

# CHAPTER I

## INTRODUCTION

### 1.1 Background to the Study

Labor migration is regarded as one of the important factor to influence the national economy. Most of the economists argue that the labor migration has significance impact on national output. Promulgation of constitution from Constitutional Assembly in 2015 indicates the ending of political transition in Nepal and open the door for spend the nation's energy on economic development. In such a context, the labor migration might be the hot issue for country for years to come. Therefore, the study on labor migration, in Nepalese economics sector, has been important. In literature of Nepalese economics sector, there have been pretty much study in the structure and pattern of labor migration but there has not been any quantitative studies on the impact of labor migration on economic growth.

Labour migration or remittance has been seen remarkable on the GDP and GNP in both real and nominal term in Nepal (Shrivastav and Chaudhary, 2007) but, in other hand, 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. Economist argued that most of the remittances have been used for consumption purpose; it has a negative impact on growth of GDP in Nepal (Sharma, 2006). However, 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). Labour migration has played momentous role in poverty reduction in Nepal from 42 percent to 21.6 percent in past decades (MoF, 2015/16).

The study about impact or role of remittance upon national economy, especially in underdeveloped economies, is the emergent phenomenon though the essence of foreign saving was discussed in classical era as well. The macroeconomic effect of labour

migration 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).

Labour migration has been considered one of the major components of GDP of Nepal since 1990s. It has significantly higher and has positive impact to reduce problem of unemployment and poverty in the nation. In order to study about the Nepalese history of labour migration, Nepalese people started foreign employment by traveling to Lahore in early 19<sup>th</sup> century joining the Sikh ruler Ranjit Singh. Foreign migration started from *Sugauli* Treaty of 1814 A.D. Nepalese economy started to receive remittance formally since Nepal's brave soldiers admitted to Britain Army.

The Gorkha soldiers have played an important role in the country's economy. An approximately one lakh fifteen thousand ex-servicemen and other Indian Government pensioners reside in Nepal(Pathak, 2005).The cash flow derived from annual pensions, remittances to families, or monies taken home in a lump sum by discharged veterans or by service personnel on leave have represented a major source of the country's foreign exchange. Even though, the Government of Nepal introduced Foreign Employment Act in 2042 B.S. (1985 A.D) to send its surplus manpower abroad for the employment, in reality the outflow of the Nepalese workers from the country in considerable number started after 1990. The pace of the foreign employment has been increasing dramatically after 1996 and the consequent shrinking of economic opportunities back home compelled Nepalese youth to look for alternatives elsewhere.

Nowdays, foreign employment has become the most important sector for the sustaining of the country's economy. On an average daily 1500 Nepalese youths leave country for employment overseas (MoF, 2016/17). Massive unemployment inside the country is the main reason behind this upsurge in venturing out to distant lands. Among the total population of about 23.1 million, 47 percent are underemployed(Bhanubhakta 2014). Annually, about 300,000 to 350,000 new Nepalese labors enter in the market. Out of these new entrants, 30 to 40 thousand find jobs within the country; about 100,000 go abroad and the rest remain in the country without a job (Bhanubhakta 2014).

Although officially, Nepal has opened 108 countries for Nepalese workers till 2017, there is an half a million to 700,000 mostly unskilled and semi-skilled Nepalese labors working in the Arabian Gulf (MoF, 2016/17). Although, they have now started going in large numbers to other regions as well, the Gulf region has more Nepalese workers than anywhere else in the world. Despite this link, Nepal's relations with Gulf countries have been an oft-neglected aspect of Nepal's international relations exercise (Pandey, 2005).

Bilateral labor agreements have been signed with major labor destination countries, namely Qatar, United Arab Emirates, Bahrain, Japan, Israel and South Korea; and decision of Free Visa Free Ticket privilege for foreign employment has been executed (Economic Survey, 2015/16). Unexpectedly increasing in the labour migration shifted the agricultural based economy towards remittance based economy. Major concentration of Nepali migrant workers is in Gulf States since the beginning but the dynamics has been changed since the past few years even though the number of people going the Gulf States is still significant. Labor migration for work has been increased especially after the origination of armed conflict in Nepal. Some study shows meaningful use of remittance in micro level (household level) of the economy. The presence of remittance has increased informal lending practices also. Private bank and financial institutions are mushrooming with the flow of remittance in Nepal.

As the strategic dimension, foreign employment expands and diversifies the job markets, develops skilled human resources, uses migration as vehicle for acquiring new skills and know-how, and strengthens the economic diplomacy. A decent employment in the foreign job market calls for ensuring the rights of migrant workers, advancement in job, social protection and worker-friendly environment, safe return and reintegration. And in its developmental dimension, it reduces the consequences of unemployment, generates greater foreign exchange earnings through remittances, increases the rate of savings and increases the social returns on investments in human resource development. In social dimension, it is more concerned with ensuring the decent employment and healthy social well being.

The realities of foreign employment are worth to assess here, very little have been talked about the cost of foreign employment within the framework of national economy despite heavy burden of migration costs both in terms of social economic and psychological costs. In reality, foreign employment is associated with hassles, abuses and exploitation. It is almost trapped into the nexus of migration and human trafficking. Human trafficking and smuggling crime networks are quite effective in comparison to the legal regime of the countries using the opportunities of migration. The cases of social disorders and family breakdowns have been significant while appraising the impact of foreign employment. Reflections of excessive economic and social dependencies towards foreign employment have been experienced due to ever increasing willingness among the youths to enter into foreign job markets beyond the knowledge-based and skill-based capacity. Most of the labour receiving markets desire to use unskilled workers from the developing world due to luring to cutting down the labour costs to be competitive in the markets of goods and services. Too little is known about the remittance behavior of the highly skilled migrant workers than that of semi-skilled and unskilled.

Foreign employment has not been placed as integral component of national economy, neither treated as national priority or any substantial mainstreaming efforts. No move has been forwarded towards a gender-sensitive safe migration policy with a rights based approach. The pitiable reality is that there is no clarity in the systems of foreign employment practiced so far whether it is state-regulated or state-managed, state-monopoly or privatized. As the consequence, there is no efficient, appropriate, adequate and effective policy and institution for fostering safe migration and promoting foreign employment in the interest of national development (Pathak, 2005).

## **1.2 Statement of the Problem**

The labor migration has been regarded as one of the important factor to influence the economy. Most of the economists argue that the labor migration has significance impact on national output. Promulgation of constitution from Constitutional Assembly in 2015 indicates the ending of political transition in Nepal and open the door for spend the nation's energy on economic development. In such a context, the labor migration might

be the hot issue for country for years to come. Therefore, the study on labor migration, in Nepalese economics sector, has been important. In literature of Nepalese economics sector, there have been pretty much study in the structure and pattern of labor migration but there has not been any quantitative studies on the impact of labor migration on economic growth.

The Eighth Development Plan (1992 – 1997) was a major turning point and was the first government move towards the uplift of the foreign employment for Nepalese going abroad for employment. Manpower agencies started providing the service as a facilitator helping Nepalese people going in search of employment. Manpower agencies then started mushrooming up and today they are situated in every nook and corner of the city. Many fraudulent cases have emerged as a result of manpower agencies indulging themselves into wrong practices. This has posed a threat to the currently boosting foreign employment industry which would ultimately hamper the inward remittance business flourishing in Nepal.

Remittance has played momentous role in poverty reduction in Nepal from 42 percent to 21.6 percent in past decades (MoF, 2015/16). 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 been seen remarkable on the GDP and GNP in both real and nominal term in Nepal (Shrivastav and Chaudhary, 2007) but, in other hand, economist argued that most of the remittances have been used for consumption purpose, it has a negative impact on growth of GDP in Nepal (Sharma, 2006). 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. In such a background the research question of the study are as bellow.

- a. What is the trend of labor migration and remittance in Nepal?
- b. Is there any relationship between the labor migration and economic growth in Nepal?
- c. What is the impact of labor migration on GDP in Nepal?
- d. Is there any casual relationship between labor migration and economic growth in Nepal?

### **1.3 Objectives of the Study**

The general objectives of the study will be to analyze “Impact of Labor Migration on Economic Growth in Nepal”. However, the specific objectives will be as given below.

- a. To examine the trend and relationship between labor migration and economic growth.
- b. To find out the impact of labor migration on GDP.
- c. To check the casual relationship between labor migration and economic growth.

### **1.4 Hypothesis of the Study**

The hypothesis of the study is as below:

Null Hypothesis ( $H_0$ ): There is no significant relationship between the labor migration and economic growth.

Alternative Hypothesis ( $H_1$ ): There is significant relationship between the labor migration and economic growth.

### **1.5 Significance of the Study**

Labor migration 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 level and domestic consumption level of the nation.

After the promulgation of constitution from Constitutional Assembly in 2015, normally it is considered the ending of political transition in the country. And it also opens the door to spend the nation’s energy on economic development. In such a context, the labor migration and its efficiency will be the hot issue for years to come for nation. Therefore, the study on labor migration has been important. In literature, there have been pretty

much study in the structure and pattern of labor migration but there has not been any quantitative studies on the impact of labor migration on economic growth in Nepal.

Labor migration has been raised as an important economic influence factor and, if well-managed, it could put an economy on a long-term sustainable growth and development trajectory. Therefore, the study on labor migration and its relation with national income will be helpful to give some important sight to policymaker, researcher, academician, students, and other stakeholders.

### **1.6 Limitations of the Study**

This research explains and analyzes the subject matter with the help of published data, therefore as a conclusion oriented research, it doesn't concern with fundamental and decision oriented research. Considering the above matter, following are the limitations of the research:

- a) The core objective of this study is to study on labor migration. There are different issues under labor migration. However this study is focused on nature and trend of labor migration, its relationship with and impact on real GDP.
- b) There are so many things to determine the impact of labor migration like gross national income, per capita income etc. The GNI, PCI includes net foreign earnings, but my focus is on impact of labor migration to boost national output. So I took GDP instead of others.
- c) Even though, the study has focus on labor migration, it is unable to undertake the study by separating the total labor migration into skilled and unskilled number. That might be more significance result if the study has conduct by separating total labor migration into skilled and unskilled.
- d) It may be better to study on the determinants of labor migration or efficiency of labor migration in Nepal rather its impact on economic growth.
- e) This study only checks the causal relation between labor migration and economic growth. It might be so better and reasonable if this study checks the causality

relation between the labor migration and other economic variables such as money supply, inflation, foreign assistance and others.

## **1.7 Organization of the Study**

The study is divided into five chapters which are as follows:

The first chapter is introduction. It deals with backgrounds of the study, Statement of the problem, objectives of the study, significance of the study, limitation of the study and finally organization of the study.

This chapter second is devoted to the brief review of literature available. Review from published books, journals (articles), websites and research gap would be included in this chapter.

The unit three present methodology used in the study. It consists of conceptual framework, research design, nature and sources of data, specification of tools and methods of data analysis, model specification, and variablespecification.

The fourth chapter is presentation and analysis of data. It contain trend and structure of labor migration and GDP, trend of ration of remittance to labor migration, trend of real GDP to labor migration, analyze the long run and short run relationship between labor migration and economic growth in Nepal, causality test, impact of labor migration on real GDP in Nepal.

The chapter five is for major findings, summary, conclusion and recommendations. Bibliography and appendices are incorporated at the end of the study.



## **CHAPTER II**

### **REVIEW OF LITERATURE**

Various studies have been done in the area of labour migration. This study tried to analysis the growing unemployment problem in various countries, craze of people going abroad in search of employment and the impact of inward remittances entering inside the country of origin. Various studies, surveys and researches have been made to assess the impact of labor migration upon economic growth and determinants of labor migration in Nepal. Most of the researches have not shown unique outcome. This means that different studies or papers have different findings about labor migration and its impact. On the basis of the review of the literature, a conceptual framework will have been developed and on the basis of the same, proceeding will have been made.

#### **2.1 Theoretical Review**

Various researches have been conducted internationally on the issue of international labour migration and remittance economy but in the Nepalese context, it is found that very few researches/studies have been conducted to analyze the economic impact that the inward remittance might have due to the international labour migration. Despite of those lacking, this study tries to identify the features, characteristics, levels and trends of the Nepalese international labour migration on one hand whereas on the other hand it tries to explore the impact that the inward remittance sent by these labours have on the overall economy of the country.

With the increase in the number of workers, the inflow of remittances has also taken an upswing. Moreover, because of the policy steps taken for enhancing the inflow of remittances to the country through the official mechanism the share of remittances coming through the official channel has gone up. The mounting remittances have led to a surplus in the current account, thereby strengthening the overall balance of payments position. Despite of such a large volume of inward remittances soaring inside the country as a result 1of booming international labour migration from Nepal, there still remains some questions unanswered.

A widely held view is that rural-to-urban migration raises food prices and increases urban revolutionary potential; underemployed, unemployed, and low-income urban laborers whose absolute or relative deprivation and frustration might be converted into political action threaten the stable political order that is so crucial for smooth production and continued profit-taking. Governments are impatient, and researchers are often called upon to produce virtually unanimous prescriptions designed to contain the "drift of rural migrants into the large urban centers," for action-prone governments to act upon (United Nations, 1979).

If the country receiving immigrants is a large one, the increase in output of labor-intensive goods spurred by immigration will reduce the world prices of those goods. This may reduce the wage, even under conditions where factor price equalization would hold for a small country. Any changes in wages of native groups will be accompanied by changes in native employment or hours worked. In the example of unskilled immigration to a closed economy, although total employment of unskilled workers (including immigrants) will increase, the fall in the unskilled wage will cause some natives to leave the labor force or reduce their hours, and the employment rate (or labor force participation rate) of natives may fall. Conversely, the employment rate of any group whose wage rises as a result of immigration is likely to increase.

Many rural-to-urban migrants rationally, although involuntarily, join the ranks of the urban unemployed since there are fewer high-paying formal sector jobs than rural laborers who migrate in response to their creation (Todaro, 1979, 1980a). Yet, drawing on their own savings or on familial or similar support, migrants may willingly go through a prolonged period of urban unemployment as an optimal strategy of investment in search of high-paying jobs, particularly when free-entry informal sector employment is available at a competitively determined market-clearing wage. There are thus two labor market equilibrium conditions. The first is the usual intersectional one. To specify the second, assume for simplicity that migration decisions are based on a two-period planning horizon, that is, all future periods collapse into the second planning period. When formal sector employment cannot be secured in the first period, two competing strategies are feasible: (a) accept informal sector employment in the first period, and in the second

period move with probability  $p$  into a higher paying urban job or pursue (with the complementary probability) informal sector employment; (b) reject informal sector employment and remain unemployed, but invest in information and engage in intensive formal sector job searching to enhance the probability of being employed in that sector in the second planning period from  $p$  to  $q > p$ . Alternatively, take up, with the complementary probability, an informal sector job. At equilibrium, the expected return discounted to the present of adopting each of these two strategies is the same. As long as  $q$  is larger than  $p$ , urban unemployment could well make sense as a deliberate post-migration choice.

Over the past three decades, policies in the area of labour migration have developed along four major paths: growing restrictiveness and selectiveness in the admission of labour migrants in developed countries; a significant increase in the number of countries, particularly developing countries that have become host to foreign workers; the rising recognition that the rights of migrant workers and their families need to be protected and; the adoption of regional agreements on the free movements of persons (UN, 2002).

Globalization of integration of regional economies has added impetus to the growing mobility of workers across abroad. In Asia the movement of labour is becoming an important and enduring phenomenon associated with economic growth and development since it eases skill imbalances in labour markets and provide broad cultural and economic benefits for sending and receiving countries. Migrants' remittances, for example, are now a valuable and stable source of foreign exchange to many origin countries. At the global level, the importance of migration to development is now reflected in the fact that it has become the part of agenda of multilateral institutions, as for example in the trade negotiations within the framework of General Agreement of Trade and Services (GATS).

Immigration will lower the wage more if immigrants are prepared to work for less than natives, as seems plausible in the case of illegal immigrants, for example. An influx of such immigrants not only shifts labor supply, but makes it more elastic. In the most commonly employed open economy model, the Heckscher-Ohlin model, the results are quite different. If technology is assumed to be the same across countries, trade will be

driven by factor endowments, and factor price equalization occurs if countries' factor endowments are not too different. In this situation, immigration will cause production of the more labor-intensive good to increase, but factor prices will remain unchanged. In an open economy, the adjustment may be thought of as occurring through the labor embodied in traded goods: immigration will cause the country to compensate by exporting more (or importing less) labor as embodied in goods. Notice that if factor price equalization obtains, there is no (economic) reason for migration to occur between countries. An explanation for migration from poor to rich countries in the context of this model could be that rich countries have tariffs on goods that make intensive use of unskilled labor, in an attempt to raise the domestic wage of unskilled labor above the world level. If labor is mobile, however, immigration of unskilled labor from abroad will occur until the wage of such labor returns to the world level (by which point the country will be specialized in the production of the good that makes intensive use of unskilled labor). Once the country is specialized, the impact of immigration will have effects similar to those of the closed economy case. If immigration is restricted—as it is in reality—the wage could remain above the world level for some time. Notice, however, that if capital is internationally mobile, factor price equalization should occur even if tariffs and restrictions on labor mobility are present.

Theoretical predictions of the impact of immigration on the wages of natives depend upon the model used. The most important modeling decisions are whether the host economy is open or closed to international trade and the degree of substitutability between immigrants and natives. In a closed economy model, immigrants will lower the price of factors with which they are perfect substitutes, have an ambiguous effect on the price of factors with which they are imperfect substitutes and raise the price of factors with which they are complements. For example, consider an economy where production takes place using capital and skilled labor, which are complementary and unskilled labor, which is a substitute for the other two factors. If immigration of unskilled workers occurs, the wage of unskilled workers will fall, while the effect on the return to capital and the skilled wage will be ambiguous. The fall in the unskilled wage will induce employers to substitute away from capital and skilled labor to unskilled labor. However, since the greater supply of unskilled labor means that optimal output is now higher, this scale

effect will induce employers to use more of all inputs. If the immigrants are skilled, they will lower the skilled wage, causing an ambiguous effect on the unskilled wage, due once again to competing substitution and scale effects. However, the fall in the skilled wage and the rise in skilled employment will lead to increased demand for the complementary factor, capital, and hence an increase in the return to capital.

Economic growth and level of economic development depends on macroeconomic 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.

Migrant remittances increase domestic savings as well as improve financial intermediation (Giuliano and Ruiz-Arranz 2005). Evidence from Philippines, Mexico and other countries suggests that remittances increase the accumulation of assets in farm equipment, promote self-employment and increase small business investments in migrant-sending areas (Taylor 1992, Taylor, Wyatt 1996, Lucas 1987, Adams 2006a, Woodruff & Zenteno 2001, and Yang 2008). Factoring the remittance inflows correctly into macroeconomic analysis is also likely to improve the credit rating and external debt-sustainability of the remittance-receiving country (Abdih et al. 2009, Avendano et al. 2009, IMF 2010, Ratha et al. 2010). Because they are a large and stable source of foreign currency, remittances are likely to curtail investor panic and prevent sudden current account reversals during a crisis (Bugamelli & Paterno 2006, Gupta et al. 2007). Furthermore, future flows of remittances can be used as collateral by governments and private sector entities in developing countries to raise financing in international

capital market (Ketkar and Ratha 2005, 2009). These innovative financing mechanisms can be used to raise funds for development projects such as low-income housing, or water supply.

Migration contributes to human capital formation. There is a growing body of evidence suggesting that the income from remittances is disproportionately spent on education and health rather than everyday consumption (Adams 2005, Adams et al. 2008, World Bank 2006b, p. 126, Valero-Gil 2008; see Nagarajan 2009 for South Africa). Once in school, the children of migrants may be more likely to finish their education, as the increased income from remittances provides additional financial resources and better prospects associated with migration influence social norms and incentives towards gaining more education (Cox-Edwards and Ureta 2003 for El Salvador, Yang 2008 for Philippines, UNDP 2009).<sup>viii</sup> Evidence from rural Pakistan suggests that temporary migration is associated with higher school enrollment, especially for girls (Mansuri, 2006). Furthermore, migration has been observed to increase health knowledge in addition to the direct effect on wealth, which has led to lower rates of infant mortality and higher birth weights in Mexico (Hildebrandt & McKenzie 2005). Visiting and returning migrants may also bring back health-improving practices such as drinking safe water and better sanitation (UNDP 2009). On the other hand, migration as such might also present a threat to migrant health as certain jobs expose migrants to occupational hazards, such as tuberculosis, pneumoconiosis and workplace injury by mine workers (Kahn et al. 2003). Increased mobility of workers has also contributed to a rapid spread of communicable diseases such as HIV (Decosas et al. 1995; Lurie 2000; Lurie et al. 2000; Brummer 2002). For instance, Kane et al. (1993) find that 27 percent of the male Senegalese migrants were HIV positive compared to 1 percent for non-migrants males from the same area. Sexually transmitted infections are also more likely to spread among migrants themselves as well as their permanent partners residing in the sending communities (Kahn et al. 2003).

Evidence on the relationship between remittance inflows and economic growth in migrantsending countries remains inconclusive. Empirical studies have found little evidence in support of a positive impact of remittances on economic growth (IMF 2005,

World Bank 2006b; Spatafora 2005; Barajas et al. 2009; Singh et al. 2009). In general, studies focusing on the labour supply response of the remittance-recipient households tend to find that remittances lower work efforts and hence reduce long-term growth (Azam & Gubert 2006; Chami et al. 2003). Other studies find that remittances improve financial access and financial development and therefore stimulate growth (Toxopeus & Lensik 2007, Giuliano & Ruiz-Arranz 2005, Gupta et al. 2007). Furthermore, the merit of remittance flows might lie more on increasing the level of income for poor rather than the growth of the economy as a whole (Jongwanich 2007). Empirical evidence from Latin America and Cape Verde suggests that remittances can lead to exchange rate appreciation, which can reduce the competitiveness of the tradable sector, the so-called Dutch Disease (Bourdet & Falck 2006, Fajnzylber & Lopez 2007, Gupta et al. 2007). However, remittances are less likely than natural resource windfalls to result in persistent exchange rate misalignment, while the exchange rate implications of relatively stable remittance flows are likely to be easier to manage than a comparatively abrupt shock due to a natural resource windfall (Ratha 2003, Rajan and Subramanian 2005, IMF 2005). In general, the inconclusive results on the impact of remittances and growth are largely due to the difficulty of separating the cause from the effect: if remittances react counter-cyclically to growth, then the negative relationship between the two is a result of reverse causality running from growth to remittances, not vice versa.

## **2.2 Empirical Review**

### **2.2.1 International Context**

Altonji and Card (1991) use the stock of immigrants in 1970 as an instrument for the change in the fraction of foreign-born individuals in the population from 1970 to 1980. Their logic is that in this period, new immigrants tended to move to places where similar immigrants already resided (Bartel, 1989) and that this initial concentration of immigrants does not directly influence the outcome variables. They try to explain changes in wages and unemployment across SMSAs from 1970 to 1980, controlling for changes in average age and education in each metropolitan area. The analysis focuses on the less-skilled native groups one would expect to be most negatively affected by

immigration: white male high school dropouts, and black and white females and black males with high school education or less. The results suggest that immigrants had an unexpected effect on unemployment in the census week. They also had a negative effect on the fraction of the population who worked in the previous year and on weekly earnings in the previous year. No significant impact was found on the labor force participation rate or the employment to population ratio in the census week or the number of weeks worked in the previous year. The magnitudes of the coefficients imply that a 1 percentage point increase in the percent of foreign-born in a city reduces the unemployment rate by 0.23 percentage points; reduces the number who worked in the previous year by 0.25 percentage points; and reduces wages of unskilled natives by 1.2 percent, at most.

Londe and Topel (1991) examine levels and changes in immigrant density across U.S. cities (SMSAs), but analyze individual-level census data on males from 1970 and 1980, and allow different waves of immigrants to have different effects. The use of individual-level data reduces the simultaneity problem, because it is possible to control for many of the characteristics that might cause people to move to growing areas. It also allows city-specific effects to be controlled for, even in an indifference cross-section. However, the problem remains that flows of goods or people may diffuse the effects of immigration and render them imperceptible to cross-section analysis.

Goldin (1994) found that wage results among the most negative by studies with an important cross-section dimension. The instrumental variables technique should eliminate positive bias caused by immigrants moving to areas with growing wages, as well as bias toward zero due to factor price equalization across the country. This may explain why Altonji and Card arrive at a more negative figure than most papers that do not use instrumental variables. To compare their results to those of other studies, it is necessary to convert the wage coefficient into inelasticity: for a city whose foreign population share increases from 7 to 8 percent, the wage is predicted to fall by 1.2 percent. Hence, in their results, a 10 percent increase in foreign share implies a 0.86 percent fall in wages (weekly earnings).



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.

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.

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.

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 labor migration through 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; It 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.

### **2.2.2 Nepalese Context**

Kansakar (1982) on behalf of CEDA conducted a study on the use of remittance and found that out of the total remit money, a beneficiary household member would spend 50 percent on household management, 16.2 percent on agricultural activities, 5.3 percent deposit in banks, 8 percent invest in running business and 4.5 percent on constructing houses. The study on remittance of NRB shows that some 80 percent remit money has been spent on house construction, buying land, household expenses, purchasing ornaments, educating children, etc. by the beneficiary households. This means some 20 percent of the remittances have been found to be used for productive purpose i.e. running business, enterprises and intensive cultivation in farm lands indicating Nepal still lags on the productive and meaningful use of remittance money at micro level. The presence of remittance has increased informal lending practices. Private bank and financial institutions are mushrooming with the flow of remittance in Nepal.

Additionally, study concluded that there is a heavy concentration of investment in real states. Business investments are undertaken mostly in trade, transport and other services, and investment in manufacturing and agriculture is a relatively rare phenomenon in the case of Nepal. Migrating trend of Nepalese youths towards India and abroad to some extent has hampered the agriculture sector and agricultural production is at a decreasing state in rural areas due to the decreasing supply of workable population. The income and wealth gap has been widened with the presence of remittance in rural economy. The financial market has furthermore not expanded in rural area even with the flow of remittances.

Seddon, David, J. Adhikari and Ganesh Gurung (2001) jointly conducted a study entitled “Foreign Labor Migration and the Remittance Economy of Nepal” with the aim of evaluating Nepal’s dependence on exporting labor. They have explored the migration

history of Nepal dating back to the beginning of the 19<sup>th</sup> century when people started migrating towards India to join the army force and relates it to the current context of migration towards the Gulf States.

Chipeta (2004) 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 through labor migration has increased domestic investment in Nepal or not.

Bhattarai (2005) conducted a research on “Migration of Nepalese Youth for Foreign Employment: Problems and Prospects” with the aim of evaluating the Nepalese government policies and programs related to the regulation and management of foreign employment profession in Nepal with the major objectives as: (i) to identify the major issues and challenges in foreign employment (ii) to identify the problems faced by migrant workers (both male and female) both in home country and the country of destination (iii) to prioritize the needs of international migrant labors (iv) to evaluate the existing government policies and programs and suggest appropriate amendments in the existing policies.

Maharjan (2005) in his editorial available on “Foreign Employment Need for Streamlining It” focuses on the need for foreign employment and its scope. According to the writer, inward remittances play a pivotal role in the national economy of any country which in case of Nepal has been badly battered due to the ongoing conflict. Industry, trade, tourism and other sectors of the economy are all in the doldrums. Under such circumstances, the rate of unemployment is high in the country. So the number of people seeking employment abroad has risen.

Pant (2006) 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 labor migration is potentially important stimuli to economic growth through remittance.

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.

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 have also not used any statistical tools to assess the fact.

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 nonproductive 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.

ILO (2015), Migration for foreign employment has become a major source of income for Nepali households that the number of migrants leaving Nepal for work is increasing every year. During the last fiscal year 2014, more than 520000 labour permits were issued to Nepalis planning to work abroad. Malaysia is now the number one destination country for Nepali migrants, closely followed by Qatar, Saudi Arabia, UAE and Kuwait. The same report concluded that overseas employment is heavily male dominated: roughly 95 percent of total labour permits are given to male. However, other data that captures those working in India where labour permits are not required or those leaving to work abroad through information channels indicate that female migration might be as high as 12 percent of the total workforce abroad. Remittances have become a major contributing factor to increasing household income as well as to the national GDP. In 2013, remittance inflows topped US\$ 5 billion, or 25 percent of the national GDP. This placed Nepal third among the countries receiving the highest proportion of remittances in terms of GDP.

### **2.3 Research Gap**

By studying above literatures, it is concluded that there has not been any empirical study in the impact of labour migration on economic growth in Nepal. There has been some literatures in the international context on this matter. But in the national context, most of the studies on these areas are on micro level like impact of labour migration on households, analysis the effect of labour migration in poverty reduction of particular village etc. and other different social issues analyzed. But there has not any empirical study on the impact of labour migration macro economy of Nepal by employing macro data of labour migration and other macroeconomic variables.

Next, there has been some study on nature of labour migration in Nepal but their result is quite controversy in the context, and not updated till current fiscal year. Till recent, in Nepalese labour migration literature, there has not any check the relationship between labour migration and economic growth by employing econometric tools. There has only

theoretical forecasting the relationship but this thesis try to analysis relationship between these two variables by employing one important econometric tool Co-integration test. Though there has been some theoretical study on the relationship between the remittance and economic growth in Nepal, till now there has also not any study on the elasticity of government expenditure growth with respect the economic growth in Nepal. Hence, this study checks the labour migration elasticity with respect to economic growth in Nepal by employing exponential regression model.

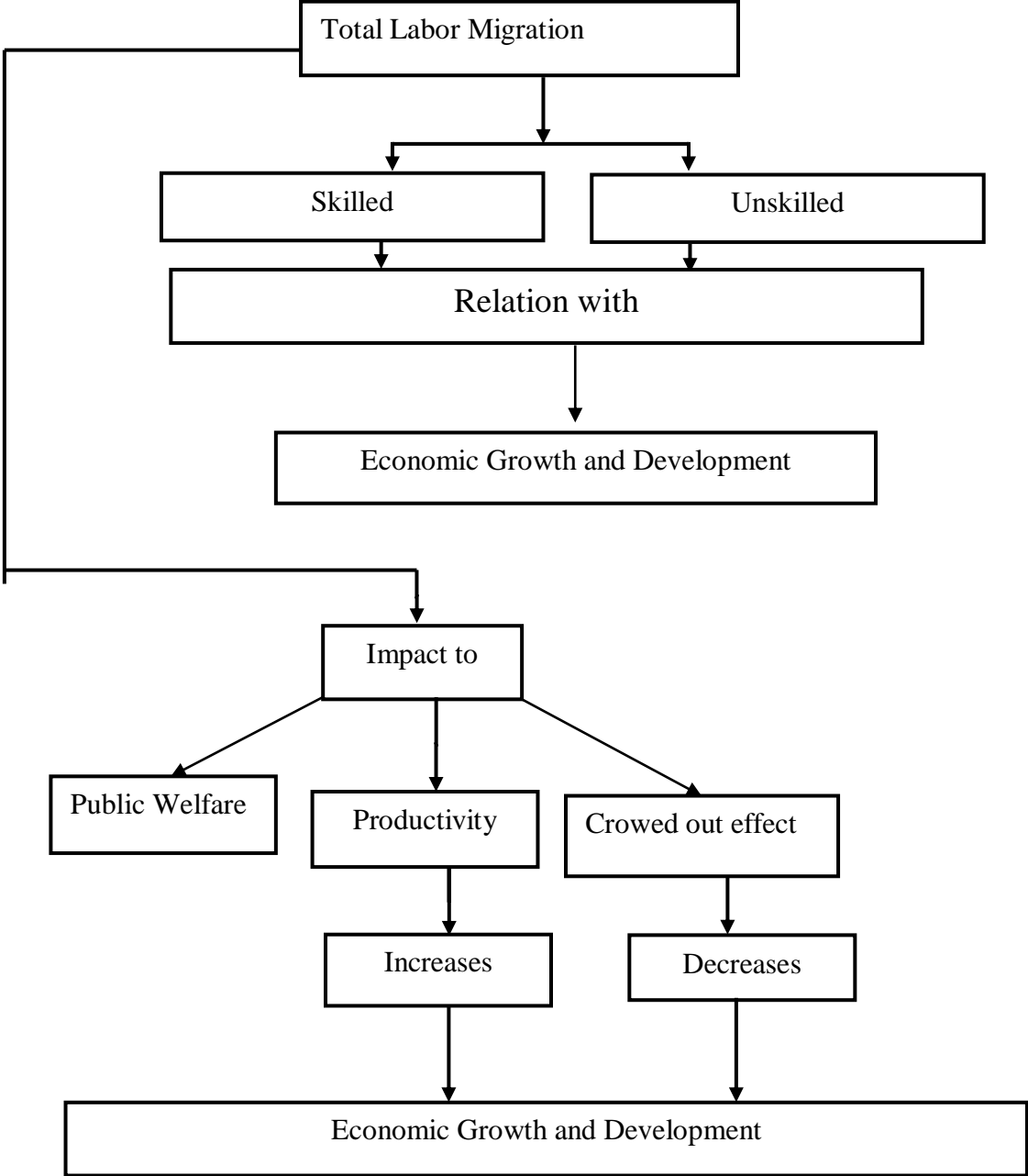
# CHAPTER III

## RESEARCH METHODOLOGY

### 3.1 Conceptual Framework

This thesis uses the following conceptual framework.

Figure: 3.1 A conceptual Framework for Labor Migration and economic growth



As shown in above figure 3.1, total labour migration, including both skilled and unskilled, has relation with economic growth and development. On the other hand, it has impact on public welfare, productivity and crowd-out effect investment. Public welfare might be end in itself. And effect on productivity through the labour migration has positively connected with economic growth and development. But, if labour migration crowded out investment rather help to support to increase it, it obviously negatively hamper the economic growth and development. On the basis of this broad conceptual framework, this empirical research study has been undertaken.

### **3.2 Research Design**

This study is based on certain research methodology consisting unit root test, co-integration test, Granger causality test, least square regression model. To analysis the impact of labour migration on economic growth in Nepal, it has been used least square simple regression model. The total labour migration has used as the independent variable.

### **3.3 Nature and Sources of Data**

To complete the research, the secondary data sets published by the government and non-governmental institutions; that are published books, magazine, journal etc. have been used. Basically, the data is collected from the publication of the Nepal Rastra Bank, ministry of finance, central bureau of statistics, foreign employment department etc. Data set from fiscal year 1994/95 to 2016/17 has been taken for the study.

### **3.4 Tools of Data Analysis**

This thesis relies on the time series data from fiscal year 1994/95 to 2016/17. Tools of data analysis have been used for the time series properties and nature of the data. To make time series data valid to analysis Unit Root Test, Co-integration test has been done.



To find the impact of labor migration on GDP growth exponential regression model has been used. Similarly, overall significance of regression ( $R^2$ ) test and f-test has been done, and t-test has been done to test the significance of regression coefficients.

### 3.4.1 Test of Stationary

Since empirical analysis based on time series data, the underlying time series should be stationary. It is necessary to test the stationary. There are several methods to test of stationary, such as, graphical analysis, the correlogram test, and unit root test. However, the paper uses unit root test as it is quite popular. Again there are various methods of testing unit root. But the paper uses Augmented Dickey Fuller (ADF) test for the purpose and used for this study.

$$\Delta Y_t = \alpha_1 + \gamma_i Y_{t-1} + \sum_{i=1}^k c_i \Delta Y_{t-i} + e_t \dots \dots \dots (1)$$

In equations (1) above the series of interest is  $Y_t$  . The symbol  $\Delta$  indicates the first difference of the series  $Y_t$ ,  $k$  is the number of lagged variables that are used to ensure the error term  $e$  is white noise.

The optimal number of lags has determined by the Schwarz Information Criterion (SIC) for the significance of the estimated coefficients.

The ADF techniques tests the null hypothesis  $\gamma_i = 0$ , against the alternative hypothesis  $\gamma_i < 0$ . Rejection of the null hypothesis is an indication that the series  $Y_t$  is stationary. In above equation (1), the alternative hypothesis indicates the series is a mean-stationary.

### 3.5 Testing the Overall Significance of Regression: F-Test

To test the overall significance of regression, null hypothesis of all coefficients are jointly zero. This joint hypothesis can be tested by the analysis of variance (ANOVA) technique.

Given the  $K$  variables in the models:

$$Y_i = \beta_1 + \beta_2 X_2 + u_i \dots \dots \dots (1)$$

Null Hypothesis: All coefficients are simultaneously zero. (i.e.,  $\beta_1 = \beta_2 = 0$ )

And F test is computed by:

$$F = \frac{ESS/DF}{RSS/DF} = \frac{ESS/(k-1)}{RSS/(n-k)}$$

If  $F > F_{\alpha}(k-1, n-k)$  reject null hypothesis; otherwise not. Where,  $F_{\alpha}(k-1, n-k)$  critical value of F at  $\alpha$  level of significance. Alternatively, if the p-value of F is sufficiently low, we can reject hypothesis. It means that all coefficients are not simultaneously zero or the multiple regression is significance.

### 3.6 Model Specification

#### 3.6.1 Relationship between Labour Migration and Economic Growth

To investigate the existence of the relationship among the variables in the system, the bound tests approach developed by Pesaran et al. (2001) has been employed. The bound test is based on F-statistic and follows a non-standard distribution, to find out the relationship between labour migration and economic growth in Nepal. Since, there exists other variables too that determine the economic growth of the country. For this thesis, it has used only labour migration. All other variables which are likely to affect to economic growth has been considered as control variable.

$$RGDP = \beta_0 + \beta_1 LM + e_i \dots \dots \dots (1)$$

- Where,
- RGDP = Real GDP
- LM = Labour Migration
- $e_i$  = Stochastic Error term

Since, the unit of the variables in the equation (1) is not same. So, it is necessary to take logarithm. It can be written in the logarithm form as

$$LN RGDP = \beta_0 + \beta_1 LN LM + e_i \dots \dots \dots (2)$$

The ARDL formulation of (2) can be written as:

$$\Delta LN RGDP_t = \beta_0 + \sum_{i=1}^p \beta_{1i} \Delta LN RGDP_{t-i} + \sum_{j=1}^q \beta_{2j} \Delta LN LM_{t-j} + \alpha_1 LN RGDP_{t-1} + \alpha_2 LN LM_{t-1} + \mu_t \dots \dots \dots (3)$$

$\Delta$  is the first difference operator,  $\beta_0$  the drift component, and  $\mu_t$  the usual white noise residuals;  $p$  and  $q$  are the number of lags. The coefficients ( $\alpha_1$  and  $\alpha_2$ ) represent the long-run relationship whereas the remaining expressions with summation sign ( $\beta_1$  and  $\beta_2$ ) represent the short-run dynamics of the model. The hypothesis can be stated as:

Null Hypothesis ( $H_0$ ):  $\alpha_1 = \alpha_2 = 0$ .

Alternative Hypothesis ( $H_1$ ):  $\alpha_1 \neq \alpha_2 \neq 0$ .

Pesaran et al. (2001) provide the two sets of critical values in which lower critical bound assumes that all the variables in the ARDL model are I(0), and the upper critical bound assumes I(1). If the calculated F-statistics is greater than the appropriate upper bound critical values, the null hypothesis is rejected implying co-integration. If such statistics is below the lower bound, the null cannot be rejected, indicating the lack of co-integration. If, however, it lies within the lower and upper bounds, the results are inconclusive. After establishing the evidence of the existence of the cointegration between variables, the lag orders of the variables are chosen by using the appropriate Akaike Information Criteria (AIC).

### 3.6.2 Impact of Labour Migration on Economic Growth

In order to find the impact of labour migration on economic growth in Nepal following simple exponential regression model has been used.

$$RGDP_i = \beta_1 LM_i^{\beta_2} e^{u_i}$$

$$\text{Or, } \ln RGDP_i = \ln \beta_1 + \beta_2 \ln RLM_i + u_i \dots \dots \dots (1)$$

Where, LM = Labor Migration; RGDP = Real Gross Domestic Product; ln= Natural Log;  $\beta_1$  and  $\beta_2$  are parameters; and  $u_i$ = error term.

### 3.6.3 Examine Causality between Labor Migration Growth and Economic Growth

In order to examine the causality between labour migration growth and economic growth in Nepal, following pair wise Granger Causality model has used.

$$RGDPG_t = \sum_{i=1}^n \alpha_i LMG_{t-i} + \sum_{j=i}^n \beta_j RGDPG_{t-j} + u_{1t} \dots\dots\dots (1)$$

$$LMG_t = \sum_{i=1}^n \gamma_i LMG_{t-i} + \sum_{j=i}^n \delta_j RGDPG_{t-j} + u_{2t} \dots\dots\dots (2)$$

Where, LMG = Total LabourMigration Growth; RGDPG = Real Total Gross Domestic Product Growth;  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$  are parameters, and u = error term, t= fiscal year

### 3.7 Explanation of Variables

Labour Migration (LM): Nepali citizens who are going abroad for working is considered labour migration in this study. Its data has been taken from economic survey.

Gross Domestic product (GDP): GDP is the total monetary value of final goods and services produced in the geographical territory of the country. It has been taken out exclusively from the economic survey.

## **CHAPTER IV**

### **FINDINGS AND ANALYSIS**

#### **4.1. Introduction**

The history of Nepalese working abroad started from the recruitment of Gorkha soldiers since April 24<sup>th</sup> 1815. On the conclusion of the Anglo-Nepali War (1812 – 1815), the British East India Company, impressed by the extraordinary bravery and fighting qualities of the Nepalese, raised the first Gorkha regiments. After the independence of India in 1947, six Gorkha regiments were allocated to the Indian Army while the remaining four to the British Army. With the Hong Kong handover to China and the overall reduction in the strength of British armed forces, the number of British Gorkhas was gradually reduced from 8,000 in 1997 to approximately 3,500 (Pathak, 2005).

An approximately one lakh fifteen thousand ex-servicemen and other Indian Government pensioners reside in Nepal. Their total annual pension is more than Rs.800 crores (Pathak, 2005). The Gorkha soldiers have always played an important role in the country's economy. The cash flow derived from annual pensions, remittances to families, or monies taken home in a lump sum by discharged veterans or by service personnel on leave have represented a source of the country's foreign exchange.

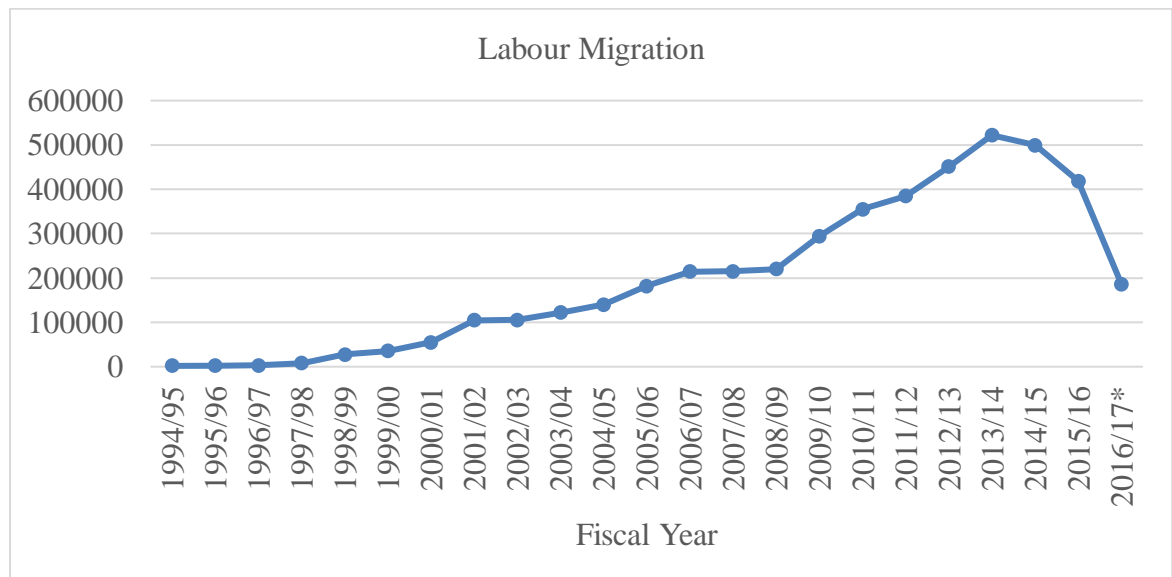
Although officially, Nepal has opened 108 countries for Nepalese workers, there is an estimated half a million to 700,000 mostly unskilled and semi-skilled Nepalese labors working in the Arabian Gulf (Economic Survey 2015/16). Although, they have now started going in large numbers to other regions as well, the Gulf region has more Nepalese workers than anywhere else in the world. Despite this link, Nepal's relations with Gulf countries have been an oft-neglected aspect of Nepal's international relations exercise (Pandey, 2005).

## 4.2 Trend and Structure of labour migration and GDP in Nepal

Descriptive analysis is carried out to analyse the trend and structure of the labour migration and GDP in Nepal. The help from the different volume of the economic survey and various publication of Nepal Rastra Bank have been taken for the descriptive analysis. GDP has been adjusted by the CPI for the analysis.

The labour migration has been normally increasing during the study period (1994-2016). It is decreased after 2013. In 2013 the labour migration is all time high. The labour migration has both the short and long run effects in the economy. The trend of the labour migration can be seen in the figure 4.1.

**Figure 4.1: Trend of Labour Migration (LM)**



\* First Eight Month

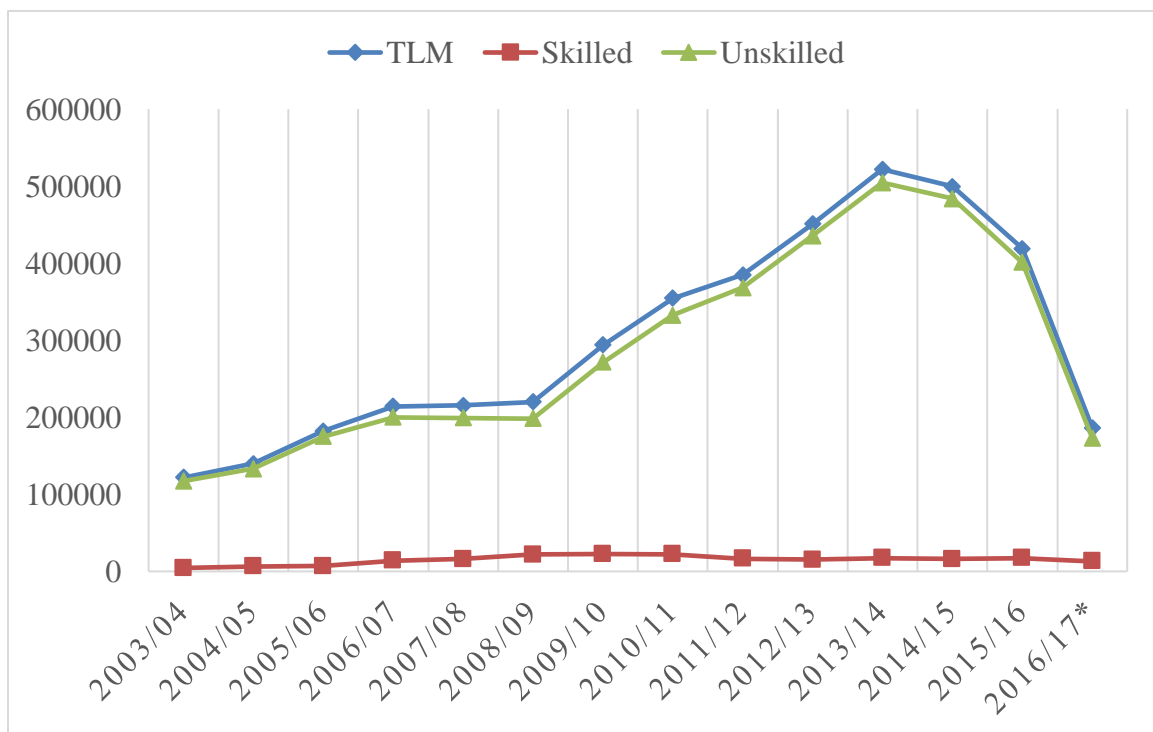
**Source: Economic Surveys of Various Years, MOF.**

The official record of labour migration has started only after fiscal year 1994/95, though the history of Nepalese working abroad started from early 19<sup>th</sup> Century as Gorkha soldiers recruited in British army. What so ever, in order to analysis the trend of Nepalese labour migration, as shown in figure 4.1, the total labour migration till fiscal year 1996/97 had been significantly very low. After fiscal year 1996/97 to till fiscal year 2008/09 it has increased by low rate but the trend shows that after fiscal year 2008/09 its trend has been

increased in increasing rare. It has been continued to increasing till fiscal year 2013/14. But the trend shows that after the fiscal year 2013/14 its trend has been decreasing.

However, the Government of Nepal (GoN) officially started to keep record the labour migration data by classifying skilled and unskilled has only after fiscal year 2003/04. Therefore, its classifying (skilled, semi-skilled and unskilled) trend has only can be shown only after the fiscal year 2003/04. And its trend can be seen as figure 4.2.

**Figure 4.2: Trend of Labour Migration by Categorizing Skilled and Unskilled**

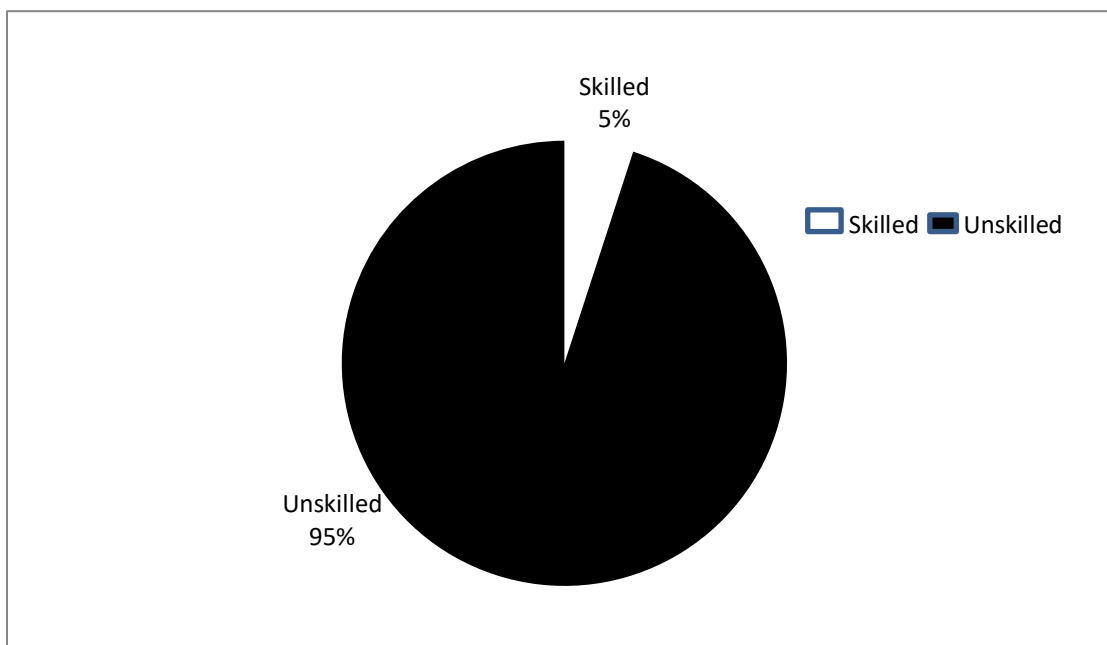


\* First Eight Month

**Source: Economic Surveys of Various Years, MOF.**

The data and trend of classified labour migration has been quite more hurting to Nepalese economy. As shown in figure 4.2, the trend of skilled labour migration has been quite constraint, only very little fluctuation can be seen and it has been low in number as well. And figure 4.2 shows that the trend of unskilled labour migration and total labour migration is quite parallel to each other. It has been clearly judge that very large part of Nepalese labour migration is unskilled labour migration.

**Figure 4.3: Share of Skilled and Unskilled Labour Migration (In Average)**



**Source: Author's Calculation through Excel.**

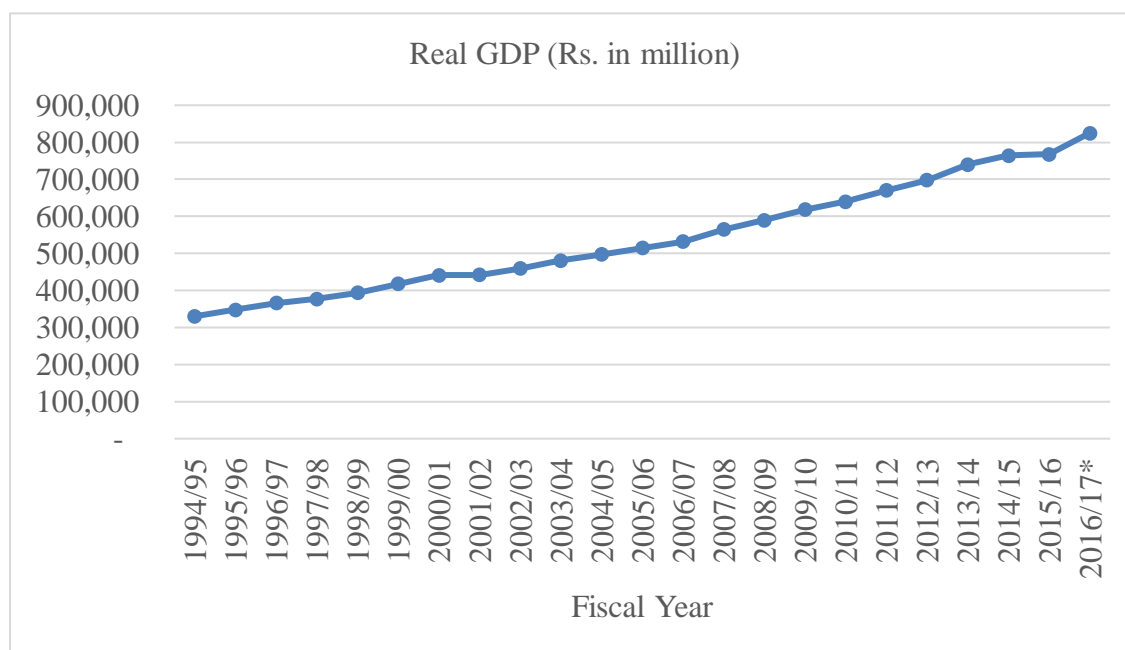
As shown in figure 4.3, the share of skilled labour migration is only 5 percent in average. In another word in on average 95 percent of Nepalese labour migration are unskilled. Lack of employment opportunities in Nepalese labor market, lowpayment, price hike, Nepalese culture that does not respect every jobs, increased expectations of youths due to the development incommunication and technology, and high affection of youths towardsforeign employment have contributed to exodus of Nepalese youths toforeign employment (Economic Survey 2015/16).

Similarly, RGDP of the country is also generally increasing over the period except year 2001 and 2015. In year 2001, the decreases in GDP may due to the Maoist insurgency in the country. There were many infrastructures have been destroyed and there was sharp decrease in the investment from the domestic and international area. And, in 2015 the decreased in RGDP due to devastating earthquake and unofficial blocked by India.



Therefore, there were decreases the economic activity in Nepalese economy, hence decreases the RGDP. The trend and nature of RGDP and RGE is given in Figure 4.4.

**Figure 4.4: Trend of Real GDP (Base 2000/01) Rs. in Million**



\*First Eight Month

Source: Economic Surveys of Various Years, MOF.

As seen in figure 4.4 the RGDP of the country is also generally increasing over the period except year 2001 and 2015. But the rate of increasing is not satisfactory.

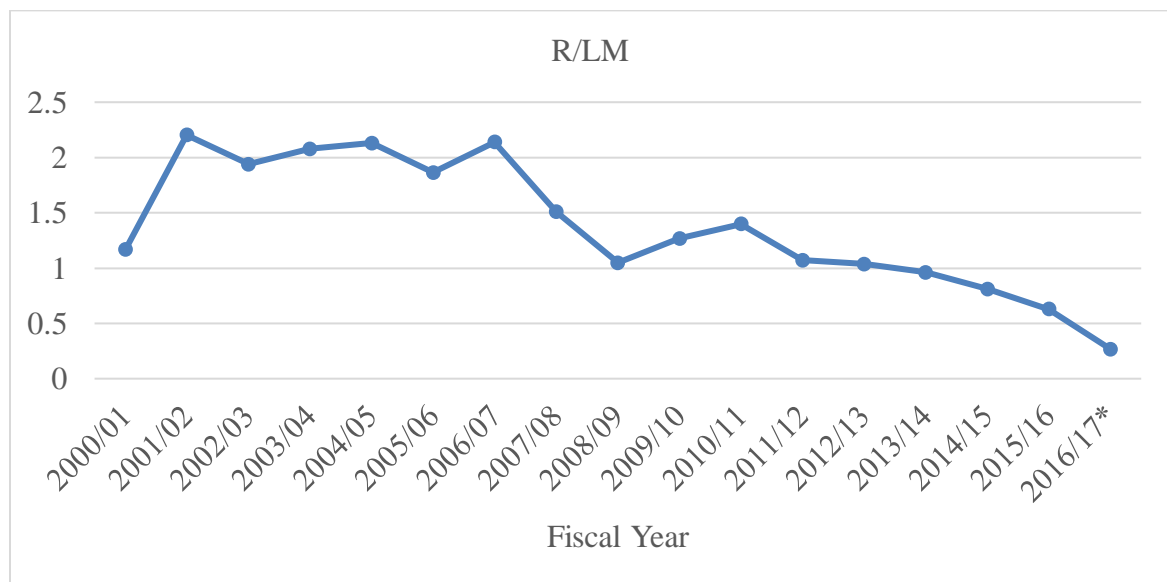
#### **4.2.1. Trend of Ratio of Remittance to Labour Migration**

Ratio of remittance to LM has fluctuating trend over the time period. This trend has been analysed only after the year 2000 because before 2000, there has not any official data of remittance in Nepal.

It had increased in 2001, 2003, 2004, 2006, 2009 and 2010. It is has been very fluctuating in year 2001 to 2007. After 7007 it has increased over the period 2008 and 2009. After

2010 to till 2016 it has been in decreasing trend. It may because of the quite increases in skilled and semi-skilled labour migration. The trend of ratio of remittance to LM is given in Figure 4.5.

**Figure 4.5: Trend of Ratio of Remittance to Labour Migration (Rs. in millions)**



\*First Eight Month

**Source: Economic Survey of Various Years, MOF.**

The ratio of remittance to labour migration shows average remittance for per unit labour migration. As shown in figure 4.5, the trend of its ratio has been quite fluctuation and unpredictable till fiscal year 2006/07. However this trend is in decreasing after the fiscal year 2006/07 till this year except from fiscal year 2009/10 to 2010/11. The decreasing trend clearly indicates that only low skilled or less earned labour migration has been increasing. In another word, the value of remittance has not been raised as increases in labour migration. Meaning that, per migrated labour's capacity of earning is decreasing in recent year.

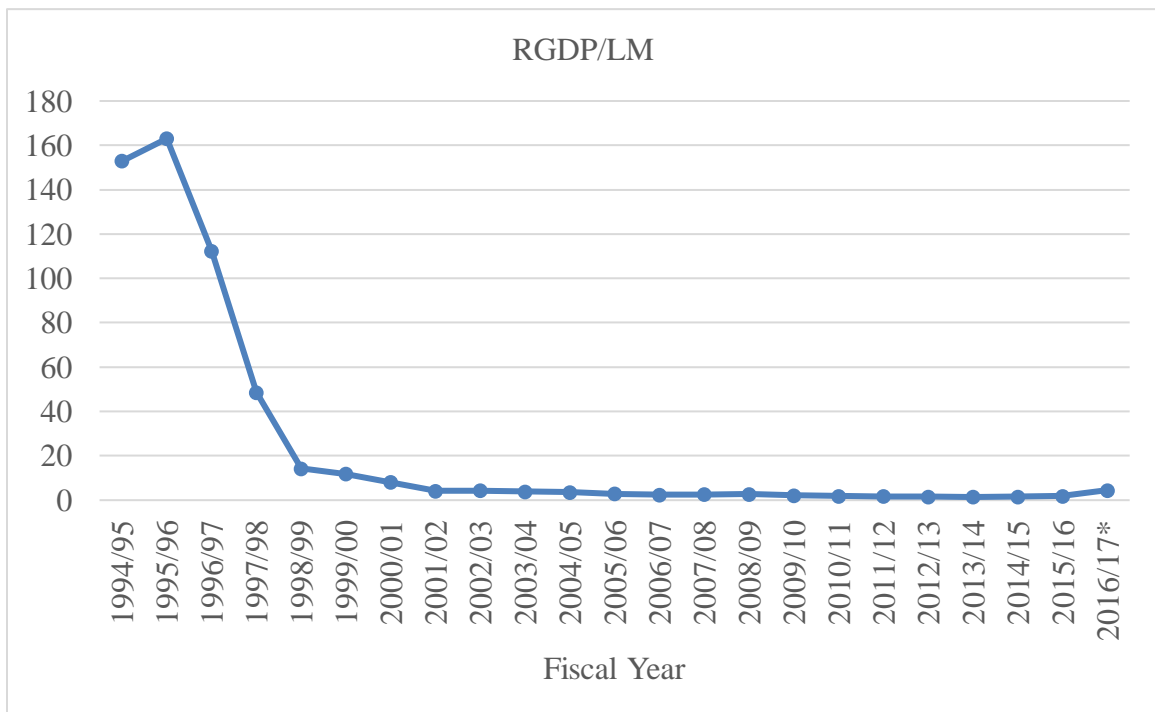
This issue is quite hurting as government of Nepal taking different actions like training, consulting and so on in order to improve the capacity of labour. But data shows opposite

as expectation. In one hand, there is an increasing the share of nations youth migration and in other hand their per capita remittance is decreasing. Therefore, this result raise big question in Nepal's policies and actions toward the labour migration. One can say the failure or ineffective of labour migration related policy of Nepal. The policy makers or concern stakeholders should take this issue very seriously.

#### 4.2.2. Trend of Real GDP to Labour Migration

Ratio of RGDP to LM was increased in the fiscal year 1995/96. Then it decreased sharply till fiscal year 1998/99. After FY 1998/99 this ratio is declined by very small. It indicate that the share of labour migration on Real GDP is declining. Meaning, that labour migration is increased at very faster rate than the Real GDP. The trend of ratio of remittance to LM is given in Figure 4.5.

**Figure 4.6: Trend of Real GDP to Labour Migration**



\*First Eight Month

Source: Economic Surveys of Various Years, MOF.

As shown in figure 4.6, the ratio of real GDP to labour migration decline shows that labour migration is increased at very faster rate than the Real GDP. This clearly indicates that labour migration is not going to improve the macroeconomic situation of the nation. This is another indicator of low skilled or unskilled labours are migrated very sharply than skilled labour. Next it also clearly indicates that the earnings from labour migration has not been productively utilize in the country. This increasing in labour migration may obviously support to household economic situation but it has not been contribute as desirable for macroeconomic situation of the nation.

Therefore, this analysis like to suggest to Nepal’s policymaker that country should take this issue seriously and find out the way to utilize its foreign earning in productive sector of economy so that it contribute the national economy in multiplier rate as possible. In such a way taking different actions in order to improve the capacity of labour is one key issue and next is utilizing theirs earning for productive sector of the economy.

**Table 4.1: Trend of Labour Migration (Average in 1990s, 2000s and 2010s Decade)**

Period	LM	R/LM	RGDP/LM
1990s Decade (1994-2000)	13092.67	NA	83.8404
2000s Decade (2000-2010)	165174.8	1.734491	3.685092
2010s Decade (2010-2016)	402370.3	0.881924	2.043733
Overall Average	197691.1	1.383434	24.09563

**Source: Economic Surveys of Various Years, MOF.**

The Table 4.1 shows the trend of labour migration, ratio of remittance to labour migration and ratio of real GDP to labour migration from 1994 to 2016; in the three decade of study period. In general, the number of average labour migration in succeeding decade increased but the overall average of labour migration is less than last decade of study period (2010-2016) shows the labour migration increasing at decreasing rate.

On the other hand, in order to look at the remittance to labour migration, in first decade it cannot be calculated because of the unavailability of time series data of remittance. In second decade of study period (2000-2010), this ratio is, averaged, 1.73. It means that the one labour migration have earned 1.73 million remittance. It may indicate there were relatively more skilled labour or high earned labour migrated in 2000s decade. But, in last decade of study period (2010-2016), this ratio is 0.88. It means that the one labour migration have earned 0.88 million remittance. It may indicate there were relatively more unskilled labour or less earned labour are migrated in this decade. However, in overall, this ratio is 1.38. It means that the one labour migration have earned 1.38 million remittance.

Again, to analysis the real GDP to labour migration ratio, the table 4.1 shows that in first decade of study period (1994-2000) it is high. But in succeeding decade it is very less as compare to first decade. It indicates that the number of labour migration is increasing very fast but the real GDP is increasing very slowly in study period.

**Table 4.2: Decade Wise Average RGDP (Average in 1990s, 2000s and 2010s Decade)**

FY	RGDP (RS. In Millions)
1990s Decade (1994-2000)*	382121
2000s Decade (2000-2010)	514148
2010s Decade (2010-2016)	729223
Overall Average	542581

\*Average after FY 1994 is taken.

**Source: Economic Surveys of Various Years, MOF.**

The Table 4.2 shows the decade wise average real GDP from 1994 to 2016 as an average of decade wise. It shows the overall average of the RGDP is Rs. 542581 which is higher

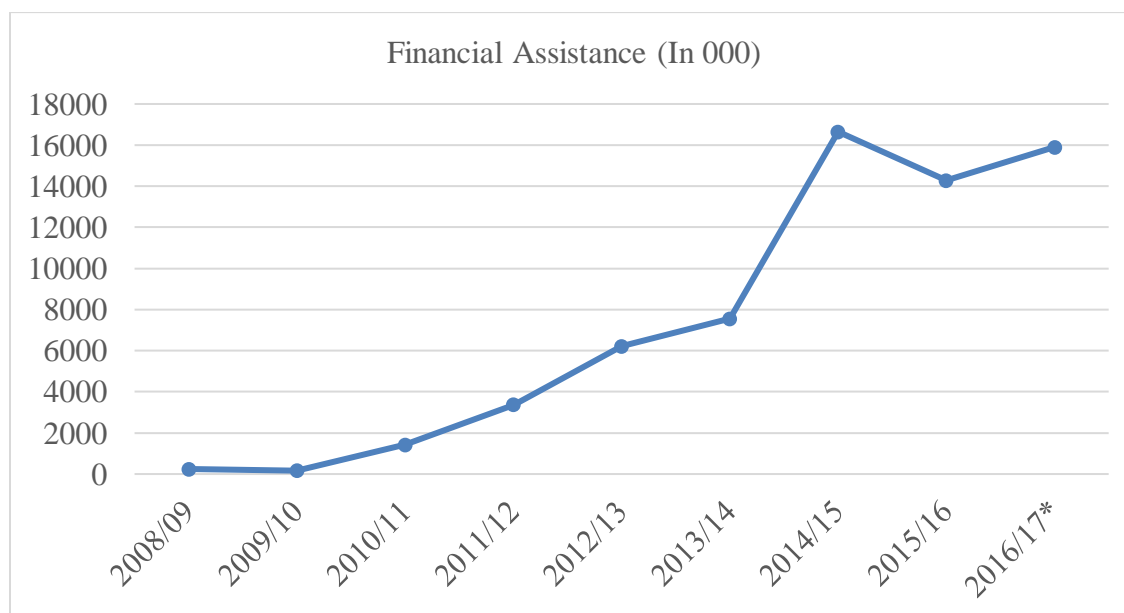
than the RGDP from 1990s and 2000s decades. That shows that the RGDP is increasing over the study period.

From above overall analysis it is concluded that the real GDP and international labour migration has been increases over the period but the share of skilled labour is very low and remain about constant over the study period and the contribution of labour migration on real GDP has been low.

### 4.2.3 Financial Assistance to Ailing and Maimed Nepali Migrant

There is increasing trend of total financial assistance in Nepal since fiscal year 2009/10 to fiscal year 2014/15. But in fiscal year 2015/16 the total financial assistance is decreased as shown in figure 4.7 but per person (averaged) financial assistance is not in decreasing, it is increasing in trend since fiscal year 2013/14 as shown in figure 4.8. It is because of the decreases in the number of ailing and maimed migrant.

**Figure 4.7: Financial Assistance to Ailing and Maimed Nepali Migrant**

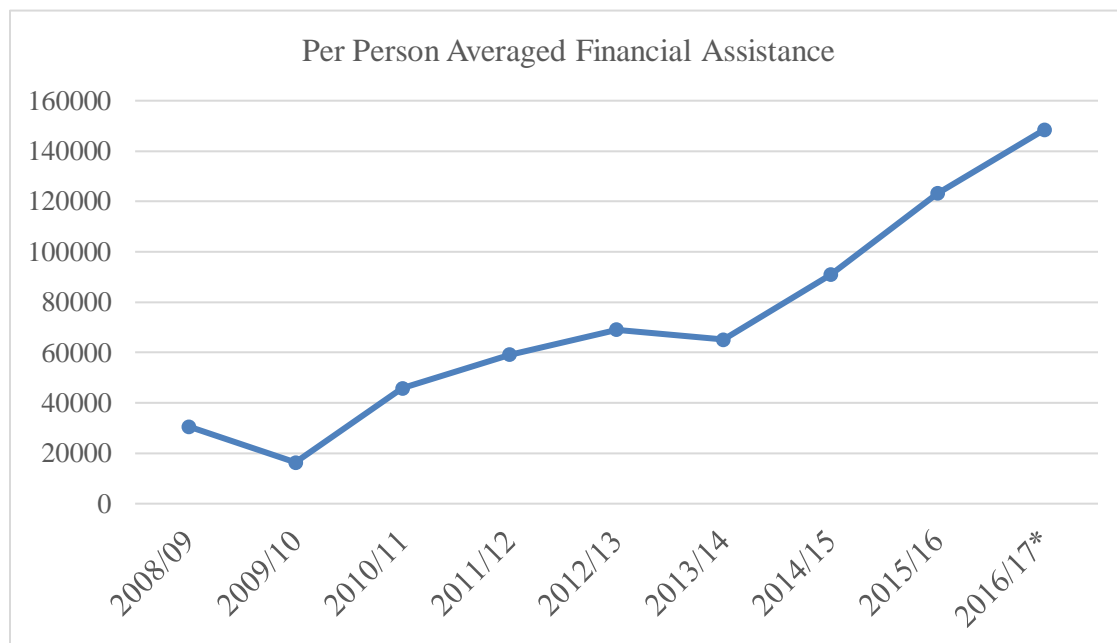


\*First Eight Month

Source: Economic Surveys of Various Years, MOF.

Figure 4.7 mainly represent the two things. One is the total financial assistance to ailing and maimed migrant has been increasing in subsequent year. Next there may increasing the number of ailing and maimed migrant worker. Therefore, the absolute analysis of this assistance is not quite valid to judge. Hence per person averaged financial assistance is calculated and its representation is shown in following figure 4.8.

**Figure 4.8: Per Ailing and Maimed Nepali Migrant Financial Assistance, Averaged**



\* First Eight Month

**Source: Economic Surveys of Various Years, MOF.**

As shown is figure 4.8 per person financial assistance to Nepali ailing and maimed migrant is increasing in trend. This is good news to Nepali workers. But only increasing trend is not final destination. There should be sufficient efforts as possible to reduce the ailing and maimed number of Nepali migrant workers.

#### 4.2.4 Analyze the Long Run and Short Run Relationship between Labor Migration and Economic Growth in Nepal

In order to analysis the long run and short run relationship between labor migration and economic growth in Nepal co-integration test has been done. The following hypothesis has been set.

Null Hypothesis ( $H_0$ ): There is no long run relationship between labor migration and real GDP.

Alternative Hypothesis ( $H_1$ ): There is long run relationship between labour migration and real GDP.

**Table 4.3: Johansen Co-integration Test**

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.434716	12.00477	15.49471	0.1567
At most 1	0.001229	0.025817	3.841466	0.8723

Trace test indicates no cointegration at the 0.05 level  
 \* denotes rejection of the hypothesis at the 0.05 level  
 \*\*MacKinnon-Haug-Michelis (1999) p-values  
 Source: Author's Calculation from E-Views.

As shown in table 4.3, the probability value of Johansen Co-integration test is 0.1567. It is more than 0.05 levels of significance. Hence the null hypothesis is accepted. It's meaning that there is no significance long-run association between labour migration and Real GDP in Nepal.

As the result from table 4.3, there is no long run association between labour migration and economic growth in Nepal. This conclusion is one of the important input to concerned policy maker of the nation. This result concluded that labour migration has not produce any long run benefit to the country. Even in the short run it has not quite desirable benefit to the macro economy of the nation as well.



Very large share of labour migration earning has spent for consumption. Country is not success to utilize the earning to productive sector so that it contributes to positive mobilization of the economy and it contributes to real GDP of the country. It suggests that Nepal's policy maker should take labour migration issue seriously. If there is not any significance long run relationship between labour migration and economic growth, countries policy shift toward how to utilize potential migrant with in the country so that country's economic activities will be accelerated.

#### 4.2.5 Impact of labor migration on Real GDP in Nepal

In order to analysis the impact of labor migration on real GDP in Nepal, exponential regression model (log-linear model) has been used. The time series data are made stationary by converting real data into log data. And the restricted regression analysis has been done by controlling all other variables which might likely to significantly impact to real GDP in Nepal.

**Table 4.4: Regression Result**

Dependent Variable: LN\_RGDP

Total Observation: 23

Method: Least Square

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.57655	0.185025	62.56746	0.0000
LN_LM	0.139544	0.016046	8.696626	0.0000
R-squared	0.782679	Mean dependent var		13.16780
Adjusted R-squared	0.772330	S.D. dependent var		0.276249
S.E. of regression	0.131811	Akaike info criterion		-1.131949
Sum squared resid	0.364859	Schwarz criterion		-1.033211
Log likelihood	15.01742	Hannan-Quinn criter.		-1.107117
F-statistic	75.63130	Durbin-Watson stat		0.233636
Prob(F-statistic)	0.000000			

Source: Author's Calculation from E-views.

As shown table 4.5, the prob. value for constant and coefficient is extremely low. It means that the labour migration has significantly impact to real GDP in Nepal. The coefficient 0.1395 shows that it labours migration have positive impact on Real GDP in Nepal. If the labour migration is increases by one unit than the real GDP will be increases by 0.1395 exponential rates. Thus,LM has positive impact on Real GDP.

But the exponential rate is less than one, in other words, the labour migration elasticity with respect to economic growth is less than one. It indicate that if labour migration changed by one unit, economic growth changed by about 0.14 million.

R squared and adjusted R-squared test shows the overall significance of the model. The value of adjusted R square shows the 77 percent variation in the LN RGDP can be explained by the Ln LM.

#### **4.2.6 Causality Test**

Again in order to analysis the relationship between real GDP and labour migration, the pair wise Granger causality test has been done.

Since, the variables RGDP not stationary at level, the causality have been checked in the first difference of RGDP. This study has chosen the Schwarz criterion for the causality between the RGE and RGDP. Table 4.4 shows the result for the pair wise Granger causality test between labour migration and real economic growth. The study has set following hypothesis.

Null Hypothesis ( $H_0$ ): Real GDP does not Granger Cause Labour Migration.

Alternative Hypothesis ( $H_1$ ): Real GDP does Granger Cause Labour Migration.

And nest,

Null Hypothesis ( $H_0$ ): Labour Migration does not Granger Cause Real GDP.

Alternative Hypothesis ( $H_1$ ): Labour Migration does Granger Cause Real GDP.

**Table 4.5: Results of Pair Wise Granger Causality Test  
(Data of RGDP in First Difference)**

Observation: 23 (1994-2016)				
Lags: 2				
Null Hypothesis	Observation	F-statistics	probability	Decision
D(RGDP) does not Granger cause LM	23	3.4670	0.0578	Accept
LM does not Granger cause D(RGDP)	23	5.8668*	0.0131	Reject

\*Value shows reject of the null hypothesis at 5% level of significance.

**Source: Author's Calculation from E-views.**

The Table 4.4 shows result of pair wise Granger causality test between LM and RGDP in the first difference. Taking lag 2 it can be concluded that there is unidirectional causality between LM and RGDP.

The F-statistics for RGDP Granger causes LM is not significant at 5 percent level of significance as p- value is greater than 5 percent (0.0578). It reveals that the null hypothesis is accepted or, in other word, the real GDP does not Granger cause labour migration.

The F-statistics for LM Granger causes RGDP is significant at 5 percent level of significance as p- value is less than 5 percent (0.0131). It reveals that the null hypothesis is rejected or, in other word, the real GDP does Granger cause labour migration. Therefore, it is concluded that LM does Granger causes RGDP but RGDP does not Granger cause LM.

# CHAPTER V

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### 5.1 Summary

The labor migration has been regarded as one of the important factor to influence the economy. Promulgation of constitution from Constitutional Assembly in 2015 indicates the ending of political transition in Nepal and open the door for spend the nation's energy on economic development. In such a context, the policy maker should keep labor migration as a priority factor for stimulate economic activities. If it manages properly, it obviously keeps move economy forward. Economist argued that most of the remittances have been used for consumption purpose, it has a negative impact on growth of GDP in Nepal, but some studies have argued that remittance earning is finished upon consumption purpose and it has no any significant effect to enhance domestic investment in the nation.

It has used descriptive analysis to check the nature and trend of the labour migration and economic growth in Nepal. It has used total labour migration and real GDP for the analysis. And some additional analysis has been done by sub-dividing total labour migration into skilled and unskilled. Real GDP is taken as the independent variable and total labour migration is taken as the independent variable to find out the relationship between labour migration and economic growth in Nepal. All other variables (that might impact to real GDP) have been used as the control variable. The Study has used Johansen Co-integration test to check the existence of the long run and short run relationship among labour migration and economic growth after checking the unit root of the concerned variables. Pairwise Granger Causality test has been used to check the causal relationship between the total labour migration and economic growth in Nepal.

The nature and trend of both labour migration and economic growth is found increasing in the study period.

Ratio of real GDP to labour migration decline shows that labour migration is increased at very faster rate than the Real GDP of the country.

It found there is positive and significant relationship between the labour migration and economic growth in the short run only. Co-integration test shows that there is no any long run association or relationship between labour migration and real economic growth in Nepal. And pair wise Granger causality test shows that there is unilateral causal relationship between labour migration and real GDP in Nepal.

## **5.2 Conclusions**

The following conclusions are made based on thesis.

- i. There is increasing trend and nature of the labor migration and real GDP throughout the study period. The growth of skilled manpower and creation of employment is not satisfactory.
- ii. On an averaged there is only 5 percent of skilled labour are migrated. In another word, 95 percent of total labour migrations are unskilled, in averaged.
- iii. There is only increasing in low skilled or less earned labour are migrations.
- iv. The value of remittance has not been raised as increases in labour migration or, in other word, per migrated labour's capacity of earning is decreasing in recent year.
- v. The decreasing ratio of real GDP to labour migration shows labour migration increasing at very faster rate than the Real GDP of the country. This clearly indicates that labour migration is not going to improve the macroeconomic situation of the nation. This is another indicator of low skilled or unskilled labours are migrated very sharply than skilled labour. Next it also clearly indicates that the earnings from labour migration has not been productively utilize in the country. This increasing in labour migration may support to household economic situation but it has not been contributed as desirable for macroeconomic situation of the nation.
- vi. There is increasing trend of total and per person financial assistance to Nepali ailing and maimed migrant.

- vii. There is only short run relationship between labor migration and economic growth in Nepal. Positive relationship between these two variables has been found in short run.
- viii. Unidirectional causality between the total labor migration and economic growth has been found. Total labor migration does Granger cause the growth in real GDP but growth in real GDP does not Granger cause increases in labor migration in Nepal.
- ix. Labor migration significantly impacts the real GDP growth in Nepal.

### **5.3 Recommendations**

Following recommendations are made through the thesis.

- i. The labor migration has been regarded as one of the important factor to influence the economy. Promulgation of constitution from Constitutional Assembly in 2015 indicates the ending of political transition in Nepal and open the door for spend the nation's energy on economic development. In such a context, the policy maker should keep labor migration as a priority factor for stimulate economic activities. If it manages properly, it obviously keep move economy forward.
- ii. This government of Nepal and various institutions are taking different actions like training, consulting and so on in order to improve the capacity of labour. But issue is quite hurting as data shows opposite as expectation. The increasing the share of nations youth migration and decreasing per capita remittance is really undesirable for national economic growth and development. Therefore, this result raise big question in Nepal's policies and actions toward the labour migration. One can say the failure or ineffective of labour migration related policy of Nepal. The policy makers or concern stakeholders should take this issue very seriously.
- iii. This study also takes worthy to suggest that Nepal's policymaker should take the issue of unproductive utilization of remittance deeply. This issue is serious and need to find out the way to utilize country's foreign earning in productive sector of economy so that it contribute the national economy in multiplier rate as possible.

- iv. Economist argued that most of the remittances have been used for consumption purpose, it has a negative impact on growth of GDP in Nepal, but some studies have argued that remittance earning is finished upon consumption purpose and it has no any significant effect to enhance domestic investment in the nation. Therefore, concern authority like government of Nepal and various institutions should focus on managing or utilizing remittance earning in productive sector as more as possible.
- v. As labor migration significance macroeconomic effect, policy maker should focus on proper managing the demand and supply labor migration so that economy will benefited.

**APPENDIX A**  
**Labour Migration and RGDP**

FY	LM (In number)	Ln_LM	Real GDP (2000/01), Rs. in million	Ln_RGDP
1994/95	2159	7.6774	330,291	12.70773
1995/96	2134	7.665753	347,921	12.75973
1996/97	3259	8.089176	366,225	12.811
1997/98	7745	8.954803	376,999	12.84
1998/99	27716	10.22977	393,903	12.88386
1999/00	35543	10.4785	417,992	12.94322
2000/01	55025	10.91554	441,518	12.99798
2001/02	104739	11.55923	442,049	12.99918
2002/03	105055	11.56224	459,488	13.03787
2003/04	121769	11.70988	481,004	13.08363
2004/05	139696	11.84722	497,739	13.11783
2005/06	182043	12.112	514,486	13.15092
2006/07	214094	12.27417	532,038	13.18447
2007/08	215268	12.27964	564,517	13.24373
2008/09	219965	12.30122	590,107	13.28806
2009/10	294094	12.59165	618,529	13.3351
2010/11	354716	12.77907	639,694	13.36875
2011/12	384665	12.86013	670,279	13.41545
2012/13	450834	13.01885	697,954	13.45591
2013/14	521878	13.16519	739,754	13.51407
2014/15	499620	13.1216	764,336	13.54676
2015/16	418713	12.94494	767,492	13.55088
2016/17	186166	12.13439	825,049	13.6232



**APPENDIX B**  
**Ratio of Remittance to LM**

FY	R/LM
2000/01	1.165386
2001/02	2.203348
2002/03	1.938166
2003/04	2.078409
2004/05	2.131423
2005/06	1.863505
2006/07	2.137844
2007/08	1.508718
2008/09	1.048958
2009/10	1.269149
2010/11	1.398989
2011/12	1.069838
2012/13	1.037398
2013/14	0.960581
2014/15	0.809391
2015/16	0.629583
2016/17	0.26769

**APPENDIX C**  
**Ratio of RGDP to LM**

FY	RGDP/LM
1994/95	152.9834
1995/96	163.0369
1996/97	112.3734
1997/98	48.67649
1998/99	14.21211
1999/00	11.76018
2000/01	8.023962
2001/02	4.220481
2002/03	4.373788
2003/04	3.950138
2004/05	3.563015
2005/06	2.826176
2006/07	2.485068
2007/08	2.622391
2008/09	2.682732
2009/10	2.103168
2010/11	1.803398
2011/12	1.742502
2012/13	1.54814
2013/14	1.417485
2014/15	1.529834
2015/16	1.832978
2016/17	4.431791

## APPENDIX D

### Labor Migration Categorizing by Skilled and Unskilled (In number)

FY	TLM	Skilled	Unskilled
2003/04	121769	4533	117236
2004/05	139696	6608	133088
2005/06	182043	7065	174978
2006/07	214094	14053	200041
2007/08	215268	16148	199120
2008/09	219965	21741	198224
2009/10	294094	22562	271532
2010/11	354716	22130	332586
2011/12	384665	16552	368113
2012/13	450834	15107	435727
2013/14	521878	17328	504550
2014/15	499620	15879	483741
2015/16	418713	17493	401220
2016/17*	186166	13110	173056
Average	300251.5	15022.07	285229.4
* First Eight Month			
Source: Economic Survey, MoF, GoN			

## APPENDIX E

### Ailing and Maimed Nepali Migrant Workers and Financial Assistance

FY	Male	Female	Total	Total Financial Assistance (In 000)	Per Ailing and Maimed Migrant Financial Assistance
2008/09	8	0	8	245	30625
2009/10	8	2	10	164	16400
2010/11	31	0	31	1422	45870.97
2011/12	55	2	57	3371	59140.35
2012/13	87	3	90	6212	69022.22
2013/14	108	8	116	7559	65163.79
2014/15	179	4	183	16650	90983.61
2015/16	111	5	116	14284	123137.9
2016/17*	106	1	107	15891	148514
* First Eight Month					
Source: Economic Survey, MoF, GoN					

## APPENDIX F

### Stationary Test

Null Hypothesis: LM has a unit root  
 Exogenous: Constant  
 Lag Length: 1 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
<b>Augmented Dickey-Fuller test statistic</b>	<b>-2.822467</b>	<b>0.0721</b>
Test critical values: 1% level	-3.788030	
5% level	-3.012363	
10% level	-2.646119	

\*MacKinnon (1996) one-sided p-values.

Null Hypothesis: LN\_LM has a unit root  
 Exogenous: Constant  
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
<b>Augmented Dickey-Fuller test statistic</b>	<b>-3.179765</b>	<b>0.0351</b>
Test critical values: 1% level	-3.769597	
5% level	-3.004861	
10% level	-2.642242	

\*MacKinnon (1996) one-sided p-values.

Null Hypothesis: LN\_RGDP has a unit root  
 Exogenous: Constant, Linear Trend  
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

	t-Statistic	Prob.*
<b>Augmented Dickey-Fuller test statistic</b>	<b>-3.377877</b>	<b>0.0803</b>
Test critical values: 1% level	-4.440739	
5% level	-3.632896	
10% level	-3.254671	

\*MacKinnon (1996) one-sided p-values.

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