## The Impact of Remittance, Foreign aid and FDI on growth: Evidence from the Nepal Economy

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### ABSTRACT

The main thrust of the thesis is to investigate the relationships between economic growth and remittance in the case of Nepal. This study also examines the effectiveness of aid, labor and FDI on the economic growth of Nepal. The ARDL Bounds testing approach is conducted for analyzing the growth model over the period 1970- 2014. The empirical results points out that remittances and labor are very important driving forces for economic growth in both the long and short-terms of Nepal economy. These findings also show that investment, FDI, and AID do not have any impact on output growth in both the long and short run period in the case of the Nepal Economy. Error-correction modeling was used to confirm the existence of a stable long-term relationship and approve a deviation from the long-term equilibrium following a short-term shock, which is corrected by almost 16 percent after each year.

**Keywords:** Economic Growth, Remittance, foreign Aid, FDI, ARDL, Nepal Economy.

Bu tezin ana hedefi ampirik olarak Nepal ekonomisindeki ekonomik büyüme ile fiziksel sermaye, işçilerin para havalesi, uluslararası direk yatırım, uluslararası ekonomik yardımlaşma ve işci gücü sayısı arasındaki uzun ve kısa dönemli ilşkiyi otoregresif dağıtılmış gecikme test ile ölçer (ARDL.). Otoregresif dağıtılmış gecikme testi kullanılarak 1970 ile 2014 yılları arasında Nepal'in ekonomik büyümesi incelenmiştir. Ampirik bulgular işçilerin para havalesi ile işci gücü sayısının hem uzun hemde kısa dönemli ekonomik büyüme üzerinde etkili olduğu belirlenmiştir. Bulgular ayrıca fiziksel sermayenin, uluslararası direk yatırımın, uluslararası ekonomik yardımlaşmanın ekonomik büyüme üzerinde hiçbir etkisi olmadığı ıspatlanmıştır. Bunun paralelinde Nepal ekonomisinde iş gücü'nün, fiziksel yatırımlardan ve diğer belirtilen faktörlerden daha etkin bir şekilde ekonomik büyümeyi etkilediği bulunmuştur.

Anahtar kelimeler: Ekonomik büyüme; otoregresif dağıtılmış gecikme testi (ARDL); Nepal ekonomisi, fiziksel sermaye, işçilerin para havalesi, yabancı direk yatırım, uluslararası ekonomik yardımlaşma, işci gücü sayısı.

# **DEDICATION**

This Thesis is dedicated to my Mother Mrs. Krishna Kumari Chamlagai and my Father Mr. Bir Bahadur Chamlagai.

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# TABLE OF CONTENTS

ABSTRACTiii
ÖZiv
DEDICATIONv
ACKNOWLEDGEMENTvi
LIST OF TABLES
LIST OF ABBREVIATIONSxii
1 INTRODUCTION
1.1 Introduction
1.2 Aim of the study
1.3 Methodology and Data4
1.4 Finding of the thesis
1.5 Structure of the study5
2 LITERATURE REVIEW
2.1 Remittance
2.2 Foreign direct investment12
2.3 Foreign Aid17
3 ECONOMIC OVERVIEW: NEPAL
3.1 Introduction
3.2 Main structure of Nepal Economy
3.3 Nepal Political Economy27
3.4 Macroeconomic Variables
3.4.1 Inflation
3.4.2 Nepal Human Development Index and Poverty

3.4.3 Nepal Employment	
3.4.4 Nepal Labor Market	
4 REMITTANCE, FOREIGN AID, FDI AND GROWTH	35
4.1 Remittance and Growth	35
4.1.1 Labor Migrations & Remittances	35
4.1.2 Emigrations	
4.1.3 Current prospective of labor migration from Nepal in recent years	40
4.1.4 Nepal Remittance Economy	42
4.2 Foreign Direct Investment	44
4.3 Foreign Aid and Growth	47
5 DATA, MODEL AND METHODOLOGY	53
5.1 Data and sources	53
5.2 Model	55
5.3 Methodology	55
6 DATA ANALYSIS AND RESULTS	58
6.1 Correlation matrix	58
6.2 Unit Root Test	59
7 CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS	65
7.1 Conclusion	65
7.2 Suggestions and recommendations	66
REFERENCES	70

## LIST OF TABLES

Table 3.1: Major Macroeconomic Indicators of Nepal	25
Table 3.2: Economic growth of past decade in Nepal    2	26
Table 3.3: Nepal Inflation, consumer prices (annual %)    2	29
Table 3.4: Nepal's HDI trends based on time series from 1980 -2013	30
Table 3.5: Nominal income, 1995/96 – 2010/11	30
Table 3.6: Indicators on employment status, 1995/96 – 2010/11	32
Table 3.7: Nepal population and percentage distribution of population 1998-2008 3	33
Table 3.8: Nepal populations and absentees' population in 2012    3	34
Table 4.1: Number of Nepalese labor migration by the year	40
Table 4.2: Remittance inflows in Nepal from 2000 – 2013 4	41
Table 4.3: Number of labor Migrations    4	42
Table 4.4: Top 10 recipients of remittances	42
Table 4.5: Top 10 recipients of remittances on % of GDP	43
Table 4.6: Uses of Remittance    4	43
Table 4.7: Foreign direct investment, net inflows    4	46
Table 4.8: FDI inflows as a percentage of GFCF in South Asia, 1991-2006 4	46
Table 4.9: Aid to GDP    5	50
Table 4.10: Sectorial distribution of foreign aid as a percentage of total aid,	
(1975-2009)	50
Table 6.1: Estimated Correlation Matrix of Variables	58
Table 6.2: Unit Root Test    5	59
Table 6.3: F-Statistic-ARDL Models    6	51
Table 6.4: Estimation for Long-Run    6	52

Table 6.5: Estimation for Short-Run	. 63
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# LIST OF ABBREVIATIONS

Abbreviation	Meaning
ADB	Asian Development Bank
ADF	Augmented Dickey Fuller
AID	Foreign Aid
ARDL	Autoregressive Distributed Lag
BOP	Balance Of Payment
CBS	Central Bureau Of Statistic
СРІ	Consumer Price Index
СРІ	Corruption Perception Index
DAC	Development Assistance Committee
EFPI	Equity Foreign Portfolio Investment
FDI	Foreign Direct Investment
FEA	Foreign Employment Act
FY	Fiscal Year
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formations
GON	Government of Nepal
HDI	Human Development Index
IDA	International Development Association
ILO	International Labor Organization
IMF	International Monetary fund
INGO's	International Non-Government Organization

INF	Inflection Rate
INV	Gross Fixed Capital Formation
K	Capital
L	Number Of Labor
LCDs	Least Developing Countries
LFS	Labor Force Survey
MFIT 4.1	Micro fit 4.1
MNCs	Multinational Corporations
NLSS-III	Third Nepal Living Standards Survey
NRB	Nepal Rastra Bank
ODA	Official Development Assistance
OLS	Ordinary Least Squares
REM	Net Remittances Inflows
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
WIR	World Investment Report

## Chapter 1

## INTRODUCTION

#### **1.1 Introduction**

Over the past decade inflows of foreign capital has been surprisingly increase and now inflows of remittance, foreign aid and FDI seen to be among the most prominent sources of external finance for the least and developing countries. According to Hernando De Soto book "The Mystery of Capital" the author assert concerning about the mysteries of missing capital, information, political awareness and so on. Also, De Soto estimate around US\$ 9.3 trillion in "dead capital" or capital which is not recognized by the government globally and this is owned by poor and middle-class people in developing countries. Remittance flows are define as transfer of payment done by individual from the expatriates to his/her home countries in layman terms and are primary example of "dead capital". The "dead capital" distinctively displayed to danger due to fostering informal and underground economy. Moreover, remittances have been underrated as development mechanism.

An international remittance which is approximately as \$406 billion in FY 2012 is estimated to flow in developing countries a 6.5 percent increase from FY 2011 (World Bank, 2012). Remittance stands as second largest sources of earning foreign exchange currency to least and developing nations behind FDI. And there is increasing concern about remittance inflows and whither it can assist in the field of economic development and poverty alleviation in home countries (Adams, 2003). Moreover, government and transnational organization has shown increasing concern about potential source of external sources of financing. Remittance seen as a boon for least developing countries due to inflows of capital from develops countries and backbone for source of external finance. For many third worlds countries foreign remittance inflows has exceed foreign aid and FDI. In the case of Nepal remittance represented a large proportion of its share of GDP. Remittance has demonstrated to be a source that contributes to poverty alleviation, economic growth and development plus decline in foreign aid put pressure for least developing countries to seek alternative source for development financing.

In the other hands, foreign aid and FDI seen to be challenging topic which is always controversial regarding to its contribution to economic growth and development. Many authors argue that over the last few decades' foreign aid seen to be unfavorable and omit to achieve development goals (Easterly, 2006). Moreover, numerous of FDI researchers have reticent about the actual impact that FDI brings in host countries. However, many researchers have uttered to social negative effect that possibly bring by FDI (Hymer, 1970). Although developing countries, particularly the one which has limited number of internal financing source competes overwhelmingly to appeal to attract FDI. Beginning of early 1990's FDI flows from develop countries has been increase surprisingly from 36 billion to \$379 billion in 2007. Furthermore, in FY 2007, remittance has surpassed foreign aid (Grabel, 2008).

#### **1.2 Aim of the Study**

The main objective of my thesis is to empirical investigating the conceptualization of links between remittances, aid, FDI on economic growth on the economy of Nepal. The thesis tend to utilize others various number of variables such as capital, labor, inflation and gross capital formation index to estimate the economic impact on Nepal's economy. The overall thesis attempt to furnish the concept of remittances, foreign aid and FDI in the context of Nepal and moreover it provide information of world in general. Also, the relationship between remittances, aid, FDI and others variables were trying to attempt the parameters of effect on economic growth. And lastly, the investigation between explanatory variables and the economic growth are conduct by applying ARDL (the autoregressive distributed lag) Bounds testing approach. This approach has been employed to study the relationship and data are collected from 1970 to 2014.

#### **1.3 Methodology and Data**

The time-series data are collected for this thesis and the time measurement of data are 44 years, which is from 1970 to 2014. The variables data include GDP (CAP) in constant price of year 2005, remittance (REM), foreign aid (AID) and FDI as the percentage of GDP, Nepal inflation rate (INF), gross fixed capital formation (GFCF), and Nepal total labor forces (L).

The method in this thesis will be conduct of cointergation as a cause of time-series based. It involve following postulating the stationary point, spurious regression and the error- correction mechanism using the Bounds test for level relationship which introduced by Pesaran et al. (2001) and cointegration test.

#### **1.4 Finding of the thesis**

The result from this thesis reveal in a mixed order. The empirical result shows that there is positive relation between FDI and remittance however the findings also show that investment, FDI, and AID do not have any impact on output growth in both the long and short run period in the case of the Nepal Economy.

#### **1.5 Structure of the study**

At the beginning of this thesis the introduction chapter expresses general information about the situation of remittance, foreign aid and FDI in wide global concept plus from Nepal's points. The literature review in following chapter two demonstrates how pioneer and preceding study has conduct and finding of their studies. In chapter three it manifest the economic situation of Nepal throughout the history and its current situation as well as constraint to achieve economic growth. Moreover, chapter four continue to discuss about remittance, foreign aid and FDI in context of Nepal and its link to economic growth. In chapter five, the data, model and methodology are presented that employed through study. In chapter six, empirical result has been conduct and interpretation of result. Finally, chapter seven provide conclusion, policy recommendation and suggestion for further studies.

## Chapter 2

## LITERATURE REVIEW

#### **2.1 Remittance**

In this section a large body of literature will be focused in Nepal remittance inflows meanwhile it also cover foreign aid (OECD), and FDI as well as impacts of these on economy growth. In beginning of literature review it mainly focuses on remittances for those cross-countries as well as specific countries which have high percentage of remittance inflows before literature addresses foreign aid and FDI. "Personal remittances are the sum of personal transfers and compensation of employees. Personal transfers include all current transfers in cash or in kind between resident and nonresident individuals, independent of the source of income of the sender (and regardless of whether the sender receives income from labor, entrepreneurial or property income, social benefits, and any other types of transfers; or disposes assets) and the relationship between the households (regardless of whether they are related or unrelated individuals)" (World Bank, 2012). Remittance has been a global phenomenon and especially it is vital for country like Nepal which receives highest proportion of remittance in terms of GDP, approximately receiving remittance worth of 25% of GDP (World Bank, 2012). Remittances have been seen as crucial responsible for poverty reduction (Page et.al, 2005), foreign exchange reserves and dependency. Regarding to impact of remittances an empirical studies have demonstrate that basically large portion of international remittance income goes to consumption, investments and savings (Dustmann & Kirchamp, 2001; Woodruff &

Zenteno, 2001; Adams, 2002). Governments play vigorous roles to regulate the channels of economic transfers. The main objective of government intervention and play active roles is primary to stimulate flow of foreign remittances as revenue, control and screen them into productivity activities and sectors, prevent market from compel, intervention, coercion, and theft. In majority of countries where migrantsending proportion is high in those countries government have intervene to regulate market. Government has initiate several kinds of activities such as legal action, incentive and terms and policy and counseling programs in order to protect market coercion (Orozco, M. 2000). Although, not always government interventions can minimize intrude or decrease unrest. In some cases governments intervene and govern remittance flows in order to gain access or be friendly with capital flows (Shivani and Tineke, 1999). The evolve of remittance transfer have through spontaneous and which now drag huge attention because of their rising volume and their impact on recipient countries as well as it becoming increasingly competitive and profitable and raise numerous challenges too. To reduce these challenges it requires policies from government level and also from private sector.

Moreover, remittance also assists to lead poverty reduction. International remittance is lies beneath on effect on consumers; it can assist to mitigate poverty level by increasing the level of income to households who receive. Remittance income can be utilized by households in various purposes it can diffuse to health, investment, education. According to (Becker, 1962) human capital accumulates by educational level of citizen receive and their experiences. A new permanent income hypothesis shows that since remittance is also type of transitory income, households contribute on the favor at margin on investments goods, human capital investment and then on consumption goods (Adams, 1998). According to Analyzing the survey that have carried on household's survey in 1986/1997 in Egypt rural area found an positive relation between foreign remittances on poverty level, calculating households living in poverty is declining by 9.8 to 12% (Adams, 1991). Moreover, studies that have done in Ghana (Adams, 2006) demonstrate that internal as well as international remittances help to diminish the depth and severity of poverty level. The data that have collected from 70 different nations, the countries including 16 developed economies countries as well as 54 developing countries (Chami et.al, 2009) suggests that remittances inflows have a large substantial impact on smoothing macroeconomic fluctuations in remittances receiving countries, and further emphasizing that it might be used as tools for stabilizing. According to Anyanwu and Erhijakpor (2010) initial examines of impact of international remittances on poverty reduction using panel date of 33 countries over 15 years founds that 10% increase in international remittances as share of GDP led to 2.8% decline on poverty gap.

Considering the impact of international remittances inflows has width effect on growth and the evidence is even large and ambiguous. Past research shows doubtful meaning of international remittance impact on growth due to belief that remittances are barely spent on personal consumption, and especially on goods that are imported from other nations (Lipton, 1980; Russell, 1986). In recent studies these idea have been serious aggression and contemporary empirical studies show that apart from consumption remittance incomes goes to saving and investment (Adams, 2002). This can positively contribute to economic development. According to Paola and Ruiz-Arranz (2006) remittances income will help to increase on domestic savings and

work as substituting in a case of lack of financial development. However, Chami (2009) and Singh (2009) argue that the effect of remittance on growth is relatively small. Chami (2003) reveal that remittance impact on long-term growth by reducing work efforts of recipients. Additionally, based on Fajnzylber and Lopez (2007) survey for average Latin America and Caribbean argue that remittance impact on investment is positively linked each other but the impact is relatively small. From 1991-95 increase in remittance 0.7 percentage of GDP to 2.3 percentages in 2001-05, which lead to annual growth of per capita GDP as 0.27 percent each year among that only one-half is projected due to expansion in domestic investment. However, Fajnzylber and Lopez (2007) recommend that if financial institution and its service is developed among receipts household, remittance could possibly hike strong and positive impact on growth.

About the effect of remittance inflow from the macro level prospective remittance have shown impacts on balance of payments, foreign exchange rates and also interest rates (United Nations, 2006; World Bank, 2006). Remittance helps to boosts foreign exchanges reserve which positive result on balance of payments with enhanced of creditworthiness and external debt property (Avendano et.al, 2011). Having a multiplier effect of foreign remittance, it helps to hike domestic output (World Bank, 2006; Adelman & Taylor, 1992). Increase in remittance also lead to enhanced debt service payments ratio to income (Das & Serieux, 2010). Developing nations have advantages and opportunity from international remittances inflows. The flow of remittance from the foreign capital market has seen as praiseworthy to the receipts countries because of the favorable finance inflows (Ratha et. al, 2009). Although to achieve and fully utilizing of foreign remittances, developing nations need to setup mechanism of safe economy system and enforcement of laws and regulations. Remittance indeed boost the economy in meanwhile it tend to enhanced when economic downturn, while reducing volatility and macroeconomic shocks. According to Chami (2009) study shows that remittance tends to act as tools that stabilize economic volatility. According to Dustmann and Kirchamp (2001) find out that remittance flows to receipts households tends to save and it might crucial capital to initiate startup micro-enterprises. In same manner research taken in 30 communities on west-central Mexico reveal that remittance flows of workers from United States contribute to 21% of new business formations as essential source of startup capital (Massey & Parrado, 1998).

In other side, analyzing remittance through spending patterns of households, they tend to take less lightly to the actual income which has few or less impact on households acquisition on new consumers goods. Adams (2002) found out those households whom received remittance income from "once-abroad" migrates threat that marginal income as temporary fluke or luck in income in rural Egypt therefore, it result on use by not sustainably acquiring new consumers or final goods. Despite of that 54% of remittances incomes are spend on an item that does not occur frequently such as repair or construction of houses. In additional, 73% per capita expenditure on investment done by migrants who once went abroad were usually buy cultivate land for agriculture or land for further construct houses. In Ghana people tend to spend much remittance income to communication equipment and similarly in Bangladesh after the 1998 natural disaster flood remittance receivers (Mohapatra, 2009). Similarly, Yang (2008) found that households who receive remittance income tend to spend on

human capital accumulation such income mainly goes to educational sector such as spending more on educational of child and increasing educational expenditure as well as it helps to child labor. In other hand, Valero-gil (2008) found out that health care expenditure is main subject that Mexican households spend with the income that they receive as remittances. Nonetheless, in Ghana Adams (2006) found that remittance income receive by households does not treat remittance differently to acquiring consumer goods or investing in human capital accumulation or in housing instead they treat remittance income as usual others income source.

In the cases of high amount of remittance inflows might cause undesirable effects on the receipts economies. This sort of issue emerged in periods when there are massive capital inflows in curtain economic receipts. Particularly, the concern about whether remittance can cause Dutch disease effects. In other words, Dutch disease is the clearly visual relationship between increase in natural resources and decline in manufacture sector. The mechanism is that increase of revenue such as massive capital inflow from remittance or foreign aid which demonstrate strong currency of receipt nation compare to other nations (exchange rate), resulting on increase in consumer goods or tradable goods that will be expensive for others countries to buy and import became cheap result on decline in manufacturing sector and less competitive. According to Gupta (2007) high level of remittance inflow could led to Dutch diseases directing strong currency appreciation of domestic nation, degradation in manufacturing sector which lead to less competitive advantages in sub-Saharan Africa. Finally, on labor supply disincentives remittances, report that remittances reduce households labor supply in Latin American economies (Fajnzylber & Lopez 2008; Hanson 2007).

#### **2.2 Foreign direct investment**

Foreign Direct Investment (FDI) is seen to be essential development tool for developing countries and numerous FDI has been trying to attract in host countries from government level. Foreign direct investment is controlling and directing of entity, invest by one company or nation into company or entity based on another nations business enterprises. FDI seen as most important resources for economic development of country in which nation are facing huge resource gap and it need outside capital to fulfil the gap, those inflows of capital from privet sector. It encourage to competitiveness, innovation and productivity, it significantly helps to earn more revenue, skills and technology transfer and increase in foreign exchange earnings. FDI normally involve sum of equity capital, other long-term and short-term capital as shown the balance of payments. FDI usually involves in various ways but basically it involve in participation in management, joint-venture, transfer of resources, transfer of technology and expertise. Though FDI, individuals or enterprise obtain limited or entire ownership of firms that located in another host country. Therefore, FDI might contribute to growth through different patterns. The legislation of incentives such as subsidies, income or tax incentives and adopting FDI is the expectation that they will bring intensively greater benefit in receipt nations. During past four decades least developing countries (LCDs) have receive trillion of dollars from developed nations in various form of foreign aid, foreign loans and FDI. Due to low level of domestic savings and financial sector within these nations are consequentially poor therefore, flow of foreign capital have not adequately utilize. LCDs have low level of capital formation, investment and definitely low savings too. However, according to Dunning (1993) Multinational corporations (MNCs) a foreign company investment relatively tied with greater technology benefits, trade secrets,

trademarks, management techniques and management skills and strategies. Apart from MNCs is advance in technology, it is also related with high level of R & D expenditures which allow them to lead the market. Due to having high level or revenue MNCs able to hire high level of human labor such as technical and professional works (Murkusen, 1995).

Which can brings a favorable effect on economic growth and human capital accumulations. There is a controversial debate on FDI on economic growth. According to some scholar research demonstrated that there supposed to be favorable policy exist in nations then FDI can play a positive role (Burnside & Dollar, 2000). The empirical analysis reveals that FDI solely invoke an ambiguous role in contributing to economic growth (Jyun-Yi & Chih-Chiang, 2008). According to Khawar (2005) investigate the relationship between FDI on economic growth in the period from 1970-92 using the ordinary least squares (OLS) technique. The studies reveal that FDI is significant and positively correlated with growth and additionally domestic investment too. According to Hossain, (2008) FDI enhance build up physical capital, increase in employment opportunities, develop productive capacity, and appreciate skills of labor through transfer of technology. According to Blamestorm and Kokko, (1997) finding suggests that FDI has positive impact on regional integration where domestic liberalization and have macroeconomic stability goes hand in hand within integrated nations. According to Aitken (1997) especially exported oriented FDI assist to setup assembling plants and enhance local production to access in international markets for exports.

A study by Feridun (2004) concerning the relationship between FDI and economic growth examine for Cyprus, from 1976-2002 using the methodology of granger causality show that there is a solid evidence materialize that the economic growth as measured by GDP in Cyprus by Granger caused by the foreign direct investment, not visa versa. According to Flexner (2000) applying Ordinary Least Squares (OLS) estimation the effect of FDI on per capita GDP growth over the period 1990-1998 and reveal that FDI has a strong statistically significant impact on per capita GDP growth. In other hand, study estimate the examine relations between FDI and GDP employing time series data of the Sri-Lankan by Athukorala (2003) using econometric reveals that capital inflows from FDI do not wield as an independent charm on growth. Likewise, the guidance of causing growth is not by FDI to GDP growth instead its GDP growth to FDI, Bhattia (2005), FDI does not have statistically significant effect on growth; on the contrary volatility of FDI has a negative impact on growth.

According to Rodriguez-clare (1996) foreign capital invested in region has forward and backward linkages and this will assist local suppliers and customers technically. In least developing countries foreign capital flows is vital which exert in local economy and absorbed if the country has minimal capacity. The benefit of FDI on local economy are widely recognized as meeting the gap between desire investment, gain in tax revenues, assist in human capital accumulation such as educational, skill and technology transfer to host country. These will certainly help out country opposing against poverty. From the assist of FDIs, the receipt or host nations will able to access instant contemporary technology which is beneficial for those receiving foreign capital and relatively helps others firms those exist in local region. Through FDI it can extend and added in existing capital which have more less similar effect on growth as alike domestic investments, moreover FDI assist to relief from balance-of payment (BOP) deficits. Along with labor augmentation, foreign direct invested corporation train and devote employees in leadership skills, who may later be part of local firms.

However, On the contrary some scholar identifies FDI as doubtful virtues. They highlight some of the prejudice adverse impact of FDI on socioeconomic. Such as foreign dominant on local resources, asset bubbles, economic volatility and instability, mass labor inflow, political lobbying, threat to small local industry, monopoly market, exploitation of factor of production and among many others. For instance, Krugman (2000) reveal that foreign investors can take an advantages into the local producers in terms of fire-sales during economic constrains due to having superior liquidity and able to control and dominant the market Hausmann and Fernandez-Arias (2001) foreign investor dominant over local companies and not allowing them to grow which make local to sell-off their business. In the presence of information asymmetry, foreign investors gain advantages which gives rise to foreign overinvestment as well as domestic under saving (Razin et.al 1999). According to Stiglitz (2000) free capital liberalization may bring economic instability due to short term capital flows speculation.

Similarly, Borensztein (1998) found out that FDI examine as important tools to transfer of technology and it provide to high level of growth then domestic investment, if in case where a host country has minimum threshold stock of human capital. Minimal prerequisite requirements of development such as education, financial markets, technical training, R & D and infrastructure so on are compulsory to meet the desire growth in host country. In same manner, Balasubramanyam (1996), Bhagwati, (1978) note that FDI on growth in host country will be strong if only country has export promotion policies rather than import and well-functioning markets. There is a genuine debate that adoption of new technology requires skill labor that can work in new technological environment. In this similar content, Borensztein (1998) found out that FDI is essential to transfer technology which contribute more than domestic investment however, high level of contribution of FDI tend to only when host nations has reach threshold level of nations' labor education. In other case, Alfaro (2004) suggest that development of financial sector is essential than human capital to absorbed higher productivity level of FDI Durham (2004) suggest that the effect of FDI and equity foreign portfolio investment (EFPI) depend on technology spillovers which requires well-functional financial institutions. The advancement of banks, financial institutions and stock markets are essential to absorbed higher rate of FDI suggest by these authors additionally, authors imply financial markets will reduce the risk regarding to investment that made by local investors.

Some of the authors have argued that the strong formation of property rights, importantly intellectual property rights is extremely vital to attract higher level of technology FDI. If the host country unable or weak to protect intellectual property rights then foreign firms will tend to invest low level of investment result on not transferring high level of technology, which dilute opportunities for spillover effects and effect level of improvements of productivity of domestic firms (Smarzynska, 1999).

The debate between academician and policymakers about whether accept or reject FDI. If in the case of accepting FDI how to optimize utilize and reap the full benefits from FDI. Before linking FDI to development and growth we need to know that is it applicable for landlocked country like Nepal which is among least developed countries?

#### 2.3 Foreign Aid

Beginning of 1970, some of the major events occurred which make both demand and supply of foreign aid to effect. The independences of Africa and India seen to be severely shortage and induced need for economic assistance. The energy crises of 1970's force many developed countries into recession and forced to adopt donor's aid policies resulting on buying goods and services from borrower's countries (Fayissa & El-kaissy, 1999). While there are various reason of granting economic assistance, the importantly is to reduce the gap level of domestic investment and savings which assist on accelerating economic growth. A basic concept that emerges by foreign aid supporters is that it assists for economic growth. An existence of external aid will help to achieve higher level of growth and without external aid, domestic resources are not enough to start off (Dowling & Hiemenz, 1983). Moreover, least developing nations are tighten up of having very low level of foreign exchange reserve in this case aid will help to seems less severe the reserve and savings gap (Papanek, 1973). Therefore, foreign aid is always considered as crucial part for least developing countries in the procedure of economic development. All though various scholars have noted about pros and cons of foreign aids, the main target of aids is to promote economic growth and improve the level of well-beings belongs of the citizens. Despite the fact, aid has been always a controversial topic over its effectiveness in receipt countries. Many countries which has high level of foreign capital flows and aid as the main sources of income, has visualize just as optimistic result on economic development. In other hand, foreign aid in least developing nations has never been obscure regarding to impact on economic growth. This holistic situation led economists to serious consideration regarding to aim and objectives of aid on economic growth in least developing countries. An empirical result that going to be conduct will show the result of either foreign capital flows are for or against of the theoretical debate concerning the impact of foreign capital flows. According to Mosley (1987) state the three different kind of effeteness of aid which is accountable are; first aid which can directly construct over the project whereas aid going to be diffusion. Second, an indirect effeteness to local spending patterns of receipts countries. And the third, similarly effect to entirely recipient government. Whatsoever changes of fiscal adoptions by government through foreign aid inflows will goings to effect to macro-economy level by changes on exchange rate, a global phenomenon portrait by Dutch diseases and increase in interest rates.

The pioneers of two-gap model Chenery and Strout (1996) state that there is a positive relation between foreign aid and growth. According to authors any additional investment done will convert into economic growth which helps to increase on output and per capita income. Any investment take place when there is higher level of domestic savings in the case of least developing countries it is opposite. Therefore, any external capital will help to fill the gap. Once more, to increase final goods and services, capital goods need to imported, in addition, if the

export is lower than import earning in this case foreign aid will play vital role to fill the gap. Moreover, they also argue that, factors of productions are underutilized in the case if shortage of domestic resources, therefore, with the help of foreign aid they can produce with higher marginal rate if they utilize optimal.

Similarly, Greenaway (1998) recommends that the rich amount of aid inflows has positive relationship and beneficial effects to least developing countries growth, conditional on a stable macroeconomic policy environment. Additionally, the result shows that low level of aid do not able to render faster growth neither very high aid/GDP ratios. Therefore, authors recommend an optimal aid is up to 40-45%. According to Collier & Dollar (2002) model of how policy and aid affect economic performance. Poverty-efficient base allocated aid and the benchmarking to actual aid allocation, the allocation of aid has maximal level of effect on poverty which highly depends on level of poverty and quality of policies. In additional authors state, actual allocation of aid and poverty efficient allocation entirely different.

The comparison and evaluation of different forms of capital inflows, foreign aid and domestic capital and its impact on economic growth author Papanek (1973) conduct a research in 1950 and 1960 including 35 and 51 countries accordingly. The result shows that foreign aid has greater range of affects than others forms of capital inflows. Meanwhile, author found that aid and domestic saving has negative correlations.

According to authors Fayissa and El-kaissy (1999) a study of 80 countries over 1971-1990 using cross sectional data shows that foreign aid has positive effects on

economic growth. In the case of poor political situation and lack of civil autonomies foreign aid seem to have negative relationship but statistically marginal impact on economic growth. Author has drawn a policy implication from the study as noting that foreign aid will assist domestic capital formation by supplementing domestic sources of finance such as savings, thus increasing the amount of investment and capital stock rather than replacing it and leads to a higher rate of accumulation of capital (Strout & Chenery 1996; Griffin, 1970).

Mosley (1987) introduced the concept of the "micro-macro paradox" and he mentions in micro level that there is impossible to generate any concept between aid and growth in developing countries due to leakage of aid which can be spend in unproductive projects by public sector. However, in macro level it reveals that due to donor regulating and screening projects and reporting it success of their project it going to have beneficial effect on growth.

In contrast, some of the studies have found the negative associations effects of foreign aid and growth. Many scholars believe that foreign aid does not increase the taxation but certainly increase the level of consumption derives from external sources of capital which consequences on lowering the saving and thereby lowering growth. Some of the author's studies argue that there is negative relationship between foreign aid and growth. Authors have argued foreign aid flows going to distort economic policies, business cycle, state intervention and stability on the receiver countries.

According to Griffin (1970), Rajan and Subramanian (2008) foreign aid does not foster to economic growth instead, foreign aid will decelerate growth by letting down

domestic saving rate. Burnside and Dollar (2000) argue that aid does not contribute to economic growth unless country has favorable policy exists. They suggest that growth is highly depending on recipient's countries and their economic policies that they perusing.

Easterly (2004) a study shows that foreign aid has negative relationship with growth therefore; they fail to find a significant relationship aid and growth. Javid and Qayyum (2011) empirical studies which based on the ARDL cointegration approach by using the data for the period 1960 to 2008. The result of study are that foreign aid and real GDP have a negative relationship, meanwhile the aid-policy interactive term and real GDP growth have a positive and significant relationship.

Bhattarai (2009) reveal that foreign aid on growth has positive relationship regarding to per capita real GDP and finalize that aid promote growth in long-run. Additionally, foreign aid effectiveness increase in good policy environment. Within the large literature on growth determinants some of the important determinants of growth include human capital accumulation, consumption expenditure, taxations, growth in populations, technology improvement, and inflation, quality of law and regulations, governance and democracy. Hence, this study will conduct on growth model by using ADRL methods.

### Chapter 3

### **ECONOMIC OVERVIEW: NEPAL**

#### **3.1 Introduction**

Nepal officially the Federal Democratic Republic of Nepal is a landlocked sovereign nation located in southern Asia between China and India, with having 26.47 million population (CBS, 2011). A country transit from Hindu monarchy to a federal democratic republic recent year. The economic growth in Nepal is the lowest among the southern countries. Nepal geographical landscapes are divided into three spare (i) Himalayas regions which bordering with China (ii) Hills and valley regions (iii) tropical Terai in south region sharing border with India. More than 70 percent of land is occupied by high mountains and hills, while remaining 30 percent land locates in Terai region which is fertile land suitable for cultivate agriculture. The population census 2011 show approximately 6.7 percent of Nepal population lives in Himalayan region, 43.1 percent in hilly region and 50.2 percent live in 30 percent area of Terai land (CBS, 2014). Due to lack of transportation facilities and basic infrastructure access to hilly and mountain region economic activities disrupted. With the small proportion of land Terai is main center for economic activities that cause high ratio of internal migration from Mountain and hilly region to seek better opportunities. Around 83 percent of Nepal population lives in rural area and agriculture as main source of income and employment. Nepal's GDP nominal for 2013 is \$ 19.41 billion (World Bank, 2012) which mainly contributed by agriculture, industry and service sector which is surprising increasing. Agriculture employs 75% of workforce, service

18% and manufacturing based industry 7% (CIA World Fact book, 2010). The country is among the least developed country in the world, with about 25.16 percentage of population live below the poverty line (CBS, 2011). Challenges for Nepal's economic growth include its geographic location (landlocked nation), high political instability and slow recovery from decade long civil war/conflict, lacking investment in sufficient infrastructure, specially electricity and transportation, inadequate industrial relation and labor market rigidities. Beside them other critical constraints include inadequate productive employment opportunities due to inert pace of agriculture sector, structure of society that poses formal or informal rules that constraints particular groups on basis of their caste, gender, ethnic and religions, lack of opportunities to improve agriculture and non-agriculture sector and labor migration (ADB, 2009).

Nepal occupies 0.3% land area in world. The altitude ranging from 70 meters to 8848 (Mt. Everest) meters and Nepal's climate varies with its topography and altitude. It ranges from the tropical to the arctic. Currently, Nepal is having average life expectancy of 67.9 years (Female 69.1 years and Male 66.8 years), and literacy rate of 65.9 percent of population (Male 75.1 and Female 57.4 % - 2011). Nepal having 1.82% of annual population growth, it ranks 145th among 187 countries listed in the global Human Development Report 2014 with Human Development Index (HDI) standing at 0.540 (UNDP, 2014). Meanwhile, Nepal is a huge potential for hydropower resources with a figure approximately 3% out of 20% the whole world generate (Adhikari, 2011) an world one of the largest untapped resources having an estimated of 83,000MW (World Bank, 2014).

#### **3.2 Main structure of Nepal Economy**

Being a least developing country, Nepal gross domestic product (GDP) for 2013 worth 19.29 billion, making 106<sup>th</sup> largest economy in the world by world bank. Nepal average GDP from 1960 to 2013 is 4.56 billion USD, reaching highest of all time in 2013 which is 19.23 billion USD and 0.50 billion USD of lowest record in 1963. Nepal annual GDP growth rate is expended to 3.65 percent in 2013 than previous year (CBS, 2013). Nepal's GDP is expected to be grown by 5.2 percent in Fiscal Year 2014 from 3.65 percentages in earlier year. Nepal one of the least developed countries among worlds which is highly relies on foreign remittances and foreign aid. The main stem of Nepal economy extensively depends on Agriculture, which employ 70-75 percent workforce and accounts approximately 33 percent of GDP. Since Nepal economy depend on agriculture it main production include tea, rice, corn, wheat, sugarcane, milk and water buffalo meat. Nepal a home of highest mountain in worlds, therefore tourism stands steady as an important source of revenue. Remittance another main source, the World Bank's report of 2014 shows that Nepal list as third highest remittance recipient countries as percentage of GDP making 29 percent of overall GDP. Also, Nepal as huge potential of hydroelectric power. Nepal economy has been growing in recent years despite, political instability, lack of financial and governmental intuitions, growing population, lack of development process in infrastructures are concerned. However, Nepal has engaged in conversion process turning its economy from primarily agriculture dominate sector to industry and services sectors. Service sector has increased surprisingly in recent years, reaching 50.1 percent of GDP in 2010/11. The trade volume has been doubled in 2010/11 compare to 2004/05. Among total trade volume, percentage of import shares has been increase from 71.8 percent to 85.9% from 2004/05 to 2010/11 respectively.

Fiscal year	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
		In NR billion at 2000/01 prices					
GDP in basic prices	463.2	480.4	493.7	522.3	542.0	563.5	583.0
Agriculture	179.8	183.0	184.8	195.6	201.5	204.0	212.4
Industry	79.9	83.5	86.8	88.3	87.1	90.0	91.2
Services	220.6	233.0	243.5	261.4	277.1	293.9	304.5
		Sha	re of diffe	rent sector	rs in real C	SDP	
Agriculture	37.4	36.6	35.9	35.9	35.6	34.7	34.9
Industry	16.6	16.7	16.9	16.2	15.4	15.3	15.0
Services	45.9	46.7	47.3	48.0	49.0	50.0	50.1
GDP growth	3.2	3.7	2.8	5.8	3.8	4.0	3.5
rate			_				
				nominal pr			
Total trade	208.2	234.0	254.1	281.2	352.1	435.2	459.4
(in NRs billion)	<b>50 7</b>	$c_0$	50.4	50.2	7	<b>CO O</b>	6
Export f.o.b.	58.7	60.2	59.4	59.3	67.70 284_4	60.8	64.56 204.0
Import c.i.f.	149.5	173.8	194.7	221.9	284.4 7	374.3	394.9
Total	102.6	110.9	133.6	161.4	219.6	259.7	306.3
expenditure	102.0	110.7	155.0	101.7	6	<i>437</i> .1	500.5
(in NRs billion)	$\sim$ 7		77 1	01 5	1077	151.0	100.2
Recurrent	62.7	67.0	77.1	91.5	127.7 4	151.0	180.2
Capital	27.3	29.6	39.7	53.5	73.09	90.2	108.0 8
Principal re- payment	13.5	14.3	16.8	16.4	18.83	18.4	18.04
Total receipts (in NRs billion)	84.5	86.1	103.5	127.9	169.8 6	218.5	304.2 2
Revenue	70.1	72.3	87.7	107.6	143.4 7	179.9	206.3 5
Foreign grants	14.4	13.8	15.8	20.3	26.38	38.6	49.33
Foreign loan	9.3	8.2	10.1	9.0	9.97	11.2	14.86
Total	24.48	24.82	25.17	25.52	25.88	26.24	26.60
population (in							

 Table 3.1: Major Macroeconomic Indicators of Nepal

Fiscal year	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
million)							
Per capita GDP (US\$)	328	350	390	464	465	556	642
Average annual pop. growth rate							1.4%
Foreign	139,7 18	165,2 52	204,5 33	249,0 51	219,9 65	294,0 94	354,7 16
employment Exchange rate (NRS per 1 USD) <sup>b</sup>	72.06	72.32	70.49	65.02	76.88	74.57	72.27

Source: Government of Nepal, Ministry of Finance, Economic Survey 2010/11, Nepal Rastra Bank, QEB.

Notes: A- After deducting FISIM; B- Period average.

Fiscal Year	Agriculture	Industry	Service	Total
2003/04	4.7	1.5	6.8	13.00
2004/05	3.5	2.9	3.3	9.70
2005/06	1.9	4.4	5.6	11.90
2006/07	1.0	4.0	4.5	9.50
2007/08	5.8	1.6	7.3	14.70
2008/09	3.0	-0.6	6.0	8.40
2009/10	2.0	4.0	5.8	11.80
2010/11	4.5	4.4	3.4	12.30
2011/12	5.0	3.0	4.5	12.50
2012/13	1.3	1.5	6.0	8.80
Average	3.27	2.67	5.32	11.26

 Table 3.2: Economic growth of past decade in Nepal

Source: Government of Nepal, Ministry of Finance, Economic Survey 2012/13

Nepal's economic growth has been continuously disrupted by the effect of political uncertainty. Nevertheless, real GDP has been steadily growing average of 5 percent for 2013/2014. The main source of growth are account mainly due to agriculture and increase in farm wages, remittances, financial and service sector improvement, urbanizations (workers from low productive jobs in rural to higher productive jobs in urban) and decline in fertility rate and increase in dependency ratio.

### **3.3 Nepal Political Economy**

The Kingdom of Nepal has emerge a national state after the king Prithvi Narayan Shah who started campaign for a unified Nepal, which was divided and weakened into small kingdom under Malla confederacy in 1770. Under the Shah dynasty, it experienced threat by emergence of Jang Bahadur Rana in 1846 who introduce hereditary prime minister, giving power to Rana regime. During then Nepal has gone three more considerable democratic movements in it political history. First movement of democracy was held in 1951 which establish democracy with the prime minister as the head of the government by abolishing Rana family oligarchy. This bought restoration of Shah Kings in power by changing fundamental political economy of Nepal. Citizen of Nepal experienced multi-party democracy for first time in Nepal's history and perceive first panned socio-economy development efforts. The ever first annual budget was announced by government in 1953 whereas; first development plan was established in 1957. Due to political unrest King Mahindra dismiss democratic government of Nepali congress party in 1960 and established "Panchayat" polity an autocratic regime. Under the kings rules there were notable progress undertake in political economy of Nepal. Such include, modernization of legal code 1962, land amend 1964, five years development plans with focusing on physical and social infrastructures. However, this economic regime distinctly interfered economy of Nepal by government controlling prices, monopoly in factors of production, restriction and forbidding on public corporations. In 1980, antimonarchist movement thrills the country when king Birendra, son of king Mahendra was in crown. The democratic attempt of political party in 1989 restores multiple democratic systems. Afterwards, the kings gradually dip and relax control of political-economic system and emerge of economic liberalization. The beginning of financial and social sector such as liberalization on education indicate decline of government interventions in economic activities. In 1996, armed conflict took place in violent way due to failure of large political parties to act against protection of minority parties aspirations. Armed struggle with Communist Party of Nepal (Maoists) which took place in 1996 and continue decade long civil war. The conflicts between government forces and Maoist force held to establish against poverty, inequality, corruptions, rough terrain and to overthrow absolute monarchy control and abolish monarchy system. It ended with Comprehensive Peace Accord signed on 2006. GDP growth rate was worsening during Maoist Insurgency, which cost nation distinctly and pushed development backwards by almost a decade.

# **3.4 Macroeconomic Variables**

#### **3.4.1 Inflation**

As we know that, persistent rise in general price over nation's economy is known as inflection. However, high and dynamic inflation distorts the smooth functioning of the economy. To alleviate this issue many countries have given their respective Central Banks the objective of price stability. Therefore, since 2003 Nepal Rastra Bank (NRB), Central bank of Nepal has begun to announce annual monetary policy in regular basis. Nepal Rastra Bank Act, 2002 permit the responsibility of maintaining price stability on the Nepal economy to Nepal Rastra Bank (NRB), the Central Bank of Nepal. Like most countries in the region, a major macroeconomic challenge in Nepal is inflation, which is correlated with inflationary trends in India. Inflation as measured by the consumer price index (CPI), has persisted at almost 9 percent in recent years.

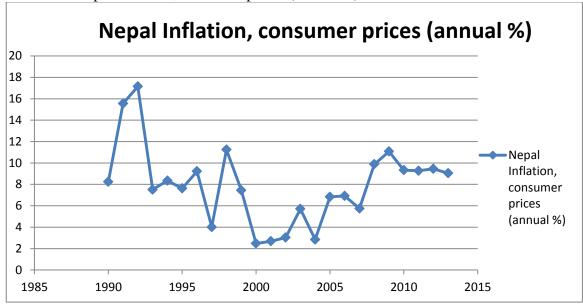


 Table 3.3: Nepal Inflation, consumer prices (annual %)

The annual average of consumer price has been increased to around 7.94 percent from 1990 to 2013. The inflation rate was accounted as 9.6 percent in average during period between 1990/91 to 1999/2000 and 6.73 percent during 2000/01 to 2013/14. Inflation rate persist stable at 9.04 in 2013 and expected to similar by the end of year 2014.

#### 3.4.2 Nepal Human Development Index and Poverty

According to the Human Development Index (HDI) report Nepal position at the 145 country among 187 countries and territories. Nepal HDI for previous year 2013 was 0.540- which fall is among low human development category. Nepal has improved its HDI value in recent year. According to HDR 2014, Nepal improved human development from 2012 which was 0.463 (UNDP, 2014). Meanwhile, report induce that Nepal has improved in gender inequality index too ranking country at 98<sup>th</sup> position which is higher than 102<sup>nd</sup> in previous year. The HDI value and country report may differ due to data and methodology approach. Nepal has been progress

Source: World bank 2014

from since 1980 to 2013 whereas, life expectancy at birth, mean years of schooling and expected years of schooling has been increased.

Year	Life expectancy at	Expected years of	Mean years of	HDI value
	birth	schooling	schooling	
1980	47.7	4.8	0.6	0.286
1985	51.2	5.9	1.2	0.330
1990	55.1	7.8	2.0	0.388
1995	58.8	8.4	2.2	0.419
2000	62.1	9.3	2.4	0.449
2005	64.8	9.9	2.7	0.477
2010	67.1	12.1	3.2	0.527
2011	67.6	12.4	3.2	0.533
2012	68.0	12.4	3.2	0.537
2013	68.4	12.4	3.2	0.54

Table 3.4: Nepal's HDI trends based on time series from 1980 -2013

Source: UNDP, Human Development report 2013.

The nominal average level of household's income in Nepal has been hike from Nrs. 43,732 in year 1995/96 to 202,374 in year 2010/11. In a same manner, nominal average per capita income level of household's has been increased from Nrs 7,690 in 1995/96 to 41,659 in 2010/11 (CBS, 2011). The back-bone behind increased in income is state as increased in remittances and level of consumptions. However, having increased in income there is huge inequality income among groups.

Table 3.5: Nominal income, 1995/96 – 2010/11

Description	Nepal Living Standards Survey		
	1995/96	2003/04	2010/11
Nominal average household income (NRs.)	43,732	80,111	202,374
Nominal average per capita income (NRs.)			
All Nepal	7,690	15,162	41,659

Poorest 20% of population	2,020	4,003	15,888
Richest 20% of population	19,325	40,486	94,149

Sources: (CBS, 2011)

According to World Bank (2013) mid of Fiscal Year 1995/96 Nepal was ranked among poorest nations in the world with having 46.28 percent of Nepal population lives below poverty line, earning less than US\$ 2 per day, which means almost halve of the population lives below poverty line. However, poverty has been significantly decline in past decade. The report of Third Nepal Living Standards Survey (NLSS-III) report that 25.16 percent of Nepalese are living below the poverty line in Fiscal Year 2010/11. In same survey 32.5 percent population lives below \$ 1.25 dollar a day and 62.8 percent below \$ 2 a day in 2010/11. NLSS-III was supported by Central bureau of Statistic, Nepal (CBS) and technical support from World Bank in 2010 and 2011.

### **3.4.3 Nepal Employment**

According to the NLSS-III define employed population as currently economically active population (also known as the labor force) comprises all those who are currently employed least one hour at once a week or temporarily unemployed and willing to work if available. The surveys have been carried out in FY 2010/11 and it reveals that participation of labor force rate has increase from 70.6 percent in 1995/96 to 80.1 percent in 2010/11. As we can see on (table 1.1) the number of labor participant rate has been increased by 11 percent from 1995/96 to 2010/11. The unemployment rate has been significantly decreased in recent trends. The unemployment rate has decrease to 3.3 percent in 2010/11, which was 4.9 percent in year 1995/96. The overall active labor force population is engaged mainly in

agriculture which accounts 66.5 percent workforce and remaining 34 percent in nonagriculture sector (CBS, 2012/13).

Description	Nepal Living Standards Survey			
	1995/96	2003/04	2012/13	
Percentage of employed population (during past 7 days)	67.2	74.3	78.4	
Percentage of unemployed population (during past 7 days)	3.4	2.9	1.8	
Percentage of not active population (during past 7 days)	29.4	22.8	19.9	
Labor force participation rate	70.6	77.2	81.1	
Unemployment rate	4.9	3.8	3.3	

Table 3.6: Indicators on employment status, 1995/96 – 2010/11

Source: CBS, 2011

### **3.4.4 Nepal Labor Market**

After the end of Maoist insurgency, Nepal has done progress towards establishing federal democratic republic. However, new constitution and federal structure have obstruct and yet to implement. After the successful election of constitutional assembly in 2013, the macro-level situation has improved and it result on effective governance, investments and growth thus expecting on higher and batter jobs. The vast majority of workers in Nepal almost three-quarters of workers engaged on earning from agriculture sector whereas, remain workers are informally employed due to lack of employment opportunities. Labor migration to foreign nations became the main options to flee Nepalese workers every year. Nepal, at the time of the last Labor Force Survey in 2008, had a population of 23.5 million. The gender distribution of the population was quite balanced with 52.8 per cent women and 47.2

per cent men. Eighty five per cent of the Nepalese population still lived in rural areas.

	1998/99		2008		Annual growth rate
	(,000)	%	(,000)	%	%
Nepal	19,104	100	23,544	100	2.11
Men	9,385	49	11,119	47.23	1.71
Women	9,718	50.87	12,425	52.7	2.49
Urban	2,249	11.7	3,549	15.7	
Rural	16855	88.23	19,994	84.9	

 Table 3.7: Nepal population and percentage distribution of population 1998-2008

Source: LFS 1998/99 and 2008

According to last Nepal labor force survey in 2008, survey shows that Educational background of the population of the total 14.4 Million population aged 15 years and above, 6.7 million (46.7 percent) have never attended school, 1.5 million (10.7 percent) have not completed primary school, 1.9 million (13.5 percent) have completed primary level, 4.2 million (29.0 percent) have completed secondary school or higher levels.

A study taken by Nepal Central Bauer of Statistic (CBS, 2012) also indicate that one in every four households (25.42%; 1.38 million households) reported that at least one member of their household is absent or is living out of country. Total number of absent population is found to be 1,921,494 against 762,181 in 2001. The highest proportion (44.81 percent) of absent population is from the age group 15 to 24 years.

Area	Total	Absent	Absent Pop	oulation		Not	
		Household	Total	Male	Female	state	
Nepal	5.423.297	1,378,678	1,921,494	1,684,029	237,400	65	
Urban/Rural	Urban/Rural						
Urban	1,045,575	200,380	285,421	227,632	57,774	15	
Rural	4,377,722	1,178,298	1,636,073	1,456,397	179,626	50	
Ecological E	Belt						
Mountain	363,698	69,255	105,423	82,322	23,101	0	
Hill	2,532,041	700,465	991,167	860,555	130,604	8	
Terai	2,527,558	608,958	824,904	741,152	83,695	57	

Table 3.8: Nepal populations and absentees' population in 2012

Source: CBS, 2012

Migration has changed the population structure in the past and will continue to do so in the future. Many Nepalese have left the country in search of better economic opportunities. According to the World Bank (The Migration and Remittances Fact book 2011), by 2010, 982,200 (3.3 per cent of total population) Nepalese had emigrated to India, Qatar, Thailand, Saudi Arabia, United States and other countries.

# **Chapter 4**

# **REMITTANCE, FDI, FOREIGN AID AND GROWTH**

### 4.1 Remittance and Growth

#### **4.1.1 Labor Migrations and Remittances**

Since the beginning of human civilization migration of people has been usual worldwide phenomenon (Bhattarai, 2005). Labor migration from one place to another was for the sake of better opportunity. Migration of people from one nation to another or from one region to another region is in search for better opportunities and expectation of higher living standards. Virtually, migration took shape in several forms and today's world it became an essential and common. While we are talking about international migration, one of the integral components of it is international labor migration. According to new statistic in 2013, 232 million international migrants approximately 3.2% of world population living abroad worldwide comparing to 175 million in 2000 and 150 million in 1990 (UN, 2013). Globalization, demographic shifts, conflicts, income inequality and climate change promote workers and their families to migrate in search for employment and security (ILO, 2014).

According to Mejia (1979) the main key factors that continue to stimulate migration is based upon social, political, economic, legal, historical, educational and cultural factors. The authors classified these key factors in three key dimensions "push" and "pull" that continue to fuel migration from many years. Pull factors as better economic opportunities, more jobs, better life standard of living often pull labor to new country, generally represent to receiving countries. Push factors are exact reverse of pull factors and factors such as lack of economic opportunities, conflicts, few job opportunities, low wages and poor living standard, low working conditions, low job securities and this tend to push labor to seek after overseas or rural to urban regions for their futures. Although labor migrations take place in various ways, large proportions of illegal migration which is aided and encourage often by criminal industry have drag attention of both sending and receiving countries (Bhattarai, 2005). Governments of both sending and receiving countries need to have strong laws and policies to regulate and develop mechanisms that manage labor migrations.

Past three decades and so, countries have integrated each other significantly through globalization, foreign trade, movement of labor, investment in foreign markets and so on. World Bank and United Nation estimated currently that more than 215 million people (World Bank, 2013) live outside then their residential country, working in overseas and sending remittances to their home country. Mostly remittances effect on various sources of country in development when country receive.

The contemporary range of labor migration from Nepal in foreign country is exceptional, broad to speak; hundreds of thousands of youth who are unable to find even adequate number of employment within the country flee overseas for employment. Foreign labor migration is now an innate part of everyday life for a majority of Nepalese, and we can see the impact distinctly visible in every sphere of society – economic, social, cultural and even political. Nepal's labor migration is usual part of the transnational movement of people that has become a prominent feature of today's modern world. Essentially, globalization has created a situation that assist to emergence of a global labor market, and that allowed easier mobility of labor too.

In other hand, International migration has fuel by increased globalizations which brought flexibility in greater state policies, new law making, and national/international workers unions which facilitated by prominent attribution of globalizations such as better communication, better transportation system, terms and conditions of standard working, needs and relation of counties and so on. Thus foreign labor migration has emerged as an important issue for state policy makers as well as a concern for international human rights bodies.

The origin of formal labor administration in Nepal can be traced about 1930 when organized industry started but due to outbreak of labor movement in Biratnagar later year in 1947, it took national formal structure of labor administration. With establishment of democratic government in 1951, labor administration went in a process to revise and reform to conduct national increasing issues such as excessive unemployment, labor migration and their welfare. Under the department of industry first regional labor office was form in Biratnagar in 1960. In 1971 department of labor was established by Ministry of labor. The Ministry of labor is responsible to develop policies and plans for promotion, management and control or regulate of local regional and foreign labor employment. Nepal's constitution embodies several condition concerning labor affairs, which form the foundation of labor administration. These labor affairs include the prohibition of thralldom and forced labor; freedoms of assembly, union and speech, freedoms of trade, business, and

profession; the promotion of social justice, the economic well-being of the people and so on. Therefore, constitution of Nepal including that are related with foreign employment embody in national legislation. Nepal, foreign labor migration is governed by national, bilateral and international policy instruments As a result, contemporary labor related issues are directly conducted by Labor Act, 2048 (1992) and Foreign Employment Act, 2042 (1987) and also govern indirectly by a number of other national laws, bilateral labor agreements, memorandum of understanding and international labor unions. The main goal of the act is to formulate policy and program that promote, manage, regulate foreign employment as well as fix minimum wages of labor and others working conditions. The principle law of migration workers is the Foreign Employment Act (FEA) 2007. This law replaced the Foreign Employment Act 1985 and its major laws have been revise and amendments. Refer to the introduction of FEA 2007; the main intention of it is to secure foreign employment. Such intention includes foreign workers safety, decent and protection of workers' rights as well as foreign employer and foreign agencies. Contemporary law FEA 2007 creates new structure and design new framework to regulate foreign labor migration. It's also introduces various government agencies their responsibilities and function, laws and obligation for recruitment agencies and initiate overseas employment monitoring system.

Despite this legislation on constitution as well as policies concerning about foreign labor migration issues, Nepal government omits to fulfill its obligations therefore, dispute debate and discussion has been continued. Especially in the case of securing of labor standard and policies in overseas, problem that are affiliated with foreign employment, labor securities, labor rights and interests. But since labor migration from Nepal is huge and challenging task for government to implement and amended policies, it became hard to address labor migration in holistic manners for Nepal government.

### 4.1.2 Emigrations

Nepal has long history of labor migration and sending their earnings as remittances from around 200 years ago back to their family. Thus, this study inspects role of such labor migration and remittances in human capital formation in labor. In the contest of Nepal, due to lack of domestic job opportunities in least developing nation like Nepal, labor migration and labor job seeking overseas has become one of the main sources of fleeing abroad for employment. A Nepalese citizen in foreign labor migration history goes back to early 1814-15 after the Nepal-British India (Anglo-Nepal) war, where total of 4,650 Nepalese youngsters were forced to recruit as British-Gurkha regiment (Rathaur, 2001). The treaty of 1816 gave British to form three Gurkha regiments in British army and allied power during World War I and World War II (Shrestha, 1990).

Similarly, it followed by Nepalese citizen traveled to Lahore (today's Pakistan) to join army of Sikh ruler "Ranjit Singh" early nineteenth century and later the migrant workers earn the nickname "Lahure" (Seddon et. al, 2010). Meanwhile, migration of labor continues to flow on second half of the 19<sup>th</sup> century on tea plantations on Darjeeling coal mining, forest of Assam in India, construction work, , and land reclamation in Bengal, Garhwal et. al (2005). At the end of the nineteenth century, for instant, move over population of Darjeeling in India was of fifty-fifty proportion to Nepalese origin (Caplan, 1970). International migration of foreign labor has become a survival strategy for men and women for many least developed and

developing countries worldwide (Nepal Migration Year Book -2006, page 1). The majority reason behind international labor migration consists of factor like war, interconflicts, poverty, lack of job opportunity, famine and so on. The reason behind migration of labor in Nepal is similar to others least developing and developing countries. In Nepal migration mainly take place because of existing poverty, deteriorating agricultural productivity; decade-long political instability and conflicts, declining natural resources and unemployment are the major cases of labor migration (Kollmair et, al, 2006). The international labor migration is one of the vital sources of employment to the young Nepalese work force in current days (ILO, Gurung, 2004).

#### 4.1.3 Current prospective of labor migration from Nepal in recent years

Despite being least developing country Nepal is the major exports of labors especially Middle East and gulf countries. Agriculture and tourism remain major sources of livelihood but major exports are labor. Rural households are highly depending on foreign earnings, remittance from abroad. At least one member's earnings from employment away from home and that are often from abroad (Seddon, 2005). Labor migration sustain firm and steady trend among Nepalese youths. Nepal has experienced mass growth of migration from rural area to urban and foreign countries such as U.S.A, Britain, Canada, German, Japan, Qatar, Malaysia, Saudi Arabia, and United Arab Emirates and other nations as well as India (Gautam, 2008).

Tuote minitum	ine of the pulse habor ingration by the year
Fiscal Year	Number of Nepalese labor migration year (2006-2013)
2006-07	204.433
2007-08	249.051 (Increased in percentage by 21.82%)
2008-09	219.965 (Decreased in percentage by 11.32%)

Table 4.1: Number of Nepalese labor migration by the year

2009-10	294.094 (Increased in percentage by 33.70%)
2010-11	354.716 (Increased in percentage by 20.61%)
2011-12	384.665 (Increased in percentage by 8.44%)
2012-13	453.543 (Increased in percentage by 17.91%)

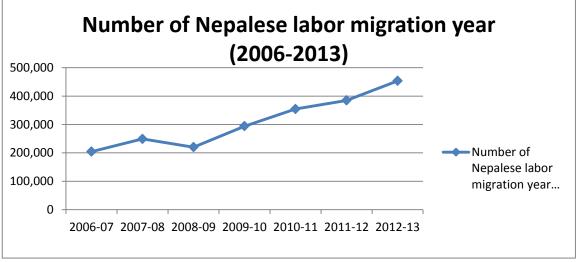
Source: Department of Foreign Employment, Nepal. 2013

The table 4.1 illustrates that; Nepalese migration of labor both male and female has been surprisingly increasing except in fiscal year FY 2008-09 which shown in table dropped by 11.32%. FY 2008-09 financial crises is core reason of global economic crises in the world which slow-down labor market and shrinks Nepal labor export.

Financial Year	Remittance Inflow US\$ Million
2000	111
2001	147
2002	678
2003	771
2004	823
2005	1,212
2006	1,453
2007	1,734
2008	2,727
2009	2,985
2010	3,469
2011	4,217
2012	4,793
2013	5,210

Table 4.2: Remittance inflows in Nepal from 2000 - 2013

Table 4.3: Number of labor Migrations



Source: Author calculate

### 4.1.4 Nepal Remittance Economy

According to the NLSS-III report the reason behind the decline on poverty level is due to rise in remittance inflows. It also reveals that 55.8 percent of households receive remittance from foreign countries and each household receive Rs. 80,436 per year. Meanwhile, 79 percent of remittances are used in daily consumptions and 2.9 percent of total remittance is used for capital formation.

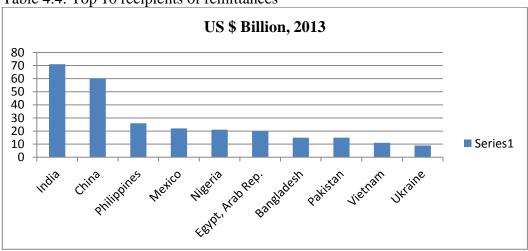


 Table 4.4: Top 10 recipients of remittances

Source: IMF, 2013

According to the new estimates, the top recipients of officially recorded remittances for 2013 are India (\$71 billion), China (\$60 billion), the Philippines (\$26 billion), Mexico (\$22 billion), Nigeria (\$21 billion), and Egypt (\$20 billion).

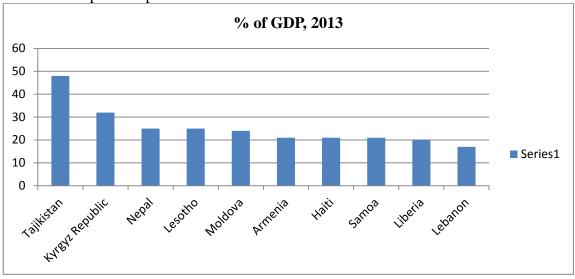


Table 4.5: Top 10 recipients of remittances on % of GDP

As a percentage of GDP, however, the top recipients of remittances, in 2012, were Tajikistan 48 percent, Kyrgyz Republic 31 percent, Lesotho and Nepal 25 percent each, and Moldova 24 percent and so on.

e
Percentage
79.0%
<b>-</b> 00/
7.0%
4.50/
4.5%
3.5%
J.J / V
2.4%

Source: Nepal Living Standard Survey (NLSS 2011)

Source: IMF, 2013

As the above table 4.6, it is miserable to say that only 2.4 percent of the total remittance was used for capital formation. Out of the total remittance 79 percent was used in daily consumption, whereas 7 percent was used in payment of loans.

High volume of remittance raised the standard of living, and has remained as an effective instrument for poverty alleviation particularly in the rural areas. Most importantly, it has now been the primary component in achieving a favorable balance of payment by narrowing the current account deficit. Despite large recorded trade deficits, Nepal often maintains a surplus in its current account due to surpluses in services (including tourism), official aid transfers, and increasingly large remittances from Nepalese living abroad.

## **4.2 Foreign Direct Investment**

Beginning of last past four decades poor nations in Asia received trillions of dollars. Most of the capital inflows are from external sources and in different forms such as foreign grants, foreign loans and foreign investment. Countries attribute like Nepal which have low level of saving, low investment plus low level of capital formation gives draws back- for nation to achieve high level of growth.

FDI traditionally seen as investment on manufacture projects which brings employment opportunities and assist host nations for financing large infrastructure projects. In the context of Nepal, FDI received in every sector but due to insufficient of infrastructures it seems to be impairment. It is compulsory to know that transfer of technology by FDI is crucial to technology-deficient countries. According to world investment report 2013, Asia received approximately 39 billion dollar. The major recipients is India, which reported as four fifth of the regions FDI. The inflow of FDI is not distributed equally in these region were Nepal receiving the lowest. In terms of attracting FDI in Nepal it has lost its glory during armed insurgency during 1996/06. However, foreign investment in recent pattern is increasing satisfactory and complacency.

According to world investment report 2013, FDI undergo a through global financial crises plus by the ongoing debt crises. The report shows that although FDI is gradually reconfiguring in increasing pattern then 2009/10 crises year, it reached approximately 1.5 trillion dollar in 2011 which is dropped by 23 percent then its peak year 2007. Moreover, report also reveals that south Asia witnessed a vigorous growth of 23 percent of FDI inflow equating to previous years. Despite of 125 percent increase in FDI in 2011, Nepal remain lowest FDI attracting nation having rank of 175 out of 182 nations globally (UNCTAD, 2011).

On the other hand, Nepal FDI profile after 2006/07 end of the armed conflict onwards improved in satisfactory level. During the post-conflict era, Nepal severely suffers from substantial market failures, relatively small market size, economy constraints as well as venerable institution and ill functioning economy. In these years infrastructure were destroyed and unavailable, access to basic needs such as electricity, transportation, water were destroyed.

After the post-conflict recovery, FDI in 2008/09 has been significantly dropped which is ascribed to global financial crises. After onwards, FDI reach peak during year 2009/10.

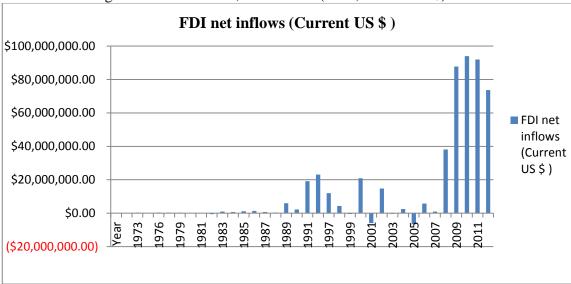


Table 4.7: Foreign direct investment, net inflows (BOP, current US\$)

Source: World Bank, 2014

For least developing countries (LDCs) contributions of FDI in terms of gross fixed capital formations (GFCF) indicate of judgment of development implications of FDI. As the studies shows that gross fixed capital formation follows resemblance patterns as FDI, which highest account as 2.5 percentages in Nepal. Although it account highest percentage in Nepal, it relevantly small proportion of gross fixed capital formation comparing to south Asian countries. Maldives, approximately weighed to 73.4 percentage of FDI to gross fixed capital formation whereas India 6.4 percentage, followed by Pakistan 5.5 percentage, Bangladesh 3.9 percentages. Fairly below Nepal, Sri Lanka accounted as 2.2 percentage, Bhutan 2.3 and Afghanistan 2 percentages (Adhikari, 2013).

Table 4.8. TDT millows as a percentage of OPCP in South Asia, 1991-2000											
Economy	Annual	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	average										
	1991-										
	1996										
World	4.4	7.5	10.6	16.0	19.8	12.0	10.6	8.3	7.5	10.5	12.6

Table 4.8: FDI inflows as a percentage of GFCF in South Asia, 1991-2006

Developing economies	6.5	11.4	12.3	14.7	14.9	13.1	9.5	8.8	10.5	12.6	13.8
Asia	6.1	9.7	10.6	11.3	13.3	10.2	7.7	7.3	9.1	11.3	12.9
Bangladesh	0.1	1.6	2.1	1.8	2.7	0.7	0.5	2.2	3.5	4.9	3.9
Bhutan	0.6	-0.5	0.2	0.2	-	0.1	0.1	0.3	0.2	1.4	0.9
India	1.3	4	2.9	2.2	2.3	3.2	3.0	3.2	3.4	3.5	8.7
Maldives	8.5	6.5	7.1	6.7	9.8	8.6	7.6	5.8	5.0	4.6	6.4
Nepal	0.9	2.2	1.2	0.5	-	2.0	-0.6	1.3	0.8	0.2	-0.4
Pakistan	5.3	7.4	5.7	6.4	3.6	5.0	7.2	4.3	6.2	13	24.1
Sri Lanka	4.6	11.8	3.8	4.7	3.8	2.4	5.6	5.6	5.1	5.5	6.2
South, East & South- East Asia	7.4	10.4	11.5	12.9	15.2	10.8	8.2	7.7	9.7	10.4	11.5

Source: World Investment Report (WIR), various issues; UNCTAD

# 4.3 Foreign Aid and Growth

Foreign aid commonly known as the transfer of various kinds of resources from one nation to other nation to encourage or promote economic welfare and social progress. The fundamental logic behind foreign aid is to conceding of resources to another nation to promote development. The popular terms of aid refer to Official Development Assistance (ODA) which allows transfer of resources from external parties to developing countries. Nepal is land-locked nations and due to sharing boards with India and China its strategic locations attracted significant level of aid from bilateral donors such as India, China, USA and former Soviet Union. Solely, Japan and US aid comprised approximately third of the grants, injecting direct to various projects. Others notable donor's nations are Britain, Australia, India, Switzerland and New Zealand. The Development Assistance Committee (DAC) accounts of resources flows from develop nations to developing nations since 1961. The DAC define ODA as "the flows of resources to nation and territories on the DAC list of ODA recipients and multilateral institutions are: i) render by official administrative, which include state or local government or by their official agencies. ii) Those transactions of which are: a) aiming to promote economic development and welfare of society of developing nations and b) granting in character and conveys a grant element minimum of 25 percent. The main criteria of executing aid or transfer of resources through are international non-government organization (INGO's) and aid for military purposes.

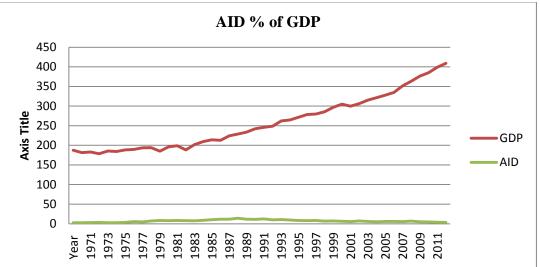
Nepal established its diplomatic relationship with US and India in 1947 and at the beginning of 1951 Nepal open its boarder to foreign world since then foreign aid has played an essential role in terms of funding to economic development and welfare of society. US Operations Mission was signed on 1951, the first bilateral donor to Nepal. The aim of aid is to initiated of relationship of trust, mutual respect and commitment between Nepal and US. Nepal then joined the Colombo plan for cooperative, economic and social development in Asia and the pacific. Nepal then promotes its social welfare and economic development by funding to various projects which lunch as first of "Five-Year Plan" in 1957 to 1962. During that time, almost all aid was in the form of grants which majority of aid directed towards enhancing agriculture sector, transportation infrastructure and generating hydro power. Since then foreign aid has begun to flow into Nepal through bilateral and multilateral agencies.

Until 1960s, Nepal relies heavily in foreign aid where almost every development projects were funded by foreign aid. Beginning of 1981, the huge inflows of aid were directed through International Development Association (IDA) of World Bank and Asian development Bank (ADB). Majority of grants were bilateral and grants from India help to build major airports, Soviet Union helps to construct cigarette and sugar factories and a hydro plant and China and US granted in other social welfare such as education, public health and agricultural as well military aid. After reforming of Multi-party democratic system in Nepal, various numbers of donors are attracted but the level of aid is just satisfactory level. From 1981 until 1988, Japan was the premier source of bilateral ODA for Nepal, accounting for more than one-third of all funds, followed by West Germany.

Nepal government expenditure composes recurrent expenditure, capital expenditure and payment principles. In current fiscal year 2013/14 it estimated as 68.3 percent for recurrent, 16.5 for capital and 8.1 percent for repayment of the principal and rest for share and credit investments (Economic Survey, 2014). Nepal government expenditure is funded by surplus of revenue, grants and deficit financing that consist of loans and changes in cash balances. The proportion of Nepal government developmental expenditure is accounted as 47 percent were finance through foreign aid (Chaulagain, 2012).

The latest value for Net official development assistance received (current US\$) in Nepal was \$769,720,000 as of 2012. Over the past 45 years, the value for this indicator has fluctuated between \$892,390,000 in 2011 and \$23,430,000 in 1970 (World Bank, 2014). Ministry of Finance FY 2011/12 indicates that total foreign aid committed in fiscal year 2011 was us\$884 million, with 65 percent in grants and 35 percent in loans.





A huge proportion of aid goes to transport, power and communications sector, attracting about 47 percent of the total aid while, Social services including health, education and drinking water—have been the second largest recipient of aid, absorbing about 23 percent of the total development assistance during 1970-2008.

	37 / 4	A · 1/	T 1 4	т	, G	• 1	0.1
2	2009)						
	Fable 4.10: Secto	rial distributi	ion of forei	gn aid as a	percentage	of total a	aid, (1975-

Year/Average	Agriculture	Industry	Transport,	Social	Others
		and	Power and	services	
		Commerce	Communication		
1970-1980	18.88	9.45	57.68	13.66	0.4
1981-1985	30.5	7.64	42.96	18.3	0.76
1986-1990	24.56	9.64	46.78	18.02	1.04
1991-1995	29.08	8.56	42.56	19.44	0.38
1996-2000	19.5	1.14	51.94	27.4	0.188
2001-2005	14.18	1.376	40.78	41.6	2.052
2006-2009	13.89	1.0	41.30	43.50	0.31
1970-2009	22.6	6.4	47.4	22.7	0.8

Source: CBS, data of 2010

Government of Nepal has been providing both conditional and unconditional grants to local bodies. Government has been providing Grants to local bodies with the objectives of making these institutions competent, strong, responsible and accountable on service delivery and to ensure people's maximum participation in the governance system through the means of decentralization. Such grants are determined on the basis of criteria as recommended by the Commission (Economic Survey, 2014).

According to 'Transparency International", The Corruption Perceptions Index measures the perceived levels of public sector corruption, scoring from 0 (highly corrupt) to 100 (very clean). A score of less than 50 indicates a serious corruption problem. Nepal has slipped ten places on the Corruption Perception Index (CPI) of Transparency Inter-national, earning a dubious distinction as one of the most corrupt states in the world. Nepal in 2014 hold 126th position with a score of 29 among 175 countries whereas it was placed 116th on the index among 176 countries in year 2013. South Asian countries secured scores below 50, with Afghanistan ranked the most corrupt in the region. Bhutan is the least corrupt in the region with a score of 65, followed by India (38); Nepal, Pakistan and Bangladesh (29) and Afghanistan (12).

The main issues of compounding corruption is the fact that lack of transparency and monitoring activities in Nepal which make foreign aid and source less effectiveness and stood questionable. According to various researches it reveals that inflow of aid and other resources in an inadequate level of institutions and governance countries promote corruptions and depravations. Therefore, a crucial form of policy needs to be implemented in order to achieve higher level of economic growth (Basnet, 2013). As per Nepal situation with limited institutional and absorptive capacity, some argue that the poor functioning institutions, under-paid civil servants, and misuse of resources makes Nepal vulnerable to aid mismanagement (Bista, 2006).

# Chapter 5

# DATA, MODEL AND METHODOLOGY

#### **5.1 Data and sources**

The major relationship between remittance, foreign aid and FDI on economic growth is analyzing using from Nepal over the period from 1970 to 2014. The secondary information "data" are collected for study from division of Ministry of Finance Government of Nepal, Central Bureau of statistics of Nepal (CBS), World Development Indicators publish by the World Bank and IMF Databases, World investment Report (WIR) publish by the UNCTAD, Economic survey, Government of Nepal (GON). The World Bank and IMF database include variables such as GDP per capita, total labor force, inflation rate, gross capital formation and so on. The time measurement of variables is 44 years, which is from 1970 to 2014.

The following variables are collected to examine the relationship between explanatory variables towards dependent one. It is mainly highlighted on three variables which are: GDP as (CAP) for capita is in constant of year 2005 as a dependent variable which collected from various sources UNCTAD, World Bank and IMF database. The data of an annual growth rate of GDP is collected from World Bank and Economic Survey of Nepal.

INV as Gross fixed capital formation (GFCF) is the investment done in gross fixed capital. Term which describes net capital accumulation during an accounting period,

Capital formation refers to net additions of capital stock such as equipment, buildings and other goods and services. A nation uses capital stock in combination with labor to provide services and produce goods; an increase in this capital stock is known as capital formation. Saving has not been considered because  $S \neq I$ .

Labor forces (L) = labor force is the actual number of labor force comprises age of 15 and older that define by International Labor Organization (ILO) available for work in Nepal duration from 1970 to 2014. The labor force of a country includes both the employed and the unemployed who can supply labor for the production of goods and services during specific period.

REM as net remittances inflows in Nepal through formal channels and it is cited as remittance inflows percentage of GDP.

AID as foreign aid which is receipt by government of Nepal from bilateral aid or grants is also noted as percentage of GDP over the year from 1970 to 2014. Foreign aid is sum of international transfer of capital, goods, or services from an international nation or organization for the benefit of the recipient country. Aid can be economic, military, or emergency humanitarian.

FDI inflows are net inflows of investment to an enterprise operating in an economy other than the home country of the investor. The measure is the sum of equity capital, reinvestment of earnings, other long-term, and short-term capital as shown in the balance of payments. No private portfolio investment is considered in this study. Data of net inflows of FDI is as percentage of GDP. INF as Nepal inflection rate annual average of consumer price has been increased to around 7.94 percent from 1990 to 2013. A consumer price index (CPI) measures changes in the price level of a market basket of consumer goods and services purchased by households. Inflation rate persist stable at 9.04 in 2013 and nearly remain similar by the end of year 2014.

These variables are utilized to measure the seriousness of impact on growth and how it has influenced the economy and the expectation for everyday life of Nepal.

# 5.2 Model

In this study, we will adopt the endogenous growth model developed by Romer (1990) and Grossman and Helpman (1991), and espoused by Borensztein et al. (1998). Following the extant literature, we extend the economic growth model of Borensztein et al. (1998) to within a time-series theoretic framework and specify a macroeconomic growth model for Nepal as follows:

 $LnCAP_{t} = a_{0} + a_{1} INV + a_{2} LnL_{t} + a_{3} LnFDI_{t} + a_{5} LnINF_{t} + a_{6} Ln AID_{t} + a_{6} Ln REM_{t} + u_{t}$ 

From Equation above, Ln CAP is Nepal's GDP per capita, a proxy for rate of economic growth, INV is gross fixed capital formation, L is Nepal's total number of labor force, FDI is foreign direct investment, net inflows, to Nepal as a percentage of GDP, INF is Nepal's inflation rate, on Consumer Price Index (CPI) basis, AID as is Nepal foreign aid as a percentage of GDP, REM is remittance flow to Nepal as a percentage of GDP and u is error terms.

# 5.3 Methodology

In my study, an Autoregressive Distributed Lag (ARDL) approach to co-integration statistic technique method is used for the econometric procedure to estimate the relationship between real gross domestic product (GDP), gross fixed capital formation (INV), Nepal's inflation rate (INF), Nepal's number of labour (L), Remittances inflows (REM), ODA foreign aid (AID) and Nepal's foreign direct investment (FDI). Analysing those variables we draw a framework of multiple regression models, where we want to find out the influence of these factors on the dependent variable as gross domestic products (GDP).

The principle advantages of ARDL approach is that it can be used regardless of whether the regressors are I (1) or I (0), and hence it avoids the pre-testing problem of unit root test (Pesaran and Pesaran, 1997).

There are two main stages in the ARDL approach to cointegration. The null hypothesis of 'no cointegration" is tested in the first stage of model. In this stage the null hypothesis means that the coefficients on lagged regressors is the error correction form of the beneath ARDL model are together with zero that refer to there is no long run relationship has been exists between them. Null hypothesis is written as H0: d1 = d2 = 0 and examine against with alternative of H1:  $d1 \neq 0$ ,  $d2 \neq 0$ . The distribution of the F-statistic in the context is non-standard irrespective of whether the variables are I (0) or I (1) (Pesaran et al. 2001). Meanwhile, in second stage if the long run relationship is exist between two variables then long and short run parameters will estimate using ARDL technique.

Cointegreation topic is a crucial concept in study of time series. It mainly concentrates on three major essential topics such as the stationary point (a point on a curve where the gradient is zero), the spurious result (the correlation between ratios of absolute measurements that arises as a consequence of using ratios, rather than because of any actual correlations between the measurements) and the Errorcorrection model (An error correction model is that the deviation of the current state from its long-run relationship will be fed into its short-run dynamics).

Time-Series are assumed to be stationary; however, if there is a non-stationary result (trend), a major problem has upsurge and this trend may cause serious problems (i.e spurious results in regression).

# Chapter 6

# DATA ANALYSIS AND RESULTS

### **6.1** Correlation matrix

In this section empirical investigation derived from annual data that collected from 1970 to 2014. It is essential to observe the degree of linear regression relationship among the explanatory variables before overseeing relevant estimations. Table 1 represents the correlation coefficient of the variables. The pairwise correlations relationship between GDP a dependent variables and the explanatory variables are in mixed order, some are reasonable high and some are too low. According to one of the classical linear regression model assumption says that no any independent variables have a perfect linear relationship with the others independent variables.

Table 6.1: Estimated Correlation Matrix of Variables

	CAP	INV	L L	FDI	IN	F REM
CAP	1.0000	.89982	.96857	.60102	12782	.55207
INV	.89982	1.0000	.91053	.64445	052435	.35433
L	.96857	.91053	1.0000	.56699	14038	.35503
FDI	.60102	.64445	.56699	1.0000	.023146	.16334
INF	12782	052435	14038	.023146	1.0000	032817
REM	.55207	.35433	.35503	.16334	032817	1.0000
AID	18181	.054326	.0072254	.055488	.23841	73834

# 6.2 Unit Root Test

In the beginning of next section Augmented Dickey Fuller (ADF) test has been employ for present study. Table 6.2 shows the result of ADF test in which reveals that CAP, K, FDI, REM, and AID are integrated of order I (1) and L is integrated of order zero, I (0). The critical values of the relevant test of the ADF for 44 numbers of observations at the 5 percent significance levels are obtained from Mackinnon (2010) and also by MFIT 4.1. It is worth noting that the intercept and trend terms are added to the ADF equations. The numbers in the parentheses indicate that zero, one, and two augmentations are necessary to be sufficient in ADF tests to secure lack of auto-correlation of the error terms with regard to the variables. I have chosen the Schwarz Bayesian Criterion for optimum lags for the variables under inspection.

	Tes	Test Statistics and Critical Values						
Variables	Leve	Levels		1 <sup>st</sup> differences				
	ADF	C.V. (5%)	ADF	C.V. (5%)				
САР	-0.34 (1)	-3.51	-3.82 (1)	-2.93	I(1)			
К	-1.85 (1)	-3.51	-5.19 (1)	-2.92	I(1)			
L	-0.57(0)	-3.51	-0.33(0)	-2.93	I(O)			
FDI	-1.67(1)	-2.93	-10.11(0)	-2.93	l(1)			
REM	-0.49(0)	-2.93	-5.23(0)	-2.93	l(1)			
AID	-1.33(0)	-2.93	-7.86(0)	-2.93	l(1)			

Table 6.2: Unit Root Test

As the value of our F-statistic exceeds the upper bound at the 5% significance level, we can conclude that there is evidence of a long-run relationship between the two time-series (at this level of significance or greater).

Unit root tests have reveal a mixed result therefore, then next level of bound tests will be conducted in this study to investigate the relationship between GDP and its regressors. Table 6.3 shows the F-statistics and critical values for the F-stat are not available for an arbitrary mix of I (0) and I (1) variables. However, author (Pesaran et al 2001) provide two critical values for the cointegration test. The lower bound is basis on the assumption that all variables are I (0) and that means there is no cointegration relationship between the investigate variables and upper bound critical values is based on assumption that all of the variables are I (1) which means there is a cointegration relation between variables. If the calculated F-stat is greater than upper bound values then the hypothesis null is rejected (Cointegrated variables), however compute F-stat is below the lower bound value then we cannot reject null hypothesis (Non-cointegrated variables). If calculate F-stat falls between upper and lower bound then its result will be inconclusive.

Table 6.3 shows that F-statistics that exceed the upper bound of critical value band, so we can reject the null hypothesis of no long-term relationship between the variables in the model. The F-statistics confirms that there exist an equilibrium relationship between GDP and its relevant variables where Column F provides the critical value bounds for F-statistic version of the test. Column W provides the bounds for the W-statistic for the three cases based on whether the underlying regression contains an interceptor trend.

F-Statistic Variables	F-Stat	Column F 95%		Column W 95%	
		I(0)	I(1)	I(0)	I(1)
F (CAP, K, L, REM, FDI, AID)	5.05	2.85	4.05	14.2	20.24

Table 6.3: F-Statistic-ARDL Models

In the following step, we estimate the coefficients of the long-term relationships and find their error-correction terms. Table 6.4 and Table 6.5 present long-run and short-run estimates for the nexus between Economy Growth and its related variables as well as error-correction coefficients respectively. Table 6.5 shows that the error-correction terms (coefficients) are statistically significant for the model. Its coefficient is almost –0.16. This means that the disequilibrium occurring due to a shock is totally corrected in 1 year period at the rates of 16 percent.

In the long-run period, that estimates the relationship between economy growth and remittances as well as labor are statistically significant at least 5% and 10% level. This means that remittances and labor have positive impact on economy growth of Nepal economy. However investment, FDI and AID are not significant at conventional level in the model. Based on the ARDL test model, long-term equilibrium relationship has been confirmed between economic growth and remittances in Nepal. The positive relationship between economy growth and remittances confirm the suggestion of (Mejia et. al, 1979) and (Bhattarai, 2005). Also (Chami et.al, 2003) and (Chami et.al 2009; Singh et al 2009) studies analyze the

relationship between economic growth and remittances as well as level of poverty. These studies show that remittances play an important role for economic growth.

0	ive Distributed 0,0,0,1,0) selected	0	tes warz Bayesian Criterion	
Dependent var	riable is CAP			
-	ns used for estimation	tion from 107	to 2014	
44 00sei valioi	is used for estima		. 10 2014	
Regressor	Coefficient	Standard E	ror T-Ratio[Prob]	
CAP(-1)	.84167	.050855	16.5503[.000]	
INV	.13774	.26831	.51334[.611]	
L	.3918	.1224	3.2012[.003]	
FDI	1.9892	5.4927	.36214[.719]	
REM	.9538	.57022	1.6726[.10]	
REM(-1)	.2382	47.6797	2.2491[.031]	
AID	17.5974	37.1474	.47372[.638]	
	0.00.11			
R-Squared	.96041	R-Bar-Square	.95401	
S.E. of Regres	sion 4.866	9 F-stat. F(	6, 37) 1552.5[.000]	
Mean of Depe	ndent Variable 2	62.7214 S.D.	of Dependent Variable 71.7753	
Residual Sum	of Squares 876	.4053 Equati	on Log-likelihood -128.2494	
Akaike Info. C	Criterion -135.2	494 Schwarz	Bayesian Criterion -141.4940	
DW-statistic	2.6104	Durbin's h-st	atistic -2.1505[.032]	
*****	*****	*****	******	*****

Table 6. 4: Estimation for Long-Run

Notes: t-statistics are in parentheses and all diagnostic pass at the 5 percent, or 1 percent level of significance. It is worth stressing that reported diagnostic suggests that the evident misspecification do exist at the 5 percent level of significance for some criteria.

Table 6.4 and 6.5 illustrate the long-run and short-run estimates for the nexus between economy growth and remittances as well as error-correction coefficients respectively. Table 6.5 illustrates that the error-correction terms (coefficients) are statistically significant for the model. Its coefficient is almost –0.16. This means that the disequilibrium occurring due to a shock is totally corrected in 1 year period at the rates of 16 percent. In the short-run period, labor and remittances only have positive impact on economic growth for the Nepal economy.

	ion Representat		Selected ARDL Model
			Schwarz Bayesian Criterion
Dependent var	riable is dCAP		
44 observation	s used for estima	tion from 19	971 to 2014
Regressor	Coefficient	Standard I	Error T-Ratio[Prob]
dINV	.13774	.26831	51224[ 611]
	.13774	.20851	.51334[.611]
dL	.3918	.1224	3.2012[.003]
dFDI	1.9892	5.4927	.36214[.719]
dREM	.9538	.57022	1.6726[.10]
dAID	.5974	37.1474	.47372[.638]
ecm(-1)	15833	.050855	-3.1134[.004]
cciii(-1)	15655	.050855	-3.113+[.00+]
******	******	******	***********
	4 < 1 0 0		<b>D_D     </b>
R-Squared	.46108		R-Bar-Squared .37369
S.E. of Regres	sion 4.866	9 F-stat.	F(5, 38) 6.3312[.000]
Mean of Depe	ndent Variable	5.2670	S.D. of Dependent Variable 6.1497
Residual Sum	of Squares 876	5.4053	Equation Log-likelihood -128.2494
	1		1 0 0

Table 6. 5: Estimation for Short-Run:

|--|

2.6104

Schwarz Bayesian Criterion -141.4940

DW-statistic

## Chapter 7

# CONCLUSION, RECOMMENDATIONS AND SUGGESTIONS

### 7.1 Conclusion

The results presented on this thesis are widely supported by the ARDL approach to measuring the contribution of remittance, foreign aid and FDI on the economic growth in Nepal. Because of the mixed-integration level of the variables (e.g. I (0) and I (1), found in series), the ARDL approach has been employed to carry out this investigation.

The empirical results points out that remittances and labor are very important driving forces for economic growth in both the long and short-terms of Nepal economy. These findings also show that investment, FDI, and AID do not have any impact on output growth in both the long and short run period in the case of the Nepal Economy. Error-correction modeling was used to confirm the existence of a stable long-term relationship and approve a deviation from the long-term equilibrium following a short-term shock, which is corrected by almost 16 percent after each year.

I can conclude that remittances and labour are not only showed positive impact on economy growth in the case of Nepal, but also other researchers have found the similar nexus by utilizing different approaches of analysing these relationship in other developing countries as well. Nepal has experience high rate of labour migration of youth population to foreign countries. Therefore, remittance inflows is strongly associated with labour intensive, such labour intensive migration brings sharp rise in remittance inflows which exceed to others means of foreign capital inflows. Thus, we can conclude that labour and remittance inflows are linked each other. However, remittance is mainly spent on consumption and small proportion is used on capital formation in Nepal. This empirical finding also endorsed by others authors who conduct relation between remittance and growth through using various model and approach (Mejia et. al, 1979; Bhattarai, 2005; Chami et.al 2003; Chami et.al, 2009; Singh et al 2009).

#### 7.2 Suggestions and recommendations

I have proved the relation between remittances, foreign aid and FDI on economic growth in the case of Nepal whereas, only among two of the variables remittance and labour seen to be positively significant to economic growth to Nepal. I would say that, the results are dismay, although it can be treating effectively if the policy and implication of other variable (foreign aid, FDI) are considered importantly by Nepal government.

Remittance has positive impact therefore percentages of total remittance receipt are needed to be encouraged on reinvest in capital formation (2.4 percent) rather than consumption (78.1 percent). Nepal economy is continuously becoming consumption oriented due to large remittance inflows rather than saving and reinvestment. Even a small proportion of remittance channelled towards capital formation sector, it would have multiplier effect and can achieve higher economic growth. Therefore, Nepal government should develop appropriate policies to channelled remittance receipt to capital formation. Moreover, government should develop appropriate training and educational program to migrants so they can remit through formal financial channel, association and encouraging migrants to remit and invest in home countries, improvement and access the use of financial services, providing reliable information to migrants on transfer services and their costs. In addition, favourable investment climate should be developed by government plus capital, skills and technology that migrants works brings need to properly utilize by government. Furthermore, labour have positive relation on growth therefore, Nepal government, external agencies, civil society need to exploit the skills and technology that bring back to home country by migrants works. Nepal government need to mainly focus on labour intensive industry due to having its large population.

In the case of foreign aid in Nepal, excessive amount of aid flows would be better off if the donors presume solely control over the projected work and connect directly to local bodies, civil society, NGOs and other local consultant rather than dealing directly with government due to the level of corruption in Nepal which seem to be higher among others south Asian countries. The current situation of Nepal can be described with paradoxes as inconsistency and small countries with large population below poverty line and low literacy rate along with rough terrain and highly corrupt government. Due to lack of sound information system and poor regular supervision in project implementation in Nepal donors are gradually losing their confidence to aid in Nepal. In the macro-level foreign aid associated with exchange rate that characterized by causing Dutch disease which felt significant impact in Nepal economy. Although Dutch diseases believe to short-run phenomenon but it seems to have long-run impact on Nepal economy due to its inability to respond through supply side. Therefore, Nepal government should fully utilize idle or underutilize productive capabilities to respond from supply side to mitigate the Dutch disease effect. Moreover, large sum of foreign aid has been spent outside without addressing the national priority by government which might facilitate in misuse and promote corruption therefore, Nepal government need to address a project prior to disburse aid.

In additional, FDI and investment seen have not had any striking impact in economic growth in Nepal. Nepal a landlocked country so, it cannot able to draw a high level of technology and other contribution that FDI brings along to progress economic development. Nepal also needs a policy framework to promote national and regional level of basic infrastructures such as energy supply, transportation and communication services. Nepal being a favourable place to invest in tourism and hydropower sectors, due to political instability, fragile security for investors and bureaucratic laws and order cause slowdown from foreign investors. The high cost of transport and energy, coupled with an adverse business environment, discourages foreign enterprises to invest in Nepal. Therefore, Nepal government need to address on investment friendly environment through reversing associated Acts and regulation, provide security and redress of investment to reap FDI. However in other hand investment has no collaboration with economic growth so capital has not been used effectively. Although Nepal has experienced gradually increase in gross capital formation around 34 percent in 2012 the problem is between gross capital formation and gross fixed capital formation. The figure of investment in not sufficient to materialize the benefits, what concern is how we spend so, the issue of Nepal is efficiency and effectiveness of the investment. Channelling the investment in

productive sectors requires developed capital market, modern tools for fund mobilization and literacy program along with incentives to save and reinvest.

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