most of the developing and underdeveloped nations. But actual data of remittance cannot be obtained as remittance obtained through informal channel is significant in those nations. So, it is the obligation of researcher to accept official data of remittance and the remittance entered through informal channel can only be guessed. Nepalese official records have shown that the total amount of remittance entered in the nation was Rs. 2128.3 million in the year 1990/91. The Figure has highly risen particularly after 2000/01 and has been recorded to be Rs. 47216.1 million. In the first eight month of 2009/10 remittance earned and sent by migrant workers has been recorded to be Rs. 231725.3 million. Table 2.4 and Figure 2.3 illustrate the growth of remittance in Nepal.

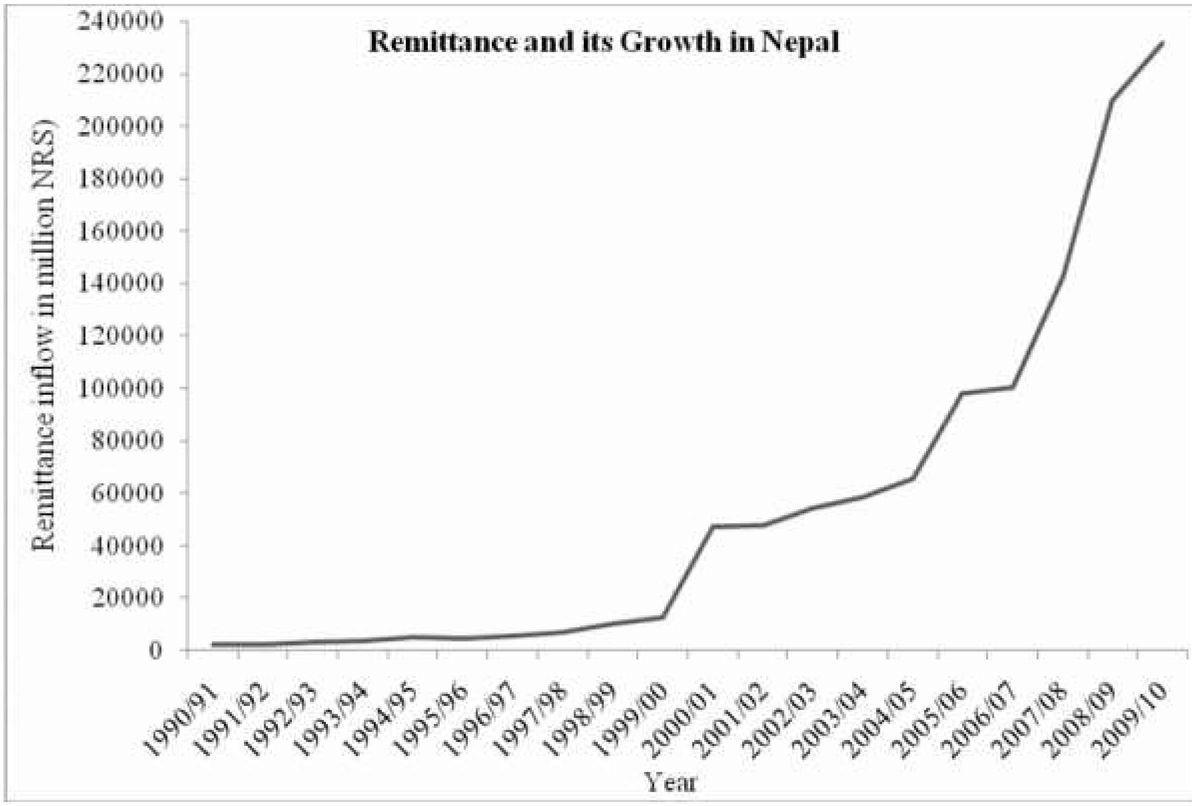
Table 2.4

Remittance and Its Growth in Nepal

Year	Remittance (In Million NRS)
1990/91	2128.3
1991/92	2316.5
1992/93	2994.3
1993/94	3469.1
1994/95	5063.6
1995/96	4283.6
1996/97	5595
1997/98	6987.8
1998/99	10314.6
1999/00	12662.3
2000/01	47216.6
2001/02	47536.3
2002/03	54203.3
2003/04	58587.6
2004/05	65541.2
2005/06	97688.5
2006/07	100144.8
2007/08	142682.7
2008/09	209698.5
2009/10	231725.3

Source: *Economic Survey 2009/10*, MOF, Kathmandu

Fig. 2.3



Source*:* Based on the Table 2.4

Total number of migrants toward foreign nation has been increasing year by year (shown by Table no. 2.2) Because of such a high increase in labor migration from nation growth of remittance inflow is also in increasing trend.

2.4 Ratio of Remittance to GDP in Nepal

Various elements like domestic consumption, domestic investment, government expenditure, net export, etc. are responsible factors that enhance GDP and its growth in the nation. Remittance is one of the earnings entered in the nation which can enhance GDP of the nation since earning earned through remittances are spent by recipients either for consumption purpose or investment purpose. (Investment includes not only expenditure made on physical capital but also made on human capital like education, health, skill development etc). Ratio of remittance to GDP was just 0.46 percent in 1990/91 and the Figure is in increasing trend. The Figure has significantly increased after the year 200/01. In that year the Figure reached 10.69 percent and the ratio is 19.19 percent in first eight month of 2009/10. Table 2.5 and Figure 2.4 show the ratio of remittances to GDP in Nepal.

Table 2.5

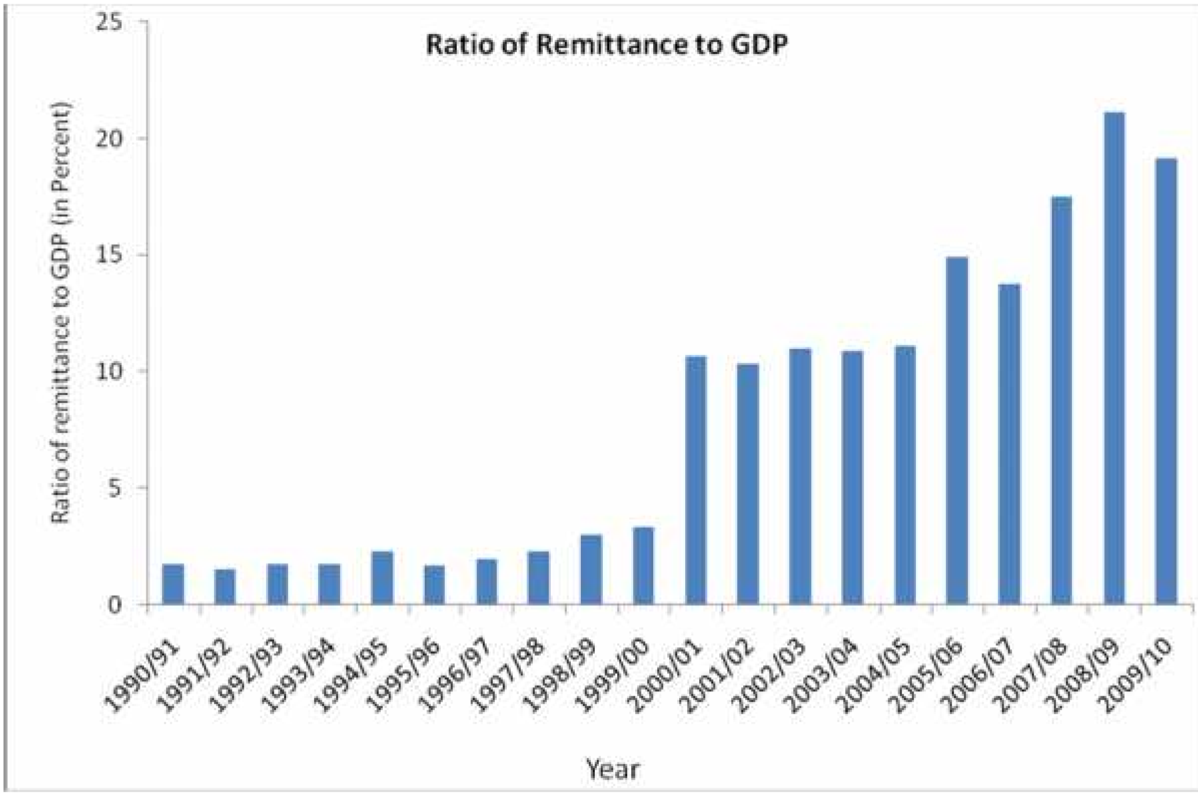
Ratio of Remittance to GDP

Year	Ratio of Remittance to GDP
1990/91	1.77
1991/92	1.55
1992/93	1.75
1993/94	1.74
1994/95	2.31
1995/96	1.71
1996/97	1.99
1997/98	2.32
1998/99	3.01
1999/00	3.34
2000/01	10.69
2001/02	10.35
2002/03	11.01
2003/04	10.91
2004/05	11.12
2005/06	14.94
2006/07	13.76
2007/08	17.49
2008/09	21.15
2009/10*	19.19

Note: * Up to first eight month of 2009/10

Source*: Economic survey* from 1990/91 to 2009/10 MoF Kathmandu

Fig. 2.4



Note: Up to first eight month of 2009/10

Source: Based on the Table 2.5

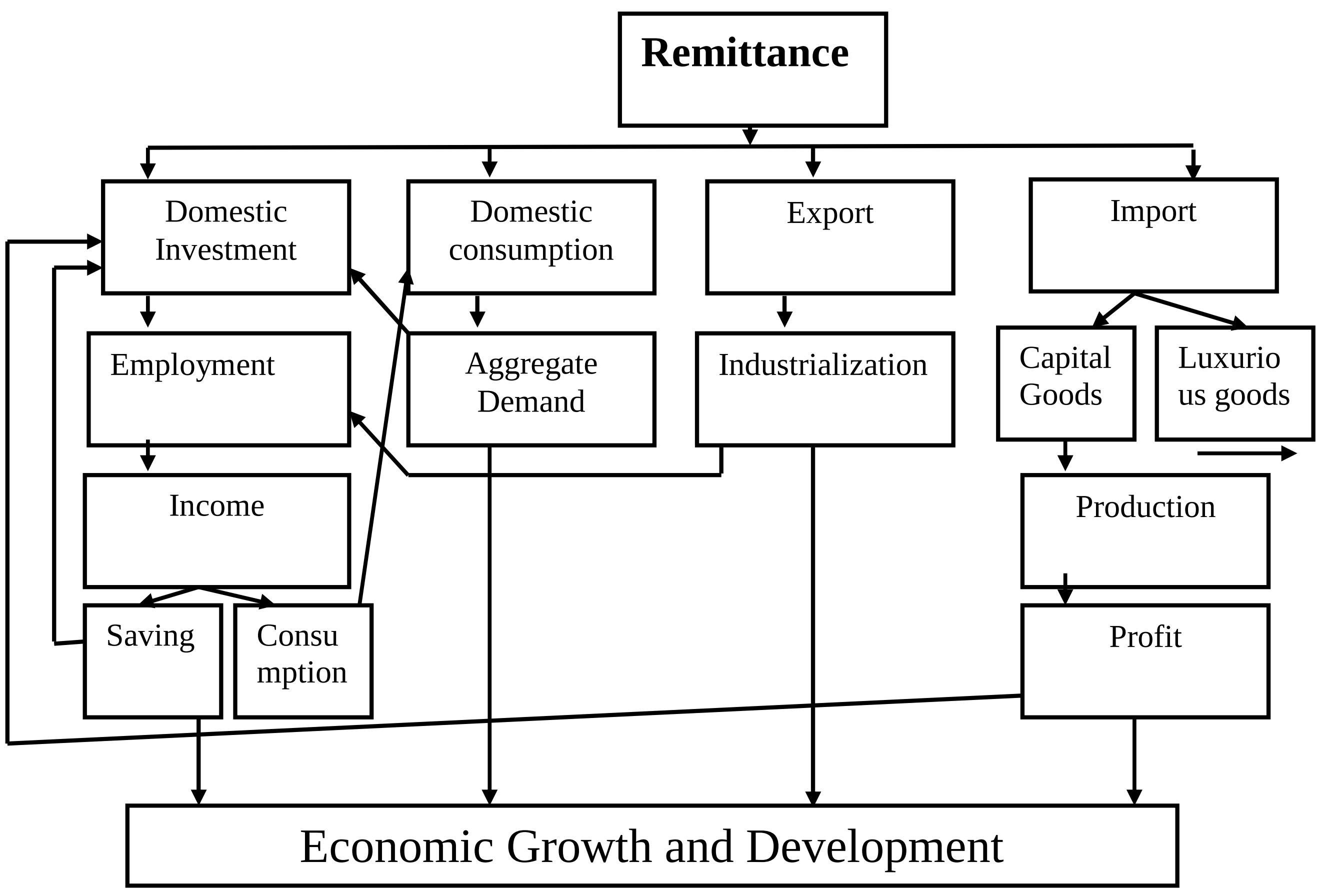
The Table and Figure show that not only the volume of remittance but also its ratio to GDP has increased. In 2000/01 the ratio of remittance to GDP had increased up to 10.69 percent from 1.77 percent in the year 1990/91. But in comparison of 2002/03 in 2003/04 and in comparison of 2005/06 in 2006/07, the ratio has declined. In first eight month of 2009/10 ratio of remittance to GDP has reached 19.19. The ratio of remittance to GDP has highly increased in the nation because the increasing rate of remittance inflow is more than the increasing rate of GDP.

CHAPTER THREE

REVIEW OF LITERATURE

Various studies, surveys and researches have been made to assess the impact of remittance upon economic growth, macroeconomic condition and other social aspects of the society and economy throughout the world by using different approaches. Most of the researches have not shown unique outcome. This means that different studies or papers have different findings about remittance and its impact. On the basis of the review of the literature, a conceptual framework has been developed and on the basis of the same, proceeding has been made.

3.1 Conceptual Framework



3.2 International Perspective

The study has mainly utilized the empirical studies in the process of review of literature. However, time and again, when the situation called for the theoretical evidence to prove or reject the ideas as seen, the study has made use of theoretical literature as well as empirical literature which have been divided into two sub-topics namely Empirical Studies and Theoretical Studies.

3.2.1 Empirical Studies

The economic impact of remittance depends to a great extent on their end uses: whether they fund current consumption or asset accumulation. Thus, the end use of remittance is one of the main debates in the literature on remittance. In general, these literatures observe that recipients use remittance in family consumption rather than investing in businesses or other productive assets. Academic papers have investigated the claims made in the anecdotal reports generally using survey data. The picture that emerges on the uses of remittance is somewhat confusing, primarily because the studies consider one country at a time, and also because the sample sizes tend to be quite small. Thus, the results in this area are quite varied and seemingly contradictory. However, three stylized facts emerge from the relevant literatures.

Use of remittance is one of the controversial facts throughout the world since there are distinguished results obtained through different works. In various papers, it is found that remittance is responsible in increasing domestic consumption level but not significant in increasing investment in the nation. However, Massey and Parrado (1998) in their paper have concluded that earning from work in the US provided an important source of start up capital in 21 % of the new business formation in Mexico. Similarly Woodruff and Zenteno (2001) also found that remittance is responsible for almost 21 % of the capital invested in micro enterprises throughout urban Mexico. These findings give foundation to study whether remittance is significant to increase domestic investment in Nepal.

The fact analyzed at first is that a significant portion, often the majority, of remitted funds is spent on consumption (e.g., Oberai and Singh, 1980, and Durand and others, 1996). Gilani, Khan, and Iqbal (1981) found that most of the remittance of their sample house-holds in Pakistan was spent on consumption, followed by residential investment. Glytsos (1993) identified a nearly identical spending pattern for remittance to Greece. The Inter-American Development Bank's Multilateral Investment Fund (2004) determined that consumption accounted for between 60 and 80 percent of the remittance in a sample of five Latin American countries, and the World Bank (2006) also identified this pattern for a larger sample of Latin American countries. Some studies, however, do find a smaller propensity to consume out of remittance than out of other income. Adams (2005) obtains this result in a study on households in Guatemala, for example. Increase in domestic consumption expenditure brings increase in aggregate demand which leads to increase in domestic investment. So, increase in domestic investment because of increase in remittance is indirectly related with increase in domestic consumption expenditure, too. So, impact of remittance to increase domestic consumption expenditure needs to be studied.

The second stylized fact is that a significant, though generally smaller, part of remittance goes into uses that we can classify as saving or investment. Alderman (1996) and Adams (1998), using survey data for Pakistan, found that remittance tend to be invested in land and buildings. Brown (1994), using survey data for Western Samoa and Tonga, determined that housing expenditures are the single largest expenditure out of remittance income. Adams (1991) found in a sample of 74 Egyptian households that the receipt of remittance increases the marginal propensity to invest, primarily in residences and land. Several of these studies also found that the main uses of those remittance not spent on consumption are spent on housing and financial assets (bank deposits). These studies have left room to study either earned remittance is channelized into productive sector or not in case of Nepal

The third and final stylized fact emerging from the literature on the end uses of remittance is that the household saving and investment that remittance fund is not necessarily productive in terms of the overall economy of the migrant's home country. Several researchers emphasize that expenditures on housing, land, and even jewelry constitute saving and investment, at least for the individual household that makes the expenditures. Although this is true, the effects of such saving on a country's overall economic activity should be considered carefully. When land and existing houses change ownership, for example, this obviously does not represent a change in aggregate investment. Sofranko and Idris (1999) showed in the case of Pakistan that very little of the remittance received from Pakistani migrants to the Middle East is channelized into actual business investment. Lopez and Seligson (1991) surveyed small businesses in El Salvador to measure the impact of remittance on small business development and reported that 40 percent of business owners who receive remittance do not invest any of the remittance funds in their businesses. These studies have argued that remittance is not significant to enhance domestic investment of the nation. So, these studies have left room to know either remittance has played any positive role or not to enhance domestic investment of Nepal.

Increase in domestic investment plays significant role to increase rate of economic growth of the nation. Remittance earning may be significant to increase investment. But if there is migration of skilled manpower of the nation, there may be negative impact upon economic growth of the nation. Faini (2002), in his study of Italy suggested that the concern in sending countries about the impact of skilled migration is fully warranted. The objective of the study was to take further look at the empirical evidence on the link between skilled migration, education and remittance. Glytsos (2002) in his study found that a uniform country performance of instability and uncertainty with great temporal and inter country fluctuation of remittance effects take place. The finding pointed out to different inter country priorities of remittance spending and to an asymmetric impact of remittance change in the sense that the good done to growth by rising remittance is not as great as the bad done by falling remittance. Migration of skilled manpower may negatively affect domestic investment in the nation since there is lack of entrepreneurship in the nation. So essence of study about the impact of remittance upon domestic investment in Nepal is realized.

Income earned through remittance may not be used to increase domestic investment ever. It is a fact that remittance is easy money for those families who are receiving income through exporting their family members to foreign nation for employment. So it is a common argument among the people that income earned through remittance or money sent by migrants to their families are used not for productive purpose rather they are spent upon real state, excessive consumption of imported costly luxurious goods which are not directly beneficial to enhance pace of economic prosperity. In this regard IOM (2003) reveals the fact that, in Guatemala, 53% of the remittance received was allocated to household expenditure and basic items, 11% was directed towards education and health and remaining, 36% was towards saving, economic activities and purchase of assets. Similarly the survey shows, in the countries of former USSR, the amount allocated to saving and investment was small. So the fact revealed by IOM may be the basis to agree common argument about the unproductive use of remittance and it is rational to find out the reality in case of Nepal.

Low level of investment is the root cause of unemployment and it is responsible to increase income poverty level of the nation. When remittance is increased, it increases investment and there is chance of reduction in level of poverty. When poverty level falls, there is a chance of increase in consumption level and leads to increase in investment as well. Chipeta (2004) in his study has used simple regression model to assess the impact of remittance on growth and macroeconomic volatility. The study concluded that remittance from abroad was anti-cyclical in Malawi and remittance reduces the incidence of poverty, the poverty gap and the severity of poverty. This finding of the study has given some encouragement to assess either remittance has increased domestic investment in Nepal or not.

Thus, a relatively recent and growing literature attempts to measure empirically remittance's impact on economic growth. One of the studies was of the Chami, Fullenkamp, and Jahjah (2003) cross-country study of workers' remittance. The study used a sample of 83 countries during the 1970–1998 period and conducted panel regressions of growth in real GDP per capita on both the workers' remittances–to–GDP ratio and the change in that ratio. Overall, it found that whereas domestic investment and private capital flows were positively related to growth, the workers' remittance-to–GDP ratio either was not significant or was negatively related to growth, with the same holding true when a squared term of the ratio was included in the analysis as well. Annual changes in the workers' remittance–to–GDP ratio were found to be negative and significant on growth. To account for possible endogeneity of remittance to the macroeconomic controls, the study also conducted an instrumental variables estimation, whereby a first-stage regression estimated the workers' remittance–to–GDP ratio as a function of each country's income gap and real interest rate gap relative to the United States. With the predicted value for the workers' remittance–to–GDP ratio as a regressor, the second stage continued to find that changes in remittance are negatively related to growth. The IMF (2005) performed cross-country growth regressions with specifications similar to those in Chami, Fullenkamp, and Jahjah (2003) on a set of 101 countries measured over the 1970–2003 period. However, in contrast to Chami, Fullenkamp, and Jahjah (2003), the IMF (2005) used an aggregate remittance variable, or the sum of workers' remittances, employee compensation, and migrant transfers, to capture behavior not associated with workers' remittance. The IMF study also used two instruments for remittance: distance between the migrants' home and main destination country, and a dummy measuring whether the home and main destination country shared a common language. The IMF (2005) found no statistically significant effect of total remittance on economic growth. These facts have given chance to raise the idea to study about impact of remittance upon growth since growth highly depends upon the level of domestic consumption and domestic investment.

Giuliano and Ruiz-Arranz (2005) gathered a sample of 73 countries during the 1975–2002 period and then calculated five-year averages for all variables used in their study to smooth out cyclical variations. Again, remittance was defined as the sum of workers' remittance, employee compensation, and migrant transfers. This study conducted OLS as well as fixed-effects panel estimates, and through a system generalized method of moments (SGMM) procedure. The study's basic specification regressed per capita GDP growth on the total remittance–to–GDP ratio, conditioning on the initial level of GDP per capita, the investment rate, population growth, the fiscal balance as a percentage of GDP, years of education, a measure of openness, and inflation. This specification did not find total remittance to be significantly related to growth. However, the authors also explored possible interactions between the total remittance–to–GDP ratio and financial deepening, as a way of testing whether remittance might enhance growth by relaxing credit constraints. Indeed, the authors found significant negative interaction terms and interpreted these results as indicative of the credit constraint hypothesis; total remittance appeared to have positive effects on growth only in countries with small financial sectors where presumably credit constraints would be more pervasive.

Increase in domestic consumption and domestic investment leads to high level of economic growth. Remittance will relax credit constraint to increase level of investment and there is rise in consumption level also because of high inflow of remittance. So, indirectly remittance is responsible to enhance economic growth of the nation. Faini (2006) estimated cross-sectional growth regressions on a set of 68 countries in which the dependent variable is the average annual per capita GDP growth rate from 1980 to 2004. These growth regressions do not include an investment variable; the reason given is that investment could be driven in part by remittance, and hence its coefficient could be capturing some of the effect of remittance. Faini (2006), like the IMF (2005), used an aggregate measure of remittance obtained by summing workers' remittance, employee compensation, and migrant transfers. The estimated coefficient on the total remittance–to–GDP ratio in Faini's ordinary least-squares (OLS) regression was positive and significant, both when average and when initial remittances were used in the total remittance–to–GDP variable. The study has used simple OLS method to find out the result but it is to be tested by using another method.

Another study, by Catrinescu and others (2006), incorporated institutional variables into the analysis, which covered 114 countries during the 1991–2003 period. Catrinescu and colleagues conducted OLS cross-sectional and various static and dynamic panel regressions of per capita GDP growth on the (log of) total remittance–to–GDP. Overall, their study found a robust positive relationship between growth and gross capital formation, as well as between growth and some of the institutional variables. Although the study also found some evidence of a positive relation-ship between growth and total remittance, this relationship was not very robust but very mild.

World Bank (2006) conducted cross-country growth regressions on a data set of 67 countries measured over 1991–2005. The control variables included (logs of) initial GDP per capita, the secondary school enrollment ratio, the ratio of private domestic credit to GDP, the

ICRG political risk index, the ratio of real imports and exports to GDP, the inflation rate, real exchange rate overvaluation, government consumption and time period dummies.. The paper reflects the idea that income in the host country appears to be a key driver of remittance. The inverse of the distance between the migrants' destination country and the remittance-receiving country was also used in place of migration shares in the migration instruments to form "distance" instruments. The growth regressions found a consistently positive relationship between the total remittance–to–GDP ratio and GDP growth, both when investment was included and when it was excluded from the estimations. When investment was excluded, however, the coefficients lost their significance. The authors also calculated the contribution of total remittances to growth rates and found that it was small.

A later exercise in the same World Bank study included interaction terms for remittance and education, remittance and financial depth, and remittance and institutional quality indicators in three separate growth equations that had the same specification as the growth equations examined previously, with the argument that remittance augment growth in the presence of complementary policies that enhance education, financial market depth, or institutional quality. The World Bank study found a negative and significant coefficient on the total remittance–to–GDP ratio, but positive and significant coefficients on each of the inter-action terms. The study argued that this implies a net positive impact of total remittance on GDP, when the complementarities are included. In addition, the study included an estimate of total remittances' impact on investment, finding a similar pattern of coefficients. Remittance enables recipient households to smoothen their consumption over time. This implies that if they are large enough, remittance will reduce economic fluctuations in a remittance-receiving country. This result has encouraged studying the impact of remittance upon the domestic consumption and domestic investment of Nepal.

Remittance can also reduce the volatility of investment through two distinct pathways. First, because firms rely mostly on internal financing to fund their investments, smoother consumption implies smoother business earnings and hence smoother investment. Second, to the extent that remittance flows through the financial system, they may make it easier for firms to borrow and hence can enable firms to smooth their investment expenditures over time. On the other hand, remittance may change recipients' behaviors in ways that tend to increase economic volatility. This is a further implication of the moral hazard argument. First, there is a moral hazard in terms of labor income. If remittance recipients reduce their labor effort, this will increase the likelihood of poor firm performance, effectively imposing more risk on firms. Risk-neutral firms will react by adjusting labor contracts in ways that shift this risk back onto the households: by increasing the dispersion of wages and employment levels over the business cycle. The increased dispersion of firm earnings and wage income will then lead to increased economic volatility. Furthermore, remittance may generate increased economic volatility if the presence of remittance causes household labor supply to become more pro cyclical. There is also a moral hazard in terms of investment effort. Recipients will choose riskier projects, or expend less effort on their existing investment projects, leading to an increased dispersion of investment returns and hence an increase in output volatility. Two recent studies, IMF (2005) and World Bank (2006), estimated the correlation between remittance and output volatility. The IMF (2005), in conjunction with the growth estimations described in above paragraph, found negative and significant relationships between the total remittance–to–GDP ratio and several measures of volatility: GDP volatility, consumption volatility, and investment volatility (all defined as the standard deviation of the annual growth rate of the variable). The study also used the largest annual decline in GDP over the period as an alternate measure of volatility and obtained similar results. The World Bank (2006) performed a panel estimation of the determinants of output growth volatility in conjunction with the growth regressions. In addition to total remittance–to–GDP, control variables were inflation, monetary policy, and fiscal policy volatility; real exchange rate overvaluation; frequency of banking crises; trade openness; terms of trade and foreign growth rate volatilities; country fixed effects; and time period effects. The study found a negative and significant coefficient on the ratio of total remittances to GDP that was robust to the different instruments used. Given that the IMF and World Bank studies did not use the preferred definition of remittances, it is important to conduct new volatility estimations using this variable. Therefore, a cross-sectional regression was estimated for a sample of 70 countries, comprising 16 advanced economies and 54 developing countries. The dependent variable in the regression is defined as the standard deviation of real per capita GDP growth over the 1970–2004 period. An OLS regression was estimated including all the possible explanatory variables in the regression. The results of the cross-country regression, found in the paper, indicate that there is a negative relationship between workers' remittance and the volatility of output and that this relationship is of marginal statistical significance. In practical terms, an increase in the workers' remittance–to–GDP ratio of one percentage point leads to a reduction of 0.164 percent in the standard deviation of GDP growth, according to the regression results. This implies that countries with high workers' remittance–to–GDP ratios experience significantly lower economic volatility than they would in the absence of remittance. Interestingly, the estimated coefficient on remittance has the same sign and nearly the same magnitude as the estimated coefficients in the studies mentioned previously. Nevertheless, the empirical results support the idea that remittance reduces macroeconomic volatility over long horizons. Yet the exercise does not shed light on the exact mechanism by which remittance reduces such volatility. Given the analysis on motives, intended uses, and end uses of remittances, it appears likely that remittance reduce output volatility at the aggregate level because they dampen consumption volatility at the household level. The increased smoothness of consumption has a direct impact on measured GDP volatility, since consumption accounts for a large share of GDP. This will remain a conjecture, however, until detailed longitudinal studies of household consumption and investment, including both households that do and those that do not receive remittances, are conducted. In this way it can be said that if there is increase in investment and consumption expenditure, there will be less macroeconomic volatility in the economy and it is needed to assess the impact of remittance upon consumption, investment and GDP, too.

Productive use of remittance in labor exporting countries is much more debaTable and questionable issue since most of the studies have concluded unproductive use of remittance earning. But Barauh (2006) in his paper had viewed that oversimplified views that remittance lead to excessive consumption, import dependency or unproductive investment in housing and land are no longer tenable. In his paper, he has concluded that remittance inflows are the source not only for foreign exchange receipt which can be used to finance balance of trade deficit or the current account deficit but also of the productive investment and social development. This study has left room to study whether remittance is responsible to encourage domestic consumption and whereby level of GDP.

Capital formation which takes place because of high and rapid level of saving and there by investment is pre-condition to accelerate economic growth in underdeveloped economies since big push is required to kick start growth. Remittance is expected to be the most significant and sTable source for saving and investment as well as economic growth in LDCs. In this regard, Banain and Roberts (2006) in their contribution have argued that there is a high propensity to save out of remittance and thus the impact of remittance on growth is expected to be positive. By using plausible values for some of the parameters under the study, the paper has concluded that the Armenian economy probably grows 1.6% per year in the long run for a permanent 10% increase in the flow of remittance. This study has used simple OLS method to assess the fact. So, to find out the effect of remittance upon domestic consumption, investment and GDP of Nepal 2SLS method may be important.

Migrant workers send their earned money to their family for various purposes. If the remittance is saved in banks or financial institutions there will be easy availability of fund for investment. When remittance is deposited with financial institutions a larger share of the population comes into contact with the formal financial system, expanding the cash economy especially in rural areas and promoting development. This increases the availability of credit and the potential provision of education loan, home mortgage and borrowing to establish small business. Browne and Mineshima (2007) in their paper have claimed that Asian countries that receive high amount of remittance include Bangladesh, India, China, The Philippines, Nepal, and Sri Lanka. Their overriding aim is to acquire saving quickly to return home and pursue investment there. The study is qualitative and it is necessary to make quantitative study to assess the fact that whether domestic investment in Nepal has encouraged because of remittance.

3.2.2 Theoretical Studies

Most of the studies have argued that remittance has been established as one of the main component of GDP of most of the LDCs since its share in GDP is in increasing trend. No doubt remittance has played significant role not only to maintain surplus BOP and foreign exchange reserve but to reduce level and incidence of poverty as well. However, remittance is not costless although benefit of inflow of remittance, especially in LDCs cannot be undermined. Robert (2004) has highlighted following potential benefits and costs of remittance:

Potential Benefits	**Potential costs**
As a sTable source of foreign exchange that eases foreign exchange constraints and helps to finance external deficits.	Eases pressure on governments to implement reforms and reduce external imbalances(Moral Hazard)
Is a potential source of saving and investment for capital formation and development	Reduces saving of recipient families and thus negatively impact on growth and development(Moral Hazard)
Facilitates investment in children's' education and human capital formation.	Reduces labor effort of recipient families and thus negatively impact on growth and development(Moral Hazard)
Raise the standard of living of recipients	Migration leads to brain drain and negative impact on the economy that cannot fully be compensated by remittances transfer
Reduces income inequality	Increase income inequality.
Reduces poverty	

In this way Robert has pointed various potential costs which labor exporting nations has to consider very well and potential benefits of remittance upon economic as well as social aspect which can play significant role to enhance development aspect of the nation either in short run and in long run as well since remittance can play positive role to enhance children's education and human capital formation.

Economists have recently turned their attention to estimating the impact of remittance on longer-term economic growth using modern growth theory. In that estimation, positive as well as negative role of remittance upon growth have been found. On the positive side, remittance may increase or enhance investment in physical capital. To the extent that there are frictions in domestic financial intermediation, imperfect capital mobility is present and remittance is not simply "disguised" as capital flows. The receipt of temporary remittance in an economy may lead to an increase in the domestic investment rate, thus increasing economic growth. If financial constraints are significant—for example, a large group of households are rationed out of credit markets because of the lack of domestic financial development—then remittance may help to ease the constraints. These results increase the investment, provided that the rationed households also have access to productive investment opportunities and use the remittance to expand investment rather than consumption. Alternatively, if remittance is primarily disguised as capital flows—the recipients investing on behalf of the remitter— efficiency in investment is enhanced to the extent that the family member receiving the remittance flows possesses some informational advantage or expertise with respect to formal financial intermediaries.

Another channel through which remittance may have a positive impact on growth is via the facilitation of human capital formation. Even though the majority of remitted funds are devoted to consumption and residential investment, significant productivity spillovers may result from the recipients' improved nutrition and shelter, assuming that they participate in the labor market. In addition, the literatures offer several examples in which a significant fraction of remittance is spent on education, assuming that those who receive the education do not in turn emigrate. As such, remittance may increase total factor productivity. These two channels may have a positive impact on growth. The accumulation of physical capital and total factor productivity are not mutually exclusive.

In addition to enhancing investment and total factor productivity, remittance may also have a positive impact on growth through their effect on the recipient economy's financial system. By increasing the recipient country's demand for money, remittance is likely to expand the supply of funds to the banking system. This in turn may lead to enhanced financial development through a reduction in the external finance premium and thus to higher economic growth through one of the two channels: (1) economies of scale, (2) a political economy effect, whereby a larger constituency (depositors) is able to pressurize the government into undertaking beneficial financial reform. It is far from assurance that remittance will have a positive impact on economic growth in any particular country. Each mechanism described in the foregoing discussion relies on a particular set of circumstances that may not be present in a given country; alternative conditions that reduce or eliminate the positive impact of remittance may be found there instead. In general, the greater the degree of capital mobility in a country, the less remittance will affect the domestic investment rate. Also, if remittance is perceived to be permanent, they will tend to be consumed in their entirety and therefore will not affect aggregate investment. Additional funds from remittance may simply be consumed. Finally, the family member who receives a migrant's remittance may actually be less skilled in investing that, which has important implications in this context if remittance is disguised as capital flows. Prevailing circumstances in a particular economy may likewise reduce the human capital and financial sector impacts of remittance. The consumption impact of remittance on labor productivity depends on recipient families' standard of living. If a family's standard of living was sufficiently high before the receipt of remittance that is basic needs are adequately met, then the labor productivity effect of remittance vanishes for that family. Also, any human capital accumulation impacts depend on the recipients' participation in the labor force after accumulation of capital. In some remittance-receiving societies, education funded by remittance is intended to enable the recipients themselves to migrate. Finally, in terms of financial sector impacts, an increase in the size of the domestic banking system via an increase in the supply of funds does not necessarily reduce the external finance premium. The political economy mechanism arising from a larger banking system may have an adverse effect on financial development: depositors lobby the government for reforms favoring safety over intermediation, for example, causing banks to increase their holdings of safe assets rather than lending.

The question of whether remittance increases an economy's growth is not simply a matter of whether conditions in the economy are favorable to the operation of the channels described previously. Remittance can also decrease economic growth through two means that operate differently than the positive channels. One that is increasingly mentioned in the literature is a Dutch disease effect, which requires that the traded goods sector of a remittance-receiving economy be the source of significant positive externalities that enhance other sectors' productive capacity. If this condition is satisfied, a Dutch disease effect may arise from remittance to the extent that they cause the economy's real exchange rate to appreciate.

A second means by which remittance may harm economic growth is through the moral hazard problem, an idea that was first formalized by Chami, Fullenkamp, and Jahjah (2003). Given that remittance is non-market income transfers that occur under asymmetric information and that monitoring and enforcement are extremely difficult because of the distance separating remitter and recipient, they may be plagued by severe moral hazard. The moral hazard problem manifests itself in two ways: recipients reduce their labor market effort and they make riskier investments. Anecdotal evidence of the labor effort effect is abundant and academic studies have detected such an effect as well. Reduced labor effort and increased investment risk lead to reduced economic growth.

3.3 Nepalese Context

Nepalese people started foreign employment by traveling to Lahore in early 19th century to join the Sikh ruler Ranjit Singh. Foreign migration started from Sugauly Treaty of 1814 A.D. and remittance has been showing its presence in Nepalese economy since it started to receive remittance formally by exporting brave Nepalese Soldiers known as 'Gurkhas' to Britain. However, remittance has become one of the major components of GDP of Nepal since 1990s. In the fiscal year 2007/08 remittance reached to NRs. 142 billion, which is 17.4 percent of GDP of the country. It has increased by 42.5 percent than the previous year (NRB, 2008). Amount of remittance received in Nepal is significantly higher and has positive impact on minimizing problem of unemployment and poverty in the nation but its impact on domestic consumption, saving, investment and growth is questionable. However, study about remittance in Nepalese economy is an emerging issue and it is a very new and debaTable issue as well. Since the share of remittance to the Nepalese economy in recent year is in increasing trend, it has become able to attract the attention of scholars toward the subject.

Under Nepalese context, the literature pertaining to the remittance has been divided into two sub-topics which are Empirical studies and Theoretical Studies.

3.3.1 Empirical Studies

Various data published by various institutions have tried to show remittance to be a significant element of Nepalese economy. Kollmair et al (2006) have made a number of case studies of various districts of Nepal to conclude that labor migration and remittance as an important mainstay of Nepalese economy. However the study is based upon case study and has not made any quantitative analysis. So, quantitative tools to assess the impact of remittance upon Nepalese economy are necessary.

Remittance can have both positive and negative impact to increase GDP as well as to grow Nepalese economy. Sharma (2006) in his study has used the simple OLS model to assess the impact of remittance in GDP. The study found that the remittance have negative impact on growth.

High level of economic growth and sustained rise in GDP is necessary to promote socio economic welfare and economic development in the nation. Remittance can create such an environment in Nepalese economy. Gaudel (2006) in his contribution had used simple OLS method to estimate the impact of remittance on GDP of Nepal. Main objectives of the work were to describe the role of remittance income for economic development of Nepal and to measure the statistical relationship of GDP among workers' remittance, grants and pensions in Nepal. Remittance income is more responsible to increase GDP in the nation though the productive use of remittance income is yet to be sought, the paper concludes. The paper has used simple OLS method and it is necessary to find the fact through use of another quantitative method the suiTable method may be use of simultaneous equation system.

Remittance is considered to be responsible to increase the GDP of Nepal. Increase in GDP means increase in investment and consumption also. Share of remittance is considered to be significant in GDP .of Nepal. Shrivastava and Chaudhary (2007) in their study have used simple OLS model and concluded that the impact of remittance was seen most remarkable in the GDP and GNP in both nominal and real terms but remittance was not used effectively so as to increase the real growth rate of the economy. This controversial result is to be confirmed through statistical investigation.

3.3.2 Theoretical Studies

Pant (2006) in his study has argued that remittance can generate a positive effect on the economy through various channels such as saving, investment, growth, domestic consumption and poverty as well as income inequality. In the study it has further been argued that in many countries large portion of remittance is invested in real estate demonstration both a desire of migrant to provide housing to families left behind and a paucity of other investment instrument in the recipients. Any statistical instruments have not been used in the study, however. The study pointed out to the fact that evidence from micro economic surveys demonstrates purchase of land, housing and other real estate are the most common uses of remittance in the country of origin. The paper has concluded that remittance is potentially important stimuli to economic growth. In Nepal's case, the impact of remittance on the poverty has been positive as revealed by the Nepal Living Standard Survey (2003/04) which showed that the poverty level defined in terms of absolute head count declined from 42% in 1995/96 to 31 % in 2003/04. Any statistical instruments have not been used in the study.

Economic growth and level of economic development depends on macro economic situation of the nation. Remittance is responsible to create various types of macroeconomic impact in the nation. Whenever macroeconomic environment is affected, domestic consumption as well as investment is also affected. Mishra (2007) in her paper states that although the evidence on the effect of remittance on long term growth remains inconclusive in economies where the financial system is underdeveloped, remittance appear to alleviate credit constraints and may stimulate economic growth. The paper further argues that remittances may contribute to national saving which could be reflected as a result in more resource and lower interest rates, thus inducing higher investments. Remittance will tend to increase investment, thus increasing potential growth and remittance have multiplier effect, the paper has argued. However, the paper has not used any statistical tools to confirm the fact..

Domestic investment depends upon easy access to credit including other things. In Nepalese economy financial institutions are growing fast. Remittance earner may save their received amount in financial institutions. If not, they spend their amount upon consumption of goods as well as services like health and education. From which there is chance of enhancement of domestic investment and consumption in the nation. Dahal (2007) has stressed that the remittance transfer was a crucial source of income to developing economies as well as to millions of households, particularly poor women and their children. He argued that unlike the aid or private investment-flows, remittance reached to the poor directly and the poor were the ones to decide on how to spend the money. According to him, more importantly, remittance services also offered a means of financial institutions to increase their outreach and relevance to poor clients. Likewise the previous studies, this study has also not used any statistical tools to assess the fact.

Foreign capital is most important to increase pace of economic growth of the nation. Remittance has become one major source of foreign capital in most of the developing economies. It has exceeded foreign direct investment (FDI) and official development assistance (ODA) to developing economies. Remittance also now account for about a third of total global external finance (World Bank, 2008). Positive impact of remittance upon macroeconomic phenomenon like GDP, balance of payment, foreign exchange reserves etc. are most common aspects pointed out by various researches. But there are many studies which appear to find out the negative impact of remittance upon national economy. Appreciation of real exchange rate, increase in real wage, lack of manpower in rural areas to make optimum utilization of available scarce productive resources etc. are some negative indications which may be the outcome of labor migration and remittance and the outcomes cannot be undermined. Trital (2008) has raised four important and serious issues regarding the negative impact of remittances upon developing economies in his contribution paper. He argues that remittance is not hazard free. The issues raised by Trital in his paper about negative impacts of remittance are:

- Remittance in developing economies sometimes may be 'Ghost Town' phenomenon that means there is high chance of collapse of small local economy which are highly depend upon remittance earning.
- It may be 'Easy Money' that negatively affects economic development.
- Remittance may widen the inequality through 'Remittance Haves and Have Not'. and
- The relationship between remittance and economic growth is unclear.

High domestic investment reduces level of unemployment of the nations. If domestic investment has not been boosted up in the nation foreign migration helps to reduce the problem of unemployment. Not only this foreign migration is source of remittance and that remittance can be channelized into investment. From which in long run domestic investment will be enhanced and employment opportunity rises in the nation. Shrestha (2008) has added another significant contribution about the impact of remittance. In the paper, she has argued that remittance has played a vital role in keeping the economy afloat and it contributes substantially to maintain macroeconomic stability. The study has highly focused upon positive impact of remittance in terms of balance of payment, relaxation of foreign exchange constraint, substitution of foreign aid to fill saving investment gap and poverty reduction. Likewise the study has pointed out that remittance create inequality in the distribution of income and remittance is typically spent on land and housing which are non productive assets with no lasting impact on the country's real income. However, the study has not used any statistical relationship and tools to assess the fact.

To sum up, high and sustained economic growth is a must to increase the pace of economic development in less developed economies. To enhance growth in those economies, remittance may be a substitute for foreign aid and official development assistance. Various studies have been made to explore impact of remittance upon national economy. Some studies have pointed out positive impact of remittance upon macroeconomic phenomenon like GDP, growth, balance of payment, saving, investment etc. But there are other equally strong views which oblige us to reject positive impact of remittance upon national economy since they argue about the negative impact of remittance upon macroeconomic phenomenon especially in relation to economic growth. However, most of the studies are just qualitative and they have explored the issue regarding the need of quantitative and comprehensive work regarding the issue. As Giuliano and Arranz (2005) has said that most of the works done on the macroeconomic of remittance and their impact on growth is qualitative. Furthermore, since the literature review in the context of Nepal reveals minimum studies carried out in the field of impact of remittance and even those existing literatures are mostly theoretical, the issue taken under study seems rather relevant which can further enhance the field. Again simple OLS methods have been used by most of the studies to assess the impact. This study has tried to assess the impact of remittance upon GDP and domestic household consumption as well as domestic investment through the use of Simultaneous equation system. From the use of simultaneous equation system mutual dependence between the variables can be assessed which is not possible through simple OLS method.

CHAPTER FOUR
RESEARCH METHODOLOTGY

4.1. Introduction

Research methodology is the collection of various steps to be undertaken in the processes of carrying out the research work. It spreads from the very beginning steps like research design, data collection to the final step of research – the report writing. Therefore, this is a set of various instrumental approaches used in achieving the predetermined objectives as stated in the earlier chapters. Kothari (1984) states:

> Research methodology refers to the various sequential steps (along with a rationale of each such step) to be adopted by a researcher in studying a problem with certain objects in view. (p19)

Therefore, the research methodology adopted in this chapter follows some limited but crucial steps aimed at achieving the objectives of this study.

4.2 Research Design

This study is based on the fact that the inflow of remittance in Nepal is high. The slower growth rate of Nepalese Economy and effectiveness of remittance to grow up the economy provides encouragement for study. To carry out the study some conceptual idea are generated about the effectiveness through literature review made in previous section. After obtaining these ideas they are changed in to functional relationship and econometric models have been formulated. To assess the impact of used variables upon dependent variable, simultaneous equation system has been used. Required data are collected through secondary sources for computational purpose and primary data have also been used for analytical purpose. To complete the study descriptive as well as analytical method of data analysis and interpretation has been brought into practice.

This study has examined the facts and postulated them in the identified framework which includes summary of the study, major findings and recommendations. They have been derived with the help of statistical analysis. The statistical tools have been adapted to evaluate the impact of remittance upon domestic investment, domestic consumption, and GDP of Nepal which will be generalized so as to reach a conclusion.

4.3 Data and Its types

This study has used the time series data to complete the task and the data were taken from the year 1974/75 onwards. In Nepal, multiparty democracy was restored 1990 and the democratic government of Nepal adopted the policy of economic liberalization in 1991 which still prevails. So, from 1990/91 Figure of remittance has found increasing trend and after the year 2001/02 its growth had taken very high speed.

This study is related with macro economic aspect and use of primary data in this task was nearly impossible. So, this study has used secondary data to complete the task.

To get the quick reference of the fact, key informant survey was made but the data obtained through the survey has not been used for analysis purpose. This data has been used just to support the obtained result.

4.4 Sources of Data

One hundred persons came to remittance companies to collect the amount sent by their migrant family members were interviewed from December 7 to December 25, 2009 through a structured questionnaire. A Total of five reputed and well-established remittance companies were visited for the purpose by and these companies were selected with judgment sampling procedure. Name of the remittance companies have been presented in Annex B and the questionnaire used for key informant survey has been presented in annex C.

The required secondary data were taken from published sources. Government publications published by government agencies were the main sources of secondary data used in this study. To obtain the required data, reports published by following agencies were also used:

- Nepal Rastra Bank
- Ministry of Finance

- Central Bureau of Statistics
- www.Tradingeconomics.com
- Other related government agencies, reports and authentic publications.

4.5 Model Specification

To complete the scientific research and to assess the quantitative relationship among variables, econometric models are used. Ordinary Least Square (OLS), Indirect Least Square(ILS), Two Stage Least Square (2SLS), Three Stage Least Square (TSLS) etc are most widely used econometric tools. OLS becomes suiTable for single equation model. For interrelated and simultaneous equation system ILS becomes suiTable but this can be used in case of exactly identified equations. But in case of over identified equation system, ILS cannot be used and 2SLS becomes suiTable. If there is mutual effect of variables upon each other then simultaneous equation system is used to assess their relationship. One beauty of simultaneous equation system is that this overcomes the problem of endogeneity which is most common in this kind of data (Gujarati, 2006). This study has tried to identify the mutual relationship of variables upon each other. Therefore this study has used the simultaneous equation system to assess the relationship between variables and estimation was made through 2SLS.

4.5.1 Conceptual Framework on the Model

In this study a very simple linear macro econometric models which satisfy a certain minimum level of accepted econometric standard has been used. The model adopted on these lines is of Keynesian basis but with a dynamic perspective and consists of two behavioral equations namely consumption function and investment equation and a national income identity.

As we know, in Keynesian model consumption is based upon level of income. That is $C = f(Y)$. But in practice, present level of consumption depends not only upon present level of income but upon past level of income that is GDP of previous year as well. It is because, people make their consumption decision to maintain their past level of consumption and in some extent past consumption becomes habit and obligation for them to make decisions on present consumption. But past level of consumption depends upon past production that is past GDP. So, in this study simple Keynesian consumption function has been extended into dynamic model by adding lagged GDP.

Main purpose of this study is to explore the impact of remittance upon domestic private consumption because in most of the observations there is a common argument that remittance earning is almost finished upon consumption purpose. So, in this study consumption function took the following form:

$$\mathrm{PC}_t \ \mathrm{X}\ f(Y_t,\ \mathrm{Rem}_t, Y_{t\mathrm{Z1}}) \text{ --------------------------------- } (1)$$

Domestic consumption expenditure is obtained through addition of government consumption (which includes collective consumption and individual consumption), private consumption (which includes food, non food and services expenditure) and consumption of nonprofit institutions. Generally remittance affects private consumption expenditure and public expenditure will not be highly affected by the remittance. So, in this function just private consumption expenditure has been included.

This study has assumed that domestic investment is correlated with business profit and business profits are positively correlated with level of national income. That means domestic investment is function of national income. Present level of investment depends upon past investment as well and past investment is directly dependent upon the past level of GDP. So, lag GDP has also been included in the function. Likewise, interest rate is another one of the main determinants of investment because it is taken as cost of capital in business activity. To assess the impact of remittance upon domestic investment is also the purpose of the study because ratio of remittance to GDP has been increasing and investment depends upon GDP also. So, in this study investment function looked like:

$$\mathrm{I}_\mathrm{t}\, \mathrm{X}\, f(\mathrm{Y}_\mathrm{t}, \mathrm{Rem}_\mathrm{t}, \mathrm{CBILR}_\mathrm{t}, \mathrm{Y}_{\mathrm{tZ1}}) \text{ -------------------------------- } (2)$$

Gross domestic investment (I_t) is obtained through summation of gross fixed capital formation (by government and private sector) and change in stock.

A popular and well known national income identity is,

$$Y_t = C_t + I_t + G_t + (X_t - M_t)$$

Government expenditure is composed by private expenditure upon durable and non durable commodities and public expenditure. In this study public expenditure has been included in gross domestic consumption expenditure and public investment has been included into gross domestic investment expenditure. So in function of national income identity government expenditure has been appeared automatically or directly.

To assess the impact of remittance upon national income, in national income identity remittances is added. So, in this study functional form of national income identity took the form of

$$Y_t = f(C_t,\ I_t,\ Rem_t, X_t, M_t) \text{ -------------------------------- (3)}$$

The notations in equation 1 to 3 stand for:

PC_t = Domestic Private consumption expenditure

Y_t = Gross Domestic Product (In nominal term)

Y_{t-1} = Gross domestic product of previous year or one year lagged GDP

C_t = Gross domestic consumption expenditure (private consumption expenditure +Public consumption expenditure)

Rem_t = Remittance earning

I_t = Gross domestic investment expenditure

$CBILR_t$ = Commercial banks' industrial lending rate

X_t = Export,

M_t = Import

t = time period expressed in year.

4.5.2 Econometric Model

To assess the functional relationship of variables used in different functions these functions have to be converted in to econometric models. For the computation purpose above mentioned functions have been converted into following equations and later on they are transformed in form double log model. Double log model (also called log linear model) is used to find the partial elasticity and the obtained results are presented in percentage form (Gujarati, 2006). Those transformed equations have been estimated to find the quantitative relationship between the used variables.

$$PC_t = \alpha_0 + \alpha_1 y_t + \alpha_2 Rem_t + \alpha_3 y_{t-1} + \mu_{ct} \text{ -------------------------------- } (4)$$

$$I_t = \beta_0 + \beta_1 y_t + \beta_2 Rem_t + \beta_3 CBILR_t + \beta_4 y_{t-1} + \mu_{it} \text{ -------------------- } (5)$$

$$Y_t = \gamma_0 + \gamma_1 C_t + \gamma_2 I_t + \gamma_3 Rem_t + \gamma_4 X_t + \gamma_5 M_t + \mu_{yt} \text{ ------------------- } (6)$$

In these equations α_i, β_i, γ_i were the parameters to be estimated (i = 0, 1, 2, ------------5) μ_{ct}, μ_{it} and μ_{yt} were stochastic error terms respectively.

For estimation of these equations, they have been transformed in to double log model as follows:

$$\ln PC_t = \alpha_0 + \alpha_1 \ln y_t + \alpha_2 \ln Rem_t + \alpha_3 \ln y_{t-1} + \mu_{ct} \text{ ------------------- } (7)$$

$$\ln I_t = \beta_0 + \beta_1 \ln Y_t + \beta_2 \ln Rem_t + \beta_3 CBILR_t + \beta_4 \ln y_{t-1} + \mu_{it} \text{ ------------------ } (8)$$

$$\ln Y_t = \gamma_0 + \gamma_1 \ln C_t + \gamma_2 \ln I_t + \gamma_3 \ln Rem_t + \gamma_4 \ln X_t + \gamma_5 \ln M_t + \mu_{yt} \text{ ------------------ } (9)$$

4.6 Identification of the Equations

Whether the equation is identified or not is to be tested before using statistical tools in case of simultaneous equation system. There are two methods to confirm the identification of the equations. One is order condition and another is rank condition. Order condition is known as necessary condition and rank condition is called sufficient condition. In this paper both order condition and rank conditions have been used to assess the identification of the equations.

4.6.1 Order Condition

A necessary (but not sufficient) condition of identification, known as the order condition may be stated in two different but equivalent ways as follows:

Definition 1

In a model of M simultaneous equations in order of an equation to be identified it must exclude at least M-1 variables (endogenous as well as pre determined) appearing in the model. If it excludes exactly M-1 variables then the equation is just identified. If it excludes more than M-1 variables then the equation is over identified.

Definition2

In a model of M simultaneous equations , in order for an equation to be identified, the number of predetermined variables excluded from the equation must not be less than the number of endogenous variables included in that equation less 1 , that is ,

$K-k \geq m-1$

If $K-k = m-1$, the equation just identified, but if $K- k > m-1$, it is over identified.

For equation no 7:

According to Definition1:

Total number of equations in the system (M) = 3

Total number of variables in the system (endogenous as well as predetermined) = 9

Total number of variables in the equation = 4

$M-1 = 3-1 = 2$

Equation no. 4 excludes 4 variables which is greater than M-1(that is 2)

So, according to first definition equation no.4 is overidentified.

According to Definition 2:

Number of predetermined variables in the system (K) = 6

Number of predetermined variables in the equation (k) = 2

Number of endogenous variable in the equation (m) = 2

Now, $K - k = 6-2 = 4$

$m-1 = 2-1 = 1$

$K-k > m-1$

So, according to definition 2 also equation no. 4 is overidentified.

For Equation no 7:

According to Definition1:

Total number of equations in the system (M) = 3

Total number of variables in the system (endogenous as well as predetermined) = 9

Total number of variables in the equation = 5

$M-1 = 3-1 = 2$

Equation no. 5 excludes 3 variables which is greater than M-1(that is 2)

So, according to first definition equation no.5 is also overidentified.

According to Definition 2:

Number of predetermined variables in the system (K) = 6

Number of predetermined variables in the equation (k) = 3

Number of endogenous variable in the equation (m) = 2

Now, $K - k = 6-3 = 3$

$m-1 = 2-1 = 1$

$K-k > m-1$

So, according to definition 2 also equation no. 5 is overidentified.

For Equation no 9:

According to Definition1:

Total number of equations in the system (M) = 3

Total number of variables in the system (endogenous as well as predetermined) = 9

Total number of variables in the equation = 5

$M-1 = 3-1 = 2$

Equation no. 6 excludes 3 variables which is greater than M-1(that is 2)

So, according to first definition equation no.6 is also overidentified.

According to Definition 2:

Number of predetermined variables in the system (K) = 6

Number of predetermined variables in the equation (k) = 2

Number of endogenous variable in the equation (m) = 3

Now, K- k = 6-2 = 4

3-1 = 3-1 = 2

K-k > m-1

So, according to definition 2 also equation no. 6 is also overidentified.

In this way all of the equations included in the system are over identified and the model as a whole became over identified.

4.6.2 Rank Condition

Although order condition of the identification problem is satisfied, the equation may not be identified since the condition is just necessary condition not sufficient condition. Rank condition is sufficient condition for identification. Fortunately, the order condition is usually sufficient to ensure identifiability and although it is important to be aware of the rank condition a failure to verify it will rarely result in disaster (Harvey1990). According to the definition, in a model containing M equations in M endogenous variables an equation is identified if and only if at least one non zero determinant of order (M-1) (M-1) can be constructed from the coefficient of the variables (both endogenous and predetermined) excluded from that particular equation but included in the other equations of the model (Gujarati 2006).To test the rank condition above equations, equation no.7, 8 and 9 can be rewritten as follows:

$$\text{«}_{ct}\ X\ln PC_t - \alpha_0\ Z\alpha_1 \ln y_t\ Z\alpha_2 \ln Rem_t\ Z\alpha_3 \ln y_{tZ1} \text{ ------------------------ } (10)$$

$$\text{«}_{it} X\ln I_t - \beta_0\ Z\beta_1 \ln Y_t\ Z\beta_2 \ln Rem_t\ Z\beta_3\, CBILR_t\ Z\beta_4 \ln y_{tZ1} \text{ --------------------- } (11)$$

$$\text{«}_{yt}\ X\ln Y_t\ Z\text{¥}_0\ Z\text{¥}_1 \ln C_t\ Z\text{¥}_2 \ln I_t\ Z\text{¥}_3 \ln Rem_t\ Z\text{¥}_4 \ln X_t\ Z\text{¥}_5 \ln M_t \text{ ------------------------ } (12)$$

The system can be written in tabular form as follows:

Equation Number	Coefficient of Variables(all variables are in log besides CBILR))								
	PC_t	I_t	Y_t	Rem_t	Y_{t-1}	C_t	$CBILR_t$	X_t	M_t
7	1	0	$-\alpha_1$	$-\alpha_3$	α_2	0	0	0	0
8	0	1	$-\beta_1$	$-\beta_4$	$-\beta_2$	0	$-\beta_3$	0	0
9	0	$-\gamma_2$	1	$-\gamma_3$	0	$-\gamma_1$	0	$-\gamma_4$	$-\gamma_5$

Now we have to obtain the relevant matrix of coefficient of variables to identify the rank of matrix.

In case of equation no 10, a matrix of coefficient of variables in which some variables are excluded from the equation but included in other equation can be formed as follows:

$$\begin{matrix} 1 & 0 & Z_{\ 3} & 0 & 0 \\ Z\text{¥}_2 & Z\text{¥}_1 & 0 & Z\text{¥}_4 & Z\text{¥}_5 \end{matrix}$$

In this matrix it can be seen that more than one 2*2 matrix (that is M-1*M-1 or 3-1*3-1 matrix) can be formed whose determinant is not zero. So rank of above matrix is 2 and equation no 10 is identified according to the rank condition.

In case of equation no 11, a matrix of coefficient of variables in which some variables are excluded from the equation but included in other equation can be formed as follows:

$$\begin{matrix} 1 & 0 & 0 & 0 \\ 0 & Z\text{¥}_1 & Z\text{¥}_4 & Z\text{¥}_5 \end{matrix}$$

Similarly in this matrix also it can be seen that more than one 2*2 matrix (that is M-1*M-1 or 3-1*3-1 matrix) can be formed whose determinant is not zero. So rank of above matrix is 2 and equation no 11 is also identified according to the rank condition.

In case of equation no 12, a matrix of coefficient of variables in which some variables are excluded from the equation but included in other equation can be formed as follows:

$$\begin{array}{ccc} 1 & \sim_2 & 0 \\ 0 & Z_2 & Z_3 \end{array}$$

Likewise in pervious matrix in last matrix also it can be seen that more than one 2*2 matrix (that is M-1*M-1 or 3-1*3-1 matrix) can be formed whose determinant is not zero. So rank of above matrix is 2 and equation no 12 is also identified, according to the rank condition.

In this way it has been found from the rank and order condition that all of the equations used in the system are identified. (In rank condition identified may indicate both just identified or overidentified).

4.7 Hypothesis setting

The main purpose of any of the research is to search for the answer of the research questions because hypotheses are set to find the tentative solution of the research questions whose validity is maintained or established through empirical tests in the scientific research. Based on the research questions, this study set the following hypotheses:

i. Remittance increases the domestic private consumption expenditure
ii. Remittance promotes domestic investment in the nation and
iii. Remittance contributes to a large share in GDP.

4.7.1 Null and Alternative hypothesis

Above mentioned general hypotheses have been broken down into null and alternative hypothesis for empirical tests.

a. Null Hypothesis: The null hypotheses for these equations are the zero values of β_{is}, α_{is}, and γ_{is}; i.e. the variables do not have significance in the model. Statistically,

$\alpha_{is} = 0$

$\beta_{is} = 0$

$\gamma_{is} = 0$

b. Alternative hypothesis: The alternative hypotheses then are the non - zero values of these parameters i.e. the variables are significant in the model. Statistically,

$\alpha_{is} \neq 0$

$\beta_{is} \neq 0$

$\gamma_{is} \neq 0$

CHAPTER FIVE

ANALYSIS AND INTERPRETATION OF THE RESULT

Mainly this study has used secondary data but for quick reference of the fact, key informant survey had also been made. First section analyzes result obtained through key informant survey and the second subsection analyzes the result obtained through statistical investigation.

5.1 Analysis of the result obtained through key informant survey

A questionnaire was developed and a total of 100 informants came to receive remitted money in various remittance companies were interviewed. Various facts like total amount of remittance received by recipients in a year and end use of remittance in various sectors like consumption; saving and investment as well as loan repayment were collected in the survey. Total data obtained through the survey has been presented in annex- D and result obtained through survey has been discussed in following points.

5.1.1 Range of Remittance Earned by Household

Throughout the survey, it was found that the remittance receiving households received minimum NRs.1,20,000 to maximum NRs.4,00,000 in a year. So, on the basis of remittance earned by households, a total of 100 households were classified into 6 groups. Classification of remittance receiving households has been shown in Table 5.1 and Figure 5.1:

Table 5.1

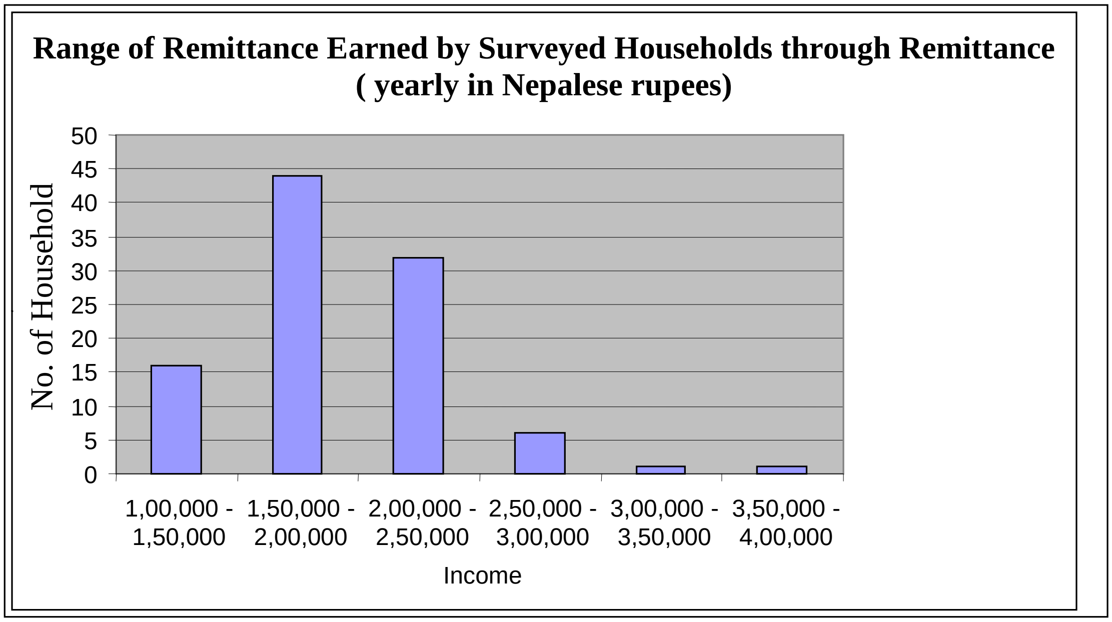
Range of Remittance Earned by Surveyed Households through Remittance

(Yearly in Nepalese rupees)

S.N.	Income	No. of Household
1	1,00,000 - 1,50,000	16
2	1,50,000 - 2,00,000	44
3	2,00,000 - 2,50,000	32
4	2,50,000 - 3,00,000	6
5	3,00,000 - 3,50,000	1
6	3,50,000 - 4,00,000	1

Source: Field Survey, 2010

Figure 5.1



Source: Based on the Table no. 5.1

According the Table 5.1 and Figure 5.1, among the 100 households, 44 households earned income through remittance ranging from NRs. 1, 50,000 to NRs. 2, 00,000 in a year. Very few households earned income through remittance which ranged from NRs.. 3, 00,000 to NRs. 3, 50,000 and NRs. 3,50,000 to NRs. 4,00,000. Only one household earned income in both of these groups. Similarly, 32 households earned income ranging from NRs. 2,00,000 to NRs. 2,50,000. So, this Table concludes that maximum numbers of households received lower income as remittance and few households earned high income as remittance. Lack of best and highly paid job because of lack of technical expertise may be the major cause behind the result.

5.1.2 a. Use of Remittance in Saving/Investment and Loan repayment

One of the objectives of this study is to assess the impact of remittance on saving and investment. Use of remittance upon saving and investment is important but whether the earned remittance has been used in saving and investment or not is the controversial issue because domestic investment has not been highly increased in the nation although flow of remittance has increased highly in recent years. Number of households which make saving and investment as well as spent on loan repayment have been presented in following Table number 5.2.

Table 5.2

Use of Remittance by Surveyed Households in Saving/Investment and Loan Repayment (Yearly in Nepalese Rupees)

S.N.	Income (Yearly)	No. of Household	
		Saving/Investment	Loan Repayment
1	1,00,000 - 1,50,000	-	-
2	1,50,000 - 2,00,000	6	3
3	2,00,000 - 2,50,000	22	26
4	2,50,000 - 3,00,000	5	3
5	3,00,000 - 3,50,000	1	-
6	3,50,000 - 4,00,000	1	1
Total		35	33

Source: Field survey, 2009

According to the above Table 5.2 the households, which received remittance up to NRs. 1,50,000 yearly, were found to have finished all their received remittance in consumption expenditure and they did not make any saving and spent the amount on loan repayment. Among 32 households which received remittance between NRs. 2,00,000 and NRs. 2,50,000, 22 households were found to have made saving and 26 households were found to have made some expenditure in loan repayment. Similarly, 5 households, which received an amount ranging from NRs. 2,50,000 to NRs. 3,00,000 yearly, were found to have made saving and investment and 3 households of this group were found spending the amount in loan repayment. Likewise one household which earned more than NRs. 3,00,000 below NRs. 3,50,000 a year was found to have made saving and investment. There was only one household which earned more than NRs. 3,50,000 a year and this household made saving and investment as well as in payment of the loan received in the process of migrating to foreign land. This Table shows that among total households only 35 households made saving and investment. Similarly, 33 households make repayment of loan from received remittance. Most of the people who migrate toward foreign nations are of poor class and they receive loan to go toward abroad. So, they have to uses their earned money to make repayment of the loan and their saving level becomes low.

Average income, average consumption, and average saving made by households which received remittance has been shown in the following Table number 5.3 and Figure 5.2.

Table 5.3

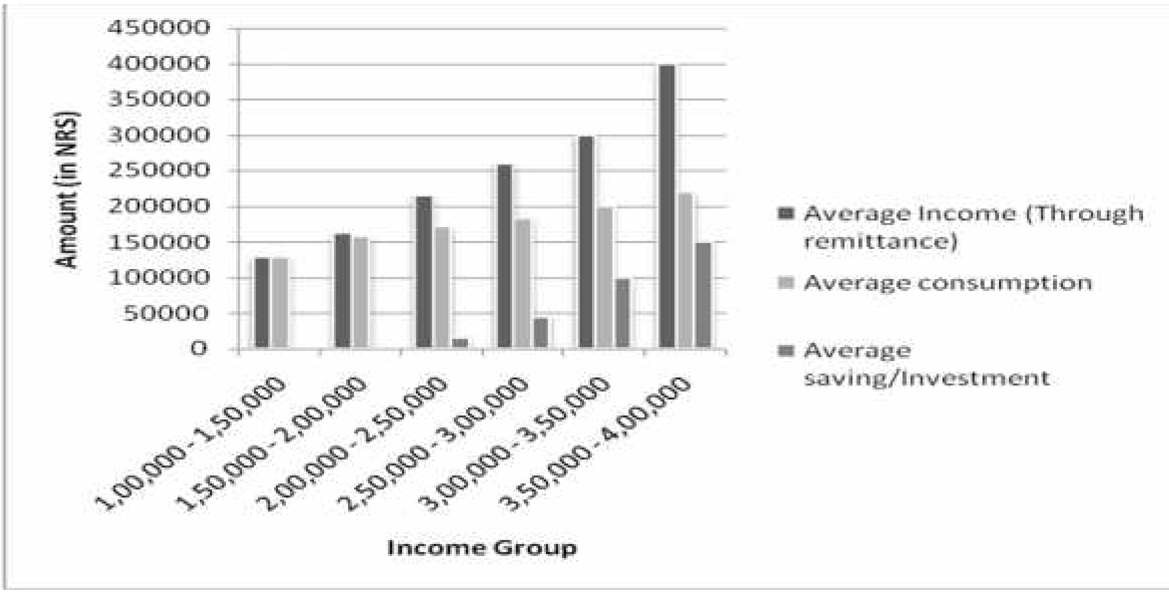
Average Remittance Received, Consumption Expenditure and Saving/Investment by Surveyed Households (Yearly in Nepalese rupees)

S.N.	Income Group	No. of Households	Average Income (Through remittance)	Average Consumption	Average Saving /Investment
1	1,00,000 - 1,50,000	16	1,28,750	1,28,750	-
2	1,50,000 - 2,00,000	44	1,63,186	1,57,727 (96.7%)	2500 (1.53%)
3	2,00,000 - 2,50,000	32	2,15,312	1,71,562 (80%)	15,937 (7.40%)
4	2,50,000 - 3,00,000	6	2,60,000	1,83,333 (70.5%)	45,000 (17.31%)
5	3,00,000 - 3,50,000	1	3,00,000	2,00,000 (66.7%)	1,00,000 (33.33%)
6	3,50,000 - 4,00,000	1	4,00,000	2,20,000 (55.0%)	1,50,000 (37.5%)
Total		100	1,83,902	1,60,100 (87.0%)	11,400 (6.20%)

Source: Field Survey, 2009

Figure 5.2

Average Remittance Received, Consumption Expenditure and Saving/Investment by Surveyed Households (Yearly in Nepalese rupees)



Source: Based on the Table no. 5.3

As shown in the Table 5.3 and Figure 5.2, the average saving of households was found to be just NRs. 2,500 yearly whose average remittance earning was NRs. 1,63,186. The Table shows that the households which received higher amount of remittance made higher expenditure in consumption and also made higher saving and investment. Average saving and average investment of the households whose average receipt was NRs. 3,00,000 and NRs. 4,00,000 was found to be NRs. 1,00,000 and NRs. 1,50,000 respectively. The Table has shown that higher proportion of income received through remittance is saved or invested when the level of income earned through remittance increases. It is because when their level of income is high their propensity to save also rises. The Table further shows that average receipt of remittance of households was NRs. 1,83,902, average consumption expenditure was NRs. 1,60,000 (87%) and average saving and investment was 11,400 (6.2%). In this way the Table highlights that larger portion of earned remittance was finished in consumption purpose and little amount was used for saving and investment purpose.

But in the survey it was found that average saving level as well as earning of educated migrants is higher in comparison of average income and saving /investment of total migrants. The fact has been presented in following Table.

5.1.2 b. Average remittance received, consumption expenditure, saving/investment (according to educational status)

From the key informant survey made in this study, it has been found that average remittance received as well as average saving/ investment has increased along with increase in educational status. The fact obtained through the survey has been presented in following Table 5.4 and Figure 5.3.

Table 5.4

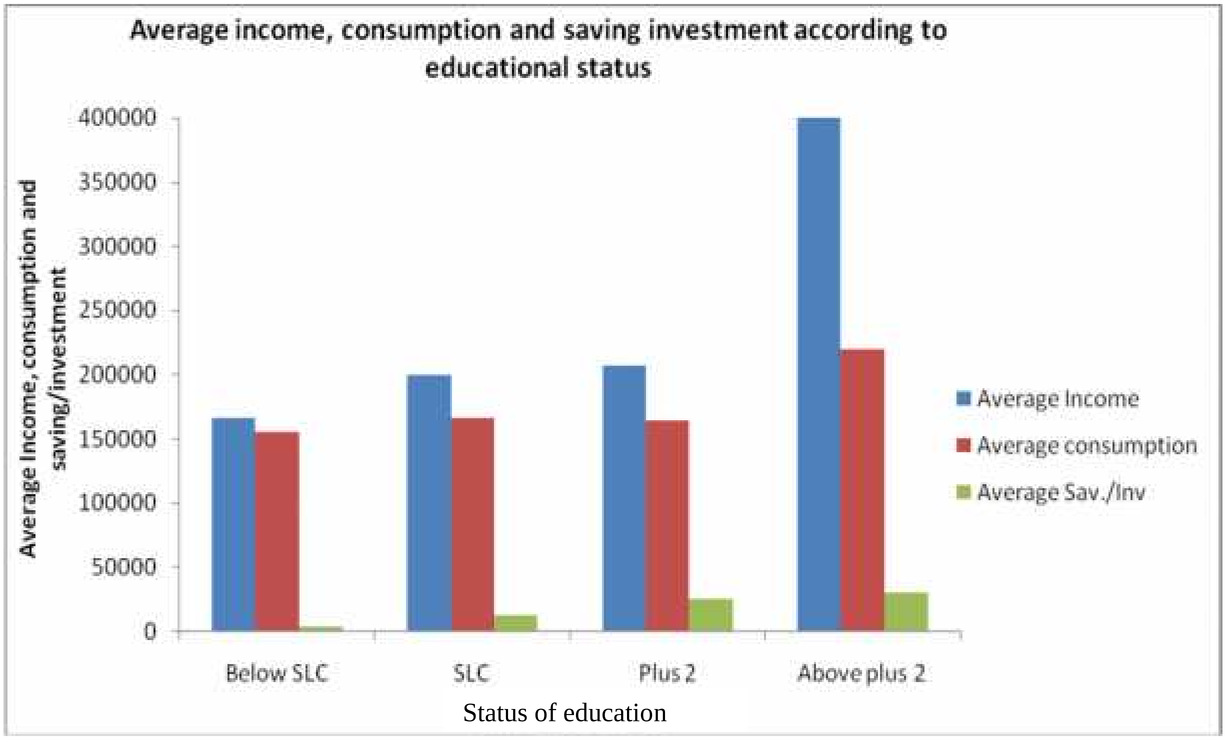
Average Income, Consumption and Saving/ Investment of Surveyed Household

(According to educational status)

No. of H.H.	Educational Level	Average Income (in NRs)	Average consumption		Average Sav./Inv	
			In NRs	%	In NRs	%
59	Below SLC	166441	155932	94	3220	2
15	SLC	200000	166000	83	12000	6
25	Plus 2	206800	164000	79	24800	12
1	Above plus 2	400000	220000	55	30000	8

Source: Field Survey, 2009

Figure 5.3



Source: Based on the Table no. 5.4

When comparison of average income through remittance was made, consumption and saving investment of educated and non educated households was observed that all phenomena of educated households was found in higher position. In case of households whose education level was below SLC, 94 percent of the remittance earned was finished in consumption purpose whereas their saving investment was just 2 percent. Those households whose educational level was SLC, the level of earning was high and consumption expenditure was found to be decreased up to 83 percent and saving investment level was found to be increased up to 6 percent. The households whose level of education was plus 2, the average consumption expenditure was reduced up to 79 percent and saving investment was increased up to 12 percent. The migrant household whose education level was more than that of plus 2 level, average income was highly increased. Their average consumption was highly reduced which was just 55 percent of their received remittance and saving investment had become just 8 percent and large proportion of remittance was used for loan repayment.

The above Figure and Table confirm that the increase in educational level, all other aspects of remittance utilization are seen to be influenced. The consumption rate was seen to be lessened by the educated in comparison of the less educated people. This reveals the fact that decreased consumption increases proportion of saving investment. It is because their average income is high on the one hand and on the other they are conscious about their future and they want and try to make some savings for their future security since they have high level of awareness.

5.1.3 Destination of Nepalese Migrant for Foreign Employment (Among Surveyed Households)

Out of the 100 people interviewed, 21 relatives of these people were reported to have been working in Malaysia and sending their earning as remittance which is the highest number of workers employed in foreign land in this group. Similarly 19 persons were working in Qatar, 12 in Saudi Arabia and just one in Singapore. Foreign destination of Nepalese migrant workers has been furnished in the following Table number 5.5 and Figure number 5.4.

Table 5.5

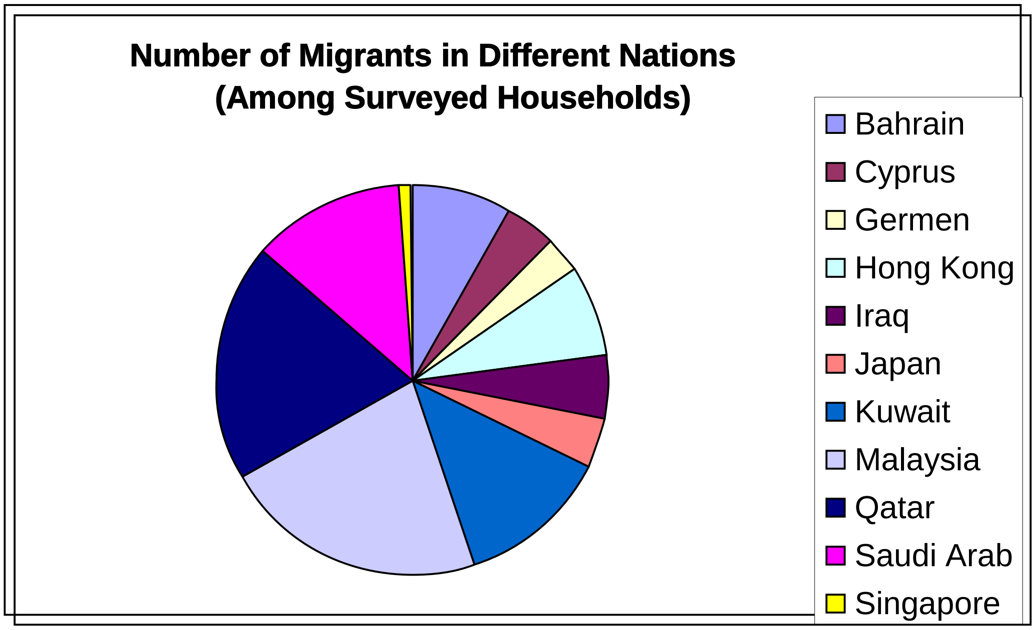
Number of Migrant in Different Nations

(Among Surveyed Households)

Nation	Number of Migrant
Bahrain	8
Cyprus	4
Germen	3
Hong Kong	7
Iraq	5
Japan	4
Kuwait	12
Malaysia	21
Qatar	19
Saudi Arab	12
Singapore	1
South Korea	4
Total	100

Source: Field Survey, 2009

Fig 5.4



Source: Based on the Table no. 5.5

The above Table and Figure illustrates that among the interviewed 100 relatives of the workers employed in the foreign country, 21 workers were reported to have been working in Malaysia followed by 19 in Qatar and 12 in Saudi Arab and Kuwait. Just a single person was reported to be migrated to Singapore and 4 to Cyprus, Japan and South Korea. Similarly just 3 persons were reported to have migrated to Germen and 5 persons to Iraq as job seekers. So this Table and Figure show that Malaysia, Qatar, Saudi Arab, Kuwait were the main destination of Nepalese migrants for foreign employment. These nations are developing nations and construction works are much more in those nations. So, there is high demand of labor in those nations and Nepalese migrants are able to get the opportunity of labor work. This may be one pull factor for labor migration of Nepal toward these nations.

5.2 Analysis of the Result obtained through statistical investigation

This study used the software STATA to obtain the result or to analyze the data. Complete results obtained through analysis in this paper have been presented in annex F. On the basis of that obtained result, this unit interpretation and analysis were made on the basis of the obtained result.

5.2.1 Interpretation of R^2:

Value of R^2 (coefficient of determination) is summary measure that tells how well the sample regression line fits the data. Value of R^2 of the models used in the study has found as follows:

Equation	Obs	Parms	RMSE	"R-sq"	chi2	P
ln PC_t	34	3	.0195496	0.9998	143001.94	0.0000
ln I_t	34	4	.0729177	0.9971	11811.62	0.0000
ln Y_t	34	5	.0104335	0.9999	568753.03	0.0000

The above result was obtained from the analysis of the data through STATA. The first behavioral equation was about the private consumption expenditure. In the equation there were altogether 34 observations and 3 parameters whose coefficients was estimated. The equation was found to have high R^2 which was 0.9998. The value indicates that 99.98% variation in the private consumption expenditure is explained by these three parameters namely nominal GDP, remittance and lag GDP.

Second behavioral equation in this study was about domestic investment expenditure. The equation had altogether 34 observations and 4 parameters whose coefficients have estimated. The equation was also found to have high R^2 which was 0.9971. The value of R^2 states that 99.71 % variation in domestic investment is explained by 4 parameters which were nominal GDP, remittances, commercial banks industrial lending rate and lag GDP.

The last equation used in the model was national income identity in which number of observations was 34 and number of parameters whose coefficients was estimated were 5. In this equation value of R^2 was found to be 0.9999. This high value of R^2 indicated that 99.99 percent variation in nominal GDP was explained by estimated 5 parameters namely domestic consumption expenditure, domestic investment expenditure, remittance, export and import.

5.2.2 Interpretation of coefficients:

There were altogether three equations in the model and different equations had different parameters whose coefficients ware estimated.

5.2.2.a Interpretation of the coefficient of first equation of the system:

In the model estimated first equations looks like:

$$\ln PC_t = 0.1311 + 1.0233 \ln y_t + 0.0303 \ln Rem_t - 0.0756 \ln y_{t-1}$$

Other information obtained through the analysis has been shown as

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
$\ln PC_t$						
$\ln Y_t$	1.023314	.0578259	17.70	0.000	.9099768	1.13665
$\ln Rem_t$	.0303613	.0067054	4.53	0.000	.017219	.0435035
$lag \ln Y_t$	-.0756787	.0597366	-1.27	0.205	-.1927602	.0414028
_cons	.1311432	.076359	1.72	0.086	-.0185178	.2808042

In the first equation, the private consumption expenditure was dependent variable and nominal GDP, lag GDP and remittance were three explanatory variables. Private consumption includes food, non food and services expenditure and consumption of non profit institutions. The result obtained through analysis showed that nominal GDP was highly significant to bring change in private consumption expenditure. The positive sign of coefficient confirmed that increase in GDP brings increase in private consumption expenditure. The coefficient indicated that 1 percent increase in GDP brought near about 1.023 percent increase in private consumption expenditure, other variables remaining the same. When there is increase in GDP there is chance of increase in per capita GDP and households will be able to increase their consumption level. These households will start to increase their food, non food and service expenditures. Again because of increase in GDP there will be increase in level of employment and per capita GDP will be enhanced and government has to increase its consumption expenditure as well to satisfy the increasing needs of citizens of the nation. These are some of the important reasons behind positive sign of coefficient of nominal GDP.

Another explanatory variable in the first equation was remittance. The variable was highly significant and positive sign of the coefficient said that there was positive relationship between remittance and private consumption expenditure. This means that increase in remittance brings increase in domestic consumption expenditure. The value of coefficient confirmed that 1 percent increase in remittance brought near about 0.03 percent increase in domestic consumption expenditure, other variables remaining the same. Therefore it can be seen that there is positive relationship between remittance and private consumption expenditure because when households earn income through remittance their capacity to spend upon food, non food and service purpose are certainly increased. These households build their capacity to make expenses upon education, medicine and so on. Again government institutions as well as non profit institutions may have to increase their expenditure to satisfy the needs of household who earn income through means of foreign employment or remittance. These are some reasons why there is a positive relationship established between remittance and domestic consumption expenditure. But the point to be considered is that out of 1 percent increase in remittance, 0.03 percent is spent upon consumption purpose. A common slogan; remittance income is finished upon consumption purpose (domestic as well as imported commodities) is somehow established through this result or fact obtained from analysis of the data. The result is highly valid in the sense that same type of results was obtained through key informant survey as well.

Last explanatory variable in the first equation was lag GDP. The variable was not found significant to bring change in private consumption expenditure. The negative sign of the coefficient said that there is negative relationship between the private consumption expenditure and lag GDP.

In this way in first equation among three explanatory variables two were significant to bring change in private consumption expenditure in the nation.

5.2.2.b Interpretation of the coefficient of second equation

In the model estimated second equations looks like:

$$\ln I_t = -4.266726 + 1.1192 \ln Y_t - 0.1644 \ln Rem_t + 0.0045 CBILR_t + 0.2194 \ln y_{t-1}$$

Other information obtained through the analysis has been shown as

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
$\ln I_t$						
$\ln Y_t$	1.119205	.2855014	3.92	0.000	.5596329	1.678778
$\ln Rem_t$	-.1644255	.0259371	-6.34	0.000	-.2152614	-.1135897
$CBILR_t$	.004565	.0057323	0.80	0.426	-.0066701	.0158001
Lag $\ln Y_t$	.2194412	.3012987	0.73	0.466	-.3710934	.8099758
_cons	-4.266726	.3595536	-11.87	0.000	-4.971438	-3.562014

In the second equation, domestic investment was dependent variable and nominal GDP, remittance, commercial banks industrial lending rate and lag GDP were independent variables. In this equation among four independent variables just two variables were significant to bring change in investment expenditure.

The analysis of the data made in this study showed that the nominal GDP was significant to bring change in domestic investment in Nepal. The coefficient indicates that 1 percent increase in GDP of the nation brings near about 1.119 percent increase in domestic investment in the nation, other things remaining the same.

No doubt there was positive correlation between GDP and domestic investment in the nation since both of them increased passing throughout the time and increment in income may enhance investment in the nation because when there is increase GDP, per capita income rises which brings increase in saving and the saving is invested in the production process. Again increase in GDP means increase in private consumption also. When consumption increases it becomes motivation for producers to produce more and there is increase in domestic investment in the nation.

Another explanatory variable in the second equation was remittance earned by foreign migrant workers in the nation. According to the result obtained through analysis in this study, remittance was highly significant to bring change in the domestic investment in Nepal. But the result is found so amazing since the sign of coefficient is found negative. Negative sign of the coefficient of the variable explained that increase in remittance was responsible to bring decrease in domestic investment in the nation. Value of the coefficient shows that 1 percent increment in remittance brings near about 0.164 percent decrease in domestic investment in average, other things remaining the same. In most of the documents, it was found to have explored that remittance is significant to bring increase in domestic investment in the nation although higher proportion of the income earned through remittance is finished in consumption expenditure (specially upon imported items and unproductive expenditure like in purchase of land and building). The argument has been found somehow challenged by this result. So, it is necessary to find the logic behind the obtained result.

As we know most of the migrants are unskilled and uneducated as well. One major push factor for labor migration from Nepal is deep poverty of the nation. To migrate toward foreign nation as migrant labor, they have to receive the loan. In village area generally the loan is taken from informal sector. When people demand more loan from informal sector, there is reduction in formal saving and reduction in investment also.

Again when migrants sent their income as remittance, it becomes easy money for those who receive the income. There is high chance of upward pressure in general level of price in the nation since private consumption expenditure rises and production does not increase accordingly. The situation leads to increase in inflation which reduces saving level and domestic investment decreases.

Similarly, remittance receiving families make high expenditure in luxurious imported commodities and they spent their income upon unproductive sector like purchase of land, real estate and costly ornaments. There is high demonstration effect in society and other people also (who don't receive remittance) start to make high expenditure upon these purposes. For that, income of people becomes insufficient and they demand loan from the formal financial institutions. From which financial intuitions make high lending towards these unproductive sector. Fund is diverted toward unproductive sector which brings reduction in domestic investment in the nation.

Third explanatory variable in the second equation was industrial lending rate of commercial banks which is used as proxy for cost of capital in this study. The analysis made in this study showed that this variable was not significant to bring change in domestic investment in the nation. But the positive sign of the coefficient was helpful to assess the positive relationship between the domestic investment and cost of capital in the nation. It is because if all other environments needed to enhance investment are suiTable, just the cost of capital is not the primary determinant of domestic investment in the nation. That means investment depends upon other various elements not only upon commercial banks' industrial lending rate. If there is appropriate environment for investment in the nation, domestic investment may increase even at high cost of capital or high interest rate also.

Last explanatory variable used in second equation is lag GDP. Lag GDP stands for production produced in the previous year. The variable was not significant to increase domestic investment in the nation but the coefficient has positive sign. So coefficient of this variable indicates that there is increase in domestic investment in the nation if GDP of previous year was high. When GDP of previous year was high, there was high saving which enhances present investment expenditure in the nation or there is high private consumption expenditure which also enhances the present investment level.

In this way among four explanatory variables used in this second equation remittance and GDP are significant to enhance domestic investment and cost of capital as well as lag GDP are not significant to enhance the domestic investment in the nation.

5.2.2.c Interpretation of the coefficient of third equation:

In the model estimated third equations looks like:

$$\ln Y_t = 0.4337 + 0.8703 \ln C_t + 0.1219 \ln I_t + 0.0067 \ln Rem_t + 0.0542 \ln X_t - 0.0606 \ln M_t$$

Other information obtained from the analysis has been shown as

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
ln Y_t						
ln C_t	.8703115	.0177589	49.01	0.000	.8355047	.9051183
ln I_t	.1219157	.017822	6.84	0.000	.0869853	.1568461
ln Rem_t	.0067182	.0040027	1.68	0.093	-.0011269	.0145633
ln X_t	.0542002	.0071356	7.60	0.000	.0402147	.0681858
Ln M_t	-.0606851	.0197081	-3.08	0.002	-.0993122	-.0220579
_cons	.4337908	.0695995	6.23	0.000	.2973783	.5702033

The third equation was related with national income identity. This equation was composed of five explanatory variables namely domestic consumption expenditure, domestic investment expenditure, remittance, export and import as well as dependent variable nominal GDP.

The first explanatory variable in the equation was domestic consumption expenditure. This variable was highly significant to bring change in GDP of the nation with positive sign. The positive value of the coefficient shows that 1 percent increase in domestic consumption expenditure brings near about 0.87 percent increase in GDP in average other variables remaining the same. No doubt because of increment in consumption expenditure, there is increase in productive activities as well as employment level in the nation. Increase in consumption level means there is increase in motivation for investors to make further investments in the nation. Because of these reasons there is multiplier effect of consumption expenditure to bring increase in the GDP of the nation.

Second explanatory variable in the third equation was domestic investment expenditure. The analysis of the data made in this study showed that domestic investment is significant to bring change in GDP of the nation. The coefficient had positive sign which indicates that increase in domestic investment brought increase in GDP. The positive value of coefficient indicated that 1 percent increment in investment expenditure brought 0.12 percent increase in GDP of the nation in average other variables remaining the same. Investment is the most important factor which brought increase in level of employment as well as level of income in the nation through various channels. When there is increase in investment level, consumption level increases which directly affects the GDP and there is further increase in level of investment. Deducing from this observation, it can be said that increase in investment has multiplier effect to enhance the GDP of the nation. These are some of the reasons why domestic investment expenditure has been found significant to bring positive change in the GDP of the nation. But a fact explored through this study is that in the case of Nepal, in comparison to investment expenditure, consumption expenditure is more significant to enhance the GDP of the nation.

Another explanatory variable used in the equation was remittance sent by migrant workers from foreign nation. One of the main objectives of the study was to assess the role of remittance to enhance the GDP of the nation. Positive impact of remittance upon GDP of the nation is most serious question raised by various literatures. The result obtained through analysis of the data revealed the fact that remittance was significant to bring increase in GDP of the nation since the variable was significant at below 10 percent level of significance with positive sign. The value of the coefficient indicates that 1 percent increase in remittance brought 0.006 percent increase in GDP of the nation in average other variables remaining the same. There are various causes behind such type of result obtained in this study. One of the main causes may be the econometric model used in this study. The study has used simultaneous equation system with double log model to assess the fact which is useful to analyze the mutually dependent variables. The analysis has shown that remittance is significant to enhance both domestic consumption expenditure as well as domestic investment expenditure in the nation both of which are again significant to enhance GDP of the nation. The positive effect of remittance upon domestic consumption is more although there is negative impact upon domestic investment. The increase in domestic consumption expenditure has multiplier effect to enhance the GDP. Because of these reasons the study has confirmed that remittance is one of the main contributors of GDP of the nation. The value of the coefficient is small. It is because inflow of remittance has increase highly only after 2001/02 and its inflow was very small prior to the date. So, remittance has started to show its positive effect upon GDP in recent years with small coefficient.

Another explanatory variable used in the last equation was export. Analysis made in this study shows that the variable export was also highly significant to bring change in GDP of the nation. The variable was also found highly significant. Positive sign of the variable confirmed that increase in export made by the nation brought increase in GDP of the nation. Coefficient of the variable was 0.542002. So, the value revealed the fact that 1 percent increase in export brought 0.54 percent increase in GDP of the nation in average other variables remaining the same. From the analysis it can be concluded that when there is increase in export, there is increase in production activities in the nation and high export is motivation for producers to produce even more unit of production. Again increase in export indicates that there is increase in employment opportunity in the nation which ultimately brings increase in domestic consumption expenditure and saving as well as domestic investment in the nation. Because of these reasons the variable export is significant to bring positive change in GDP of the nation. But according to the result obtained in this study it has been obtained that till the date export plays higher role to enhance GDP of Nepal in comparison of remittance inflow.

Last explanatory variable used in this last equation was import. The variable was also found significant to bring change in GDP of the nation. But the negative value of the coefficient was somehow helpful to show the negative relationship between GDP and import made by the nation. The value of coefficient of the variable shows 1 percent increase in import brings 0.060 percent decrease in GDP of the nation. The negative value of the coefficient reveals the fact that because of import made in the nation GDP is negatively affected. It is because there is import of consumable goods which are not used for production purpose. The result shows that machines tools and equipments have not been imported in the nation and there is outflow of national wealth in foreign nation. Which has reduces the capital formation in the nation and domestic investment has been reduced. From which ultimately GDP of the nation has been negatively affected.

CHAPTER SIX

SUMMERY, MAJOR FINDINGS AND RECOMMENDATIONS

6.1 Summary

Remittance has become one of the major sources of external financing in various LDCs including in Nepal. It has become one of the major contributors to minimize the problem of unemployment in Nepal since more than sixteen lakh Nepalese workers are working abroad formally, according to governmental publications. Not only number of workers working abroad has been increased, size of remittances sent by those migrant workers has also been increased in tremendous way. In recent years share of remittances in total foreign exchange earning has exceeded tourism income and merchandise export as well. Ratio of remittance to GDP has mounted up and has reached near about 20 percent. So, there is a general opinion in each and every arena of the society that Nepalese economy has been moving on and continuing only because of high flow of remittances in the nation is somehow valid.

Although various works have analyzed the impact of remittances and its macroeconomic effect, most of them have made just qualitative and theoretical explanation. Growth generating capacity of remittance and its positive impact upon GDP are most debaTable issues. These issues have left room to make this simple task.

In general the study has presented the impact of remittance upon some macroeconomic scenario of the nation but specifically the study has tried to examine the role of remittance upon domestic private consumption, domestic investment and thereby GDP of the nation. Being the macro level study, to complete the task the study has used the data obtained through secondary source which consists of various governmental publications published by government agencies like ministry of finance, CBS, Nepal Rastra Bank etc. For analytical purpose the paper has used the time series data during the period from 1974/75 to 2008/09.

This study has used so simple Keynesian types equations but with dynamic perspectives to analyze the fact. Main aim of the study is to assess the impact of remittance upon domestic private consumption, domestic investment and GDP of the nation. There is mutual relationship between domestic consumption and GDP and between domestic investment and GDP. Again all domestic consumption, domestic investment and GDP are affected by remittance. So, to assess the result and to analyze the fact, this study has used simultaneous equation system. The equations are transformed in to double log model. The analysis of the model has been made through 2SLS by using the software STATA to confirm the quantitative relationship between the used variables in the system of equations. This study has concluded that remittance is significant not only to increase domestic consumption expenditure and but also to enhance GDP in the nation. However, remittance has reduced the domestic investment in the nation since large portion of remittance is used upon the unproductive sector.

6.2 Major Findings:

On the basis of general discussion and quantitative analysis made in this study, some important findings have been obtained. These major findings have been listed down in following points:

6.2.1 Trend of Nepalese workers to migrate toward foreign nations as job seekers is increasing year by year. In the year 1994/95 number of workers going abroad as job seekers was just 2159 which number has reached up to 204533 in 2006/07. Up to mid March 2010, the total number persons issued permits for foreign employment have reached 1620370. Various pull and push factors are responsible for such a high trend of migration in the nation.

6.2.2 Main destination of Nepalese workers for foreign employment has been found to be Malaysia where 32.4% migrants (among total migrated persons) are working and second destination has been found to be Qatar where 28.71 % migrant workers are working. It may be because of high employment opportunities in these nations because of rapid development process.

6.2.3 It has been found that size of remittance inflow has been increasing in tremendous way in Nepal. The size was just 204.3 million Nepalese Rupees in the year 1974/75 and the Figure has been reached 231725.3 million Nepalese Rupees in the first eight month of 2009/10.

6.2.4 Not only the size of remittance inflow has increased in the nation but it has been found that its share to GDP has also increased. In the year 1990/91 ratio of remittance to GDP was just 0.46% and the Figure has gone up to 19.01 in the first eight month of the year 2009/10

6.2.5 From quantitative analysis made in this study, it has been found that nominal GDP is significant to bring increase in domestic consumption expenditure in the nation. The result obtained through key informant survey shows that average consumption expenditure of households is 1,60,100 Nepalese rupees yearly since average remittance receipt is 1,83,900 Nepalese rupees yearly. The result obtained in this study has shown that increment of 1 percent in GDP brings 1.023 percent increase in domestic private consumption expenditure.

6.2.6 From the analysis of the data obtained through key informant survey, it was found that when the level of education is higher, less proportion of remittance earned is spent on consumption purpose and the higher proportion is used in saving investment.

6.2.7 From analysis of data made in this study, it has been found that remittance inflow and domestic consumption expenditure have positive relationship. Quantitatively the study has found that 1 percent increase in remittance inflow is responsible to bring approximately 0.030 percent increases in domestic private consumption expenditure other things being the same.

6.2.8 Lag GDP has not found significant to bring change in domestic private consumption expenditure in the nation.

6.2.9 From the analysis of data made in this study it has been found that GDP is significant to bring positive change in domestic investment expenditure in Nepal. The result has shown that 1 percent increase in GDP brings near about 1.119 percent increase in domestic investment in the nation other things remaining the same.

6.2.10 General argument argued in different forums about productive investment of remittance has been somehow challenged by this study. Through the analysis of the data made in this study, it has been found that remittance inflow plays negative role to change domestic investment expenditure in the nation. The numerical result says that the 1 percent increase in remittance earning brings approximately 0.164 percent decrease in domestic investment expenditure other things being the same.

6.2.11 It has also been found that the cost of capital that is the industrial lending rate of commercial banks is not significant to affect domestic investment in the nation.

6.2.12 Another finding of the study is that lag GDP is not significant to increase domestic investment in the nation.

6.2.13 Domestic consumption expenditure has been found highly significant for bringing increase in GDP of Nepal. The result obtained in this study confirms that 1 percent increase in domestic consumption expenditure brings approximately 0.870 percent increase in GDP other things being the same.

6.2.14 Likewise, the study has found that 1 percent increase in domestic investment expenditure brings near about 0.121 percent increase in GDP other things remaining the same. Thus the result shows that domestic consumption expenditure plays greater role than domestic investment expenditure to enhance GDP of the nation in Nepal.

6.2.15 Remittance sent by Nepalese migrant workers also plays significant role in enhancing GDP of Nepal. It has been found that 1 percent increase in remittance inflow is responsible to bring near about 0.006 percent increase in GDP of the nation other things remaining the same.

6.2.16 This study finds that export also brings significant increment in GDP of Nepal. Result obtained in this study shows that 1 percent increase in export brings near about 0.054 percent increase in GDP of the nation in average, other things remaining the same.

6.2.17 Import also is to be found significant in bringing change in GDP of Nepal. It implies that Nepal makes expenditure to import nonproductive articles rather than productive articles like machine, tools or equipments. It can be said from the obtained result that 1 percent increase in import brings near about 0.060 percent decrease in GDP of the nation other things remaining the same.

6.3 Recommendations

The study has found that remittance is one of the important avenues of national economy not only to minimize problem of unemployment but also to minimize the level of poverty and to minimize the foreign exchange constraint. Nepalese economy will face serious economic downturn if there is reduction or stoppage in the amount of remittance flow in the nation. It will not be wise to be satisfied just through calculation and recording of remittance entered into the nation. Regularity, sustainability, continuity and channelization of remitted amount toward productive sector to boost up the national economy have emerged to be a must. On the basis of discussion made in this study, following recommendations are made:

- No doubt the number of workers working abroad is in increasing trend. But the main destinations of migrant workers are limited to countries like Malaysia, Qatar, Saudi Arabia, UAE, Kuwait, etc. Most of these nations are in process of development and they are demanding labor force from LDCs mainly for construction works and manual jobs. In the days to come, these nations may be able to be recognized as developed nations and Nepalese workers will not be able to get job opportunity. Again economic shocks which may take place in these nations may directly affect Nepalese economy as well since remittance sent by migrant workers will be badly affected. The experience of case of Libya started from 2011 February is to be taken as reference. So, government of Nepal has to explore new destinations for foreign migration and laborers are to be motivated to enter into new destinations. Government has to appoint government representative in those countries. This will help in minimizing the exploitation of Nepalese labor in foreign nations and bad impact of shock as well as reducing unemployment problem in the nation and bring in more foreign currency.
- Remittance earning through export of labor force is one of the main sources of foreign currency earning in most of the LDCs including China and India. Nepalese workers have to compete with labor of those nations in international market. Again there is prevalence of great economic recession through out the globe at present. Although global financial crisis started form September 2008 has not affected remittance earning of the nation till first eight

month of 2009/10, the crisis certainly brings some curtailment in earning of remittance in near future because labor importing countries have been making huge reduction in import of labor. The data published by NRB has shown that in the first six month of the fiscal year 2009/10, remittance has grown only by 12.6%. So, to cope with this great economic recession and to compete with labor of other labor exporting countries in international market, Nepal has to export laborer with some skill, efficiency and talency. So, various skill development training programs are to be launched through CTEVT to enhance the capability of exported labor. Government has to make strong monitoring to manpower companies since they are migrating unskilled labor by giving fake certificate of skill development trainings. This step will open up an avenue for easy access to employment and the socks in foreign nations may have little or no impact on these workers.

- This study has found that large portion of remittance is finished in consumption purpose because remittance may emerge as easy money for these recipients. High domestic consumption expenditure because of high remittance but low level of production may be one of the causes behind high rate of inflation in the nation. So, government has to formulate and implement policies to motivate remittance recipients to cut down the consumption and mobilization of remittance in investment. This will boost up economic growth of the nation thereby increasing more employment opportunity in the nation itself.
- Remittance may not be long term and sustained source of external financing since downturn in economy of host countries may badly affect economy of home country as well. So enhancement of domestic investment expenditure is to be made which has multiplier effect to boost up the national economy. In this study it has been found that remittance is significant to decrease the domestic investment expenditure. So, the remittance recipients are to be motivated to invest the earning made through remittance. For this, suiTable policies are to be formulated and special incentives are to be given for remittance recipients to make investment in cottage and small scale industries, micro enterprises, modernization of agriculture, small hydro electricity project, etc. For that government has to implement the policies like tax free for the income earned through investment of remittance in production process, high interest for those who make saving of their money earned through remittance in formal sector, soft loan for remittance earner when they want to make investment and their saving becomes insufficient to make investment etc. This will help to

discourage consumption; to enhance investment and to enhance the participation of private sector in economic development of the nation.

- Actual and authentic data of remittance which entered into the nation through informal channel is not available but it has estimated that larger portion of remittance enters in the nation through informal channel. So, to record the actual remittance data and to take suiTable policy measures to regulate the remittance, government has to give special attention to formal channel and incentives are to be given for remitters to remit through formal channel. For that government has to take the policy to reduce cost of transfer of remittance and its strong monitoring This will help to make systematic and authentic records of remittance entered into the nation.
- To regulate the foreign employment and remittance, government has to make the district wise record of migrant workers and their destination. This record will help to take special attention against the exploitation of migrants in host countries. Again this record will help to give special motivation to remittance earners to invest their earnings in their own locality. For that in local area government has to stimulate the micro credit programs to provide easy loan for remittance earners who want to make the investment in own locality. This will avail a chance for maximum utilization of production potentiality in the local area and to make the balanced regional development in the nation.
- One of the main causes to boost up in the investment level of neighboring country, India, is high level of investment made by Non residential Indians. So, Government of Nepal has to try to formulate suiTable policies to motivate saving and productive investment of remitted amount and discourage unnecessary consumption.
- Remittance will not be sustainable source of fund to make investment to develop the nation. Because whenever there is any shock in host country, at first foreign labors become victim, especially unskilled labor. When all migrants migrated in foreign nation return to their home country, it becomes serious threaten for national economy. So, from the date government has to formulate the policies to encourage returned migrants to be involved in self employed activities. For that government has to formulate the policies like Skill development program for those returned migrants with easy loan also.

Annex A

Definition of Remittance Given By IMF

Total remittances are constructed as the sum of three items in the IMF's Balance of Payment Statistics Yearbook (BOPSY): "Workers' Remittances," "Compensation of Employees," and "Migrant Transfers."

Workers' Remittances (part of current transfer in the current account) are current transfers made by migrants who are employed and resident in another economy. This typically includes those workers who move to an economy and stay, or are expected to stay, a year or longer.

Compensation of Employees (part of the income component of the current account) instead comprises wages, salaries, and other benefits (cash or in kind) earned by nonresident workers for work performed for residents of other countries. Such workers typically include border and seasonal workers, together with some other categories, e.g., local embassy staff.

Migrant Transfer (part of the capital account) includes financial items that arise from the migration (change of residence) of individuals from one economy to another.

Annex B

List of Remittance Companies visited for the purpose of key informant survey

Sn	Name of Remittance Company	Visited Date	Number of informants
1	International Money Express, Ghantaghar	2009 Dec. 5 & 6	20
2	Western Union Money Transfer, Ghantaghar	2009 Dec. 7 & 8	20
3	Nepal Money Remit, Lainchaur	2009 Dec. 10 & 11	20
4	Prabhu Money Transfer, Ghantaghar	2009 Dec. 12 & 13	20
5	Sewa Money Transfer, Kuleshwor	2009 Dec. 14 & 15	20

Annex C

Questionnaire used in key informant survey

Informations provided by informants remain fully confidential and the data has been collected for personal use. The information gained through this interview will not be published anywhere.

1.Description of Informant

Name:

Age:

Gender: Male ☐ Female ☐

Address:

Educational Qualification: Below SLC ☐ SLC ☐ +2 ☐

Bachelor ☐ Master ☐ Above ☐

2. How many members are in your family?

3. How many members from your family have been migrated for foreign employment?

4. In which nations they are and what is their occupation there?

5. How many times migrated members send money in a year?

6. How much amount they send at a time?

7. From which source they send Money?

   a. Bank or remittance company

   b. Friends, relatives and others

8. How do you divide received money in following headings?

   a. Daily needs goods like rice, pulse, vegeTables etc

b. Durable goods like TV, Computer, refrigerator etc

c. Health, education and training

d. Saving

e. Investment (in share, cottage industry and other)

f. Loan repayment

g. Others

9. Is the money earned through remittance is sufficient to make smooth operation of your family?

10. Is there any source of income of your family besides remittance?

11. If yes what they are?

Thank you very much for your kind information.

Annex D

Detail Information obtained through key informant survey

(Yearly in Nepalese rupees)

S.N.	Destination	Income earned	Consumption Expenditure	Saving and Investment	Loan repayment
1	Malaysia	2,40,000	1,90,000	20,000	30,000
2	Malaysia	1,50,000	1,50,000		
3	Qatar	2,40,000	1,50,000	40,000	50,000
4	Saudi Arab	1,80,000	1,80,000		
5	Bahrain	1,20,000	1,20,000		
6	Hong Kong	1,80,000	1,60,000	20,000	
7	Iraq	1,50,000	1,50,000		
8	Kuwait	1,80,000	1,50,000	30,000	
9	Malaysia	2,40,000	2,00,000	20,000	20,000
10	Qatar	1,60,000	1,60,000		
11	Qatar	2,10,000	1,80,000		30,000
12	Malaysia	2,50,000	1,70,000	30,000	
13	Iraq	1,60,000	1,60,000		
14	Saudi Arab	2,40,000	2,00,000	20,000	20,000
15	Cyprus	4,00,000	2,20,000	1,50,000	30,000
16	Saudi Arab	1,70,000	1,70,000		
17	Malaysia	2,10,000	1,50,000	40,000	20,000
18	Qatar	2,00,000	1,70,000		30,000
19	Kuwait	2,00,000	1,80,000	20,000	
20	Hong Kong	1,50,000	1,50,000		
21	Kuwait	1,80,000	1,70,000	10,000	
22	Kuwait	1,60,000	1,60,000		
23	Qatar	1,50,000	1,50,000		
24	Japan	3,00,000	2,00,000	1,00,000	
25	Malaysia	2,00,000	1,50,000	50,000	

26	Qatar	1,80,000	1,50,000		30,000
27	Kuwait	2,00,000	1,70,000	10,000	20,000
28	Saudi Arab	1,60,000	1,60,000		
29	Qatar	1,50,000	1,50,000		
30	Japan	2,40,000	2,00,000		40,000
31	Malaysia	1.20,000	1,20,000		
32	Cyprus	1,60,000	1,60,000		
33	Saudi Arab	1,50,000	1,50,000		
34	Saudi Arab	2,80,000	2,00,000	80,000	
35	Malaysia	1,50,000	1,50,000		
36	Hong Kong	2,50,000	1,70,000	30,000	50,000
37	Qatar	2,40,000	1,80,000	20,000	40,000
38	Kuwait	1,40,000	1,40,000		
39	Bahrain	1,80,000	1,80,000		
40	Saudi Arab	2,00,000	1,60,000	10,000	30,000
41	Malaysia	1,30,000	1,30,000		
42	Qatar	1,50,000	1,50,000		
43	Qatar	2,00,000	1,70,000		30,000
44	Malaysia	1,50,000	1,00,000		50,000
45	Saudi Arab	2,00,000	140,000	20,000	40,000
46	Germen	2,50,000	2,00,000		50,000
47	Bahrain	1,80,000	1,80,000		
48	Bahrain	2,00,000	1,40,000	20,000	40,000
49	Saudi Arab	2,50,000	1,60,000	50,000	40,000
50	Malaysia	1,40,000	1,40,000		
51	Malaysia	1,20,000	1,20,000		
52	Kuwait	2,00,000	2,00,000		
53	Qatar	1,20,000	1,20,000		
54	Hong kong	1,50,000	1,50,000		
55	Cyprus	1,30,000	1,30,000		

56	Germen	1,70,000	1,70,000		
57	Bahrain	1,40,000	1,40,000		
58	Malaysia	2,00,000	1,50,000		50,000
59	Malaysia	2,10,000	1,80,000		30,000
60	Bahrain	1,50,000	1,50,000		
61	Kuwait	1,20,000	1,20,000		
62	Qatar	2,00,000	1,70,000	30,000	
63	South Korea	2,40,000	1,80,000	10,000	50,000
64	Qatar	2,20,000	1,60,000	30,000	30,000
65	Kuwait	1,80,000	1,80,000		
66	Kuwait	2,00,000	140,000	20,000	40,000
67	Qatar	1,70,000	1,70,000		
68	Singapore	1,40,000	1,40,000		
69	Cyprus	1,50,000	1,50,000		
70	Qatar	1,80,000	1,70,000	10,000	
71	Malaysia	2,80,000	2,00,000	80,000	
72	Malaysia	1,80,000	1,60,000	20,000	
73	South Korea	1,70,000	1,70,000		
74	Saudi Arab	2,10,000	1,80,000		30,000
75	Iraq	1,20,000	1,20,000		
76	Hong Kong	1,80,000	1,80,000		
77	Germen	2,00,000	1,70,000	30,000	
78	Japan	1,30,000	1,30,000		
79	Japan	1,50,000	1,50,000		
80	Malaysia	1,80,000	1,80,000		
81	Bahrain	1,20,000	1,20,000		
82	South Korea	1,50,000	1,50,000		
83	Bahrain	1,30,000	1,30,000		
84	Kuwait	2,40,000	1,80,000	20,000	40,000
85	Qatar	1,50,000	1,00,000		50,000

86	Iraq	2,40,000	1,90,000	20,000	30,000
87	South Korea	1,50,000	1,50,000		
88	Hong Kong	2,00,000	2,00,000		
89	Malaysia	2,40,000	1,80,000	10,000	50,000
90	Malaysia	1,70,000	1,70,000		
91	Hong Kong	1,50,000	1,50,000		
92	Saudi Arab	1,20,000	1,20,000		
93	Kuwait	1,80,000	1,80,000		
94	Qatar	2,00,000	140,000	20,000	40,000
95	Malaysia	1,40,000	1,40,000		
96	Qatar	2,20,000	1,60,000	30,000	30,000
97	Qatar	1,60,000	1,60,000		
98	Saudi Arab	1,80,000	1,60,000	20,000	
99	Malaysia	1,80,000	1,80,000		
100	Iraq	2,10,000	1,80,000		30,000

Annex E

Complete Data Used for Computational Purpose

Year	GDP	Public Consumption	Private Consumption	Import	Export	Investment	Remittance	CBILR
1975	16571	1257	13652	2215	1475	2402	204.3	12
1976	17394	1294	14060	2466	1874	2632	231.3	13
1977	17280	1260	13689	2474	2037	2768	268.3	14
1978	19732	1471	15721	3053	2086	3507	219.4	14
1979	22215	1889	17741	3547	2618	3514	303.1	14
1980	23351	1565	19195	4374	2695	4270	357.3	14
1981	27307	1922	22411	5357	3523	4808	484.2	14
1982	30988	2638	25272	5828	3592	5314	427.1	14
1983	33761	3416	27458	7196	3455	6628	549.7	15.5
1984	39390	3644	31860	7661	4196	7351	611.1	17
1985	46587	4371	35977	9310	5372	10184	690.7	17
1986	55734	5065	44782	11218	6506	10133	809.1	17
1987	63864	5797	50746	13132	7555	12853	1292.6	15.67
1988	76906	6895	62407	16350	8717	14478	1608.4	15
1989	89270	8947	70173	19162	9897	16672	1628.6	15
1990	103416	8959	86314	21820	10887	17486	1747.9	15
1991	120370	11085	97771	27785	14226	25119	2128.3	14.42
1992	149487	11908	121372	39321	23909	32985	2316.5	12.88
1993	171474	14900	133402	47429	30948	43176	2994.3	14.54
1994	199272	15987	154065	62972	47548	48589	3469.1	14
1995	219175	20267	166443	75850	53084	56194	5063.6	11.33

1996	248913	23018	191469	88996	55405	65024	4283.6	9.46
1997	280513	24987	216364	105775	73853	70245	5595	7.67
1998	300845	28015	231392	101949	68659	74079	6987.8	8.5
1999	342036	30529	264944	101648	78150	72812	10314.6	8.13
2000	379488	33964	287947	123055	88360	82137	12662.3	8
2001	441519	35785	354232	146757	99610	84751	47216.1	8
2002	459443	38586	377257	130912	81492	89889	47536.3	11
2003	492231	42652	407438	140522	77280	98073	54203.3	10.5
2004	536749	46397	427288	158151	89544	109181	58587.6	11.3
2005	589412	52453	468849	173754	85958	117539	65541.2	11
2006	654084	56794	538533	204828	87952	135532	97688.5	10.8
2007	727827	66949	589426	230893	93567	153337	100145	10.7
2008	815663	80663	654806	271291	104207	178446	142683	10
2009	991316	106503	788515	342536	122737	211039	209699	10.5

Annex F

Complete Result Obtained Through Analysis

```
  ___  ____  ____  ____  ____ tm
 /__    /   ____/   /   ____/
___/   /   /___/   /   /___/   10.0   Copyright 1984-2007
  Statistics/Data Analysis            StataCorp
                                      4905 Lakeway Drive
     Special Edition                  College Station, Texas 77845 USA
                                      800-STATA-PC        http://www.stata.com
                                      979-696-4600        stata@stata.com
                                      979-696-4601 (fax)

Unlimited-user Stata for Windows (network) perpetual license:
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                       OPMCM

Notes:
      1.  (/m# option or -set memory-) 10.00 MB allocated to data
      2.  (/v# option or -set maxvar-) 5000 maximum variables

. insheet using d:/bristol/tsdata1.txt
(9 vars, 36 obs)
. gen lagpvtcons =  privateconsumption[_n-1]
(1 missing value generated)
. gen laginv =  investment[_n-1]
(1 missing value generated)
. gen laggdp = gdp[_n-1]
(1 missing value generated)
. gen loggdp = log(gdp)
. gen logpvtcons = log( privateconsumption)
. gen loginv = log(investment)
. gen logimp = log(import)
. gen logexp = log(export)
. gen logremit = log(remittance)
. gen loglagpvtcons = log(lagpvtcons)
(1 missing value generated)
. gen loglaginv = log(laginv)
(1 missing value generated)
. gen consumption =  publicconsumption + privateconsumption
. gen logcons = log(consumption)
. gen laglogpvtcons = logpvtcons[_n-1]
(1 missing value generated)
. gen lagloginv = loginv[_n-1]
(1 missing value generated)
. gen lagloggdp = loggdp[_n-1]
(1 missing value generated)

. sureg (logpvtcons = loggdp logremit lagloggdp) (loginv = loggdp logremit cbilr
lagloggdp) (loggdp = logcons loginv logremit logexp log
> imp)
```

Seemingly unrelated regression

Equation	Obs	Parms	RMSE	"R-sq"	chi2	P
logpvtcons	34	3	.0195496	0.9998	143001.94	0.0000
loginv	34	4	.0729177	0.9971	11811.62	0.0000
loggdp	34	5	.0104335	0.9999	568753.03	0.0000

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logpvtcons						
loggdp	1.023314	.0578259	17.70	0.000	.9099768	1.13665
logremit	.0303613	.0067054	4.53	0.000	.017219	.0435035
lagloggdp	-.0756787	.0597366	-1.27	0.205	-.1927602	.0414028
_cons	.1311432	.076359	1.72	0.086	-.0185178	.2808042
loginv						
loggdp	1.119205	.2855014	3.92	0.000	.5596329	1.678778
logremit	-.1644255	.0259371	-6.34	0.000	-.2152614	-.1135897
cbilr	.004565	.0057323	0.80	0.426	-.0066701	.0158001
lagloggdp	.2194412	.3012987	0.73	0.466	-.3710934	.8099758
_cons	-4.266726	.3595536	-11.87	0.000	-4.971438	-3.562014
loggdp						
logcons	.8703115	.0177589	49.01	0.000	.8355047	.9051183
loginv	.1219157	.017822	6.84	0.000	.0869853	.1568461
logremit	.0067182	.0040027	1.68	0.093	-.0011269	.0145633
logexp	.0542002	.0071356	7.60	0.000	.0402147	.0681858
logimp	-.0606851	.0197081	-3.08	0.002	-.0993122	-.0220579
_cons	.4337908	.0695995	6.23	0.000	.2973783	.5702033

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