ROLE OF REMITTANCES IN ECONOMIC GROWTH OF NEPAL

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in Partial Fulfillment of the Requirements
for the Degree of Master of Arts in
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LETTER OF RECOMMENDATION

This thesis entitled "Role of Remittances in Economic Growth of Nepal" has been prepared by Mr. Chop Kanta Subedi under my supervision. I hereby, recommend this thesis for examination by the Thesis Committee in a partial fulfillment of the requirement for the Degree of Master of Arts in Economics.

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LETTER OF APPROVAL

This is to certify that the thesis submitted by Mr. Chop Kanta Subedi entitled "Role of Remittances in Economic Growth of Nepal" has been approved by the Central Department of Economics in the prescribed format of the faculty of the Humanities and Social Sciences, Tribhuvan University.

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ABSTRACT

This thesis entitled on "Role of Remittances in the Economic Growth of Nepal" is done for the partial fulfillment of the degree of Master of Arts in Economics. The research focused on the trend of the remittance income and its impact on the GDP of Nepal. Secondary data were used for the study collected from the Quarterly Economic Bulletin of Nepal Rastra Bank and Economic Survey of the Ministry of Finance of Government of Nepal.

In the research the trend of remittances income in Nepal is shown by calculating the share of remittances in the GDP as a percent of GDP. Line graph and bar diagram is also shown in order to illustrate the trend of remittance income in Nepal. To test the significance of the role of remittance in the GDP of Nepal, a simple linear regression model was used with GDP as the linear function of remittance. The data of remittance and GDP were analyzed for 39 years from 1975 to 2013.

From the research it is found that percentage of remittances in the GDP has been increasing for every year and currently it has become more than one forth of GDP of the country. It is also found that GDP is the positive linear function of remittance. The research also proved that remittance has a significant impact on the growth of GDP of the country. It is also found that the coefficient of determination is 95.62 percent and F- test is significant.

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ABBREVIATIONS/ ACRONYMS

AD = Anno Domini

ARTEP = Asian Regional Team for Employment Promotion

BoP = Balance of Payment

CARIM = Consortium for Applied Research on International Migration

CBS = Central Bureau of Statistics

CIS = Commonwealth of Independent States

FDI = Foreign Direct Investment

FY = Fiscal Year

GDP = Gross Domestic Product

GNP = Gross National Product

G/N = Government of Nepal

HKH = Hind Kush Himalayan

ICIMOD = International Centre for Integrated Mountain Development

ILO = International Labor Organization

IMF = International Monetary Fund

IGEG = Inter Governmental Expert Group

ISS = International Students Society

IZA = Institute for the Study of Labor

KONMAD = Global Knowledge Partnership on Migration and Partnership

LAC = Latin American and the Caribbean

LDCs = Least Developed Countries

MENA = Middle East and North America

MoF = Ministry of Finance

NRB = Nepal Rastra Bank

ODA = Official Development Association

RBI = Reserve Bank of India

RMA = Royal Monetary Authority

SAARC = South Asian Association for Regional Co-operation

SEE = South East Europe

SME = Small and Medium Enterprises

UNU = United Nations University

UNHCR = United Nations High Commission for Refugees

USAID = United States Agency for International Development

VDC = Village Development Committee

VECM = Vector Error Correlation Model

WP = Working Paper

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Nepal is the least developed agricultural country where more than 7 million people are dependent on agriculture. Due to the lack of investment expenditure and Foreign Direct Investment (FDI), Nepal has very few numbers of large industries. Only 3 percent growth rate of employment opportunities cannot absorb the workers in the domestic labor market. There are about 0.4 million of labors enter in the market every year but only one third of them can get the job in the domestic market. So rests of the labors are being obliged to go the foreign country to get the employment opportunity. The labors who resides the foreign country for employment are known as foreign employee and country in which the foreign labors are working there are known as the country of foreign employer (CBS, 2014).

Generally, remittances denote that portion of migrants' earnings sent from the migrants' destination to the place of origin. Though they can also be sent in kind, the term 'remittances' is normally limited to denote monetary and other cash transfers transmitted by migrants' workers to their families and communities. The labors save their surplus income and return to their country of origin. Such money sent by the labors is called remittance. The remittance generally refers the transfers in cash or in kind from a migrant to household residents in the country of origin. The IMF considers a wider definition and incorporates three categories that is (a) workers' remittance transfers in cash or in kind from the migrant to the resident households in the country of origin, (b) compensation to the employees or the wages, salaries and other remunerations in cash or in kind, paid to the individual who work in an country other than where they legally reside and (c) migrants' transfers which denote capital as they move from one country to another and stay for more than one year. Oxford Dictionary (1964) defined that remittance is the sum of money sent form one place to other.

For the convenience of the research, the economic growth of Nepal is defined in terms of the GDP of Nepal. The Gross Domestic Product (GDP) is the total monetary value of all the goods and services produced with in the country generally within a year. Usually, GDP (at producer's price) is expressed as a comparison to the previous quarter or year. It is one of the primary indicators used to gauge the health of a country's economy. It can be measured from two methods either by income approach or by expenditure method. Logically, both measures should arrive at roughly the same total (investopedia.com).

Global remittances, including those to high-income countries, are estimated to have totaled $534 billion in 2012, and projected to go up to $608 billion in 2015. However, despite the overall growth in remittance flows to developing countries, the continuing global economic crisis is dampening remittance flows to some regions, with Europe and Central Asia and Sub-Saharan Africa especially affected, while South Asia and the Middle East and North Africa (MENA) are expected to perform much better than previously estimated (SAARC, 2014).

World Bank report-2014 shows that International migrants from developing countries are expected to send $436 billion remittances to their home countries in 2014 despite more deportations from some host countries, says the World Bank's latest issue of the Migration and Development Brief.

In 2014, the remittance flows to developing countries will be an increase of 7.8 percent over the 2013 volume of $404 billion, rising to $516 billion in 2016, according to revised projections from the latest issue of the brief. Global remittances, including those to high-income countries, are estimated at $581 billion in 2014 from $542 billion in 2013, rising to $681 billion in 2016.

Remittances remain a key source of external resource flows for developing countries, far exceeding official development assistance and more stable than private debt and portfolio equity flows. For many developing countries, remittances are an important source of foreign exchange, surpassing earnings from major exports, and covering a substantial portion of imports. For example, in Nepal, remittances are nearly double the country's revenues from exports of goods and services, while in Sri Lanka and the Philipines; they are over 50 per cent and 38 percent, respectively. In India, remittances during 2013 were $70 billion, more than the $65 billion earned from the country's flagship software services exports. In Uganda, remittances are double the country's income from its main export of coffee.

Remittances have become a major component of the balance of payments of nations. India led the chart of remittance flows, receiving $70 billion last year, followed by China with $60 billion and the Philippines with $25 billion. There is no doubt that these flows act as an antidote to poverty and promote prosperity. Remittances and migration data are also barometers of global peace and turmoil and this is what makes World Bank's KNOMAD initiative to organize, analyze, and make available these data so important.

The year 2013 saw an intensification of deportations, with more than 370,000 migrants sent back to their home countries from Saudi Arabia alone in the five months since November 2013. Many of these migrants were from Ethiopia, Egypt and Yemen. In the US, over 368,000 people (mostly migrants seeking entry into the US and apprehended at the border) were deported to their home countries in Latin America and the Caribbean (LAC), particularly Mexico, El Salvador, Guatemala and Honduras.

In addition, asylum-seekers have surged, as a result of strife and conflict. According to a recent report by the United Nations High Commissioner for Refugees (UNHCR), asylum claims in 44 industrialized countries reached 612,700 in 2013, a 28 percent increase over 2012, and the second highest level in the past 20 years. In Europe, the number of asylum applications raised by 32 percent to 484,560 in 2013, and Germany the largest recipient of asylum requests (109,600). The vast majority of asylum applicants are from Syria, Russia, Serbia and Kosovo.

This trend is accompanied by a rise in anti-immigration sentiment, which appears to beginning momentum in several European countries, including France, Germany, and the United Kingdom. During 2013, remittance flows were generally robust in all regions except LAC, and the Middle East and North Africa (MENA), where the two largest remittance-recipient countries, Mexico and Egypt, saw declines in remittance inflows, due in part to removals and deportations from the US and Saudi Arabia, respectively. However, both countries retained their rankings in the top 10 remittance-receiving countries globally. India remained in the top spot, with $70 billion remittances in 2013. Other large recipients were China ($60 billion), Philippines ($25 billion), Mexico ($22 billion), Nigeria ($21 billion), Egypt ($17 billion), Pakistan ($15 billion), Bangladesh ($14 billion), Vietnam ($11 billion) and Ukraine ($10 billion) (World Bank, 2014).

In terms of remittances as a share of GDP, the top recipients were Tajikistan (52 percent), Kyrgyz Republic (31 percent), Nepal and Moldova (25 percent), Samoa and Lesotho (both 23 percent), Armenia and Haiti (both 21 percent), Liberia (20 percent), Kosovo (17 percent) (Migration & Development Brief 2014).

Like many developing countries, remittances' magnitude in Nepal is immense with sustained high growth, surpassing all the inflows in the balance of payments. For instance, workers' remittances increased by an average growth of 28.7 percent in the last six years. In the first eight months of 2014, remittances reached Rs. 491 billion, about seven times larger than Official Development Assistance (ODA) and five times higher than export earnings. Based on the size of economy, with its remittance to GDP ratio of about 25 percent Nepal is in the third position among all countries as shown in 'Migration and Development Brief, 2014'.

Among the poorest and LDCs countries in the world, about one quarter population of Nepal is below the poverty line. Nepal is heavily dependent on remittances, which amounts to as much as 22 percent of GDP (MoF, 2013/14). Agriculture is the mainstay of the economy providing a livelihood for more than 70 percent of the population and accounting for a little over one third of GDP (Index mundi, 2014). The total GDP of Nepal in 2014 is $67 billion and estimated GDP growth rate is 5.1 percent with GDP per capita $2400. The contribution on GDP by sectors is agriculture 35 percent, Industry 20 percent and services 45 percent (NRB, 2014). More than three million people are working outside the country out of which most of the labors are in the Gulf countries.

The volume of remittance entering in the domestic economy are Rs. 253 billion in 2010/11, Rs. 359 billion in 2011/12, Rs. 434 billion in 2012/13 and Rs. 543 billion by the end of the year 2014 *(*NRB, 2014*)*. Similarly the GDP of the country are Rs. 1564 billion in 2011/12, Rs. 1701 billion in 2012/13 and Rs. 1928 billion in the fiscal year 2013/14 (MoF, 2013/14*)*.

The figures of the remittance do not include the earnings from India because the earnings from India are brought with the labors themselves and through Hundi. Also the remittances through the illegal channels and Hundi are not considered under study. Most of the remittances come from the workers of poor family in blue-colored jobs. Foreign income for them is a means of livelihood for bread and butter, repayment of loan and the rest for improving the quality of life (Bhatta, 2013).

Official remittance inflows to Nepal reached 24.7% of GDP, which makes Nepal the third largest remittance recipient in the world. The amount of remittance outflows was just US$ 50.3 million in 2012. Most of the remitted money is spent in the consumable goods and services and most of the consumable goods are imported. So the remitted money has been returned to the foreign country (Migration & Development Brief, 2014*)*. Nepal's export is $ 2 billion (not included unrecorded border trade with India). The imports volume is $ 7 billion mainly on petroleum products, gold and machinery (*NRB, 2014*).

Over the past decades, workers' remittance have grown to become one of the largest sources of financial flows to developing countries, often dwarfing other widely-studied sources such as private capital and official aid flows. While it is undeniable that remittances have poverty-alleviating and consumption-smoothing effects on recipient households, a key empirical question is whether they also serve to promote long-run economic growth. This study tackles this question and addresses the main shortcomings of previous empirical work, focusing on the appropriate measurement and incorporating an instrument that is both correlated with remittances and would only be expected to affect growth through its effect on remittances. The results show that, at best, workers' remittances have no impact on economic growth. (IMF, 2009).

Various studies have found that the families of migrant workers tend to become more extravagant than before on remittances income for their daily subsistence giving up income generating activities, abuse of such income and other behavioral changes. Furthermore remittances have a limited impact on long-term growth because it is used mostly for daily consumption purposes by the recipient households (Arunatilake et al 2010). Nepal Living standard survey (2011) showed that out of the total income of remittances receiving households, 31 percent income comes from remittances which are mostly spent on daily life consumption (79 percent) followed by repayment of loans (7 percent), capital formation and doing business has a very minimal share .

1.2 Statement of the Problem

Remittance has been one of the major sources of foreign exchange earnings. It has been increased rapidly over the last few years. Increasing the inflow of remittance has been lowering the rate of poverty. But it should be noted that Nepal is unable to invest the remittance in productive sector. The increasing volume of remittances increased the import of goods and services from the foreign country. Nepalese economy has been consumption oriented. So major part of the remittance is spending on the consumption of goods and services which is helping to increase the trade deficit. The rate of economic growth can be increased if remittance be invested in the productive sector like industry, hydropower, agriculture and tourism. Since the study under consideration was concerned with the role of remittances on the economic growth of Nepal, so the study seeks to answer the following questions.

i. What is the trend of remittance income in Nepal?
ii. What is the role of remittance on economic growth of Nepal?

1.3 Objectives of the Study

The general objective of the study is to find the impact of remittances in the economic growth of Nepal. To fulfill the general objective, the specific objectives of the research were as follows:

i. To study the trend of remittance income in Nepal.
ii. To study the role of remittance on economic growth of Nepal.

1.4 Research Hypothesis

In order to test the significance of the contribution of the remittances in the economic growth of Nepal, the following research hypotheses were formulated for the test of model of the research. The hypothesis will be tested at 5% level of significance for the given degrees of freedom. The hypotheses of the study are:

H_o: $\beta = 0$; There is no significant role of remittances in the economic growth of Nepal.

H_1: $\beta \neq 0$; There is a significant role of remittances in the economic growth of Nepal.

1.5 Significance of the Study

For more than one decade Nepalese economy has been dependent on the remittances. The volume of remittances in Nepal is increasing every year during the last decade. Due to increase in remittances current account has been in surplus. Since FY 2011/12 current account has been in surplus although there huge trade deficit around five hundreds billion in every year. So remittance has played a significant role in the domestic economy of Nepal. Remittance also increased the disposal income of the remittance receiving household so their level of consumption and life standard has also been increased. Remittance also has the role to decrease the severe poverty of Nepal. It is helping the lower income group people to manage food and shelter. Due to remittances the level of education, health & sanitation, employment and awareness of the general public has increased. Remittance has also helped to manage the increasing population of the urban areas by developing the rural into urban. Remittances through banking channel provided the non fund business of the banks and financial institutions. Thus remittance has various benefits and positive points in Nepalese economy as above mentioned. Particularly the study under consideration is significant due to the following points.

i. The research helps to study the trend of remittance income in Nepal
ii. The research helps to study the role of remittance on economic growth of Nepal.

1.6 Limitations of the Study

This research is limited due to the following points:

The data of remittance and GDP from Nepal Rastra Bank and Economic Survey/ MoF for the period of 1975 to 2013 AD and studied the trend of inflow of remittance and then calculated the share of remittance on the GDP for the respective years to find its contribution on GDP. The regression line of y on x was estimated by the method of Least Squares using the software EViews-7 to test the significance of the remittance on GDP. Here country wise inflows of remittance were not studied. Also the data of remittance before FY 1975/76 were not studied. The money entering through illegal channels like Hundi and the money brought by the employee themselves were especially from India were not included in the study. Also the impact of inflation raised by remittances was neglected and limited tests procedures were applied the analysis of data in the study. So the result obtained from the research may not be generalized in other settings.

1.7 Organization of the Study

The study is divided into five different chapters. Chapter one deals the introduction of the research which covers background of the study, statement of the problem, objectives of the study, research hypothesis, significance of the study, limitations of the study and organization of the study. Chapter two deals the review of literature which covers review of theoretical Literature, review of empirical literature, review of international studies, review of Nepalese studies and research gap. Chapter three deals research methodology which covers design of research, area of study, sample of study, economic model, collection of data, reliability and validity of data, analysis and interpretation of data. Chapter four deals the analysis and interpretation of data covering trends of remittances income in Nepal and role of remittances in the economic growth of Nepal including graphical, tabular, diagrammatic presentation of data and mathematical estimation of the regression model. And chapter five deals with summary, findings, conclusions and recommendations of the research.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

Although the review of literature starts before selecting a research topic, it continues up to the completion of the research. After the selection of the research topic, the researcher's main task is to get more knowledge related to the area of research topic. Review of related literature helps to determine the area, scope and importance of the study under consideration. The key purpose of review of literature is to find out what works have been done up to now in the area of study. It gives the rational to the investigator to write the significance of the problem, statement of the problem, objective of the study, hypothesis of the study and limitations and delimitations of the study as well.

Review of literature provides the guideline to the researcher that how to proceed the research work. Reading books, journals, published and unpublished bulletins and materials, newspaper manifesto of the political parties, appraisal report of the function of the government bodies and non- governmental organization, reports of diplomatic organizations, biography manuals, auto- biography, meeting of seminars and workshops, internet searches etc. can be read in reviewing the literatures.

There is not absolute theory of remittance and its relation with the other domains. There is considerable debate regarding the relative contribution of international migrant’s remittances to sustainable development. While the rates and levels of officially recorded remittances to developing countries has increased enormously over the last decade, academic and policy oriented research has not come to a consensus over whether remittances contribute to longer term growth by building human and financial capital or degrade long run growth by creating labor substitution.

Puri & Ritzama (1999) defined that remittance is the portion of international migrant workers' earning and transferring back from the country of employment to the country of origin.

Dennis (1991) justified that remittance is usually calculated as the combined value of workers' remittance and labor income or consumption of employees for migrants working abroad for either more or less than one year. Besides this, remittance reflects the monetary dimension in the complex web of linkage that exists between migrating countries and their home countries.

2.2 Theoretical Concept

The theoretical investigations in remittances produce highly mixed results. On the positive side, remittances contribute to the alleviation of poverty and, in some instances, provide capital to fund households' investments and savings. For a number of countries, international remittances have driven macroeconomic growth, mostly by increasing national disposable income. For many low income countries, remittances are the most important source of external financing, leading FDI and ODA. However, some studies have found that remittances can have a deleterious impact on national economic growth in the medium and longer terms. Remittances can fuel inflation, disadvantage the tradable sector by appreciating the real exchange rate, and reduce labor market participation rates as receiving households opt to live off of migrants' transfers rather than by working. Moreover, remittances' contribution to growth and poverty might reduce the incentives for implementing sound macroeconomic policy or to institute any needed structural reforms. So the review of literatures related to the field doesn't give the perfect information to the researcher, reader and the stake holder of the research.

2.2.1 Review of Literature on International Studies

Giuliano & Ruiz (2005) found that if the remittances relationship with per capita GDP is not statistically significant, remittances do have a robust positive impact on financial development. Employing an empirical methodology that controls for the relationship between remittances and financial development and a new remittance dataset for middle and low income economies only, the researcher found that remittances are correlated with indicators of financial development. Moreover, threshold analyses reveal that remittances appear to substitute for a well developed financial system by promoting growth more robustly in those countries with weak financial systems.

Hoermann. & Kollmair (2009) presented a research paper in ICIMOD and found that worldwide migrants' remit almost US$ 318 billion, almost 80 percent of which is directed to developing countries and since 2002 flows have almost doubled. For the HKH countries, remittances are particularly significant. They received close to US$ 70 billion in 2007, or 21 percent of global flows. No other region has such a large inflow. The study found that the annual flow of remittances from Iran to Afghanistan is almost US$ 500 million dollars, which is approximately 6 percent of the national GDP of Afghanistan. This is equal to the telecommunications market share of the whole Afghan economy.

Arunatilake, et al (2010) conducted a research in Srilanka and found that the remittances from abroad have risen steadily over the years. They amounted to US$ 2.5 billion in 2007. Sri Lanka is struggling to strike a balance between maximizing the development benefits of migration while protecting migrant workers and their families from the adverse impacts of migration. On the macro front, remittances have provided a stable as well as the largest source of foreign capital to the country. Remittances have also provided significant balance of payments (BOP) support to the country by offsetting the adverse impacts of the trade deficit during times of crisis. Further, there are indications that remittance inflows have improved national savings and lifted the level of investment rate of the country. A large proportion of households in the country receive remittances. The level of remittances received by migrant households appears to be significant being equivalent to 48 per cent of main household income in the country.

Tumbe (2011) conducted a research for PhD in Indian Institute of Management where he provided a factsheet of domestic and international remittances at the State level and across household characteristics and discusses the extent of remittance dependency, it's growth since the 1990s, the different uses of remittances across States, the possible impact on source region inequality and its importance in enhancing financial inclusion. Data from the 49th and 64th round migration related National Sample Surveys, the Reserve Bank of India (RBI) and the 2001 Census were used for the analysis. Some of the findings were: (a) The domestic remittance market was estimated to be $10 billion in 2007-08, 60% being Inter-State transfers and 80% directed towards rural households (b) Domestic remittances financed over 30% of household consumption expenditure in remittance receiving households that formed nearly 10% of rural India (c) Domestic remittance dependency was high in Bihar, Uttar Pradesh and Rajasthan and has generally grown since the 1990s, most notably in Orissa. (d)The top 25% households received around 50% of domestic remittances suggesting that remittances could be increasing source region inequality (e) 70% of domestic remittances were estimated to be channeled in the informal sector as against 25% in China revealing a huge opportunity for financial institutions to serve migrant workers (f) Kerala, Punjab and Goa accounted for over 40% of international remittance flows and are among the top remittance-dependent economies of the world.

Arifeen (2013) presented a research paper in International Organization for Management. This paper attempted to see the contribution of migrants' remittances to Bangladesh socioeconomic development both at macro and micro economic perspectives by using various relevant literatures published by different organizations. The macroeconomic base mainly focuses on Gross Domestic Product (GDP) including foreign reserve and balance of payment, capacity of importing goods, etc. while the micro economy focuses utilization of remittances for family social security, consumption and investment at the household and community level. The research found that remittances through international migrants are a relatively stable form of income. In the last thirty one years, increased remittance flow has been contributing to the economic development of Bangladesh. It is evident that remittances not only increase household income, but also have the potentiality to increase local and national economic growth. However some major challenges are considered as impediments to further socioeconomic development of Bangladesh.

Ratha & Shaw (2007) conducted on migrants and remittance. According to their study following conclusions were found:

74 million or nearly half of the migrants from the developing countries reside in other developing countries. However they believe that this estimate is likely to be low as the official data tend to undercount irregular migrants. Irregular migration is probably even more common in south-south than south-North migration because of tight

restrictions on immigration in many developing countries, coupled with limited enforcement, the high cost of travel documents and unclear immigration rules in the south.

Almost 80 percent of South-South migration is estimated to take place between countries with contiguous borders and most appears to occur between countries with relatively small differences in income. In contrast, while proximity can be important in shaping South-North migration, large income differences encourage migration over greater distances.

Estimates of South-South remittances range from 9 to 30 percent of developing countries’ remittances receipts or between $18 billion and $55 billion in 2005 depending on the allocation rule chosen to estimate bilateral flows the estimate is high when the allocation rule is based on migrant stocks but low when it is based on migrant incomes (which tend to be higher in the North). These estimates are based on officially recorded remittances of $188 billion to the south in 2005 the amounts would be higher if flows through informal channels were taken into account.

The impact of South-South migration on the income of migrants and natives is smaller than for South-North migration. However, even small increases in income can have substantial welfare implications for the poor and cross-migration can improve the match between skills and requirements in the countries involved, thus raising efficiency and welfare.

The costs of South-South remittances (where such remittances are permitted) are event higher than those of North-South remittances because of lack of competition in the remittance market, a lack of financial development in general and high foreign exchange commissions at both ends of the transaction.

Icduygu (2004) argued in his study that remittances to Turkey from the estimated over 3.5 million Turkish emigrants living abroad are continuing and presumably account for a sizeable part of the country’s economic development; it is still no easy task to pinpoint the dynamic nature of the link between remittances and economic development.

Certainly, among the main consequences of labor emigration for a sending country like Turkey are the beneficial impacts of incoming worker's remittances. As a developing country, Turkey has always needed external capital to support development projects and has always faced perennial shortages of foreign funds to pay for imported goods and services and foreign debts.

From this perspective, worker's remittances greatly contribute to the country's economy. Worker's remittances increased from a modest $ 93 million in 1967 to a peak $ 1.4 billion in 1974 and then declined to $ 893 million in 1978. Turkey showed a more or less consistent level of annual remittances receipts of around $1.5 to 2.0 billion between 1979 to1988. In this period, almost a quarter of Turkey's annual total import bill was financed by remittance receipts of about $3 billion, which increased to $ 3.4 billion in 1995. In the 1990s, remittances were equivalent to around one-third of the trade deficit but were well below 3 percent of GNP. In short, since the 1960s, worker's remittances have greatly contributed to meeting the import bill of the country but their relative importance with respect to GNP has been limited.

Another way of the workers' remittance is the type of investments made by the migrants. Money coming from abroad often finds its way into the maintenance of the family left behind or is spent as investment in equipment, real estate, a car or possibly as part of the migrant's attempt to set him or herself up in a trade or another kind of new enterprise. Certainly much of the incoming money has gone directly into the family or local community of a migrant, often to maintain dependants left in Turkey. In the frequent cases where migrants abroad do not return to their place of origin in Turkey, much of the remitted money is more often spent on consumables for the new home. It seems that remittances do not help to reduce imbalances between regions in the country, though it is clear that improvements are made possible by remittances.

World Bank (2012) conducted a research on impact of remittances on financial development using both balance of payment statistics for close to 100 countries over the period 1970-2002 and household survey based data for Mexico (2000) and El Salvador (1995, 1997, 1999, 2001). From the research they showed that remittances, funds received from migrants working abroad to developing countries have grown dramatically in recent years from U.S.$18 billion in 1980 to over U.S.$126 billion in 2004. They have become the second largest source of external finance for developing countries after foreign direct investment (FDI), both in absolute terms and as a proportion of GDP. Furthermore, unlike, other capital flows, remittances tend to be stable even during periods of economic downturns and crises. The development potential of these flows is increasingly being recognized and therefore interest in remittances and their impact is growing among governments, international organizations, and the private sector. Yet, research on remittances is sparse and limited mainly to country-specific surveys that examine the effects of remittances on poverty, education, and health among other things. On the other hand the effect of remittances on financial development remains largely unexplored, despite the increasing interest on the part of financial institutions both in the remittance source and destination countries to enter this business as a way to expand their customer base. Furthermore this topic is empirically interesting because a priori, the links between remittances and financial sector development are unclear. Remittances might have a positive impact on credit market development if, as individuals receive sizeable transfers from abroad that are shown to be stable, banks become more willing to extend loans to remittance recipients. On the other hand because remittances might help relax individuals' financing constraints these flows might also lead to a lower demand for credit and have a dampening effect on credit market development. At the same time, whether we observe a positive relationship between remittances and financial development measured in terms of deposits will depend on the extent to which households are able to save part of the remittances they receive and do so by depositing these funds with banks.

Iheke (2012) published his research article in International Journal of Development and Sustainability. The study analyzed the effect of remittances on the Nigerian economy. The study employed secondary data covering the period 1980-2008. Data sources included official publications of the World Bank, Central Bank of Nigeria, National Bureau of Statistics, Journals and other relevant publications. Data collected were analyzed using trend and regression analysis. The following were found in the research.

Results of data analysis revealed that remittance inflow has been on the increase over the past two decades. Also remittances, percapita income, investment and time were the positive and significant factors influencing output while consumer price index significantly influenced output negatively. It was recommended that remittance receiving countries should provide a friendly economic environment through sound macro-economic policies, including stable exchange rates, basic physical infrastructure, improved market integration, reliable financial and other institutions, transparent legal system and good governance in essence, conditions that can prime the economy for development and equip it adequately to benefit from this external stimulus.

Remittance inflow to the country increased rapidly from early 2000 to 2009. This supports the revelation that Nigerians abroad grew the economy by a whopping $7billion in the year 2008 and that Nigeria is the sixth highest destination of remittances from its citizens living in the migrant destination.

The regression result showing the factors affecting output of the economy measured by the real gross domestic product per capita is presented in the linear functional form was chosen as the lead equation as it was the best fit model. The coefficient of multiple determinations was 0.9686 which implies that 96.86 percent of the variations in output of the economy were explained by the variables included in the model. The F ratio was (77.24) was significant at 1 percent and this attests to significance of the regression result or otherwise, that the data fit the model.

Remittance was significant at 1 percent and positively related to the economy's output. This implies that the national output increases with increase in the inflow of remittances to the country. The research also revealed a positive and significant relationship between lagged per capita income and investment proxies by gross fixed capital formation at 1 percent level of significance. These imply that there would be a 5.5 percent and 27.3 percent increase in output for a unit increase in per capita income and investment respectively.

The positive impact of remittances on per capita income growth in the sampled countries over the study period could be explained by the fact that remittances may be used by recipients for consumption and/or investment. All other things remaining equal, whichever use remittances are put, they are capable of inducing an increase in aggregate demand, leading to a rise in national output and a subsequent increase in real income growth.

Consumer price index is negatively and significantly related to output at 10 percent significance level. This result implies that there would be a 44.7 percent decrease in output for a unit increase in the rate of inflation. This conforms to *a* priori expectation as increase in the price productive inputs is a disincentive to investment which leads to reduction in output. Time trend is significant at 10 percent level and positively related to output.

2.2.2 Review of the Literature on Nepalese Context

Rashid (1989) in his study found that the total saving of the remittance is 8 percent which is very low compared to other Asian countries. Moreover the saving rate of the Nepalese workers is lower because most of them are employed in low paid jobs and their marginal propensity of consume is relatively higher. He also found that only the small proportion of the migrants uses the remittance directly for the productive investment like agriculture, manufacturing and trade. The major forms of investments are on education of the children, reinvestment of the remittance for further migration and for lending money.

Sherpa (2010) in his study found that a Nepalese migrant worker in India typically earned around Rs. 240 per day (earned Rs. 7200 per month if worked every day and Rs. 43,200 in 6 months). On average, half of gross earnings were used for food and living expenses, as the cost of living is higher than in Nepal and there are more consumables to tempt the migrant. Around 9% was used to cover the cost of travelling to and from India, and 11% on repayment of the loan for migration. This left around Rs. 12,800, or 30%, of which more than a third was spent on gifts for family and friends (food, clothes, shoes, kitchen utensils, electronic goods, watches, jewelers and so on), and the remainder was remitted in monetary form. He also found that the use of remittances varied from person to person and with family size and economic status. There is no real culture of saving and investment and people lacked awareness of the potential benefits. Most people simply spent what they earned and migrated in order to bring back food and money to live on for the next 4 to 6 months. The items that remittances were used for are listed in Table 14 from most to least important. Labor migrants brought new skills like driving, construction, cooking, electrical skills and house painting when they return to the villages. But opportunities to use these skills, or invest the savings, were very limited. Lack of ideas of opportunities for entrepreneurship and of access to markets all discouraged returned migrants from investing even the small sums that they have. The few who did invest or start a business were generally the ones who were not in such a bad ‘hand-to-mouth’ situation and did not have to worry about feeding their families for the remaining months.

Gaudel (2006) showed in his study that the share of remittance to GNP was found 1.74 percent in mid-July 1991.This share increased sharply (9.38 percent) after the period of mid-July 1999 and eventually reached to 12.03 percent in mid-July 2005. On average, the share of remittance to GNP was 11.03 percent during the review period from mid-July 2000 to 2005. During that period, the grants and pension also increased by 7.72 percent and 58.06 percent respectively. Thus, from this analysis it is clear that the remittance income has become an important contributor (64.72 percent) to the current transfers in balance of payments of Nepal. From the estimated regression model he found that 1 percent change in remittance income increases GDP by 2.13 percent to 5.17 percent respectively. It implies that 1 percent increase in grants increases GDP by 14.3 percent to 15.4 percent. An examination of t-values associated with the different coefficients reveals that the remittance income is highly significant at 1 percent level. It means that remittance income variable is more responsible to increase GDP in the nation. It shows that grants are more effective to increase GDP in the economy. In the same way, pension and other items are also found to be effective to raise GDP in the country. From the test statistic, it is apparent that all regression models are highly significant at 1 percent level as indicated by the size of F statistic. The percentage of variation explained by R^2 and adj. R^2 produces better results indicating the range from 0.864 to 0.974. However, the Durbin-Watson statistic for all regressions is found very low with large constant coefficients and standard errors of estimation. More specifically, DW statistic in equation 1 lies below the lower limit of critical value (1.08) and supports the hypothesis of positive serial correlation. But DW falls in the zone of indecision and tends to suggest for other new tests of autocorrelation. The conclusions from his regression model (a) are Remittance income and Grants appear to be the most relevant variables to raise nominal GDP in Nepal (b) Pension and other items have also significant impact on increasing nominal GDP in Nepal.

Neupane (2011) in his study showed that size of remittance inflow has been increasing in tremendous way in Nepal. 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. From quantitative analysis made in his 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 where average remittance receipt is 1,83,900 Nepalese rupees yearly. The result obtained in his study has shown that increment of 1 percent in GDP brings 1.023 percent increase in domestic private consumption expenditure. From analysis of data made in this study, he 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. Lag GDP has not found significant to bring change in domestic private consumption expenditure in the nation. 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. Through the analysis of the data made in his study, he 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 decreases in domestic investment expenditure other things being the same. He also 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. He also found that the study is that lag GDP is not significant to increase domestic investment in the nation. 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 increases in GDP other things being the same.

Panta(2015) in his study reported that remittances are more predictable as compared to other financial flows and, more importantly, they are counter-cyclical providing buffer against economic shocks. In conflict or post–conflict circumstances, remittances can be crucial to survival, sustenance, rehabilitation, and reconstruction. In providing primarily for household livelihoods, remittances are spent on general consumption items in local communities that contribute to local economies by backing small businesses. A reasonable proportion of these expenditures is directed to the construction of homes, health care and education, together with savings in financial institutions, thereby creating employment in these Moreover, in contributing to foreign exchange earnings, remittances can spur economic growth by improving sending countries' creditworthiness and expanding their access to international capital markets. Studies that argue against remittances having poverty-reducing impact indicate that because of the high transaction costs of migrating, the 'truly poor' do not migrate. While this argument may have some merit, it has little evidence as a number of studies from different countries have illustrated that the 'very poor' and the 'poor' do migrate.

2.3 Review of Empirical Literatures

2.3.1 Review of International Context

Lucas (2005) in his research showed that remittances may indeed have served to accelerate investment in Morocco, Pakistan and India.

Glytsos (2002) models the direct and indirect effects of remittances on incomes and hence on investment in seven Mediterranean countries and found that investment rises with remittances in six out of seven countries.

Leon & Piracha (2004) showed in their research that for eleven transition economies of Eastern Europe. During 1990-1999 remittances have a positive impact on productivity and employment both directly and indirectly through their effect on investment.

Roberts & Banaian (2004) studied on remittances in Armenia and conclude that conclude that overall, empirical evidence suggests that the propensity to save out of remittance income is high (almost 40%) and remarkably consistent across studies.

Faini (2002) presented a research paper in UNU conference and found a positive impact of remittances on growth and interpreted the positive coefficient on the policy stance to indicate that in order for the full impact of remittances to be realized, which allow households to accumulate productive assets, a sound policy environment is needed one that does not foster macroeconomic uncertainty, does not penalize agricultural activities and supports the build-up of social and productive infrastructures.

Richarde et al (2005) conducted a research by collecting the data of 71 developing countries about remittances, inequality and poverty and resulted that the remittances reduced the severity of poverty in the developing world. They also found that the remittances reduced the poverty through the increased in income and allow greater investment in physical assets in education and health and also enables access to larger pool knowledge.

Zabar & Sattar (2005) studied on found that the real GDP is positively correlated with remittances. He also found that the remittances have the significant impact on the economic development of the country.

Jovicic & Mitrovic (2006) studied the trend and volume of remittance by using vector auto-regression model in Serbia for the observed period of 62 months showed an autoregressive character of remittance, a positive coefficient of regression on consumer goods import and a negative coefficient on the lagged industrial output. The short run elasticity was 0.0874 and the long run elasticity was 0.563 with the conclusion that remittances cause an upward pressure on the import resulting into a huge trade deficit in the long run.

Tambama (2011) conducted a research on remittance in which research analysis explored the empirical developmental impact of formal remittances in Zimbabwe, particularly their effect on poverty reduction and human capital. Using a three stage least squares estimation technique to counter the endogeneity problem of remittances, the study provides evidence that a unit increase in the share of remittances on GDP reduces poverty by 52% and increases human capital accumulation by 11.5% in Zimbabwe. The reverse causality of remittances and poverty reduction has not been supported by the results of this study. Thus remittances contribute significantly to development objectives such as those of the Millennium Development Goals. The paper also strives to show that trade openness, GDP and dependency ratio help increase remittance inflows. Consequently, the development potential of remittances can particularly be improved by increasing the total flow of formal remittances and bilateral and multilateral agreements between the sending and the receiving countries. Improved management of remittances and incentives to channel remittances into more productive uses can also improve the developmental effect(s) of remittances.

Sayed et al. (2012) conducted a research on remittances and. This paper has employed annual time series data over the period of 1980 to 2009. Johansen and Jeuuselius's cointegration technique, error correction model and sensitivity analysis have been performed to analyze the long-run, short-run relationships and robustness of the results respectively. From the research the cointegration results confirm that there exists significant positive long-run relationship between remittances and economic growth in Korea while significant negative relationship exists between remittances and economic growth in China. Error correction model confirms the significant positive short-run relationship of workers' remittances with economic growth in Korea, while the results of China were insignificant in short run. Causality analysis confirms unidirectional causality runs from workers' remittances to economic growth in both China and Korea. Sensitivity analysis confirms that the results are robust.

Lili et al. (2013) presented a research paper in CARIM. The paper looks at the economic impact of remittances for Armenia and also for CIS countries more generally. For Armenia regression analysis shows that over the short run 10 percent remittance growth positively affects GDP growth by 0.3 percentage points through its multiplying effect on domestic demand. It is also an undeniable fact that remittances have a poverty-reducing effect and that 10 percentage point growth in remittances should lead to a 1.7 percentage point decrease in the poverty rate. However, a key question is whether remittances also serve to promote long-run economic growth. Empirical results show that a 10 percentage point increase in remittances negatively influences GDP growth by 0.2 percentage points over the long run. This negative effect can create moral hazard in recipient households.

Kunsel News (2015) stated that there was a small but increasing flow of remittances to Bhutan from Bhutanese working abroad, particularly in the US and Australia. Non-resident Bhutanese remitted various currencies worth Nu 508 million from January to December, 2014, according to the Royal Monetary Authority (RMA). This was an increase of Nu 164 from Nu 344.6 in the previous year during the same period. Unlike in most of the South Asian neighbors, foreign remittances do not form a major portion of the Gross Domestic Product (GDP) in Bhutan. A recent World Bank report titled "Global Economic Prospects: Having Fiscal Space and Using It" reveals that remittance inflow into Bhutan is the lowest among the SAARC countries, contributing only two percent of the country's GDP.

2.3.2 Review of Nepalese Context

Gautam (2011) studied on remittance income on consumption and found that more the 60 percent of remittance income come from channels of money transfer agencies, 18 percent from banking channels, 5 percent from Hundi, 14 percent from their friends and friends and 3 percent from themselves.

Panta (2006) studied the remittances in Nepal and found that the share of remittance in the current account receipts soared from 27.4 percent in 2000/01 to 33.6 percent in 2005/06.

Shrestha (2007) studied Contribution of Foreign Employment and Remittances to Nepalese Economy and found that the ratio of remittance to the GDP of Nepal has been increasing every year. He also found that the remittance to GDP ratio increased from 0.5 percent in 1990/91 to about 11 percent in 2004/05 and further to 16 percent in 2005/06.

Srivastav (2010) studied on remittances and foreign employment and mentioned that remittance has contributed substantially to maintain the macroeconomic stability of developing economy. He found that remittance has been leading in the external sector in the recent years. Since last few years, remittance has been playing the main role for the foreign currency earning and favorable impact on balance of payment. In micro level, the biggest contribution of remittance for Nepal has been reported to be welfare and improvement in the livelihood of remittance receiving household.

Chaudhary (2007) studied on remittances and development and mentioned that most of the remitted income has been spent on durable goods and services which raise their living standard. He also concluded that the consumption pattern of the remitted income cannot make the domestic economy self dependent due to import oriented goods and services.

Loksin, et al. (2005) studied Remittances and Poverty in Nepal in which the data for 72 districts indicate that higher the increase in the average amount of remittances in a district, the faster is the rate in the poverty reduction. The regression analysis indicates that the increase in remittances accounts for 6.2 percent decline in poverty. The research concluded that the remittances from abroad play a significant role in reducing poverty. They also concluded that if the amount of remittances remained unchanged, the aggregate poverty rate would have declined by 3.9 percent rather than 6.2 percent.

Maimbo & Adams, (2005) studied Migrant Labor Remittances in South Asia and found that poverty and remittance predicts that on average 10 percents increase in total remittance should reduce the poverty by 0.9 percent. They also found that the decline in poverty in response to increase in per capita consumption expenditure is quite low in Nepal as compared to other countries.

Panta (2008) conducted a research on Mobilizing Remittances for Productive Use and found that remittances rose from Rs. 47.5 billion in 2001/02 to Rs. 142.7 billion in 2007/08. Moreover the share of remittances incoming through the official channel has been going up. In 2001/02 only 27 percent of the remittance entered through official channel where as in 2007/08 it was 91 percent. He also found that the share of remittance in total current account receipts also increasing from 33.6 percent in 2001/02 to 50.8 percent in 2007/08. Similarly the share of remittance to GDP ratio increased from 10.3 percent in 2001/02 to 17.4 percent in 2007/08. In this study he concluded that any significant decline in receipts from remittances could disturb the structure of the economy from the macro level due this huge volume of remittance.

Wong (2011) examined in his study that the link between remittances and family relationship quality by analyzing the data from more than 800 Nepali adult men, drawn from a larger survey project in the Chitwan Valley, a southern region in Nepal. Since remittances could improve the living standards of left-behind family and ease financial tensions at home, he anticipated that work migrants have better relationships with their families than non-migrants, who cannot offer remittances. The findings show that compared to non-migrant men, labor migrants report significantly higher quality in some of their family relationships, but not all of them. Additionally, he found that those who remit more money do not necessarily have better family relationships than those who remit less. The results represent important initial findings in an understudied area of the research on remittances in the sociology of migration. These results also suggest that further research on the causal relationship between remittances and family relationships is warranted.

Bhatta 2013) conducted a research on remittance and trade deficit using co integration technique and a vector error correlation model (VECM) based on monthly data based on merchandise import, worker's remittances and trade deficit for ten years. The studied showed that there is positive relationship of remittances into the import and trade deficit in the long run implying that the remittance income seem to have spent mostly on imported goods and services either foe daily consumption or luxury and durable items which is accelerating import and ultimately inducing trade deficit to rise. His study also showed that unit raises in remittance causes the trade deficit to increase by 0.296 units.

Thagunna (2013) conducted a research in which he studied the macroeconomic variables Consumption, Saving, Investment, Import and Export affecting the GDP of Nepal. He used Unit Square Test, Least Square Regression Analysis and Granger Causality Test for the analysis of the remittance inflow during 2001 to 2009. In the study, he found that consumption has significant impact on GDP of Nepal where as saving and investment has positive impact. He concludes the study that Nepali economic growth, due to higher Remittance is essentially a "pseudo-growth".

2.4 Research Gap

From the review of literature it was found that many studies were taken on the remittances and GDP of Nepalese economy and international economies. These studies were concerned with the trend of remittance inflow and its impact on the GDP for not more than fifteen years. But in Nepal there are very few studies which use the statistical tests for the significance on the economic growth of Nepal. Many of the studies have shown only the actual line of remittances and GDP to show their trend but not the trend line which is very poor analysis of the trend. In these studies mathematical relationship is shown to some extent only. So to fulfill this gap the topic was selected for the research. Here the trend of remittances and their role were studied in the economic growth of Nepal by establishing the relationship with the time series data of remittances and GDP for 39 years.

CHAPTER III

RESEARCH METHODOLOGY

This chapter deals the methods and procedures of the study under consideration in order to achieve the objectives of the research. It describes in detail about the works that is to be done in course of conducting the research. It consists of design of the study, area of study, data collection procedures and data analysis procedures as well.

3.1 Design of the Research

The study was associated with the quantitative analysis of statistical data of remittance income and GDP of Nepal during the periods of FY 1975/76 to FY 2013/14. Statistical software of regression EViews-7 was used to analyze the data. The software calculates only the quantitative data and gives the quantitative solution. Also the quantitative statistics regression and F statistics were used for the analysis of the result of the study. So the research is a quantitative research.

3.2 Area of the Study

The study used the data of remittance entered into Nepal through legal channels. Since the total volume of remittances were included in the study that may come in any part of the country. So the area of the study is the whole Nepal.

3.3 Sample of the Study

The researcher used 39 years data of remittances and GDP of Nepal as the sample of the research. The nominal GDP at producer's price was taken as GDP and the Rem. is the workers' remittances from the quarterly economic bulletin as published by the NRB.

3.4 Model of the Study

To test the significance of the contribution of remittances to GDP, an economic model was used. In the model, GDP was taken as the dependent variable and remittance was taken as the independent variable. The simple linear regression models were as follows:

The model was $\log GDP_t = \alpha + \beta \log Rem_t + U_t$

Where, α = Natural growth rate of GDP/Constant term

β = Regression coefficient of Remittance

GDP_t = Nominal Gross Domestic Product at producer's price for the time period t

Rem_t. = Workers' remittances for the time period t

U_t = error term

3.5 Collection of Data

The data for the study are remittances and GDP of Nepal. Only secondary data of remittances and GDP were used for the study. For the purpose of the study, data of remittances were collected from various issues of Quarterly Economic Bulletin of NRB and Economic Survey of MoF, G/N. Also the researcher visited the official websites of NRB and MoF, G/N for other supporting information.

3.6 Reliability and Validity of Data

The data for the study were collected from the authorized monetary authority of Nepal, NRB and fiscal policy authority MoF of Nepal. These data were already tested and verified by the authorized organizations and used as a standard data. So the data are supposed to be reliable and valid in their original form. Thus no any measures were taken to establish the reliability and validity of the data.

3.7 Methods of Analysis and Interpretation of Data

The data were analyzed by graphical, multiple bar diagram and Least Squares methods. To analyze the trend of remittance inflow, share of remittances to the GDP of Nepal were calculated and then presented in graph. Also the percentage of the year wise increase of remittances was studied and trend line of the remittances was drawn. To test the significance of the contribution of remittances on economic growth of Nepal, contribution of remittances on the nominal GDP of Nepal and contribution of remittances in service sector, agriculture sector and production sector. Least Squares method of regression analysis was applied by using the EViews-7 statistical software.

CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE RESULTS

After collecting the statistical data for the study, the data were analyzed by graphical method, multiple bar diagram and Least Squares methods of regression. To analyze the trend of remittance inflow, share of remittances to the GDP of Nepal were calculated and then presented in graph. Also the percentages of the increase of remittance in the succeeding year were calculated, average growth of remittance was calculated and trend line of remittance inflow was drawn. To test the significance of the contribution of remittances on economic growth of Nepal, a regression line of GDP on the remittance was tested.

4.1 Trend of Remittances Income in Nepal

The size of remittances income in Nepal has been increasing in every year especially from the fiscal year 2001/2002. With the increase in remittances, both the nominal and real income of the remittance receiving family increasing which has pushed up to increase the national disposable income. The increasing volume of remittance has also increases the household consumption so that the aggregate demand of the economy increasing rapidly. Due to the increase in aggregate demand in the economy, the production of the economy should be increased otherwise there will be pressure on import of goods and services. If the economy increased its production, then the aggregate income of the economy increased and hence the GDP also increases implying that the economy meets its equilibrium.

Among the least developed countries, Nepal is one of the major remittances receiving country. In 2012 AD, Nepal has third largest country in terms of receiving the remittances with the remittances income Rs. 359 billion. With the increase in volume of remittances, the share of remittances to GDP has also been increased. But the growth rate of GDP is not as much as the growth rate of remittances so the share of remittances to GDP has been increasing every year rapidly. In 2000 it was 3.33 percent of GDP, in 2001 it was 12.12 percent of GDP, in 2013 it was 25.4 percent and in 2014 it was 28.16 percent of the GDP (NRB, 2014).

4.1.1 Share of Remittances in terms of GDP of Nepal

During the periods of 39 years, volume of remittances increased 2127.17 times from Rs. 204.3 million in 1975 to Rs. 434581.7 million in 2013. But the GDP of the country increased only 102.66 times from Rs.16571 million in 1975 to Rs.1701194 million in 2013. This implies that the increasing rate of remittances exceeded the increasing rate of GDP. Thus the share of remittance in GDP is also increasing in accordance with the chronological order. During the age of the four decades, there has been fluctuation of inflow of remittances both in amount and in percentages. Here the share of remittances to GDP of Nepal has been shown in the following table.

Table: 4.1: Year wise remittances and GDP at producer' price (in Rs. millions)

Year	Rem.	GDP	Rem. as % of GDP	Increase in % of Rem.
1975	204.3	16571	1.23	-
1976	231.3	17394	1.32	13.21
1977	268.3	17280	1.55	15.99
1978	219.4	19732	1.11	-18.22
1979	303.1	22215	1.36	38.14
1980	357.3	23351	1.53	17.88
1981	484.2	27307	1.77	35.51
1982	477.1	30988	1.53	-1.46
1983	549.7	33761	1.62	15.21
1984	614.1	39390	1.55	11.71
1985	690.7	46587	1.48	12.47
1986	809.1	55734	1.45	17.14
1987	1292.6	63864	2.02	59.75
1988	1706.5	76906	2.21	32.02
1989	1628.6	89270	1.82	-4.56
1990	1747.9	103416	1.69	7.32
1991	2128.3	120370	1.76	21.76
1992	2316.5	149487	1.54	8.84
1993	2994.3	171474	1.74	29.25
1994	3469.1	199272	1.74	15.85
1995	5063.6	219175	2.31	45.96
1996	4283.6	248913	1.72	-15.40
1997	5595.0	280513	1.99	30.61
1998	6987.8	300845	2.32	24.89
1999	10314.6	342036	3.01	47.60
2000	12662.3	379488	3.33	22.76
2001	53525.2	441519	12.12	322.71
2002	55805.9	459443	12.14	4.26
2003	61530.6	492231	12.50	10.25
2004	66493.8	536749	12.38	8.06
2005	78043.4	589412	13.24	17.36
2006	109696.1	654084	16.77	40.52
2007	113081.8	727827	15.53	3.08
2008	161472.6	815658	19.79	42.79
2009	209698.5	988272	21.21	29.86
2010	231725.3	1192774	19.42	10.5
2011	253551.6	1374953	18.44	9.41
2012	359554.4	1536000	23.40	41.80
2013	434581.7	1701194	25.54	20.86

Source: Appendix I

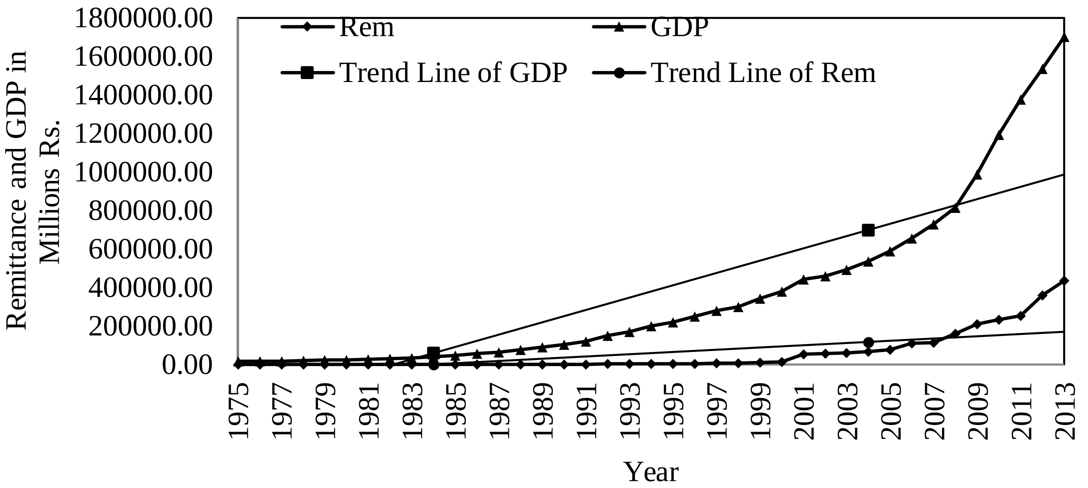
The above table shows that the remittances and GDP were Rs. 204.3 and Rs.16571 million respectively in 1975 where the share of remittance was 1.23 percent of the GDP. The remittance then increased by 13.21 and 15.99 percent in 1976 and 1977 respectively but decreased in 1978 by 18.22 percent. Again the remittances increased for three years up to 1981 and then decreased by 1.46 percent. The share of remittances in the GDP was revolving around 1.6 percent up to 1986 then its value started to increase. In 1999 the ratio was 3.01 percent and in 2000 it was 3.33 percent. But in 2001, there was huge amount of remittance entered into the Nepalese economy so that it took 12.12 percent of the GDP. But up to 1996 there was a fluctuation in the amount of remittances particularly the remittances decreased in the year 1978, 1982, 1989 and 1996.

In 2001 the remittance of the Nepalese economy jumped very highly and increased by 322.71 percent. After 2001, the volume of remittances increased rapidly and in every year the ratio of remittance to GDP was increasing as the GDP was increasing at decreasing rate. In 2012 Nepal had been the third largest remittance receiving country in the world receiving Rs. 359 billion where the GDP was Rs. 1536 billion so that the share of remittance to GDP was 23.40 percent. Then in 2013 the country got Rs. 434 billion as remittance with 25.54 percent of the GDP. More recently in 2014 the GDP of country was Rs. 1928 billion and the remittance received was Rs. 543 billion with 28.16 percent of the GDP.

From the result shown in the table, it can be seen that the average growth in the remittance of the country is 26.81 percent where as the average increase in GDP (nominal GDP at producer's price) is Rs. 43195.4615 million.

Thus from the above data, it can be said that the remittances were rapidly increasing and Nepalese economy is heavily depending upon the remittance economy. The remittance income is benefitted for the country but if there is any disturbance in the inflow of remittance, then the Nepalese economy will be vulnerable. The graphical presentation of trend of remittance inflow is illustrated in the following figure.

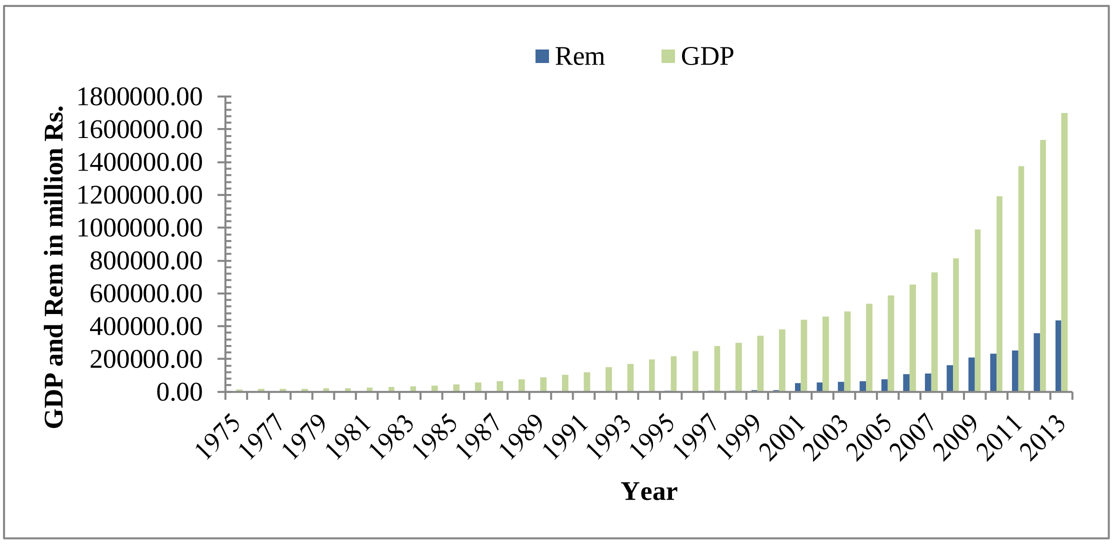
Figure: 4.1: Line graph showing the trend of remittance and GDP of Nepal



Source: Appendix I

To justify the relationship between the remittances and GDP, here bar diagram is also presneted. From the diagram it can be seen that the ratio of remittances and GDP up to 2000 AD was very small or simply neglible. After 2001 the share of remittances to GDP started to increase and then in the successiding year, it has become a significant figure. In 2013, the remittances hold 25 percent of the whole GDP of Nepal which shows if there any shock in the remittance sector then the Nepalese economy face a severe problem having deficit in balance of payment(BOP).

Figure 4.2: Bar diagram showing the remittance and GDP of Nepal in various year



Source: Appendix I

4.2 Estimation of the main Model

To test the significance of the contribution of remittances in the economic growth, the main model was log $GDP_t = \alpha + \beta \log Rem_t + U_t$. The following table gives the solution of the model.

Table: 4.2: Estimation of log GDP from log Remittances

Dependent Variable	Independent variables	Coefficient	St. Error	t-statistics	Prob.
log GDP	log Rem.	0.572946	0.021011	27.26920	0.0000
	A	3.044906	0.082400	36.95259	0.0000

$R^2 = 0.952601$ and Adj. $R^2 = 0.951320$ *source: Appendix III*

From the above table, it is found that the constant term $\alpha = 3.044906$ and coefficient of log remittance $\beta = 0.572946$. Now the estimated simple linear regression model of GDP on remittance became;

The estimated regression line of GDP on remittances is $logGDPt^{\wedge} = 3.044906 + 0.572946\ logRemt^{\wedge}$

And the t- statistics = $\dfrac{\beta^{\wedge}}{S.E.(\beta^{\wedge})} = 27.26920$

4.3 Interpretation of the Results

The above result shows that log GDP_t is the positive function of log Rem_t. It is shown that the coefficient $\alpha = 3.044906$ which is positive and any increase in remittance increases the GDP. That is there is the positive relationship between the GDP and remittances at the same time period. This also implies the autonomous increment in the GDP was by 3.044906 million in every year. Since the coefficient of log remittance is positive and is equal to $\beta = 0.572946$ so the remittances have the positive role on the in the growth of GDP of Nepal. It also tells us that the increase in remittance by one million at a time period t implies 0.572946 million increase in the nominal GDP for the same time period t. In other words, unit change in remittance implies the 0.572946 unit change in nominal.

It is also shown that the calculated t-statistics is 27.26920 which is greater than the table value of t at 5 percent level of significance and 38 degrees of freedom. That is calculated t = 27.26920 is greater than table value of t= 1.96. So the Null hypothesis is rejected. This implies that the alternative hypothesis is accepted and hence can be concluded that there is a significant role of remittance in the GDP of Nepal.

The coefficient of determination i.e. R^2= 0.952601 which shows the magnitude of the goodness of fit of the regression line and is the high percentage of the explained variation from the total variation to be explained. The table value of R^2 shows that the total variation in GDP is 95.26 percent by the variation in the remittances. Also R^2= 0.952601, which is the larger coefficient of determination implies the higher explanatory power of the explanatory variable remittance for the estimation of the explained variable.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is divided into three parts. The first part deals the summary of the research; second part deals the findings of the research, third with the conclusion and the fourth with the further recommendations of the research.

5.1 Summary

This research was on the topic "Role of Remittances on the Economic Growth of Nepal". The research included the analysis of 39 years data of remittances and GDP of Nepal during 1975 to 2013 AD. For the purpose of research, the secondary data of remittances and GDP of Nepal were collected from the various issues of quarterly economic bulletin of Nepal Rastra Bank and Economic Survey, MoF. Then the data were restructured into suitable form and analyzed by using the EViews-7 statistical software.

To study the trend of remittances inflow in Nepal, the share of remittances in the GDP of Nepal during the year 1975 to 2013 were calculated. To make this research more illustrative, trend line of the remittances and GDP were presented in the graphical and diagrammatic form. To find the role of remittances in the economic growth of Nepal, a simple linear regression model was studied. GDP was taken as the dependent variable of workers' remittances and found that GDP is the positive function of remittances. Also it was found that remittance has significant effect on the contribution of GDP.

5.2 Findings

From the statistical analysis of data, it was found that remittance is the significant determinant of the Nepalese economy and remittance played a vital role in the economic growth of Nepal. It is also found that remittances income in Nepal has been increasing rapidly during the last decade especially from 2001. The share of remittances to GDP of Nepal has been increased from 12.12 percent in 2001 to 25.54 percent in 2013. This percent was 1.23 percent in 1975 and 1.11 percent in 1978. This increasing volume of remittances has showed that remittance is the significant determinant of the economic growth of Nepal. This data also showed that if there is any disturbance in the inflow of remittances, then the Nepalese economy will be imbalance. The research also showed that the rate of growth of GDP is very low whereas rate of growth of remittance is very high which implies that huge amount of remittances is used in household consumption and there is no saving and investment. For the sector wise analysis of the remittances, it was found that remittances has the significant effect on the growth of Agricultural, Industrial and Service sector nominal GDP. The major findings of the research are given below.

i. The share of remittances to the GDP has been increasing and currently it is the one fourth of the GDP.
ii. The average increase in remittances is 26.81percent.
iii. There is a fluctuation in the remittances amount before the year 1996 and after 1996 there is continuously increase in the remittances income.
iv. GDP is the positive function of remittance.
v. The autonomous increase in GDP is 3.044906 million.
vi. The average increase in GDP is 43195.4615.
vii. The natural growth of GDP is positive and there is a significant role of remittance on the GDP.
viii. The increment of remittance is greater than that of GDP.

5.3 Conclusions

Based on the findings of the research, the following conclusions were made.

i. Since the remittance is the determinant factor of GDP, it should be used in the productive sector. Otherwise the increasing volume of remittances increases import which affects the BOP. As the import increases, ultimately the increasing volume of remittances increases the trade deficit and current account will be deficit.
ii. The rate of dependence of the Nepalese economy on the GDP should be minimized by increasing the domestic goods and services and increasing level of employment in the domestic economy. Otherwise if there is any shock in the inflow of remittance, then the Nepalese economy face the vulnerable situation and it will be very difficult to re correct it.

iii. Significant amount of remittance is still entering through informal channel which should be discouraged. If not so, it will increase the unnecessary consumption and help to increase the trade deficit.

iv. GDP is the positive function of remittances but elasticity of remittance is only 4 percent. So GDP should be increased in accordance with the increase in remittances. To increase GDP, the remittances should be used in productive sector like agriculture, tourism, education, industry, hydroelectricity and so on.

v. The autonomous increase in GDP is very low. This can be improved by increasing remittance income in investment and decreasing in household consumption.

vi. There is a significant role of remittance on the GDP implies that increase in remittances increases the GDP.

vii. The explained variable GDP is best estimated by the explanatory variable Remittance.

viii. The magnitude of the goodness of fit of the regression line is best estimated by the remittance. Also there is high percentage of the explained variation from the total variation to be explained. This also indicates that there is 95.26 percentage of total variation in GDP by the regressed variable i.e. remittances.

ix. Coefficient of determination is very high which implies the higher explanatory power of the explanatory variable remittance.

5.4 Recommendations

Based on the conclusions derived from the findings of the research, the researcher would like to recommend to policy maker, researchers and other stakeholders.

i. Nepal needs to further formulate policies that a) send more remittances through official rather than unofficial channels. b) increase the levels of remittances by encouraging migrants to hold their savings in financial assets in the country rather than holding them abroad, or c) encourage migrants to become investor in productive assets in the country

ii. Policymakers should welcome the returnees who will come back with skills, entrepreneurship and capital instead of treating them as a burden. Policies to re-integrate the returnees can include improving self-employment opportunities, support for small and medium-enterprises (SMEs), and budget support to districts facing large returns.

iii. The government should encourage the employees to invest their remit income in the productive sectors like industry, agriculture, health, education and hydropower etc.

iv. The government should encourage export of goods and services by increasing production in the domestic economy.

v. Tax should be increased in import on the consumption of household goods and services.

vi. Dependence of Nepalese economy on the remittances should be minimized by developing the level of employment in the domestic economy.

vii. Similar research can be conducted by taking multivariable affecting the GDP of the country so that more reliable results can be obtained.

viii. More advanced technologies should be applied so that the results obtained from the research can be generalized in other setting.

ix. More than 50 % of the remittances are entering into the country through illegal channels which are not recorded in the remittances data. Also the remittances from India are not included in the worker's remittance of current account of the country. So the government should make the policy to overcome such problems.

x. Government of Nepal should develop a website to make available information to migrants on remittances transfer mechanisms, prices, and speed and reliability that could improve transparency and further competition in the remittance industry. The website could also give information on investment opportunities, returning to the country of origin, immigration policies in destination countries and links to websites of the Nepal government and non-government institutions.

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Appendix I
Data of Remittance and GDP

Year	BREM	YA	YI	YS	YF	YAR	YIR	YSR	YFR
1975	204.30	11435.00	1303.00	3228.00	15966.00	78626.98	12012.07	41314.48	143495.08
1976	231.30	11495.00	1469.00	3625.00	16589.00	79069.47	12555.98	45642.29	147263.91
1977	268.30	10389.00	1821.00	4045.00	16255.00	75842.70	14058.64	49660.05	146777.03
1978	219.40	11616.00	2194.00	4611.00	18421.00	75842.70	15681.15	52373.01	150365.53
1979	303.10	13365.00	5130.00	6197.00	24692.00	78150.45	15340.05	52902.68	153800.76
1980	357.30	13520.00	2608.00	5758.00	21886.00	74426.73	15487.55	57372.60	151763.06
1981	484.20	15510.00	1371.00	6808.00	23689.00	82139.67	17202.25	60847.77	166135.11
1982	477.10	17715.00	3733.00	7589.00	29037.00	85883.81	18981.47	62733.92	174312.93
1983	549.70	19082.00	4049.00	8513.00	31644.00	84944.37	21147.88	62695.17	175196.54
1984	614.10	22570.00	4661.00	9773.00	37004.00	93045.33	22945.55	67591.41	190993.17
1985	690.70	22761.00	6649.00	15030.00	44440.00	95237.36	24955.24	76247.04	201722.61
1986	809.10	27136.00	8358.00	17720.00	53214.00	97810.66	27706.36	79914.81	211209.51
1987	1292.60	30623.00	9555.00	20963.00	61141.00	97128.63	28329.40	84551.52	214633.04
1988	1706.50	36755.00	11676.00	24740.00	73171.00	103497.03	30941.64	90212.98	229605.84
1989	1628.60	42572.00	13975.00	29285.00	85832.00	109877.99	32510.50	94337.32	241508.00
1990	1747.90	50470.00	15871.00	33361.00	99702.00	116212.92	33418.78	98786.33	252301.07
1991	2128.30	55368.00	20362.00	40397.00	116127.00	118715.09	37607.39	108435.16	268515.87
1992	2316.50	65156.00	29627.00	50150.00	144933.00	117451.46	43935.33	115435.89	280784.68
1993	2994.30	70090.00	34400.00	60878.00	165368.00	116723.40	46025.88	123907.78	289579.54
1994	3469.10	80589.00	40635.00	70372.00	191596.00	125598.16	50180.71	133414.56	311931.03
1995	5063.60	85569.00	46627.00	77778.00	209974.00	125179.74	52169.93	141374.09	320198.84
1996	4283.60	96896.00	53499.00	88993.00	239388.00	129950.57	56761.51	149716.94	338010.12
1997	5595.00	108785.00	60031.00	100754.00	269570.00	135620.90	60442.92	156883.99	355234.83
1998	6987.80	112495.00	63406.00	113897.00	289798.00	136775.72	61824.06	167338.78	366637.40
1999	10314.60	132373.00	69916.00	127729.00	330018.00	140660.40	65541.34	176362.78	383065.95
2000	12662.30	145131.00	78689.00	142431.00	366251.00	147542.90	71273.54	186378.12	406063.51
2001	53525.20	155624.50	73561.10	196268.90	425454.50	155624.54	73561.07	196268.87	425454.49
2002	55805.90	166090.20	77860.40	200101.40	444052.00	160422.00	74197.00	192781.00	414091.99
2003	61530.60	172802.60	83538.10	217205.30	473546.00	165761.00	76492.00	199874.00	429699.31
2004	66493.80	186125.00	89408.00	242460.00	500699.00	173734.00	77588.00	213504.20	448654.32
2005	78043.40	199368.00	97059.00	270145.00	548485.00	179810.26	79925.20	220609.50	463164.96
2006	109696.10	211704.00	105098.00	313528.00	611118.00	183014.86	83498.82	233025.95	480434.63
2007	113081.80	226823.00	115529.00	355012.00	675859.00	184796.00	86792.00	243538.60	493650.60
2008	161472.60	247191.00	130913.00	401339.00	755257.00	195559.00	88305.36	261438.43	522259.95
2009	**209698.5**	309553.00	148901.00	480438.00	909528.00	201464.00	87784.00	277131.00	542654.00
2010	**231725.3**	**395755.00**	**169383.00**	**553432.00**	**1083415.00**	**205517.00**	**91295.00**	**293275.00**	**565760.00**
2011	253551.60	478149.00	200844.00	619147.00	1256482.00	214787.00	95250.00	303319	587535.00
2012	359554.40	516951.00	214987.00	714194.00	1396139.00	225487.00	98127.00	316988.00	613877.00
2013	434581.7	555585.00	238702.00	804884.00	1540181.00	228330.00	99697.00	336093.00	635751.00

YFINR	YNITR	YP	YPR	YPUC	YPRC	YPUCA	YPRCA	YM	YX
1092.56	4529.62	16571.00	143079.64	1257.00	13652.00	505.00	1718.00	2215.00	1475.00
1421.93	5642.41	17394.00	148042.04	1294.00	14060.00	632.00	1811.00	2466.00	1874.00
1855.74	7261.66	17280.00	149537.68	1260.00	13689.00	689.00	1891.00	2474.00	2037.00
1759.34	8281.71	19732.00	154214.78	1471.00	15721.00	1113.00	2181.00	3053.00	2086.00
1454.07	8274.58	22215.00	157499.99	1889.00	17741.00	1138.00	2125.00	3547.00	2618.00
1783.44	7932.18	23351.00	155131.18	1565.00	19195.00	1466.00	2215.00	4374.00	2695.00
1735.24	9401.63	27307.00	170692.72	1922.00	22411.00	1823.00	2476.00	5357.00	3523.00
1590.63	9144.83	30988.00	178222.77	2638.00	25272.00	2487.00	2978.00	5828.00	3592.00
1558.50	9044.97	33761.00	178948.97	3416.00	27458.00	2941.00	3635.00	7196.00	3455.00
1654.90	9537.16	39390.00	194692.06	3644.00	31860.00	3139.00	3768.00	7661.00	4196.00
1815.57	9694.10	46587.00	205170.15	4371.00	35977.00	3629.00	5757.00	9310.00	5372.00
1819.85	9909.02	55734.00	214537.71	5065.00	44782.00	3909.00	5522.00	11218.00	6506.00
2546.07	10214.43	63864.00	218184.32	5797.00	50746.00	4727.00	7098.00	13132.00	7555.00
2832.29	12273.15	76906.00	234977.21	6895.00	62407.00	5483.00	7931.00	16350.00	8717.00
3511.53	11187.24	89270.00	239500.46	8947.00	70173.00	7902.00	8490.00	19162.00	9897.00
4699.13	12035.61	103416.00	255847.43	8959.00	86314.00	7968.00	9034.00	21820.00	10887.00
5032.34	12676.60	120370.00	272235.05	11085.00	97771.00	8683.00	14097.00	27785.00	14226.00
5404.00	12178.89	149487.00	285012.75	11908.00	121372.00	10331.00	18945.00	39321.00	23909.00
5976.44	14297.94	171474.00	294040.12	14900.00	133402.00	11769.00	25509.00	47429.00	30948.00
6937.63	16665.85	199272.00	319727.25	15987.00	154065.00	13380.00	28652.00	62972.00	47548.00
7770.65	19342.94	219175.00	330290.76	20267.00	166443.00	15070.00	33300.00	75850.00	53084.00
8625.04	19750.16	248913.00	347921.12	23018.00	191469.00	17624.00	38457.00	88996.00	55405.00
8757.47	21273.47	280513.00	366223.10	24987.00	216364.00	19392.00	41402.00	105775.00	73853.00
9492.24	21073.63	300845.00	376956.13	28015.00	231392.00	22573.00	42802.00	101949.00	68659.00
10150.79	22027.58	342036.00	393948.57	30529.00	264944.00	23888.00	41381.00	101648.00	78150.00
11103.50	23746.95	379488.00	417985.94	33964.00	287947.00	26436.00	46888.00	123055.00	88360.00
12026.30	28090.37	441519.00	441518.66	35785.00	354232.00	18063.00	66687.00	146757.00	99610.00
13308.46	27956.92	459443.00	442048.12	38586.00	377257.00	17439.00	72450.00	130912.00	81492.00
12428.00	29789.11	492231.00	459489.07	42652.00	407438.00	14719.00	83354.00	140522.00	77280.00
16172.42	32349.62	536749.00	481003.50	46397.00	419290.00	14955.00	94226.00	158151.00	89544.00
17180.00	34574.00	589412.00	497738.96	52453.00	459530.00	17213.00	100326.00	173754.00	85958.00
19105.00	34051.00	654084.00	514485.63	56790.00	527810.00	17510.00	118020.00	204828.00	87952.00
21476.00	38387.56	727827.00	532038.16	66950.00	576910.00	24650.00	128690.00	230893.00	93567.00
23042.85	42256.95	815658.00	564516.90	80660.00	641090.00	32990.00	145450.00	271291.00	104207.00
23725.00	47455.00	988272.00	590109.00	106530.00	772760.00	44280.00	166760.00	342536.00	122737.00
24327.00	**52770.00**	**1192774.00**	**618530.00**	**119190.00**	**916990.00**	**53670.00**	**211220.00**	**434200.00**	**114298.00**
25821.00	52160.00	1374953.00	639695.00	130920.00	1022130.00	63810.00	228920.00	450060.00	121710.00
26725.00	56858.00	1536000.00	670735.00	164370.00	1167860.00	71560.00	235830.00	512950.00	153860.00
28369.00	59452	1701194.00	695203	166340.00	1346830.00	67950.00	291900.00	659920.00	175880.00

YCS	YSAV	YNFI	YNCT	YNSAV	YNP	YAE	YIE	YSE
179.00	1662.00	267.00	354.00	2283.00	16838.00	5,184	50	317
189.00	2040.00	277.00	375.00	2692.00	17671.00	5,348	48	349
188.00	2332.00	319.00	372.00	3023.00	17599.00	5,516	46	385
213.00	2540.00	291.00	385.00	3216.00	20023.00	5,690	44	424
251.00	2585.00	390.00	579.00	3554.00	22605.00	5,869	42	467
589.00	2591.00	494.00	844.00	3929.00	23845.00	6,054	41	515
509.00	2974.00	587.00	951.00	4512.00	27894.00	6,244	39	568
-151.00	3088.00	615.00	1228.00	4931.00	31603.00	6,215	46	611
52.00	2887.00	697.00	1373.00	4957.00	34458.00	6,187	54	657
444.00	3886.00	625.00	1498.00	6009.00	40015.00	6,158	64	707
798.00	6239.00	661.00	103.00	7003.00	47248.00	6,130	75	760
1168.00	5887.00	709.00	177.00	6773.00	56443.00	6,101	88	818
1073.00	7321.00	1203.00	166.00	8690.00	65067.00	6,073	104	880
1823.00	7604.00	1575.00	156.00	9335.00	78481.00	6,045	122	946
3023.00	10150.00	1541.00	116.00	11807.00	90811.00	6,017	144	1018
2074.00	8143.00	1934.00	172.00	10249.00	105350.00	5,989	170	1095
2294.00	11514.00	2147.00	218.00	13879.00	122517.00	5,962	200	1178
2342.00	16207.00	2715.00	482.00	19404.00	152202.00	6,014	241	1246
2375.00	23172.00	3231.00	581.00	26984.00	174705.00	6,067	292	1319
2612.00	29220.00	3863.00	495.00	33578.00	203135.00	6,120	352	1396
6861.00	32465.00	4817.00	819.00	38101.00	223992.00	6,173	426	1477
11936.00	34426.00	3566.00	900.00	38892.00	252479.00	6,227	514	1563
10290.00	39162.00	4660.00	1009.00	44831.00	285173.00	6,282	621	1654
9353.00	41438.00	6025.00	1158.00	48620.00	306870.00	6,337	750	1750
4792.00	46563.00	10881.00	1205.00	58648.00	352917.00	6,392	906	1852
18948.00	57577.00	13125.00	1319.00	70702.00	392613.00	6,448	1,094	1960
13899.00	51501.00	1701.00	65595.00	118797.00	443220.00	6,504	1,322	2074
3130.00	43600.00	-605.00	68186.00	111181.00	458838.00	6,668	1,355	2126
7311.00	42141.00	-676.00	75533.00	116998.00	491555.00	6,835	1,389	2180
22489.00	63064.00	-1684.00	84889.00	146269.00	535065.00	7,007	1,424	2234
38368.00	68110.00	1637.00	97704.00	167451.00	591048.00	7,183	1,460	2291
40100.00	58757.00	4956.00	126146.00	189858.00	659040.00	7,364	1,496	2348
55440.00	71453.00	7432.00	128992.00	207876.00	735259.00	7,549	1,534	2407
68830.00	80188.32	79470.00	182817.00	270952.00	823605.00	7,739	1,572	2468
101990.00	93230.00	11750.00	249487.00	354466.00	1000021.00	7,933	1612	2530
191600.00	**136589.00**	**9117.00**	**282648.00**	**428354.00**	**1201891.00**	8132.46	1652.49	2593.23
234540.00	198923.00	7549.00	307859.00	514331.00	1382503.00	8331.6	1692.9	2656.7
228160.00	176461.00	14785.00	422772.00	614018.00	1550785.00	8530.7	1733.4	2720.2
283060.00	158865.00	7796.00	486837.00	653499.00	1708990.00	8729.8	1773.9	2783.7

Appendix II

Definition for Data

Sector	Variable Name	Variable Defination	Units	Variable Type	Data Period Start	Data Period End	Comments	Source
Government (G)	GBB	Government Budget Balance	NRs. Million					MOF, Economic Survey
Government (G)	GCB	Government Cash Balance	NRs. Million					MOF, Economic Survey
Government (G)	GCE	Government Capital Expenditure	NRs. Million					MOF, Economic Survey
Government (G)	GDL	Government Domestic Loan	NRs. Million					MOF, Economic Survey
Government (G)	GFG	Government Foreign Grants	NRs. Million					MOF, Economic Survey
Government (G)	GFL	Government Foreign Loan	NRs. Million					MOF, Economic Survey
Government (G)	GNTAX	Government Non Tax Revenue	NRs. Million					MOF, Economic Survey
Government (G)	GPE	Government Principal Payment (Government Amortization)	NRs. Million				Loan Repayment and Interest	MOF, Economic Survey
Government (G)	GRE	Government Recurrent Expenditure	NRs. Million					MOF, Economic Survey
Government (G)	GTAX	Government Tax Revenue	NRs. Million					MOF, Economic Survey
Government (G)	GTE	Total Government Expediture	NRs. Million		1975	2009		MOF, Economic Survey
Government (G)	GTRV	Total Government Revenue	NRs. Million					MOF, Economic Survey
Monetary (M)	MCC	Currency in Circulation	NRs. Million					NRB, QEB
Monetary (M)	MDC	Domestic Credit	NRs. Million					NRB, QEB
Monetary (M)	MDD	Demand Deposite	NRs. Million					NRB, QEB
Monetary (M)	MFA	Foreign Assets	NRs. Million					NRB, QEB
Monetary (M)	MFL	Foreign Liabilities	NRs. Million					NRB, QEB
Monetary (M)	MGE	Claim on Government Exterprises	NRs. Million					NRB, QEB
Monetary (M)	MGEF	Claims on Government Entreprises, Financial	NRs. Million					
Monetary (M)	MGENF	Claims on Government Entreprises, Non Financial	NRs. Million					
	MIBRR	Inter Bank Transaction Rate	in %					
Monetary (M)	MM1	Narrow Money Supply (M1)	NRs. Million					NRB, QEB
Monetary (M)	MM2	Broad Money Supply (M2)	NRs. Million					NRB, QEB
Monetary (M)	MNCO	Net Capital and Other Items	NRs. Million					NRB, QEB
Monetary (M)	MNDA	Net Domestic Assets	NRs. Million					NRB, QEB
Monetary (M)	MNFA	Net Foreign Assets	NRs. Million					NRB, QEB
Monetary (M)	MNG	Net Claim on Government	NRs. Million					NRB, QEB
Monetary (M)	MPS	Claim on Private Sector	NRs. Million					NRB, QEB
Monetary (M)	MRM	Reserve Money (High Power Money)	NRs. Million					NRB, QEB
Monetary (M)	MTD	Time Deposite	NRs. Million					NRB, QEB
Price, Interest and Exchange Rate (P)	PAI	Lending Rate Agriculture	In %				Commercial Bank Rate, average	NRB, QEB Various Issues
Price, Interest and Exchange Rate (P)	PCI	Lending Rate in Commercial Loan	In %				Commercial Bank Rate, average	NRB, QEB Various Issues
Price, Interest and	PCPI	Consumer price Index	Index (2001)				Base Year 1996 Base	NRB, QEB

Sector	Variable Name	Variable Defination	Units	Variable Type	Data Period Start	Data Period End	Comments	Source
Exchange Rate (P)							Year Changed	
Price, Interest and Exchange Rate (P)	PCPIF	Consumer Price Index (Food)	Index (2001)				Base Year 1996 Base Year Changed	NRB, QEB
Price, Interest and Exchange Rate (P)	PCPII	Indian Consumer price Index	Index (2001)				Cornsumer Prices, 2005 Base Year Changed	IFS CD-ROM
Price, Interest and Exchange Rate (P)	PCPIIB	Indian Consumer price Index (Border)	Index (XXXX)					
Price, Interest and Exchange Rate (P)	PCPINF	Consumer Price Index (Non Food)	Index (2001)				Base Year 1996 Base Year Changed	NRB, QEB
Price, Interest and Exchange Rate (P)	PDR	Deposit Rate for 1 Years Fixed Deposite	In %					
Price, Interest and Exchange Rate (P)	PDY	GDP Deflator	Index (2001)					Derived
Price, Interest and Exchange Rate (P)	PDYA	GDP Delfator Agriculture	Index (2001)					Derived
Price, Interest and Exchange Rate (P)	PDYI	GDP Delfator Industry	Index (2001)					Derived
Price, Interest and Exchange Rate (P)	PDYS	GDP Delfator Services	Index (2001)					Derived
Price, Interest and Exchange Rate (P)	PEI	Lending Rate in Export Bill	In %				Commercial Bank Rate, average	NRB, QEB Various Issues
Price, Interest and Exchange Rate (P)	PII	Lending Rate Industry	In %				Commercial Bank Rate, average	NRB, QEB Various Issues
Price, Interest and Exchange Rate (P)	PIS	Lending Rate Services						
Price, Interest and Exchange Rate (P)	PNERA	Nominal Exchange Rate(US$, average of the year))	Index (1996)				Base Year 1996, Changed, $ Rate	NRB, QEB
Price, Interest and Exchange Rate (P)	PNERE	Nominal Exchange Rate(US$, end of the year))	Index (1996)				Base Year 1996, Changed, $ Rate	NRB, QEB
Price, Interest and Exchange Rate (P)	POI	Crude Oil Price	Index (2001)				US$ Per Barrel,	
Price, Interest and Exchange Rate (P)	PREER	Real Effective Exchange Rate(US$)	Index (1996)				Base Year 1996, Changed,	NRB, Monetary Division
Price, Interest and Exchange Rate (P)	PSR	Saving Interest Rate	In %					
Price, Interest and Exchange Rate (P)	PWOPI	World Price Index	Index (2001)				World CPI Index, 2005	IFS CD-ROM
Price, Interest and Exchange Rate (P)	PWOPII	World Price Index of Industrialized Countries	Index (2001)				Adavanced Economy CPI Index,2005 Base Year Changed	IFS CD-ROM
Price, Interest and Exchange Rate (P)	PWPI	Wholesale Price Index	Index (XXXX)					

Sector	Variable Name	Variable Defination	Units	Variable Type	Data Period Start	Data Period End	Comments	Source
Price, Interest and Exchange Rate (P)	PWPII	Indian Wholesale price Index	Index (2001)				Indian Wholesale or Producer Prices, 2005	IFS CD-ROM
Balance of Payment (B)	BAMT	BOP Amortization	NRs. Million				Before 2001 amortization after 2001 Repayment	NRB, BOP Division
Balance of Payment (B)	BCAT	Capital Tansfers	NRs. Million				Official Capital Transfer Net	NRB, BOP Division
Balance of Payment (B)	BCTC	Current Transfer Credit	NRs. Million					NRB, BOP Division
	BCTCO	Current Transfer Credit Others	NRs. Million					NRB, BOP Division
Balance of Payment (B)	BCTD	Current Transfer Debit	NRs. Million					NRB, BOP Division
Balance of Payment (B)	BEO	Net Error and Omission	NRs. Million				Derived BTB+BNS+BNI+BCTD+BCAT+BNFB+BEO=0	NRB, BOP Division
Balance of Payment (B)	BFDI	Foreign Direct Investment	NRs. Million				FDI flow since 1996 onwards	NRB, BOP Division
Balance of Payment (B)	BFG	BOP Grant	NRs. Million				Before 2001 Official Grants after 2001 Grants	NRB, BOP Division
Balance of Payment (B)	BFL	BOP Government Drawing	NRs. Million				Before 2001 Foreign Loan after 2001 Drawings	NRB, BOP Division
Balance of Payment (B)	BGM	Import of Goods	NRs. Million				Before 2001 Import C I F and after 2001 F O B	NRB, BOP Division
Direction of Trade(D)	BGMI	Import from India	NRs. Million				Share of Import taken from direction of trade and DXI as a percent of BGX	NRB, QEB
Direction of Trade(D)	BGMO	Import from Other Countries	NRs. Million				Share of Import taken from direction of trade and DXI as a percent of BGX	NRB, QEB
Balance of Payment (B)	BGTB	Balance on Goods	NRs. Million					NRB, BOP Division
Balance of Payment (B)	BGX	Export of Goods	NRs. Million					NRB, BOP Division
Direction of Trade(D)	BGXI	Export to India	NRs. Million				Share of export taken from direction of trade and DXI as a percent of BGX	NRB, QEB
Direction of	BGXO	Export to Other Countries	NRs. Million				Share of export taken	NRB, QEB

Sector	Variable Name	Variable Defination	Units	Variable Type	Data Period Start	Data Period End	Comments	Source
Trade(D)							from direction of trade and DXI as a percent of BGX	
Balance of Payment (B)	BIP	Income Payment	NRs. Million				Before 2001 Investment Income	NRB, BOP Division
Balance of Payment (B)	BIR	Income Receipt	NRs. Million				Before 2001 Investment Income	NRB, BOP Division
Balance of Payment (B)	BNFB	Change in Net Foreign Balance	NRs. Million				(-) increase, Before 2001 change in reserve and after Change in nfa	NRB, BOP Division
Balance of Payment (B)	BNI	Net Income	NRs. Million				dereived from BIR-BIP	NRB, BOP Division
Balance of Payment (B)	BNS	Net Services	NRs. Million				dereived from BSR-BSP	NRB, BOP Division
	BOIA	Other Investment Assets	NRs. Million		2001	2009	Series since 2001	
	BOIL	Other iInvestment Liabilities	NRs. Million		2001	2009	Series since 2001, It excludes General Government	
Balance of Payment (B)	BREM	Remittance	NRs. Million				Before 2001 Private Remittance after 2001 Workers Remit and Pension	NRB, BOP Division
Balance of Payment (B)	BSP	Service Payment	NRs. Million				Before 2001 Service Payment, except investment income	NRB, BOP Division
Balance of Payment (B)	BSR	Service Receipt	NRs. Million				Before 2001 Service Receipt, except investment income	NRB, BOP Division
Real Sector and National Account (Y)	YA	Agriculture GDP at Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YAE	Agriculture Employment	NRs. Million					
	YAGYFI	Land Agro Production Capacity	NRs. Million					
Real Sector and National Account (Y)	YAI	Agriculture Investment	NRs. Million					
Real Sector and National Account (Y)	YAR	Agriculture GDP at Constant Price (XXXX)	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YCS	Change in Stock in Current Price	NRs. Million					MOF, Economic Survey

Sector	Variable Name	Variable Defination	Units	Variable Type	Data Period Start	Data Period End	Comments	Source
Real Sector and National Account (Y)	YF	GDP in Factor Cost at Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YFINR	Real Financial Intermediary Service (Inputed Value of Banking Services)	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YFR	GDP in Factor Cost at Constant Price (XXXX)	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YI	Industrial GDP at Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YIE	Industry Employment	NRs. Million					
Real Sector and National Account (Y)	YII	Industry Investment	NRs. Million					
Real Sector and National Account (Y)	YIR	Industrial GDP at Constant Price (XXXX)	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YM	Import of Goods and NFs in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YNCT	Net Current Transfer in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YNFI	Net Factor Income in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YNITR	Real Net Indirect Tax	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YNP	Gross National Product in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YNSAV	Gross National Saving in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YP	GDP in Producer Price (in Current Price)	NRs. Million					MOF, Economic Survey
Real Sector and National Account	YPR	GDP in Producer Price (in Constant Price(XXXX))	NRs. Million					MOF, Economic Survey

Sector	Variable Name	Variable Defination	Units	Variable Type	Data Period Start	Data Period End	Comments	Source
(Y)								
Real Sector and National Account (Y)	YPRC	Private Consumption in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YPRCA	Private Capital Formation in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YPUC	Public Consumption in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YPUCA	Public Capital Formation in Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YS	Service GDP at Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YSAV	Gross Domestic Saving In Current Price	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YSE	Service Employment	NRs. Million					
Real Sector and National Account (Y)	YSI	Service Investment	NRs. Million					
Real Sector and National Account (Y)	YSR	Service GDP at Constant Price (XXXX)	NRs. Million					MOF, Economic Survey
Real Sector and National Account (Y)	YX	Export of Goods and NFs in Current Price	NRs. Million					MOF, Economic Survey

APPENDIX III

Estimation of log GDP from log remittances using EViews-7 software

Dependent Variable: LOG_GDP
Method: Least Squares
Date: 07/18/15   Time: 08:32
Sample: 1975 2013
Included observations: 39

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_BREM	0.572946	0.021011	27.26920	0.0000
C	3.044906	0.082400	36.95259	0.0000

R-squared	0.952601	Mean dependent var	5.207903
Adjusted R-squared	0.951320	S.D. dependent var	0.631726
S.E. of regression	0.139381	Akaike info criterion	-1.053289
Sum squared resid	0.718802	Schwarz criterion	-0.967979
Log likelihood	22.53914	Hannan-Quinn criter.	-1.022681
F-statistic	743.6090	Durbin-Watson stat	0.212742
Prob(F-statistic)	0.000000		