AN ANALYSIS OF RELATIONSHIP BETWEEN REMITTANCES AND IMPORTS OF NEPAL

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in Partial Fulfillment of the Requirements
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By

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RECOMMENDATION LETTER

This thesis entitled 'AN ANALYSIS OF RELATIONSHIP BETWEEN REMITTANCES AND IMPORTS OF NEPAL' has been prepared by Mr. LILA RAJ LOHANI under my supervision and guidance. I hereby recommend this thesis for the internal examination by the Thesis Committee as a partial fulfillment of the requirements for the Degree of Master of Philosophy in Economics.

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RECOMMENDATION LETTER

This thesis entitled 'AN ANALYSIS OF RELATIONSHIP BETWEEN REMITTANCES AND IMPORTS OF NEPAL' prepared by Mr. LILA RAJ LOHANI is recommended for final/external examination as a partial fulfillment of the requirements for the degree of Master of Philosophy in Economics.

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VIVA – VOCE SHEET

We have concluded the viva-voce examination of the thesis entitled 'AN ANALYSIS OF RELATIONSHIP BETWEEN REMITTANCES AND IMPORTS OF NEPAL' submitted by Mr. LILA RAJ LOHANI in partial fulfillment of the requirements for the degree of MASTER of PHILOSOPHY in ECONOMICS. We found this thesis satisfactory in scope and quality and written according to the prescribed format. Therefore, we accept it for the degree of M. Phil. in Economics.

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DECLARATION

I hereby declare that this M. Phil. thesis entitled 'AN ANALYSIS OF RELATIONSHIP BETWEEN REMITTANCES AND IMPORTS OF NEPAL'submitted to the Central Department of Economics, Tribhuvan University (TU), isentirely my independent work prepared under the supervision of my supervisor. I have made due acknowledgements to all ideas and information borrowed from different sources in the course of writing this thesis. The results of this thesis have not been presented or submitted anywhere else for award of any degree or for any other purpose. No part of the contents of this thesis has ever been published in any form before. I shall be solely responsible if any evidence is found against my declaration.

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ABSTRACT

Background: The remittance has become one of the main sources of financial inflow and has brought significant and structural changes of the developing countries like Nepal. Over the past few decades, Nepal has received a significant increase in the volume of remittances. On the other side, Nepal has been facing a significant trade imbalance from many years. These two variables are most contentious topics in this decade.

Objectives: In this context, the paper has examined the relationship between remittances and import in Nepalese economy.

Method: A suitable econometric model was developed by including broad money supply and foreign assistance together with remittance in the explanatory variablesin which the import is regarded as response variable. The necessary data were obtained from publications of the MOF from the years 2000/01 to 2021/22, and then the stationarity of the variables was tested. Because of the mixed in order through the results of the stationarity test, a suitable ARDL model was then applied to measure the long- and short-term effects of the explanatory variable.

Results: The study's findings revealed that remittances and the broad money supply (M2) were main variables to determine the size of import. Both variables had a positive impact on imports, but the third factor, foreign assistance, had a negative and insignificant impact over response variable.

Conclusions: The conclusion of the study indicates that the hypothesis was accurate. It means that when remittance revenue rises in the economy, imports rise along with it. The primary cause of this is remittances have increased recipients' income and the domestic production hasn't increased significantly due to an increase in absenteeism. As a result of mismatch between rising demand and stagnant supply, the import volume has increased. The findings of the research will be useful for academic interest as well as it may assist policymakers while formulating policies to shape imports and increase the effectiveness of remittance wisely.

Keywords: Import, remittance, broad money supply (M2), foreign assistance, developing countries.

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ABBREVIATIONS AND ACRONYMS

ADB	:	Asian Development Bank
ADF	:	Augmented Dickey-Fuller Test
ADRL	:	Autoregressive Distributive Lag
BOP	:	Balance of Payments
BPM6	:	the Balance of Payments Manual 6th Edition
CBS	:	Central Bureau of Statistics
COVID-19	:	Corona Virus Diseases 2019
DLEP	:	Department of Labor and Employment Promotion
DOFE	:	Department of Foreign Employment
DW	:	Durbin-Watson
ECM	:	Error Correction Model
EU	:	European Union
FDI	:	Foreign Direct Investment
FY	:	Fiscal Year
GCC	:	Gulf Cooperation Council
GDP	:	Gross Domestic Product
GNI	:	Gross National Income
GNP	:	Gross National Product
GON	:	Government of Nepal
HDR	:	Human Development Report
IBRD	:	International Bank for Reconstruction and Development
IDA	:	International Development Agency
IFAD	:	International Fund for Agricultural Development
ILO	:	International Labor Organization
IMF	:	International Monetary Fund
IOM	:	International Organization for Migration
J-B	:	Jarque-Bera Test
LDCs	:	Least Developed Countries
LMIC	:	Low and Middle-Income Countries

MENA	:	Middle Eastern and North African Countries
MOF	:	Ministry of Finance
MOLE	:	Ministry of Labor and Employment
NEPSE	:	Nepal Stock Exchange Index
NPC	:	National Planning Commission
NPR.	:	Nepalese Rupees
NRB	:	Nepal Rastra Bank
ODA	:	Official Development Assistances
OECD	:	Organization for Economic Cooperation and Development
OLS	:	Ordinary Least Squares
OPEC	:	Oil and Petroleum Exporting Countries
SAARC	:	South Asian Association for Regional Corporation
SDG	:	Sustainable Development Goals
SPSS	:	Statistical Package for the Social Sciences
TU	:	Tribhuvan University
UK	:	United Kingdom
UNCTAD	:	United Nations Conference on Trade and Development
UNDP	:	United Nations Development Program
UNESCAP	:	United Nations Economic and Social Commission for Asia and the Pacific
UNIFEM	:	United Nations Development Fund for Women
UPR	:	Usual Place of Residence
US	:	United States
US$	:	United States Dollar
USA	:	United States of America
VAR	:	Vector Autoregressive
VECM	:	Vector Error Correction Model

CHAPTER I

INTRODUCTION

1.1 Background of the Study

International labor migration is the movement of people across international borders for employment. It has become one of the most debated macroeconomic issues in the recent world. With the exception of India, Nepal's experience with international labor migration dates back to the adoption of GON's liberalized policy in 1985, which focused mostly on the Gulf States, Malaysia, and other South East Asian countries.

The term "remittances" refers to "household income from foreign economies arising primarily from the temporary or permanent movement of people." Remittances encompass both cash and non-monetary commodities that move through official channels, like by electronic wire, or through unofficial channels, like goods or money transported across borders. They mostly consist of money and non-cash gifts sent or given by people who have moved to abroad and settled there, as well as the net wages of temporary workers like border workers, seasonal workers, or other short-term employees who work in economies they are not inhabitants of(IMF, 2009).

In the same way, the World Bank (2018) states that "Personal remittances is the total amount of personal transfers and employee compensation. In broader sense worker remittances is personal transfers".

In many low and middle-income nations, remittances represent a significant source of foreign exchange earnings and are growing. Officially recorded remittance flows to LMICs totaled $630 billion in 2022, increasing 4.2 percent over 2021 at a time when the global GDP was $95 trillion. According to this information, 0.66 percent of the world's GDP will be covered by remittances in 2022 (World Bank, 2022).

Most frequently, migrants move from least developed to developed countries. Millions of people all around the world migrate away from their home countries in search of better job prospects and living conditions. While many migrant workers choose to go abroad due to the higher income and career opportunities, many others are forced to do so for a variety of reasons, including natural disasters, unstable political conditions, and a lack of suitable jobs in their home country.So, remittance is one of the major external financial sources of developing countries, it is equally important to the large number of families and has become backbone of developing countries. According to Meyer and Shera (2016), the total amount of remittances transferred to developing countries was approximately two thirds as large as foreign direct investment and more than twice as large as official aid.

The rate of job creation in Nepal is lower than the annual influx of labor force into the labor market. Therefore, the only option available to those who are newcomers is to search for work abroad. As a result, remittances have grown to be one of the main sources of income for households in Nepal. Migration from Nepal to the rest of the globe has emerged as a significant and contentious topic in the political, social, and economic life of the nation. The Government of Nepal has issued more over 3.8 million permits to work abroad (excluding India) between the fiscal years 1993/94 and 2014/15, which is close to 14% of the current population. Furthermore, nearly 71% of the overall absent population (1,921,494) are living outside the country (MOLE, 2016).

The amount of remittances received in Nepal has also increased significantly, from NPR 47.21 billion in 2000/01 to NPR 961.05 billion in 2020/21. In 2000/2001 and 2020/21, remittances each provided 10.69 and 22.53 percent of the GDP, respectively. Therefore, the remittance flow is considered as an important component in Nepal's development financing(MoF, 2021).

Remittances offer several benefits, including boosting a nation's foreign exchange reserves and the overall economic activity of a particular person. Given that the Nepalese economy frequently experiences a trade deficit, it also serves as a means of compensating for our imports. Similar to this, non-skilled and semi-skilled labor has improved their skills as a result of work abroad, which may pave the way for economic growth.

Similarly, Remittances can help the economy to escape from the low-level equilibrium trap encircled by poverty and stagnation. Because of the size of remittance, the economy has been able to survive despite the downturn in other economic sectors. Additionally, remittances have moderately improved the standard of living for the households that receive them.The rest of the world is also helping to increase the volume of remittances in addition to the traditional sources from Britain and India. In addition, government policies are created to support it. Therefore, remittances are becoming a vital component of our economy.

It has been noted that the flow of remittances can help many least developed countries (LDCs) with their balance of payments issues, which are caused by a large proportion of imported products in consumption. Although scholars and policymakers are aware of the benefits and drawbacks of remittances, there is no general consensus among the overall impact of it. Since the decade of the 1990s, the emigration of both professional and unskilled labor has dramatically increased, which has caused a considerable inflow of remittances into the Nepalese economy.

Remittances are currently the subject of considerable discussion at global forums due to the steady increase in the amount of money and products supplied by migrant workers. Remittances, for instance, are acknowledged as one of the Sustainable Development Goals (SDG) indicators, and the debate over supporting remittance-receiving households leverages the positive influence on development, which is always changing.Because the amounts of remittances flowing to LMICs are now more than three times the size of official development assistance and higher than the foreign direct investment, remittances are now regarded as being equally important to foreign direct investment, official development assistance, and international trade for development activities (World Bank, 2019).

Like other LMICs, Nepal's economy is becoming more and more dependent on remittances sent by migrant workers. Nepalese migrant workers send a sizable sum of money back to their families. In terms of ratio of remittances to the GDP, Nepal ranks among the top recipients. Remittances accounted 28 percent of Nepalese GDP in 2018, making it the fifth-largest recipient of remittances globally (WB, 2019). The sizeable inflow of remittances has not only enhanced its economic contribution to the nation but also significantly decreased the number of people living in poverty. According to (CBS, 2011), remittance income has helped reduce the number of people living in poverty from 42percent in 1995 to 25percentin 2010.

The ILO Country Office for Nepal claims that the inadequate employment possibilities in Nepal, particularly in rural regions, and the possibility of earning more money abroad drive individuals to leave their country for better opportunities (Vinding & Kampbel, 2012). According to data on migration trends, Malaysia, Saudi Arabia, Qatar, the United Arab Emirates, and the rest of the

Middle East have all proven to be popular destinations for Nepalese workers (MOLE, 2016). Some of the main issues pushing people to seek jobs abroad are reduced job creation, rising unemployment, political unrest, slower industrial growth, etc. However, if there is a significant wage gap between the country of origin and the country of destination, even those who are employed may be encouraged to migrate.

According to Nepal's 2019/2020 economic survey, there are currently almost 500,000 workers entering the labor field, and the lack of employment opportunities within the country, the unemployed labor forces are compelled to go overseas for work. As a result of increased labor migration, the volume of remittance is rising, which has both micro and macro level impact in the economy. The same survey indicates that a large portion of remittances are utilizing for consumption, which is partly met by imports by increasing the size of deficit BOT. As a result, policy measures are required to increase remittances to productive sectors (MoF, 2015).

Absentee population is one of its major demographics, social, and economic problems of any country. In Nepal, a significant portion of the population is absent, which has been a big problem. In contrast,the absentee were 3.2 percent in the census2001 which were increased to 7.3 percent in 2011. According to the preliminary results of the Census 2078, a total of 21,69,478 persons are absent from 29192480 which covers 7.4 percent of total population.

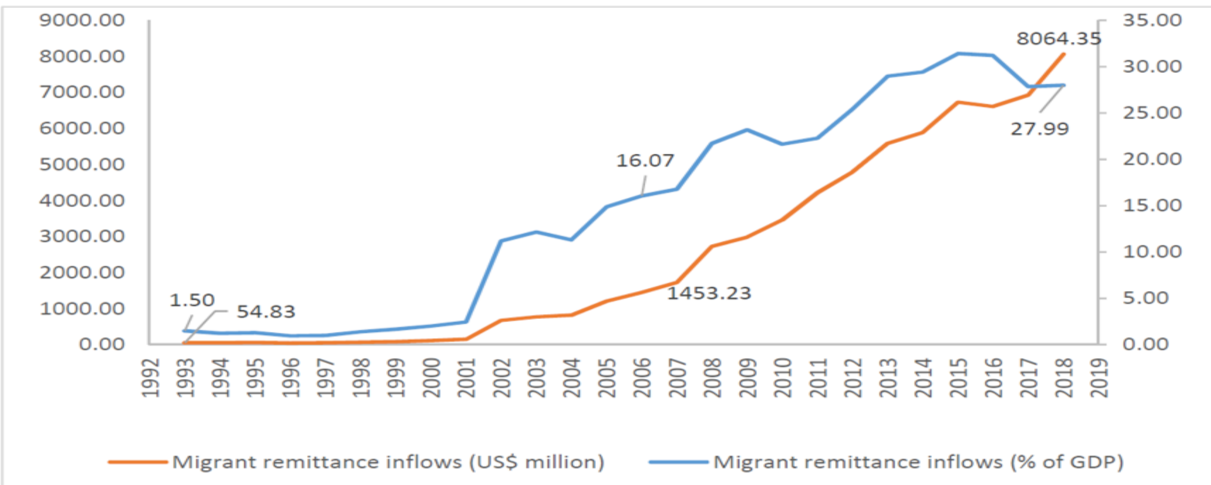
It demonstrates how Nepalese workers are associated with the foreign employment. However, this trend has created difficulties to manage the massive labor emigration to the government. According to DOFE, the labor migrants have been granted permission to work in around 145 countries. The most attractive destinations for foreign employment are Malaysia and the states of the Gulf Cooperation Council. The migration flow was not preplanned; instead, it developed naturally. However, the government's actions and policies contributed to favoring international movement, particularly emigration. The government of Nepal is working to regulate migration through policies, legislation, institutions, and initiatives.

Some legal provisions to control overseas employment are the Foreign Employment Act of 1985, the National Labor Policy of 1999, and the Foreign Employment Policy of 2012. Similar to that, there are structural mechanisms in place. An apex organization is the Ministry of Labor, Employment to manage the emigrant laborers. The Department of Foreign Employment and

Foreign Employment Promotion Board were established to guarantee and promote a safe and healthy working environment for migrant employees.

Due to an increase in the number of employees travelling for employment in foreign countries, remittances are an important source of foreign cash earnings in Nepal. Due to the continual rise in remittances to the country, the Nepalese economy is now remittance-based. According to the share of its GDP that it received remittances from, Nepal was among the top recipients (WB, 2019). Both the quantity of remittances received from migrants in US dollars and their share of GDP have grown over time. (see*Figure 1.1*).

Figure 1.1 Migrant Remittance Inflows in Nepal (US$ million and percent of GDP) 1993 – 2018



Source: *The World Bank, January 2018*

In 2018, migrant remittance inflows into Nepal remained strong, increased by 16.4 percent, and hit a new record high of US$ 8,064.35 million. Nepal not only leads South Asia in terms of remittances as a percentage of GDP, but is also one of the top receiving nations globally. However, between the years 2016 (31.21%) and 2017 A.D. (27.85%), remittances as a percentage of GDP have declined by 3.36 percentage.

These huge cash inflows in the case of Nepal can be a significant and potent resource for social development. The growth in remittance flows could support the country's overall development on a macro level. Similar to this, at the micro level, the remittance can be utilized for the establishment of cottage and small industries which would increase the household members' income which would assure the better health and educational facilities together withliving standard.

Adams and Page (2005) found that both migration and remittance have a substantial role in lowering poverty in the developing world in their study article on international migration, remittance, inequality, and poverty.

Similar to this, Kandil & Metwally (1999) believe that the reason there is a plainly positive association between imports and income is because employees and their families can use remittance revenue to meet their needs. They also send imported consumer durables to their family in addition to money. A leak occurs when imports fluctuate as a result of changes in income and remittances, which has a negative impact on the multiplier's value. However, the multiplier's value is based on the values of consumption propensities. The economy will be extremely dependent on imports and the value and volume of imports will increase as resource availability increases.

Remittances began to take on greater strategic significance for governments, policymakers, scholars, and other partners in these references after it became a global priority item. Now, remittance is one of the safest and most dependable sources of foreign currency in LMICs. However, there aren't many talks or investigations into how to use remittances productively or how they might affect development. There is no debate regarding the rising consumption as a result of increased remittances. However, the impact of remittances on national macroeconomic variables has become the subject of limited research.

This thesis attempts to quantify the trend and pattern of remittances with other macroeconomic variables as well as explore the relationship between remittance and imports.To achieve this objective, the data from the Ministry of Finance, Department of CBS, Nepal Rastra Bank and many of other sources have been utilized.

1.2 Statement of the Problem

As discussed earlier, remittance as the result of foreign employment has large benefits to receiving countries in national context as well as in household level. There are several evidences in the world that remittances have reduced poverty in many developing countries. However, an important discussion regarding remittance in a country like Nepal is; do the amount of money received as remittances in terms of foreign exchange are used for domestic investment with long benefits like human capital formation or they always used for household consumption?

Remittances as an outcome of labor export can affect important macroeconomic variables including GDP, imports, and other factors. If imports sparked by remittances aren't intended for productive uses, they might hinder economic progress. Remittances help mitigate the negative consequences of outside shocks like the energy crisis, rising foreign interest rates, etc. On the other side, it can raise recipients' standards of life and even out income distribution. Contrary to these advantages, it is true that immigration depends on the immigration laws of the host countries and is an irregular source of foreign cash. The increased spending and expansion of money that follow remittances also contribute to domestic inflation (Nishat & Bilgrami, 1991).

Remittances have undoubtedly influenced macroeconomic factors on the whole. On the home country, it has both positive and negative outcomes. Nepal is experiencing a serious trade deficit as a result of its nation's rising import volume on an annual basis. In this context, the present study is focused on the remittance inflow and its association with other macroeconomic variables especially on imports.The purpose of this thesis is to examine whether remittance has a positive effect or negative effect in the import and its effect on other macroeconomic variables in the developing countries like Nepal.

In this context, thisstudy answers the following questions.

i. What are the trends and patternsof remittances and some other macroeconomic variables ofNepalese economy?
ii. What is the relationship between remittance and imports?

1.3 Objectives of the Study

The general objective of the study is to examine the relationship between remittance and imports of Nepal. The specific objectives of the study are: -

i. To present the trends and patterns of remittancesand some othermacroeconomic variables of Nepalese economy.

ii. To assess the relationship between the remittance and imports.

1.4 Limitations of the Study

The research is based on secondary data that is accessible at various levels of government organizations of Nepal, including MOF, NRB, CBS, and other international organizations, like the World Bank, IMF, and WTO etc.

The economy of a country is influenced by a wide range of macroeconomic and microeconomic factors. Although the model used in this study attempted to account for all possible causes, certain variables that have an impact on the Nepalese economy might have been missing because it only used secondary data sources.

Between Nepal and India, there is no border fee, and traveling without a visa to India is easy. Therefore, it is undetermined how many individuals are employed in India at the moment. Although one of the main countries for Nepalese immigration is India, Nepalese workers are not included in this study. Similar to that research, this one basically takes into account the overall number of persons working abroad and the average amount of money they send home to Nepal. Even if some people migrate abroad with their families as well, this is not included.

The study has the following limitations

i. The study takes remittance as a key independent variable and gross domestic product (GDP) and foreign assistance (including grants and loans) are also taken into account as explanatory variables.
ii. The study has covered only the remittance from migrant workers excluding India, Gorkha remittance and employment compensation.
iii. Price of all commodities is calculated at the current price.

1.5 Organization of the Study

The followings are the chapters included in this study.

Chapter I Introduction

This chapter contains brief introduction of history and present scene ofremittance and its contribution. Besidesthis, statement of the problem, objectives of the study, limitation of the study and organization of the studyare included.

Chapter II Review of Literature

The review of the reference materials is covered in the second chapter of this study. Brief summaries of the articles, books, journals, research papers, and theses that have been reviewed are presented.The literature review work is organized into three sections i.e. the global context, the national context, and the research gap.

Chapter III Research Methodology

The methodologies used for the research are covered in the methodology part. Data collecting, data analysis, and study methodologies are all part of the research design.

Chapter IV Role of Remittance on Nepalese Economy

This chapter uses available secondary data to analyze and determine the overall contribution of remittances to the domestic economy. This chapter's presentation begins with outlining the state of the global economy and how remittances have an impact. Later description on macro-economic situation of Nepal and contribution of remittance is described. And the trend analysis and descriptive analysis are also included in this chapter.

Chapter V Relationship between remittance and import

This chapter has dealt with the relationship between remittance and import. It has included all the necessary econometric models and testing. At last, interpretation of the testing has been presented.

Chapter VI Major findings, conclusions and recommendations

Remittance has direct and indirect impact on various aspects of national economy. In this chapter, the impact of remittance on imports and other macroeconomic health are analyzed.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

Labor migration is a physical transfer of an employee or labor force from one place to other. It might be of a permanent or temporary nature. People move from rural to urban areas for a variety of reasons, but the most of the time it's because of compulsion and a lack of infrastructure, medical care, education, and other essential facilities.

Many academic works demonstrate the relationship between remittance and import. Some of studied literature and their findings are mentioned below.

2.2 International Context of Foreign Employment, Remittance and Import

Zaman (2005) stated that remittance plays a vital role toward economic development of any country especially for the developing nations. With remittances, an economy can spend more than it produces, import more than it exports or invest more than it saves, and this might even be more relevant for small economies. Remittances play a potentially important role in the import demand functions both at the aggregate and disaggregated levels, particularly where there is a foreign exchange problem. The demand for imported consumer items is unaffected by remittances, he continues, but the import of capital goods and raw materials is positively impacted.

As the demand for Bangladesh's labor has risen internationally, remittances sent by migrants have increased over the years in the economic growth of the nation. Remittances make a larger contribution to the GDP and foreign exchange earnings for developing nations (WB, 2005).

According to Taylor and et al. (1996), policymakers and researchers are increasingly aware of how international migration affects the economies of the regions that receive remittances as households from developing nations become more connected to labor markets in prosperous countries.

The rising amount of international remittances has equally impressed policymakers and social scientists, according to Brown (2006). The developments in migration and, consequently, remittance inflows are currently attracting the attention of policy makers and social scientists, and this trend has generated a significant amount of theoretical and empirical literature. The influence of remittance on social development, however, is less understood (Hu, 2013), and there haven't been as many studies done to reach an agreement on its effects. How remittances are used and their potential effects on social development are two major questions that have received attention.

According to Klugman's (2009) analysis of the relationship between remittances and social development, remittances are essential to enhancing the standard of living for millions of people in developing nations.

Similar to this, other studies have examined at how remittances affect social development, finding that they motivate people to spend more on both consumption and the development of their human capital (Mansour & et al., 2011; Parida & et al., 2015; Thapa & Acharya, 2017).

Other research (Anten, 2010; Wahba, 2015) have concentrated on the influence of remittances in rising spending on health services. These studies also have examined the effect of remittances over social development.

Numerous studies have supported the favorable role that remittances have in enhancing household welfare, living conditions, and child education (Hu, 2013; Yang & Choi, 2007; Jaquet et al., 2016; Thieme & Wyss, 2005; Vogel & Korinek, 2012). The international organization has also acknowledged the beneficial role that remittances have in social development (WB, 2018).

Paine (1974) claimed that since remittance recipient families now have a desire for foreign commodities and living standards—which is especially true once migrant workers return to their homes—there will be a strong incentive to import out of remittances.

According to Durand & Massey's (1992) research, the majority of migrant households' remittance income goes toward consumption rather than worthwhile investments.

De Haas (2009) also came to the conclusion that remittances are financial resources that recipient households can utilize to invest at the micro and macro levels of the national economy. As a relatively consistent source of foreign cash, it is becoming more and more significant.

Additionally, Bettin & Zazzaro (2012) came to the conclusion that remittances have a beneficial impact on the economy because they reduce liquidity constraints and boost availability to credit with the aid of an effective banking system. They did this through examining panel data from 66 different nations. On the other side, Lartey (2017) came to the conclusion that a floating exchange rate system offers a greater probability of economic growth and more remittances than a fixed exchange rate system.

Glytsos (2005) conducted an analysis of the impact of remittances on investment, consumption, imports, and output and found that lowering remittances would have a higher impact than increasing them. When remittances are invested productively, the additional output will help to lessen the burden of rising demand.

Giuliano & Arranz (2005)worked on data set of more than 100 developing countries from years 1975–2002 and found that remittances can enhance economic growth only in less financially developed countries.

Adams (2006) discovered that households that receive remittances utilize a smaller percentage of their income for food and other non-durables consumption and a bigger percentage for housing, education, and healthcare financing.

Adams (2011) concluded after reviewing 50 different literatures that international remittance in most of the case have positive impact on poverty reduction and healthcare at the same time it can have negative effects like labor supply, education and economic growth.

Olubiyi (2014) conducted research to investigate the causal connections between Nigeria's gross domestic product, exports, imports, and trade between 1980 and 2012. The quantitative result suggested that remittances had a negative impact on exports and a positive impact on imports, leading us to believe that in the instance of the Nigerian economy, remittances had a negative influence on the trade balance.

In a study published in 2016, Farzanegan & Hassan examined the impact of remittances on the trade balance for a sample of 11 MENA (Middle East and North Africa) nations between 1980 and 2013. They discovered that the increase in import-led consumer expenditures in the economies caused by the influx of remittances had an increasing impact on the trade deficit. The outcome supported the idea that through increasing domestic investment capacity, authorities in this region may be able to lessen the detrimental effects of remittances on the trade balance.

Fayissa and Nsiah (2010) used panel data from 37 African countries to examine the effects of remittances within a traditional neoclassical growth framework and came to the conclusion that remittances contribute to economic growth in underdeveloped financial systems by offering liquidity and capital for investment. Similar to this, Cooray (2012) discovered that the development of the financial sector and education have a strong favorable impact on economic growth. Remittances can, according to Kuckulenz & Buch (2004), have a significant positive influence on the current account, but they can also have less advantageous characteristics, such as creating a Dutch disease effect.

Additionally, Jongwanich (2007) came to the conclusion that remittances through investment and human capital channels can have a negligible positive impact on economic growth. In the same study, he made the case that government officials and policy makers should not view remittances as a development engine similar to exports and foreign direct investment (FDI) because they have a negligible beneficial influence on economic growth.

The usage of the remittance income is the most crucial factor to consider when analyzing the effect of remittance on economic growth. In a household-level analysis of remittance use, Knerr (2017) suggested that, compared to loan repayment and consumption, only a small share of remittances are used for saving and investing. According to Airola (2007), households that receive remittance spend more on housing, healthcare, and durable goods and less on food than households that do not.

Olusuyi, Adedayo, Agbolade, and Ebun (2017) came to this conclusion based on research on the dynamic impact of remittance on economic growth in Nigeria between 1971 and 2013. They used the Keynesian open economy model of income in the Nigerian economy to show that there is a significant relationship between remittance income and economic growth through spillover effects on component of GDP as consumption, investment, and import.

(Vargas-Silva, Jha, & Sugiyarto, 2009) came to the conclusion that remittances do have a positive impact on GDP growth based on studies conducted in more than 20 Asian nations on the topic. The same study also comes to the conclusion that a 10% increase in remittances can result in a 0.9–1.2% boost in GDP growth.

Similar to this, Connell & Conway (2000) came to the conclusion that remittances can assist small emerging economies spend more, import more, and invest more. Furthermore, Walmsley et al. (2017) backed up the idea that remittances had a positive influence, concluding that generally, both nations sending and receiving labor have benefited from migration of labor in terms of real GDP or income.

Some studies on the utilization of remittances contend that it depends on the location where they are sent and utilised. For instance, Taylor (1999) argued that remittances have a significant multiplier effect when employed in rural households that consume commodities produced domestically, have labor-intensive production processes, and use few technologies. On the other side, the same research indicates that remittances paid to urban households may help to raise imports by increasing the demand for imported goods.

According to Siddiqui (2003), migration enables parents to provide better educational chances for their children, but at the same time, children's education is also impacted by their parents' absence. Therefore, it is clear that while remittances have helped children have a better education on the one hand, their education has also suffered as a result of their parents' absence.

According to Adhikari et al. (2011) and Tachibana et al. (2019), migrant workers provide financial assistance for their families through remittances, but the families who stay at home frequently have worse mental health.

Middle Eastern and North African (MENA) economies have had the highest degree of dependency on received remittances worldwide over the last three decades. The region has also had the highest non-oil external trade balance deficit among developing countries. Farzanegan &et al. (2016) examined the role of remittances in the trade balance of 11 labor-abundant MENA countries. A regression analysis shows that the inflow of remittances has had an increasing effect on trade deficits by triggering import-led consumption expenditures. The results are robust after controlling for other drivers of trade deficit and fixed effects.

According to Walmsley et al. (2017), remittances boost the nation's economic activity, which contributes to the economy's overall growth. They continue by saying that while remittances aid in short-term economic growth, relying more heavily on them over time lowers total output (GDP) since it shrinks the workforce that is available to work.

Inward remittance affects the GDP and other economic and development indices through consumption and investment, according to Arnold (2017). Remittances are employed in the majority of countries to benefit recipient households, communities, and the entire national economy.

According to Carling (2004), remittances boost credit availability because they are saved in financial institutions, and can help businesses realize investments that have a favorable influence on development. Similarly, Pant (2008) concluded that remittances can generate a positive effect on the economy thorough various channels such as savings, investment, growth, consumption, and poverty and income distribution.

According to Ratha's (2013) research, remittances boost household earnings, making them an effective tool for reducing poverty in developing nations.

Barajas, Chami, Fullenkamp, Gapen, and Montiel (2009) came to the conclusion that over the past decades, workers' remittances have grown to become one of the largest sources of financial flows to developing countries, often dwarfing other widely-studied sources such as private capital and official aid flows. While it is undeniable that remittances have poverty-alleviating and consumption-smoothing effects on recipient households.

In the Asian context of migration;Asis, (2003) mentioned that, in recent times, particularly inthe last 30 years, journeying in Asia has meant international labor migration, initiallyto the Gulf countries in the 1970s, and to the dragon economies in Asia from the1980s. And men are not the only ones engaged in it.

Portugal & Zildzovic (2016)found that the following positive impact of remittance in national economy. First, remittance inflows reduce volatility of output and stimulate economic growth. Second, remittances support the development of the financial sector. By relaxing credit constraints, they stimulate investments and future growth. Notwithstanding these positive effects, remittance may exert adverse effects in an economy receiving them.Large inflows can lead to a real exchange rate appreciation and the subsequent loss of export competitiveness.

Remittance inflow and inflation were shown to be negatively correlated by Barua & et al. in 2007. Bangladesh may need to import more expensive capital goods as it develops, which will have an impact on its Balance of Payments (BOP) condition. Although this will have a short-term negative impact on the BOP situation, if those capital items are used for productive reasons, they will be able to increase domestic output, which will have a long-term beneficial effect.
Similar to this, Ahmed (2010) stated that remittance flows to Bangladesh have been statistically significant but have had a negative influence on growth based on the results of time series regression. Similar studies on the relationship between remittance economic growth According to a 2012 study by Siddique, Selvanathan, and Selvanathan, there is only a one-way causal relationship between remittance growth and economic growth in Bangladesh, no causal relationship between remittance growth and economic growth in India, and a two-way causal relationship between remittance growth and economic growth in Sri Lanka.

Muktadir-Al-Mukitand et. al. (2013)studied the relationship between remittance and import in Bangladesh and concluded that remittance and import have a consistent, favorable, and important link. Evidence from Granger causality analysis reveals that there is a one-way causal relationship connecting import and remittance. Therefore, they recommended that Bangladesh reduce its heavy reliance on imports, which is a hindrance to attaining economic growth more quickly.
So, from the above review it can be concluded that there have been lots of research on remittance and its impacts internationally and found various results.

2.3 National Context of Foreign Employment and Remittance

Shrestha (2008) concluded her article that, in Nepal, remittances have become one of the most important sources of foreign currency, and they have recently become a significant source of assistance for family members who are still living at home. Remittances made by migrant workers have previously been shown to be a successful strategy for reducing poverty. However, the issue with Nepalese migrant workers is that they labor in low paying jobs, which causes them to save very little money and have a significantly greater marginal propensity to consume.
Similar to this, a research done in Nepal using an economic model backs up the idea that remittances boost spending on consumption. According to Acharya and Leon-Gonzalez (2013),

households that receive remittances in Nepal tend to spend more on consumption, which rises even further when remittance income rises.

According to Shrestha (2017), the rise in labor migration to the Gulf of Malaysia accounts for 40% of the drop in poverty between 2001 and 2011. This study also shows how migration through remittance enhances children's enrolment in school and that a significant portion of consumption expenditures—an estimated $1 rise in remittance raises $0.5 increase in consumption—goes toward food.

In contrast, Pant (2017) discovered that households that get remittance spend more on schooling and less on housing, and that remittance had no appreciable impact on expenditure on food, consumables, or durables. Investing more in education helps to create human capital, which might eventually support long-term economic growth.

Meanwhile, MOLE (2016) highlighted that growing remittance income to Nepal shows a reduction in the manufacturing sector, which has harmed export. A rise in imports is a result of rising labor migration and remittances, which add to overall consumer spending. The labor force is not being used to its full potential at the same time.

According to Glinskaya, Bontch-Osmolovski, and Lokshin (2007), labor migration and remittance income made a significant contribution to Nepal's reduction in poverty between 1995 and 2004.

According to Bhandari & Chaudhary (2017), the largest percentage of remittance income in Nepal is spent on consumer goods, followed by loan repayment.

Seddon(2005) has mentioned that in the last decade, foreign labor migrationhas become a major feature of Nepal's economy and society. Approximately 700,000Nepalese are working beyond India, mainly in the Middle East, East Asia, andSoutheast Asia. About five percent of these are women. At least another 700,000workers in the private sector in India, and 250,000 in India's public sector.

Kumar(2004) pointed outthat, high unemployment and underemployment will force people to remain eitherunder severe poverty or migrate to other places within and outside the country forbetter opportunity for livelihood.

Bhattarai (2005) evaluated the Nepalese government’s policies and programmes related to theregulation and management of foreign employment profession in Nepal and concluded that migrant workers have beenfacing problems both in the origin and the country of destination.

Further to that,government polices relating to the international migration are not properlyimplemented. On the other hand, government lacks commitment in protecting therights of the migrant workers.

In their article, Thagunna & Acharya (2013) came to the conclusion that remittances simply serve as a short-cut for financing imports for consumer use. The boost for the economy is mediocre. But when "harnessed" into the productive sector, there is a fair chance of stimulating the economy more effectively. This calls for the vigorous execution of measures that will eventually wean Nepal's economy from its reliance on remittances.

Similar to this, Sharma (2017) outlined how remittances have a significant impact on driving up consumption and boosting GDP. He also makes the case that remittances are causing the Dutch sickness phenomena and moral hazard.

Remittances do not always aid in a country's growth. The government must examine the factors that influence Nepalese people to send money home, particularly those other than individual family remittances, and design its policies to capitalize on these factors in order to implement effective and efficient public policies that direct remittances into profitable initiatives. The government authorities have largely disregarded the use component of remittances, despite the fact that the policies and measures implemented thus far to increase the effect of remittances are primarily intended to encourage the sending of remittances through official channels. Consequently, it is difficult for the government to allocate remittances to profitable enterprises. Families of migrant workers should be inspired and given the necessary training so they may start small companies.This will increase employment and benefit the home economy. Long-term migrant workers may return and be reintegrated into the nation, bringing with them superior technology and skills (Pant, 2011).

2.4 Legal Provisions for Foreign Employment

Followings are the legal frame works enacted by the government for the promotion of foreign employment.

i. Foreign Employment Act, 2064
ii. Foreign Employment Regulation, 2064
iii. Policies for Foreign Employment

Foreign Employment Act and Regulations, 2064 (2007/08)

In order to promote international employment as a respectable career, the government of Nepal has promulgated the Foreign Employment Act, 2064. The protection of foreign employees' rights and provision of essential security is emphasized by this law. The Foreign Employment Regulation, 2064, which enlarged the scope and streamlined the process for implementing the Foreign Employment Act, was approved by the Nepali government in accordance with clause 85 of the Foreign Employment Act, 2064.

The following are the major characteristics of the act and regulations.

- Progressive system for protection of labor's right;
- Provided various facilities and made foreign employment a profession of anhonored;
- Increased provision for punishment on crime against labor, and prescribedmechanism for implementation;
- In case of emergency, the act has provisioned foreign Employment fund as arelief mechanism;
- Act has increased the role of government in promotion of foreign employment.

Some of the weaknesses of the act and regulations:

- Lack of government contribution in Foreign Employment fund;
- Lack of real representation of organizations working for the right and welfareof the labors; and
- Lack of mediation mechanism for settlement of disputes.

Policies for Foreign Employment

Though, the government of Nepal has not developed foreign employment specificpolicy document, there are foreign employment related topics in various governmentmanifestos. Followings are some of the foreign employment related policies:

Labor and Employment Policy, 2062 (2005/06)

The following policy and strategies in relation to foreign employment has beenhighlighted in the Labor and Employment policy, 2062.

- A distinct policy on labor migration will be formulated and enforced for thepromotion of safe and decent foreign employment.
- The implementation of the global labor parameters in the informal sector willbe encouraged through employers’ and workers’ organizations.

- The "skill for employment" programme will be implemented by coordinatingthe vocational and skill development training programmes conducted underdifferent ministries and agencies and making them more effective inaccordance with the changing technology and nature of demand of the labormarket.
- The global standards of gender equality and promotion will be adopted andtheir provisions gradually implemented.

Action Plan for National Human Rights, 2061 (2004/05)

- Review the effectiveness of the implementation of the foreign employmentrelated acts.
- Establish foreign employment information center

2.5 Gaps and Problems in Legislation and Implementation

Despite having good intentions, the Overseas Employment Act (2064) has not successfully promoted foreign employment or protected migrant workers. All agencies concerned in labor migration must work together in a coordinated effort for the Act to be executed properly. Equally crucial is the involvement of local law enforcement, immigration, banks, airlines, and diplomatic missions abroad. Licensed recruiting agencies deplore the current legislative regulations governing immigration clearance. Sending individuals abroad is delayed in particular by the requirement for governmental clearance for employment offers, for publicizing job offers, and for the screening of applicants. Agents assert that this has caused a slowdown in business. Similar complaints regarding the prohibitive cost of finding job abroad are made by potential migrants. Regularly, licensed business owners and unlicensed recruiting firms charge more than what is allowed by law. In the recruitment of workers for employment abroad, unethical behavior, graft, corruption, and worker exploitation have become widespread phenomena.

False job contracts, visas, and travel documents are frequently used to travel and clear immigration. As a result, many Nepalese who have traveled abroad to find employment become trapped or are deported. As was previously said, a foreign worker who feels cheated can complain to the Department of Labour and Employment Promotion (DLEP). Offenders may be held in police custody for up to 30 days while an investigation is carried out after presenting their case and with the consent of a court.

2.6 Research Gap

According to the aforementioned conclusion, numerous surveys about the relationship between remittances and their different effects on domestic economies around the world, including Nepal, have been conducted in the past few decades.It was discovered that many studies were primarily focused on findings of the causes of joining foreign employment, use of remittance in household economy, impact of remittance on poverty reduction and consumption, contribution of remittance on balance of payment and GDP etc., but were not sufficiently explore the association between remittance and imports.This study has investigated for an association between remittance and import because it is crucial to examine how remittances should be used so that they can have a long-term positive impact on economy besides to their immediate impact on different macroeconomic variables. New vision and work plan should be drafted by government to use the remittance in nation building. Directed or planned use of remittance could boost the national economy. By using remittance, national production could be increased despite the rise in imports; so that, the remittance would be virtue rather than ruin in Nepalese economy.

Hence, two other deterministic variables that similarly influence imports are included in this thesis i.e. the broad money supply (M2) and foreign aid (including grants and loans). Dao, K. (2020) found the statistically significant and positive relationship between broad money supply and Vietnam's trade balance. Similarly, another well-known slogan and the most contentious topic in the modern world is aid for trade facilitation in poor nations.Therefore, in addition to remittance, the researchers has included broad money supply and foreign aid in the deterministic variables.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

This study is macro level study and is based on secondary sources of information. This is analytical as well as descriptive type of research design. The main objective of this research is toanalyze the relationship between remittance and imports, which simply portrays an accurate profile of status of remittance income and national trade balance.Some analytical tools have been used such as multiple regression, correlation and other statistical tools.

3.2 Source of Data

The primary objective of the study is to examine the relationship between remittance and Nepal's import situation. The study also aims to examine the overall contribution of remittance on national economy with the help of secondary information. The necessary information has been collected from various secondary sources i.e., publication reports, research works, journals, survey reports etc. from the following organizations.

- Ministry of Finance
- World Bank
- Nepal Rastra Bank
- Central Library of Tribhuvan University, Kathmandu
- Central Bureau of Statistics
- International Labor Organization; etc.

3.3 Methods of Analysis and Interpretation of Data

Data was aggregated and categorized after it was gathered from the various sources. Since, the data are time series in nature, the data were converted in real term by using the GDP deflator. After this, numerous mathematical and statistical tools were employed. All required software has been assigned in accordance with requirements and has interpreted in accordance with the statistical findings.

With the help of descriptive and statistical tools, data analysis is carried out. One of the techniques for data display is trend analysis, descriptive analysis, unit root test, co-integration test, multicollinearity test, regression analysis, Breusch-Pagan-Godfrey heteroscedasticity Test, Ramsey RESET Test, CUSUM and CUSUM square test were done.

A computerized Eviews and SPSS program were used to show the interrelation between remittance and import using regression analysis. For examining the relationship of remittance on import the following steps were followed:

- Individual time series were determined. Examining of individual time series suggested that, dependent variable import and independent variables broad money supply (M2), Remittance and foreign assistance are first difference stationary.
- The empirical data are converted into log form once the stationarity of the variables has been confirmed.
- Autoregressive distributed lagged model (ARDL) is applied for regressions.

Data are uploaded in Excel Sheets and then imported to the SPSS and EVIEWS to construct trend line and other statistical tests. With the help of these software, all necessary tests and works have been completed.

3.4Econometric/ Regression Model

A scientific statistical technique for estimating relationships between variables is regression analysis. It is used to gauge the strength of the relationship and forecast its course. Since determining the impact of remittance on import is the primary goal of this study. So, equation (I) has formulated to analyze the impact of remittance (REM) on imports (IMPORT).

$$Import = a + \beta_1(Remit) + \varepsilon_i \text{.....Equation (I)}$$

Equation 1 uses 'import' is dependent variable which is totally dependent on remittance income and has considered other determinants are included on error term, which might produce biased result. To obtain unbiased result, other independent variables are entered in equation 1 as shown in the equation 2. As we know that, the payment of import has to be made in foreign exchange, due to which in this model, other possible sources of foreign exchange have been included in independent variables.

$$Import\ (M) = a + \beta_1 REM + \beta_2 M_2 + \beta_3 FOA + \ \epsilon \text{ .... Equation (II)}$$

Since, the nature of the time series data are non-stationary, the data are transformed into natural log form and the above two equations have written as,

$$lnM_t = a + \beta_1 Ln\,(REM)_t + \varepsilon_t \ldots\ldots \text{ Equation (III)}$$

And

$$lnM_t = a + \beta_1 lnREM_t + \beta_2 lnM2_t + \beta_3 lnFoA_t + \mu_t \ldots\text{.Equation (IV)}$$

Where, ln is natural logarithm, ε is error term and a, β_1, β_2, $\beta_3$are regression parameters.

CHAPTER IV

ANALYZING THE DYNAMICS: TRENDS AND PATTERNS OF MACROECONOMIC VARIABLES

4. Introduction

This chapter is divided intofive sections. The first section deals with the overview of macroeconomic situation of Nepal, the second section is related with trend and pattern of various macroeconomic variables over the studied period. The third section of this chapter studies the contribution of remittance to the National Economy. Furthermore, forth section is the descriptive analysis of the studied variable and last section presents the correlation relationship between the various macroeconomic variables.

4.1An Overview of Macro Economic Situations of Nepal

In 2021/22, due to the availability of Covid-19 vaccine, the economic and social activities in the world have been normalized. Due to the normalized economic situation after Covid-19 and high growth in energy sector, Nepalese economy is expected to be increased by 5.84percent. The growth was 4.25 percent in the previous year.

In the fiscal year 2021/22, the Nepalese agriculture, industry and service sector is expected to grow at 2.3 percent, 8.1 percent and 6.6 percent respectively. The GDP at consumer price is expected to be NPR 4.851 trillion in which share of Bagmati province is largest with 36.9 percent and share of Karnali province is least with 4.1 percent. The growth rate is highest with 6.74 percent in Bagmati province and lowest with 4.82 percent in Madhesh Province. The gross domestic consumption rate is decreased to 90.7 percent in this fiscal year; last year it was, 92.3 percent. In the fiscal year 2019/20, the gross investment was decreased by 25.9 percent, but it was increasing in the last two years. In the FY 2020/21, gross investment is increased by 29.3 percent and in 2021/22, it is expected to grow by 18.1 percent and would reach to NPR 1.807 trillion. The ratio of GDP to gross investment expected to reach 37.3 percent; in the previous year, it was 35.8 percent.

The GDP per capita is expected to grow by double digit i.e., 12.3percent and would reach to NPR 164,598 in the last year, it was NPR 146,521. But GNI PCI is expected to grow by 10.8percent and would reach to $1381. The inflation rate in the first 8 months of FY 2021/22 is 7.1percent, it was 3percent in the same period of previous fiscal year. The integrated expenditure in FY 2020/21 of 3 level of government is increased by 14.4percent and has reached to NPR 1.362 trillion in which 54.4percent is spent on current expenditure, 36.5percent in capital expenditure and 9.1percent in financial settlement. The deficit budget of federal government in 2021/22 is 7.1percent of GDP; it was 8.2percent before. The ratio of GDP to federal expenditure is 2percent in the 2021/22 in which 19.8percent is covered by current expenditure, 5.4percent by capital expenditure and 2.8percent is financial settlement.

The ratio of revenue to the GDP is reached to the 21.9 percent in the FY 2021/22 in which, the contribution of tax revenue and non-tax revenue is 20.4 percent and 1.5percent. In the previous fiscal year, the ratio of revenue to GDP was 20.4percent. Similarly, in February 2022, the gross public debt of Nepalhas reached to NPR 1.848 trillion which is 38.09percent of GDP and the share of internal debt and foreign debt is NPR 8.63 trillion and NPR 9.84 trillion.

With the objective of enabling and making competitive banking system, NRB has adopted the acquisition and merger policy, due to which the number of financial institutions has been decreasing and has reduced to 128. The ratio of population per financial branch is 2572 and it is minimum in Gandaki and maximum in Karnali province. The electronic payment system has been increased in the economy and the financial access also has been increased within the country and the presence of commercial bank has reached to 750 local levels.

The deposits of financial institutions have been increased by 4.1percent and reached to NPR 4.854 trillion in the February 2022. In the same period, credit flow has been increased by 12.8percent and reached to NPR 4.607 trillion.

The Nepal Stock Exchange Index (NEPSE index) is reached to 2668.1 in March 14, 2022, it was 2458.5 in the same previous March 14, 2021. The index is ever highest with 3199 in 18 August 2021. The capitalization has increased by 11.7percent and reached to NPR 3.782 trillion and it is 78percent of GDP.

Import tax has been increased from 29938.24 crore to 41880.40 crore from FY 2076/77 to 2077/78. Total export has reached to 147 Arab 75 crores up to 8 month of 2078/79 which was 80 Arab 78 crores in the 8 months of previous year i.e., export income has increased by 82.9 percent.

The insurance sector has raised NPR 604 billion as a premium, in which NPR 521 billion is covered by life insurance and NPR 82 billion by non-life insurance. The insurance sector has covered 29percent of total population up to February 2022, it was 27percent before. The term insurance that is offered to people those who are going to foreign employment is 6.4percent. The number of cooperatives in the economy has reached to 30,879which has covered 7.33 million people as shareholders with share capital 94.12 billion and deposits of NPR 478 billion and credits of NPR 426.3 billion.

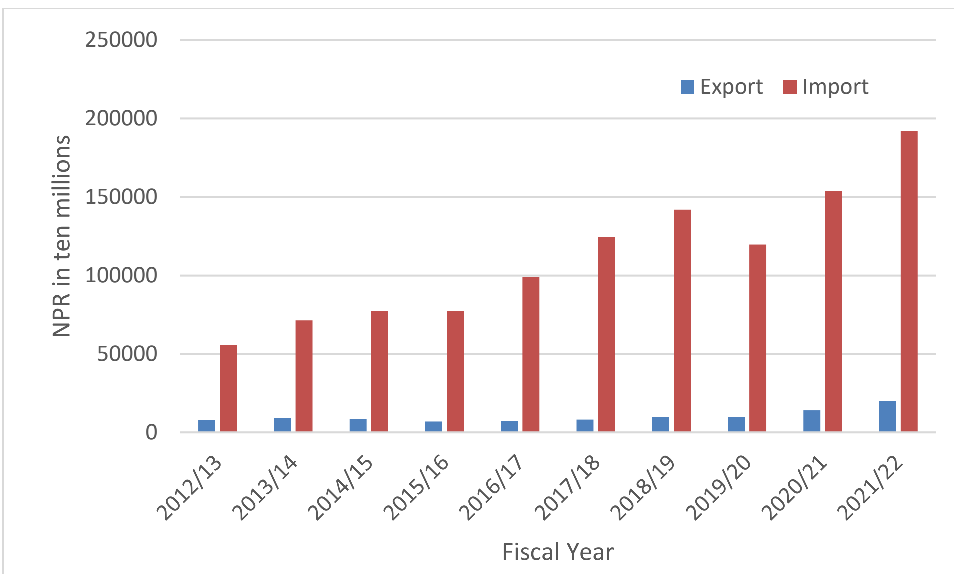
Up to February 2022, 5.662 million people have taken approval for foreign employment in which 412 thousand people have got approval in this fiscal year. The remittance income in the first eight months F/Y 2021/22 of Nepal is decreased by 1.7percent reduced to NPR 631.19 billion which was 642.33 billion in the same previous period. The reserve of foreign exchange was NPR 1.399 trillion in July 2021 and has decreased to NPR 1.171 trillion in February 2022. The reserve is sufficient to import goods and services for 6.7 months. The volume of FDI has increased by 60percent and reached to NPR 16.3 billion in February 2022 and it was 10.18 billion in before.

In Nepal, NPR 228 billion has been approved for investment in the first eight month of 2021/22. Till February 2022, NPR 1.089 trillion investment has been approved by investment board and NPR 396.53 billion by industry department. The number of registered companies have reached to 283 thousand in February 2022 in which largest 70.7percent companies have registered in Bagmati province and least 1.2percent companies are registered in Karnali province. In 2020, the number of tourist arrivals in Nepal was 230 thousand but in 2021 it was reduced to 151 thousand and have spent NPR 13.50 billion in their recreational activities.

At last, the expenditure of all 3 levels of government has increased. The aggregate demand is increased due to which import volume is rising and it has pressurized in balance of payment. Both BOP and current account is negative, the foreign reserve level has also decreased due to which there is pressure in external sector. In another hand, due to Russia Ukraine war, the price of petroleum goods is continuously increasing, as a result of it, the inflation rate is rising.

The export has increased by 82.9 percent and reached to NPR 147.75 billion in February 2022. In the previous year it was increased by 7.8 percent and has reached to NPR 80.78 billion. Similarly, the volume of imports has increased by 38.6percent and reached to NPR 1.308 trillion; it was increased by 2.1 percent and had reached to NPR 944 billion in the previous year. The trade deficit of Nepal has increased by 34.5percent and has reached to 1.161 trillion in February 2022. Due to higher trade deficit, reduced capital account and foreign aid, the BOP status has is reduced to NPR 258.64 billion in February 2022. In the same time, the capital account is deficit by NPR 462.93 billion (MoF, 2022).

Figure 4.1Status of foreign trade of Nepal



Source: Researcher's own calculation

TheFigure *4.*shows the status of export and import of Nepalese economy. During this decade of 2012/13 to 2021/22, the import volume is much bigger than the export which has resulted continuous trade deficit. The share of export also has declining up to 2017/18 and has started to increase thereafter. In the opposite, the import volume is continuously increasing except 2019/20, it is because of the global lockdown due to the Covid-19 in that year.Nepal's deficit foreign trade situation has not improved during the study period and is actually getting worse. Nepal's narrow export base, lack of competitiveness, low productivity, inconsistent policies, and complicated regulatory environments may be the main causes for the country's lower export growth than import growth. These obstacles could also discourage local and foreign investment and expand the gap in international trade.

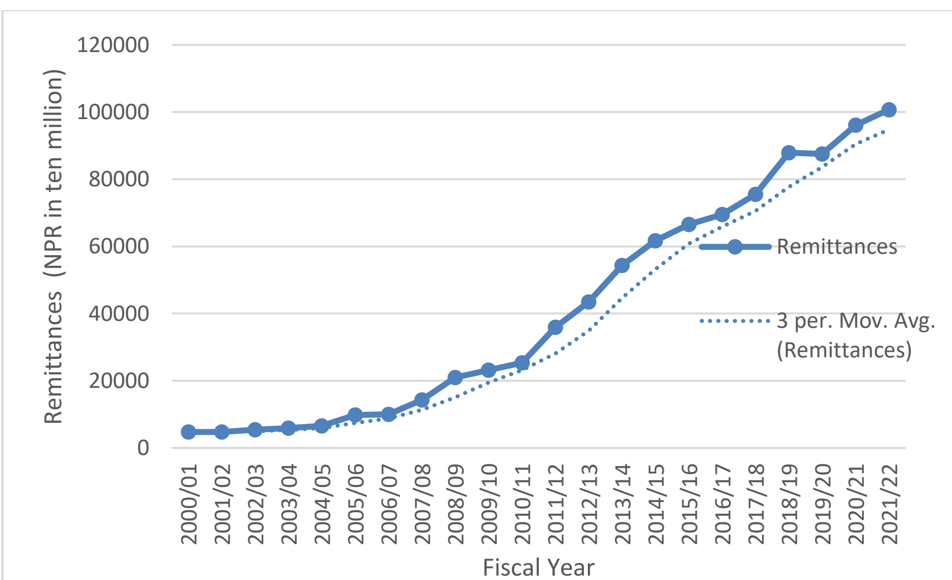
4.3 Trend and Pattern Analysis

The trend of import can be analyzed mainly by observing on the changes in some major macroeconomic variable such remittance, GDP, private consumption expenditure, investment, FDI, government expenditure, export, board money supply (M2), foreign assistance etc. are the prominent factors to determine the import. So, the trend and pattern of such macroeconomic variables are briefly analyzed.

4.3.1 Trend of Remittances

As previously defined, remittances is the amount money that is obtained and sent back to the home country by foreign migrated nationals to a country. The size of remittances of Nepal has been steadily evolving over the years.The trend of remittances has been plotted on the basis of data from the FY 2000/01 to 2021/22.

Figure 2.2 Trend of Remittances



Source: Researcher’s own calculation

The **Error! Reference source not found.** shows the trend of national data of remittance (Million in NPR) of Nepal in the study period. The X axis represents fiscal year and Y axis represents the

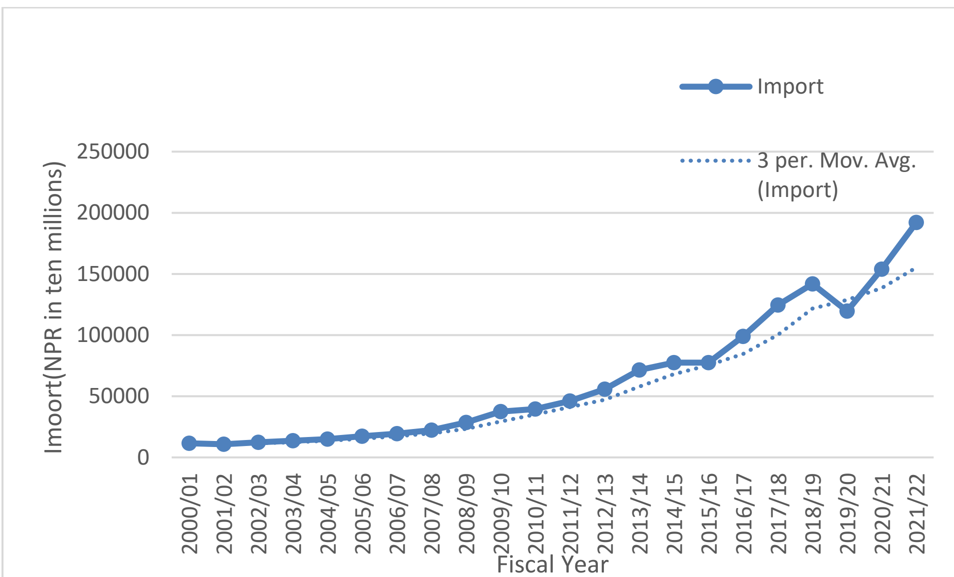
Remittance of Nepal. The trend of remittance has increased significantly and its volume is continuously increasing in the study period except the year 2019/20 due to global shutdown due to Covid-19. The size of remittances was low in the previous years and its size is has been multiplied 21.33times in these 22 years. The main reason behind the increase in remittances is the increase in number of migrant workers. The dotted line represents the 3 year moving average curve which is smooth and continuously increasing. The tiny fluctuationsthat were observed in remittances hadn't influenced the moving average curve. It means the fluctuations were negligible.

4.3.2 Trend of Import

Imports are the volume of foreign originated goods and services that comes to the national territory.Generally, the goods and services which aren't generally produced within the country or demand deficit goods and services are supplied by the imports. Since, the infant stage of industrialization and primitive technology of Nepalese agriculture, Nepal is forced to import many of industrialized goods, medicine and even agricultural products.

The trend of imports has been plotted on the basis of data from the FY 2000/01to 2021/22. The size of import was low in the previous years and its size is has been multiplied 16.60times in these 22 years.

Figure 3.3 Trend of Import



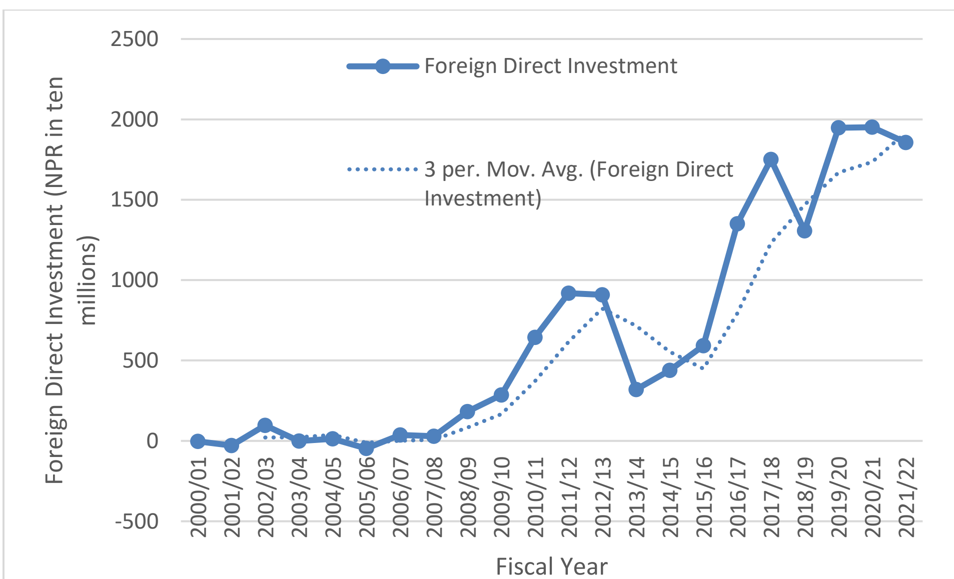
Source: Researcher's own calculation

Error! Reference source not found. shows the trend of imports in which fiscal year is measured in X-axis and import volume is measured in Y axis. Its volume is continuously increasing every year. In the year 2015/16 it was stagnant due to economic blockade made by India and decreased in 2019/20 due to pandemic of Covid-19 crisis. The dotted line has constructed on the basis of 3 year moving average curve which is smooth and continuously increasing. The stagnant imports of 2015/16 and downfall imports of 2019/20 import hadn't significantly affected the moving average curve because of the cumulative effect of 3 fiscal years.

4.3.3. Trend of Foreign Direct Investment

Foreign direct investment (FDI) is an ownership stake in a foreign company or project made by an investor, company, or government from another country. FDI is one of the very important sources of foreign exchange for overall development of developing economies. It increases the imports directly with the establishment of new industries and for their direct necessary imported raw material and other goods. The data of FDI from 2000/01 to 2021/22 and the trend line has been plotted on the basis of it.

Figure 4.4 Trend of FDI



Source: Researcher’s own calculation

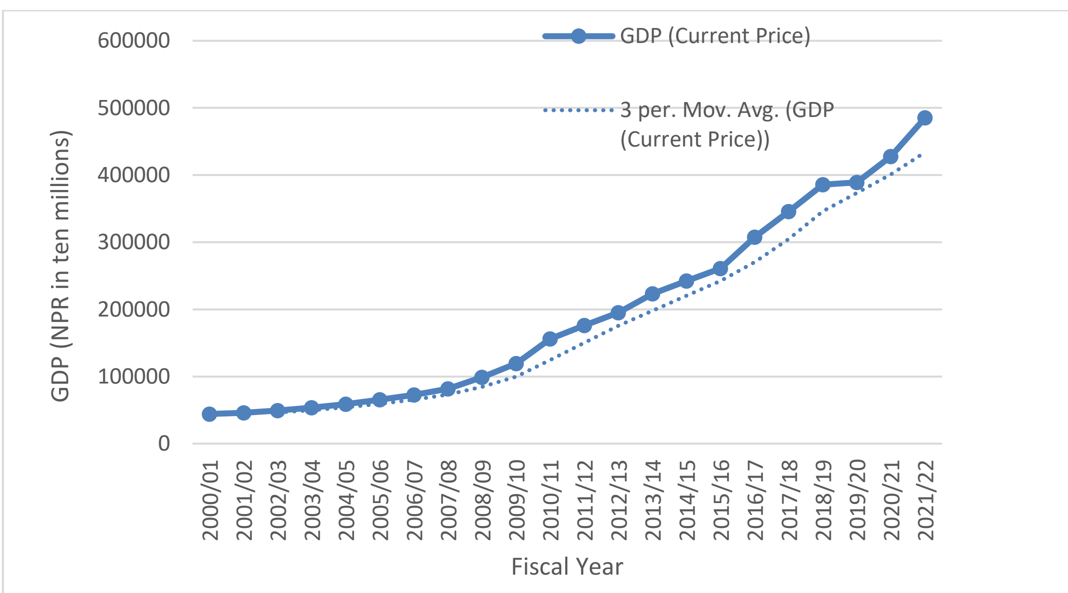
In the*Figure* **4.4**, fiscal year and FDI (NPR in ten millions) are measured in X axis and Y axis respectively. The data of FDI is remained negative in the period of 2000/01 to 2002/03 and 2005/06 and zero in 2003/04. Probably the reason of downfall of FDI in Nepal might be internal conflict led by Maoist revolutionary and global reasons might be the terrorist attack of

September 11. The FDI drastically decreased in the year 2013/14 and in 2018/19. The reasons might be the internal and external. The attractive investment environments having the stability in legal, social, political circumstances and economically viable and advantageous country attracts the FDI and vice versa. Since, the Nepal had inaugurated its most awaited constitution from constitution assembly which had created some political clashes which would be the downfall of FDI. After this period, the FDI again started to rise. The 3 year moving average curve has constructed and represented by dotted line which is also decreased in the period of 2013/14 to 2015/16 because of the cumulative effects.

4.3.5 Trend of GDP

Since, the GDP is the money value of all final goods and services that are produced within the domestic territory, its size and growth directly affected by the size of imports. In most of the developing economies, the plant, machinery, technology and necessary equipment are imported by foreign country.So, this type of imports leads to the increase in GDP. The actual trend line of GDP is constructed on the basis of data from 2000/01 to 2021/22.

Figure 4.5 Trend of GDP



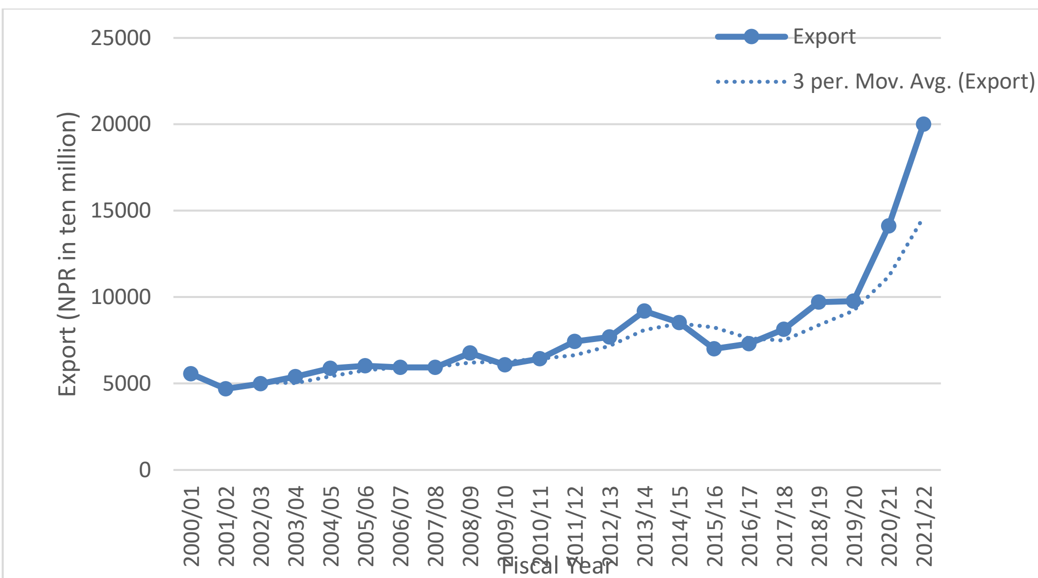
Source: Researcher’s own calculation

In the Figure *4.5*, fiscal year and GDP at current price (NPR ten millions) are measured in X axis and Y axis respectively. The size of GDP (current Price) is continuously increasing from the years and now. In the year 2019/20, the GDP is stagnant and it is because of Covid-19 and global shutdown. The 3 year moving average curve has represented by dotted line in the figure, which is continuously increasing during the period.

4.3.6 Trend of Export

The exports are the value of domestically originated goods to the foreign country. It is another very important sources of foreign exchange. The exports are the main sources of foreign exchange of any country. Generally, the surplus of goods and services over domestic demand goes to the foreign country, the increase in export in compare to import of any country assures the good economic health of any country.

Figure 4.4 Trend of Export



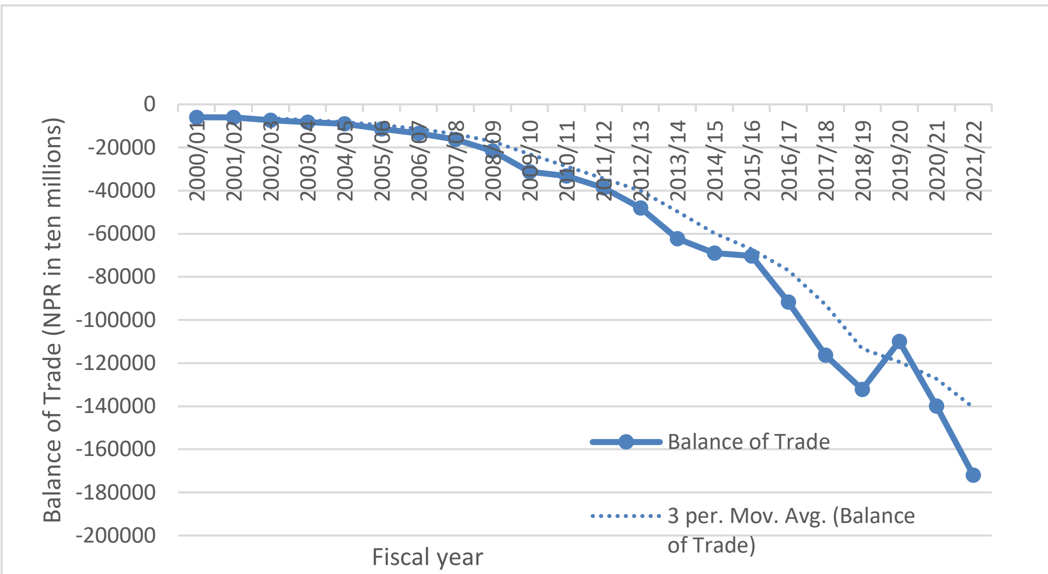
Source: Researcher's own calculation

The trend line of export volume of Nepal from the fiscal year 2000/01 to 2021/22 have been presented on the basis of data. In the Figure *4.4*, fiscal year is measured in X axis and Export volume (Ten Million NPR) is measured in Y-axis. The export volume has raised from the initial days to now.With the exception of 2001/02, 2009/10, 2014/15 and 2015/16, the export trend is rising. The events of September 11, 2001, the global economic downturn of 2008–2009 and the economic blockade, and the massive earthquake are the respective causes. In the same figure, the dotted 3 year moving average curve is also constructed, which is more smooth than the trend line and it has also felt the downturn in the year 2016/17 which is the cumulative effect of economic blockade and massive earthquake.

4.3.7 Trend of BOT

Balance of Trade is the difference between the value of merchandise trade between one country and rest of the world. In other words, it is the gap between export value and import value of physical goods. The trend of BOT shows the history of foreign trade of Nepal.

Figure 4.5 Trend of BOT



Source: Researcher's own calculation

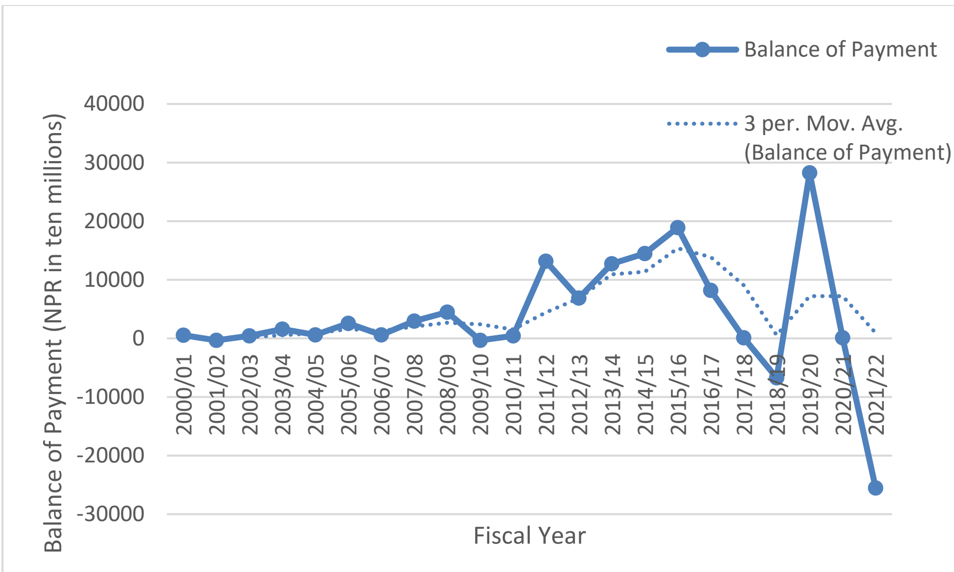
The trend line of BOT has been constructed on the basis of data from 2000/01 to 2021/22 in which the fiscal year is measured in X-axis and size of BOT (in million NPR) is measured in Y-axis of Figure *4.5*.

The BOT is negative from the early days; it means Nepal isn't able to manage the huge gap of export and import. The negative BOT was smoothly increasing up to 2007/08 and increasing at faster rate thereafter. The BOT is almost multiplied by 28.65 times in these 22 years. The 3 years moving average curve of Balance of Trade has constructed with the help of Excel and represented by dotted line. It is also smoothly decreasing in the study period a small kinked has realized in 2018/19 which might be the result of Covid-19 effect that has been realized in 2019 to 2021.

4.3.8 Trend of BOP

The BOP is the difference between international receipts and payments of an economy. It incorporates export earnings and remittance income as a receipt and also payment for imports and remittance payment. Since, the impact of remittance on import is the main objective of the study, the size and trend of BOP is presented here.

Figure 4.6 Trend of BOP



Source: Researcher’s own calculation

The trend line of BOP on the basis of data has been constructed and presented in Figure *4.6*. Fiscal year is measured in X-axis and BOP (NPR ten million) is measured in Y-axis. The trend of BOP is fluctuating, in the study period however the fluctuations are varied.

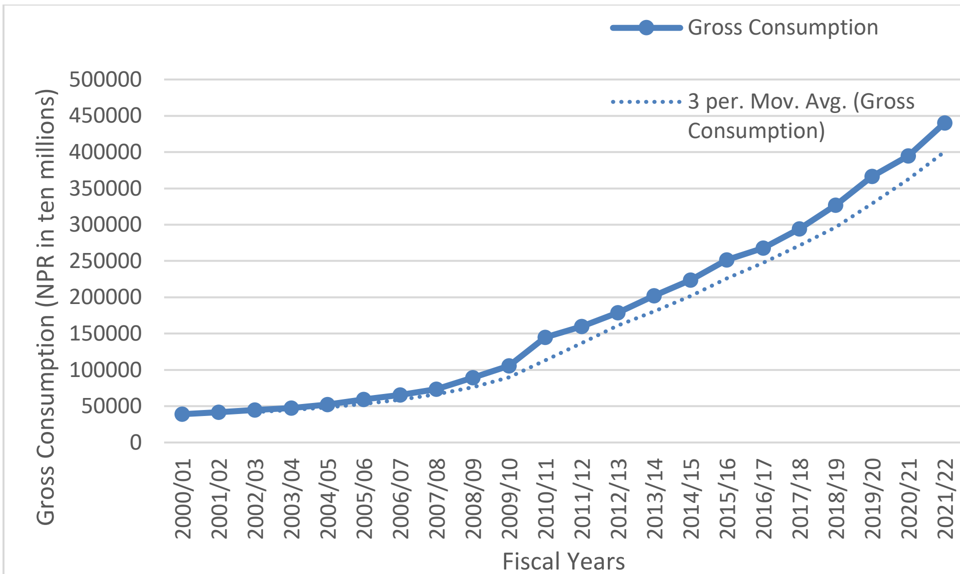
The purpose of using a moving average curve is to reduce the impact of short-term fluctuations and provide a clearer picture of the underlying trends in a country's international economic activities. By smoothing out the year-to-year variations, economists can better identify long-term patterns and assess the overall health of a nation's external financial relationships.

The 3 years moving average curve of BoP has constructed and represented by dotted line. There are some fluctuation in moving average curve. In the study period, the annual data are fluctuating and its impact has measured in moving average curve.

4.3.9 Trend of National consumption

National consumption is either met by domestic product or met by imported goods. To analyze the impact on import is incomplete without the study of trend of national consumption. So, the actual trend of national consumption is presented here.

Figure 4.7 Trend of Gross Consumption



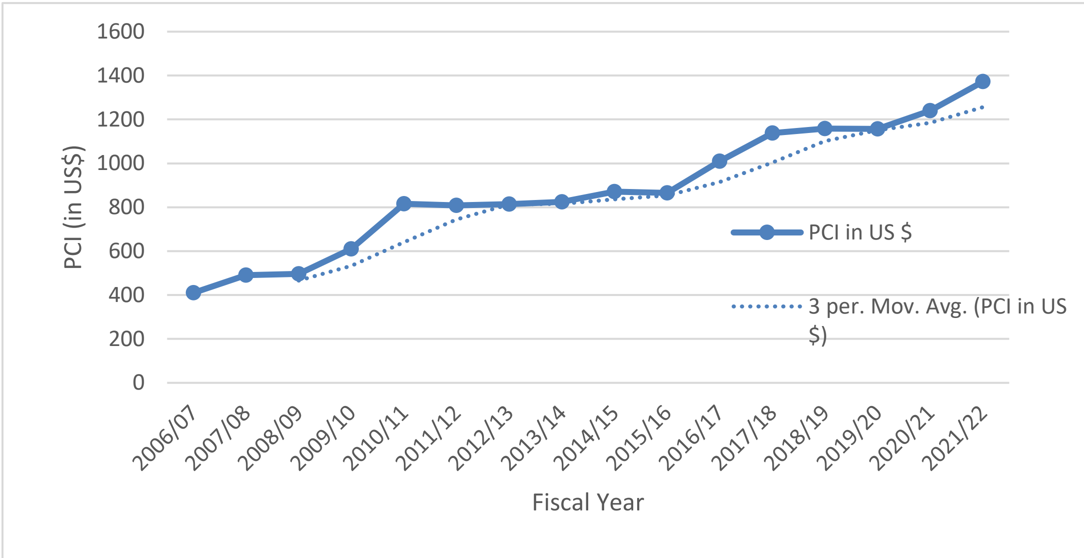
Source: Researcher's own calculation

The trend line on the basis of national consumption data from the year 2000/01 to 2021/22 are presented. In this Figure *4.7*, fiscal year and gross domestic consumption expenditure are measured in X axis and Y-axis respectively. The data of gross domestic consumption is continuously increasing from the beginning to now. The national consumption is increased by 11.28 times in the period of then and now. The 3 years moving average curve of gross consumption is presented by dotted line in the figure. Since, the annual data is smoothly increasing, the moving average curve is also smooth and continuously increasing during the study period.

4.3.10 Trend of PCI

Per capita income is one of the major indicators of an economy. In the early days it is only a leading variable to denote the health of an economy, nowadays the time is changed many other variables are studied to understand the economic health, though its value is important.

Figure 4.8 Size of PCI



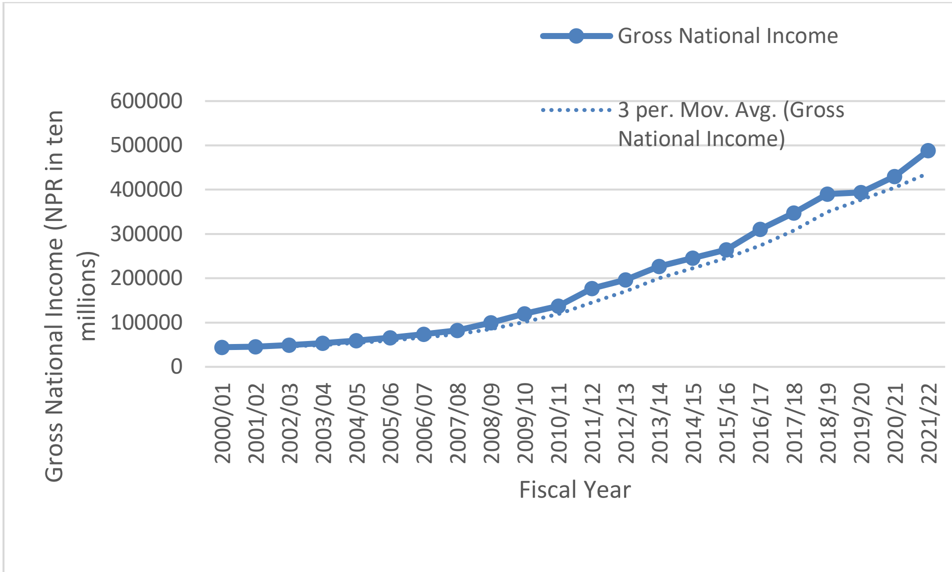
Source: Researcher's own calculation

Researcher found the data of PCI only after the FY 2006/07. Due to which, the trend line on the basis of 16 fiscal year is presented in Figure *4.8*. PCI is on the rise, however at a very slow rate and at a very low level. Limited industrialization, heavy reliance on agriculture, inadequate human capital development, political instability, and other factors are the key causes of Nepal's low PCI. The dotted line in the figure represents the 3 year moving average curve, which is smooth and increasing during the study period. The cumulative effect of annual data has affected the moving average curve, it looks stagnant during 2012/13 to 2015/16 and increasing thereafter.

4.3.11 Trend of Gross National Income

The gross national income shows the actual economic health of an economy. It incorporates all the receipt and payment of a country to the rest of the world. On the basis of the size of gross national income, PCI is constructed and it also reflects purchasing power of a country and the living standard of people.

Figure 4.9 Trend of Gross National Income



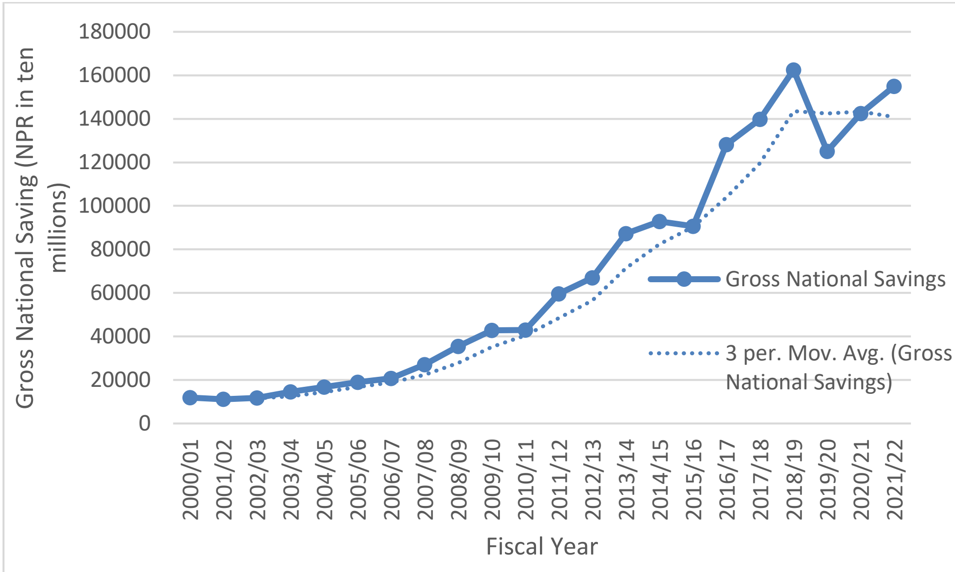
Source: Researcher's own calculation

The trend of the GNI over the study period is constructed in Figure 4.11. The fiscal year is measured on the X axis while gross national income is measured on the Y axis. It has been growing throughout the entire study period, demonstrating the strength of the Nepalese economy. Due to the global shutdown brought on by COVID-19, it appears to be constant in 2019–20. The dotted line in the figure represents the 3 year moving average curve of gross national income, which is also smooth and increasing, it is because the annual data of gross national income is also increasing during the study period except the year 2019/20.

4.3.12 Trend of Gross National Saving

The size of gross national saving shows the capacity of capital formation within the country, which ultimately affects to the GDP and other related macroeconomic variables. The size of GNS is increasing from the very beginning to now except the fiscal year 2015/16 and 2019/20.

Figure 4.10 Trend of Gross National Saving



Source: Researcher’s own calculation

On the basis of the gross national saving data from 2000/01 to 2021/22, a trend line is created in

Figure 4.*10*with the fiscal year represented by the X-axis and the size of the gross national saving represented by the Y-axis. The gross national saving is rising during the entire period, but it was flat in 2010–11 and fell in 2015–16 and 2019–20. Global recession, a major earthquake, and the Covid-19 pandemic are the primary causes, respectively. The 3 year moving average curve is drawn and represented by dotted line. It is also increasing but has stagnant in the period of 2018/19 to 2020/21 because of the heavy downfall in 2019/20.

4.4 Contribution of Remittance to the National Economy

4.4.1 Remittance Income in Nepal

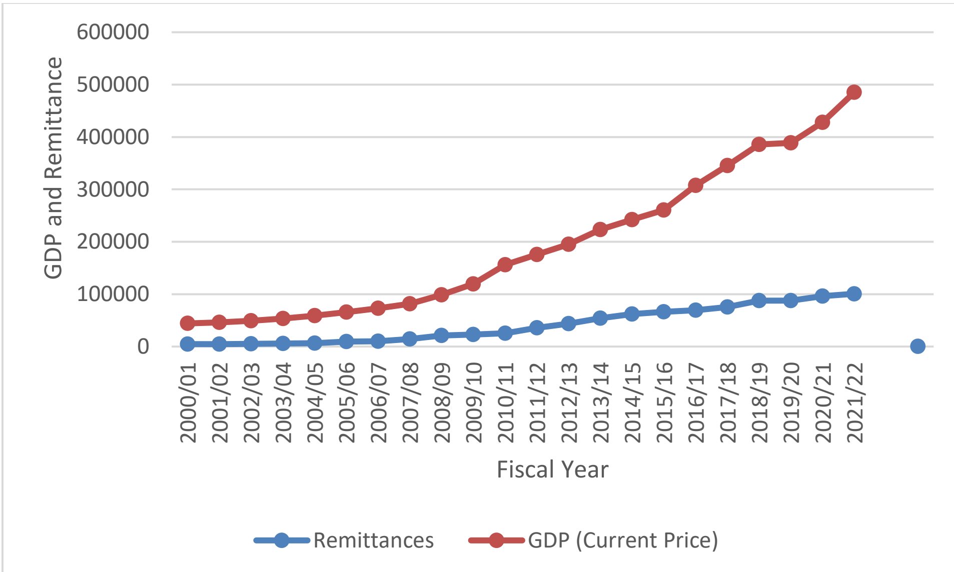
Remittance inflow has attracted rapt attention in the Nepali macroeconomic environment as the inclination of abroad employment is becoming more and more popular among young people in Nepal.In the fiscal year 2019–20, Nepal received remittances totaling Rs. 875 billion, or 23.23 percent of GDP (NRB 2020). Since remittances account for more than a quarter of Nepal's GDP, the country seems to be remittance-based. Remittances from overseas have multiplied more than three times in the past ten years.Over four million work permits for Nepali employees were given by the Department of Foreign Employment (DoFE) between 2009 and 2019 (MOLESS 2020). Out of 110 destination countries for labor migration, Qatar, the UAE, Saudi Arabia, Kuwait, and Malaysia are the top five destination countries (MOLESS 2020). But still some people are found going abroad in informal channel and working in the government restricted areas too.

This section of the study examines the contribution of remittance to the NationalEconomy.

4.4.2. Remittances and Economic Growth

Remittances is the amount of money that a migrant worker sends back tohis or her home country. It has become one of the main sources of foreign exchange todeveloping countries and millions of individual households. Basically,remittances are private income and hence it should be treated as households'income. But in the terms of currency, remittance increases the reserve of foreign currency directly whereas domestic income increases the reserve indirectly through exports. In Nepal, Remittance has covered a significant portion of GDP which could be seen in the following figure. Since, Nepal is receiving huge amount of remittance income, it increases the domestic demand which ultimately increases the economic activities within the nation. But larger number of remittances receiving families are usingtheirfunds to purchase land or buildings, automobiles and health and education,which has reduced the domestic saving and investment. The productive use ofremittance income could lead to the significant growth of GNP.

Figure 4.11 Trend of Remittance and GDP



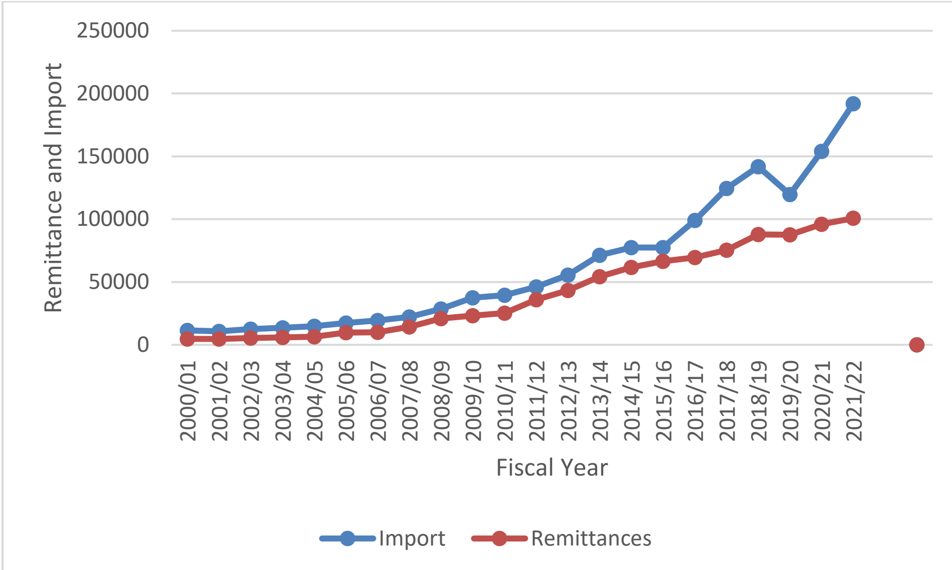
Source: Researcher's own calculation

In the Figure *4.11*, the fiscal year is measured in X axis and GDP and remittance are measured in Y axis. Clearly, it can be seen that the remittance and GDP together are rising every year in the same direction, which has also contributed significantly in the GDP.

4.4.3. Contribution of Remittance to the Import

Since remittance is a private income sent back to the home by the foreign migrant workers, it increases the purchasing capacity of the recipient household and hence demand increases. Since, the size and recipients of remittance are increasing in the country, the domestic demand has also been increased. In another side, due to various reasons in the Nepalese economy, the production capacity hasn't been increased in the desired level. So that, a part of increased domestic demand has met by imports.

Figure 4.12 Trend of Remittance and Import



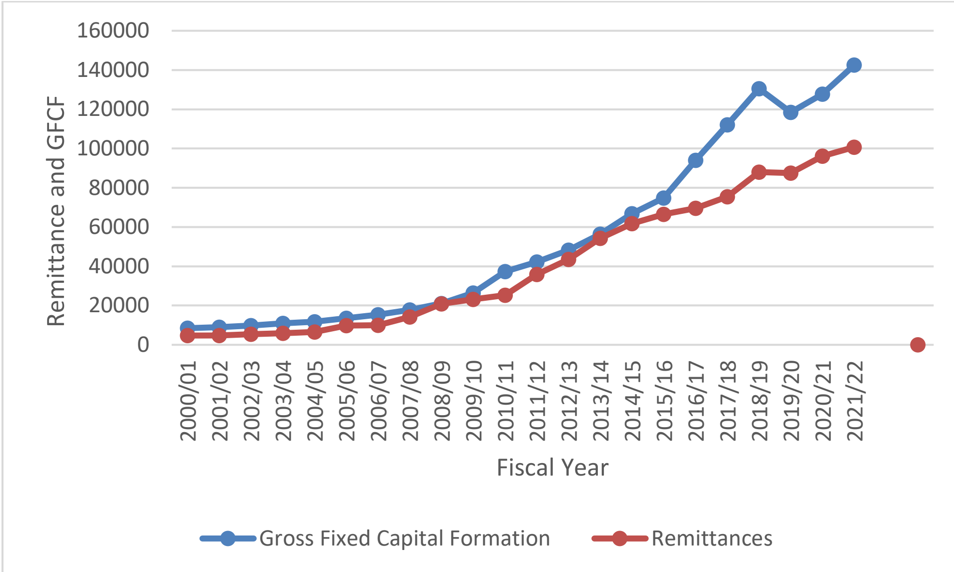
Source: Researcher's own calculation

In the Figure *4.12*, the data of remittance and import from 2000/01 to 2021/22 areplotted in the figure. In the figure, fiscal year is measured in X-axis and remittance and import are measured in Y-axis. Clearly, we can see that there is similar trend with remittance and imports in the study period.

4.4.4. Contribution of Remittance to the GFCF

The capital formation is an important determinant of the economic growth. The rate of gross fixed capital formation (GFCF) inside the economy determines the growth rate of GDP and export. Due to large share of GDP of Nepal goes on consumption, rate of domestic saving is very low within the country, and hence, the capital formation rate with the domestic saving is not met at desired level. At this time, the remittance which adds domestic saving with foreign reserve could be the solution of deficiency syndrome of domestic capital formation.

Figure4.13 Trend of Remittance and GFCF



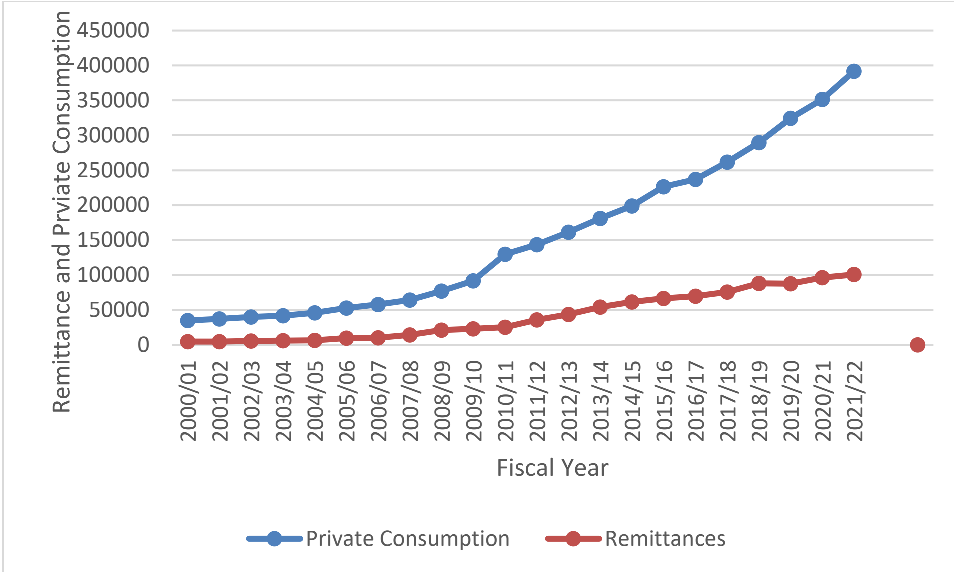
Source: Researcher's own calculation

In the Figure4.13, the trend between import and GFCF has been sketched, and it is observed that there is a clearly similar trend between remittance and GFCF. So, it is expected that the GFCF is also influenced by the remittance.

4.4.5 Contribution of Remittance to the Private Consumption

The private consumption expenditure is the amount of money that is spent on consumption goods by the individuals and households. According to the J.M. Keynes, the consumption expenditure is directly affected by the disposable income i.e. $C_t = a + bY_{dt}$ (where, C_t = consumption at time period 't' and Y_{dt} is the disposable income at time period 't', 'a' is autonomous demand and 'b' is the portion of disposable income that goes on consumption or Marginal propensity to consume). The remittance is the private income of the recipient workers and their families, it directly affects to their consumption level. It means, a large part of the remittance income goes on consumption.

Figure4.14 Trend of Remittance and Private Consumption



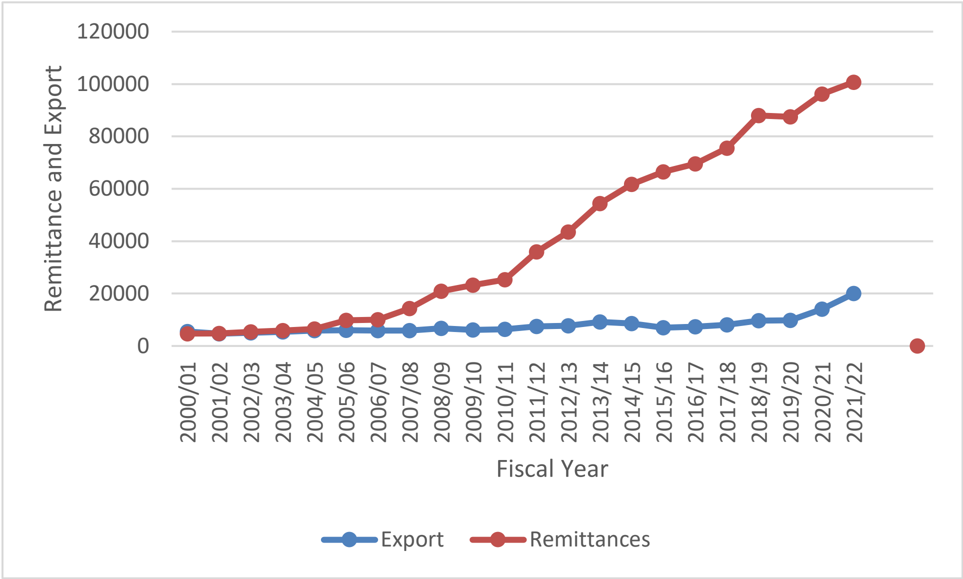
Source: Researcher's own calculation

In the Figure4.14, fiscal year is measured in X axis and remittance and private consumption are measured in Y axis. On the basis of trend of these two variables, remittance and private consumption are in the same direction, which proves that there is a direct proportional relationship between remittance and private consumption i.e., private consumption are led by remittance.

4.4.6Contribution of Remittance to the Exports

Remittance and exports play vital role in shaping a country's economic landscape. While exports drive foreign trade, remittances contribute to the financial well-being of families and communities. Exports generate revenue by selling goods and services abroad, stimulating economic growth and job creation. On the other hand, remittance represents the hard-earned income of expatriate workers, providing a lifeline to households and often supporting education, healthcare, and investment. Both remittance inflows and export revenues contribute significantly to a nation's economic stability, with remittances fostering domestic consumption and exports fostering international trade relationships. Together, these economic pillars underscore the interdependence of global economies and the importance of effective policies to ensure their positive impact.

Figure 4.15 Trend of Remittance and Export



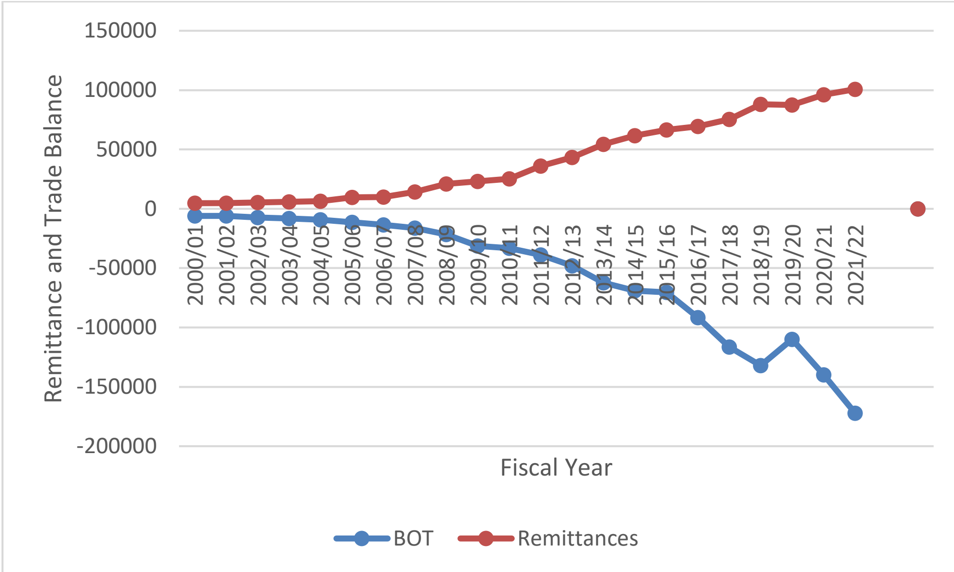
Source: Researcher's own calculation

On the basis of data in the study period, the trend line between remittance and exports data is constructed and presented. In the Figure 4.15, the trend line clearly shows that moderate relationship between remittance and exports. From this trend line, it can be hypothesized that a small portion of remittance income has been invested in the exporting industries.

4.4.7Contribution of Remittance to the Trade Balance

The difference between the entire volume of export and import of merchandise trade is known as the trade balancei.e., BOT= Export – Import. Since, the change in the value of export and import also brings the change in size of BOT. The change in Export positively influences the size of BOT whereas the change in import negatively affects to BOT. As already explained, there is a positive and significant relationship between remittance income and import. It means, the increase in Remittance income has also increased the size of import due to which, the size of BOT is worsening at a faster rate.

Figure4.16 Trend of Remittance and BOT



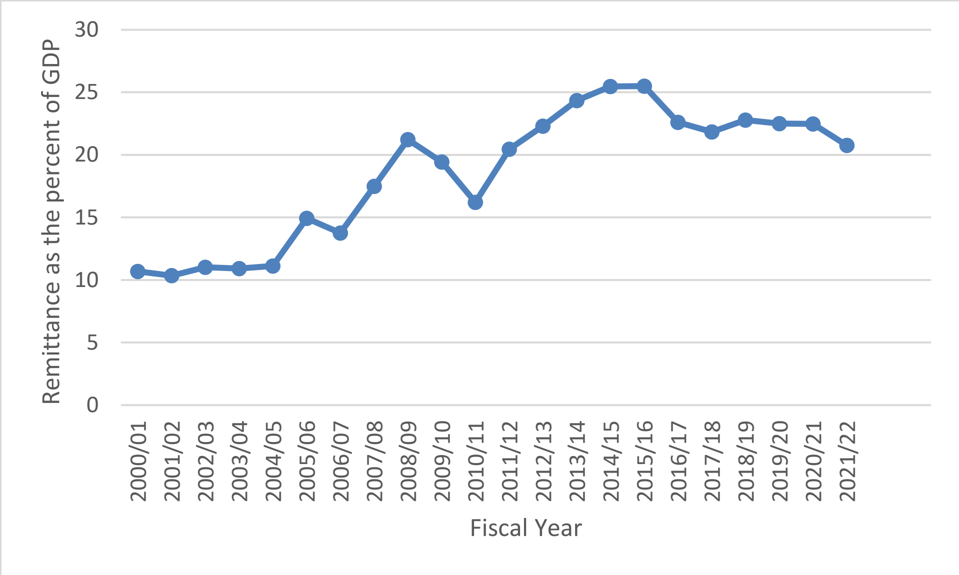
Source: Researcher's own calculation

In the Figure4.16, fiscal year is measured in X axis and remittance and trade balance are measured in Y axis. By observing the trend of remittance and trade balance, the increasing remittance has worsening the BOT. It means, the increase in remittance has increased the imports. It might be either the domestic goods aren't sufficient or haven't satisfied the domestic people, so they are preferring imported one. So, the deficiency in supply is met by imports.

4.4.8 Contribution of Remittance to the GDP

Remittances exert a noteworthy influence on a country's GDP, serving as a crucial component of its economic makeup. These financial inflows, sent by overseas workers to their home countries, contribute directly to GDP figures. They enhance consumer spending, encourage investment, and alleviate poverty by providing families with additional disposable income. Consequently, remittances play an integral role in shaping a nation's economic growth and stability, illustrating the significant relationship between individual contributions and the broader economic landscape.

Figure 4.17 Trend of Remittance as the percent of GDP



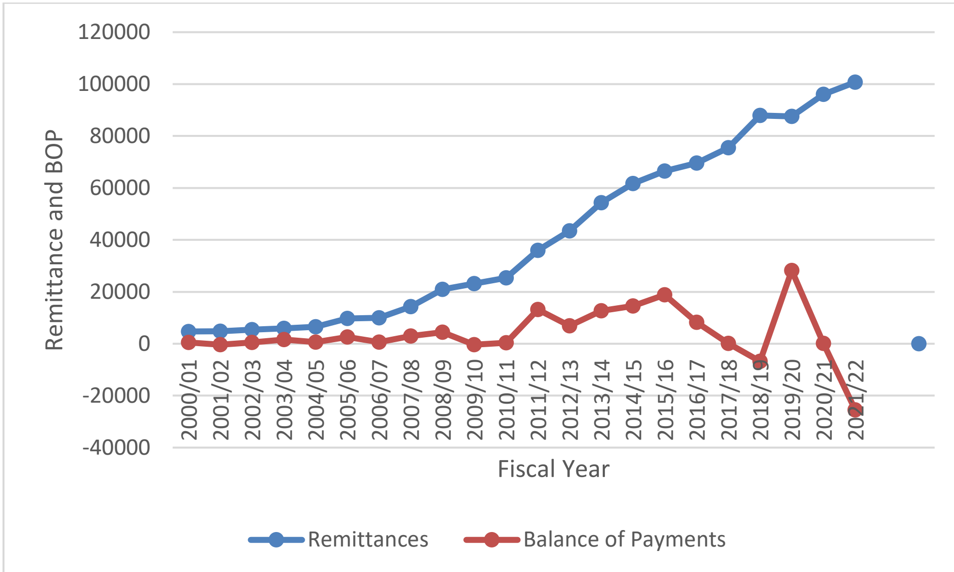
Sources: Researcher’s own calculation

The Figure *4.17* gives the glimpse of remittance as the percentage of GDP from the year 2000/01 to the 2021/22. In this figure, fiscal year is measured in X axis whereas remittance as the percent of GDP is measured in Y axis. In the study period, remittance has increased dramatically and has covered a largeratio of GDP

4.4.9 Contribution of Remittance to the BOP

The Balance of Payments (BOP) of a nation is significantly impacted by remittances, which have a significant impact current account. Remittance inflowsmake a positive contribution by increasing a country's receipts and balancing trade deficits. These funds frequently serve as a reliable supply of foreign money, supporting currency stability and facilitating import payments. Since, remittance is the one of the major sources of foreign exchange of Nepalese economy and BOP is the difference between receipt and payment. The trend line of remittance and BOP has been constructed and presented here which reflects the relationship between these variables.

Figure 4.18 Trend of Remittance and BOP



Source: Researcher’s own calculation

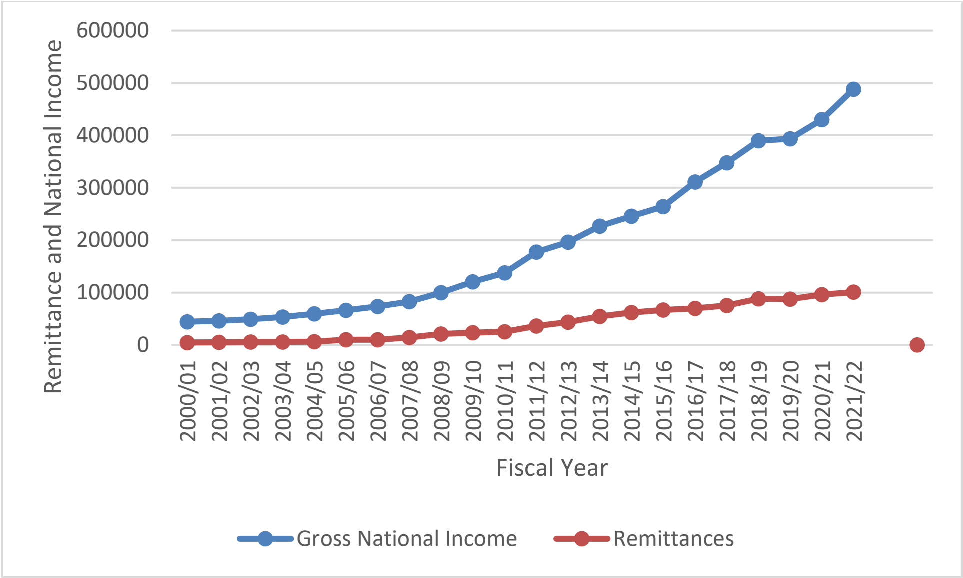
The trend of remittance is ever increasing and the trend of BOP is fluctuating in the study period which is presented in the Figure *4.18*. The possible reason behind the fluctuating BOP in the study period might be the worldwide depression of 2008 – 12, massive earthquake of 2015 and worldwide lockdown during Covid-19 pandemic. In this relationship we can strongly argue that, increased remittance adds the foreign reserve within the country which strongly influences the position of BOP.

4.4.10 Remittance and National Income

The national income of a nation is significantly influenced by remittances, which enhance the economic fabric. The money that foreign workers send home to their family boosts the recipient country's overall economy. Remittances boost consumer spending, raise living standards, and support economic growth by giving households access to more money. This direct influx of foreign income raises the level of national income in general and emphasizes how connected global financial relationships are.

Since, the national income is the sum of net national product and net factor income from abroad (NFIA) and this NFIA is determined by the remittance. So, it is clear that, remittance directly affects to the national income. In Nepalese economy, remittance is one of the major deterministic variables of national income.

Figure 4.19 Trend of Remittance and National Income



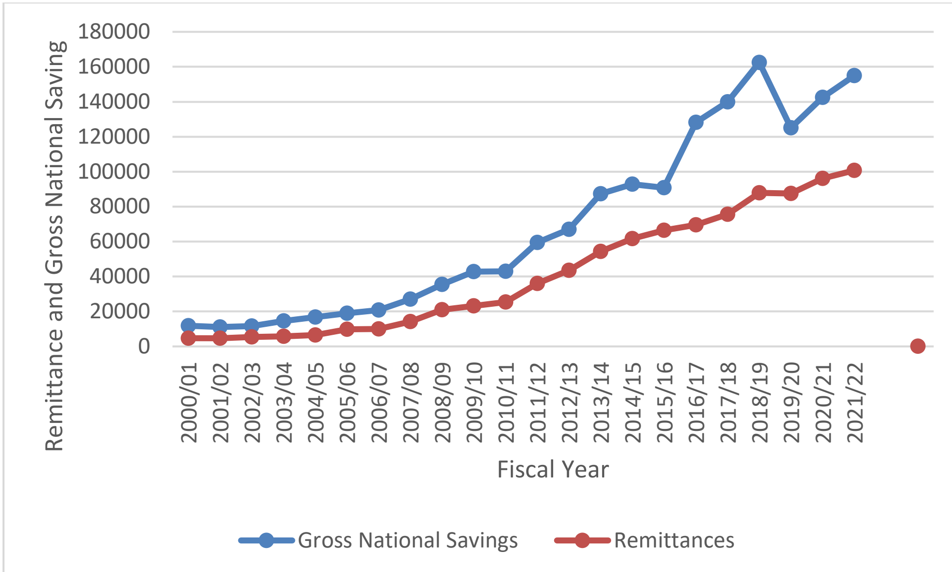
Source: Researcher's own calculation

In the Figure *4.19*, the fiscal year is measured in X axis whereas remittance and national income are measured in Y axis. The trend of both variables are rising in same direction in the study period which justifies that remittance has played an important part of Nepal's national income.

4.4.11Contribution of Remittance to the Gross National Saving

Remittances have a significant impact on the Gross National Savings (GNS) of LDC countries, increasing the resources available for investment and future growth.Remittances increase the domestic savings base for recipient households as a source of income, which boosts the GNS as a whole. These inflows frequently offer a consistent source of capital that can be used to make profitable investments, promoting stability and economic growth. Since, the consumption and saving both are the function of national income, remittance is contributing significantly in national consumption and national saving as well.

Figure 4.20 Trend of Remittance and Gross National Saving



Source: Researcher's own calculation

In the Figure *4.20*, the fiscal year is measured in X axis and remittance and GNS are measured in Y axis. In the figure, the trend of remittance and national saving are moving in the same direction i.e.; increasing trend of national saving has been led by the increasing trend of remittance.

4.5 Descriptive Statistics

Descriptive analysis is the essential part of the study to understand the features of the variables during the study period. It consists maximum value, minimum value, average value and standard deviation of the discussed variables, and it is presented in the*Table 4.1*.

Table 4.1 Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Remittance (Ten Million)	22	4721.61	100730.69	41370.5455	33941.12049
Import (Ten Million)	22	10738.90	192044.84	63047.5691	53887.32519
Export (Million)	22	4694.48	20003.10	7844.8991	3436.01335
GDP at current Price (Ten Million)	22	44151.90	485162.47	194737.8505	141639.42028
Gross National Income (Million)	22	44321.95	488259.75	195527.1614	143232.86707
CPI Index	22	2.42	12.62	6.4223	2.81546
Gross Domestic Saving (Ten Million)	22	4214.06	59054.78	18796.6095	16351.56246
Gross National Saving (Ten Million)	22	11118.06	162524.85	68402.8850	53151.35084
Gross fixed capital formation (Ten Million)	22	8475.06	142507.73	54337.1718	46431.56329
Private Consumption (Ten Million)	22	34898.90	391856.35	156423.4045	113949.13855
Trade Balance (Ten Million)	22	-172041.74	-6003.30	-55202.67	50897.76
FDI	22	-46.97	1951.27	661.3018	719.73870
BOP (Ten Million)	22	-25525.91	28241.0	3820.8582	10304.67834

Source: Researcher's own calculation

Table *4.1* provides the summary statistics of the 13 macroeconomic variables that are analyzed in this study. The results show that there are significant statistical disparities. The remittance inflow within the country varies from 4721.61 (ten million) to 100730.69 (ten million) with an average of 41370.5455million whose standard deviation point is 33941.12. Similarly, the import volume is remained minimum at 10738.90 (ten million)having maximum with 192044.84(ten million) whose average remained at 63047.56. In the same way, GDP at current price varies from

44151.90(ten million) to 485162.47(ten million) with an average of 194737.85 (ten million) in these 22 years.

Gross National Income has remained minimum at 44321.95(ten million) and maximum at 488259.75(ten million) having average value 195527.16. Likewise, The average CPI during the course of this 22-year research is also 6.4223, with a low and high of 2.42 and 12.62 respectively.The Gross Domestic Saving of Nepalese economy ranges from minimum 4214.06(ten million) to maximum 59054.78 (ten million) with average of 18796.61. In this study period of 22 years, the average of Gross National Saving measured to be 68402.88with minimum of 11118.06(ten million) and maximum of 162524.85 million. The average amount of Gross Fixed Capital Formation was remained 54337.17in the study period having minimum 8475.06 (ten million) to 142507.73 (ten million) whose standard deviation point is 46431.56.

The average of another important macroeconomic variable Gross private consumption expenditure varies from 34898.90 (ten million) to 391856.35(ten million) having the average of 156423.40. In the same way, the export volume ranges from the minimum value 4694.48 (ten million) to maximum value 20003.10(ten million) with the average of 7844.90 whose standard deviation is 3436.01. Similarly, the minimum value of Trade Balance (BOT) remained -172041.74 (ten million) and the maximum of -6003.30 (ten million) with the average of -55202.67. At the same study period of 22 years, the minimum BOP is -25525.91 (ten million) and the maximum is 28241.01 (ten million) with the average of 3820.86 having the standard deviation of 10304.68.

4.6 Correlation Analysis

We use the correlation analysis tools to measure the association between two variables. In other words, correlation coefficient establishes the correlation and level of intensity between two variables. This section of study measures and tables the relationship between the studied variables.

Table 4.2 Correlation Results

	Remit	Import	Exp	BoT	CPI	Invest	GDP	GFCF	PVT Cons	GNI	GNS	BOP	GDS	FDI
Remit	1													
Import	0.973**	1												
Export	0.797**	0.878**	1											
BOT	-0.977**	-0.999**	-0.862**	1										
CPI	0.033	-0.061	0.004	0.065	1									
Invest	0.952**	0.985**	0.871**	-0.985**	-0.006	1								
GDP	0.992**	0.990**	0.836**	0.991**	-0.005	0.976**	1							
GFCF	0.986**	0.988**	0.802**	-0.991**	-0.070	0.987**	0.994**	1						
Pvt Cons	0.991**	0.983**	0.843**	0.983**	0.017	0.960**	0.997**	0.986**	1					
GNI	0.993**	0.990**	0.836**	-0.992**	-0.010	0.975**	1.000**	0.994**	0.997**	1				
GNS	0.985**	0.971**	0.756**	-0.977**	-0.019	0.968**	0.981**	0.987**	0.968**	0.982**	1			
BOP	0.030	-0.185	-0.390	0.170	0.274	0.336	-0.057	-0.072	-0.024	-0.051	-.037	1		
GDS	0.836**	0.880**	0.651**	-0.888**	-0.163	0.883**	0.856**	0.887**	0.817**	0.856**	0.916**	-0.290	1	

FDI	0.912**	0.919**	0.744**	-0.923**	-0.074	0.921**	0.940**	0.938**	0.936**	0.938**	0.909**	-0.027	0.815**	1
**. Correlation is significant at the 0.01 level (2-tailed).														
*. Correlation is significant at the 0.05 level (2-tailed).														

Source: Researcher's own calculation

The descriptive statistics variables have been identified and described, and the Pearson correlation coefficient has been calculated. The findings are shown inTable *4.2*. Remittances and imports have a strong positive correlation. Similarly, remittance has positively influenced export income, CPI, Investment, GDP, GFCF, Private consumption, Gross domestic saving, Balance of payment, Gross national saving and Gross national income. But the remittance income is negatively associated with the balance of trade. It can be concluded that due to remittance income import increases more than the export and because of this balance of trade worsens. By the same way, due to remittance income, the demand of domestic people increases than the domestic supply and the deficiency is met by the imports and general price level increases.

From the above table, there is the significant and strong negative relationship between remittance and BOT (-0.977<-0.7). So, it can be concluded that as the remittance increases the BOT worsens further significantly.

Secondly, the import is positively correlated with the export income, investment, GDP, GFCF, Private consumption, gross domestic saving, gross national saving and gross national investment. The import is negatively related with the Balance of trade and consumer price index. Theoretically, import volume worsens the balance of payment, but in the Nepalese case, the negative BOP due to the deficit trade is highly maintained by the remittance income, so in this table import is also weakly related to the balance of payment.

CHAPTER V

DATA ANALYSIS AND RESULTS

In this chapter, the results of the empirical research are presented. It includes the results of diagnostic tests carried out in this study and describes the outcome of the test results.Relationship between remittance and import are analyzed with the econometric model. For this, at first, unit root test for stationary property of data is done. Based on the stationary test, the suitable ARDL model is applied to find the long run and short run relationship between the variables, then multicollinearity and other tests have been done thereafter. The major finding of the study is presented as follows.

5.1 Regression Analysis

Regression analysis is a statistical method that determines the strength and character of the relationship between one dependent variableand a series of other independent variables. In order to assess the statistical significance and robustness of the data, this section of the study comprises the regression of study variables. As previously mentioned, the model created for this study analyzes the impact of remittance money on imports.

5.1.1 Model Analysis for Imports

The major goal of this study is to ascertain how remittances affect imports.The effects of remittance (REM) and import (M) have been examined using equation 1.

$$lnM_t = \alpha + \beta lnREM_t + \mu_t \dots..(i)$$

Where, ln is natural logarithm, μ is error term and α, β are regression parameters.

Equation 1 uses remittance is only one the determinant of import. The additional independent variables were introduced into equation 1 as stated in equation 2 below in order to generate a fair estimate of the casual effect in regression.

$$lnM_t = a + \beta_1 lnREM_t + \beta_2 lnM2_t + \beta_3 lnFoA_t + \mu_t \dots .(ii)$$

Equation 2 improves upon equation 1 by integrating additional independent variables to more thoroughly describe the model, including board money supply (M2) and foreign aid including grant and loan (FOA).

5.1.2 Model Framework and Data Sources

Pearson (2001) introduced the autoregressive distributed lag model (ARDL). In comparison to other time series co-integration models, such as Johansen's approach (1988), Engle and Granger co-integration approach (1987), and Johansen's co-integration test, which are used to examine the long-term relationships between two variables and multiple variables, respectively, the autoregressive distributed lag model has a number of advantages. The capacity to simultaneously estimate short-run and long-run parameters is a benefit of the ARDL model. If the series are I(0), I(1), or a mix of both, ARDL can be utilized. However, this model cannot be used if any variable is stationary at I(2), since the findings of ARDL will then be incorrect Pesaran &et al(2001). The stationarity of each variable is investigated using unit root tests. For confirming the stationarity of variables, ADF and PP are frequently used. To make sure none of the research variables are stationary at the second difference, I(2), a check must be made. The error correction term (ECT), which is developed from ARDL, integrates the short-run dynamics with the long-run equilibrium without sacrificing any long-run information.

F-statistics were used to investigate co-integration. F-statistics investigate the combined importance of variables' lagged values during one time. The null hypothesis in F statistics is that there is no long-run co-integration between the dependent and independent variables. Regressors are used to calculate the asymptotic distribution of critical values in the bound test technique. As a result, the regressors are mutually integrated or strictly integrated in order I(1) or I(0). Pesaran (2007). According to Pesaran et al. (2001), I(1) denotes the upper bound and I(0), the lower bound. If the estimated F statistics value is more than I(1) and less than the lower bound, co-integration between the research variables occurs; otherwise, there is no co-integration among the variables.The decision to use co-integration is questionable when the estimated value is in the range of I(0) and I(1). According to Pesaran and Shin (1999), the error correction term (ECT) is a useful tool for examining the long-term relationships between the research variables, and its value should be negative and substantial. To choose the best lag duration, the Schwarz information criterion (SIC) is used, but first the bound F-test for co-integration is performed. This is the equation of bound test co-integration.

$$\Delta M_t = \theta + \sum_{i=1}^{p} \theta_1 \, \Delta M_{t-i} + \sum_{i=1}^{q} \theta_2 \, \Delta REM_{t-i} + \sum_{i=1}^{q} \theta_3 \, \Delta M2_{t-i} + \sum_{i=1}^{q} \theta_4 \, \Delta FOA_{t-i} + \theta_5 \, \Delta M_{t-1} + \theta_6 \Delta REM_{t-1} + \theta_7 \, \Delta M2_{t-1} + \theta_8 \, \Delta FOA_{t-1}$$

The error correction dynamics are represented by the first part of the aforementioned equationsθ-$_1$*to* θ_4, while the long-term relationships between the dependent and independent variables of the model are illustrated by the second half of equations θ_5 to θ_8. The Wald F-Statistics value is necessary for the ARDL approach, hence the following are the co-integration alternative and null hypotheses.

(H0: $\theta_1 = \theta_2 = \theta_3 = \theta_4 = \theta_5 = 0$)

($H1$: $\theta_1 \neq \theta_2 \neq \theta_3 \neq \theta_4 \neq \theta_5 \neq 0$)

We examine the short-run coefficients once the cointegration findings show that the research variables have a long-term connection. The ARDL equation for the short-run and long-run is as follows:

$$\Delta M_t = \theta + \sum_{i=1}^{p} \theta_1 \, \Delta M_{t-i} + \sum_{i=1}^{q} \theta_2 \, \Delta REM_{t-i} + \sum_{i=1}^{q} \theta_3 \, \Delta M2_{t-i} + \sum_{i=1}^{q} \theta_4 \, \Delta FOA_{t-i} + \eta_1 \mathrm{Ect}_{\mathrm{t-i}} + \mu_{\mathrm{t}}$$

The error correction term (ECT) in the equation above evaluates how quickly the variables' short-term deviations from their long-term values are dynamically adjusted, as well as how long it will take for the variables to achieve their long-term equilibrium path. The error correction term's coefficient is _1. The stability of the coefficients was examined using the cumulative sum (CUSUM) and cumulative sum of squares (CUSUMsq) in both the short- and long-term. Brown and others (1975). Although the stationarity of the variables is not required for the bound test for co-integration, it is still important to check that none of the variables are stationary at second difference I(2); otherwise, the results of the ARDL will be biased. In order to obtain stable results in the bound test, we apply the unit root test to check the stationarity of each variable through the ADF.

5.2 Result and Discussions

Each variable conducted a Unit Root Test to determine whether or not the data were stationary before going on to regression analysis. For the Granger Causality Test and least square regression, stationarity is crucial to prevent inaccurate parameter estimations of the link between variables. If the regression is run under the non-stationary data, the regression result will be spurious. Therefore, it is better to determine the order of integration of the variables under the study. The Augmented Dickey Fuller (ADF) test (Dickey & Fuller, 1979; Dickey & Fuller, 1981)and PP test (Phillips and Perron, 1988) are used for this purpose both at level and first difference (at once intercept and then intercept and trend). Natural Log level form of data were applied in testing the unit root. The results from log level form of data are presented inTable *5.1*.

Table 5.1 ADF Unit Root Results at Log Level Form

Variables	Stationary at	ADF (p-value)	Includes
LNRM	1st difference	0.0001	Intercept only
LNRREM	1st difference	0.0016	Intercept only
LNFOA	1st difference	0.0000	None
LNRM2	Level	0.0242	Intercept and Trend

Sources: Researcher’s own calculation

The table displays the ADF's findings for determining each variable's stationarity. All variables are stationary at first difference, according to the ADF findings that were reviewed, with the exception of LNRM2 i.e.,none of the variables are stationary at second difference I (2), confirming the applicability of the ARDL model.The fundamental premise of the ARDL model is that all variables will be stationary at level or at the first difference, or both. This is done to ensure that no variables are stationary at the second difference.

Table 5.2 lag order selection criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	23.44697	NA	1.84e-06	-1.852092	-1.653135	-1.808913
1	99.92483	116.5377*	6.03e-09*	-7.611889*	-6.617105*	-7.395995*

Note: An asterisk (*) indicates lag order selected by the criterion

The outcomes of the lag order selection criterion are shown in Table 5.2. To choose an appropriate lag for the dependent and independent variables, three distinct lag order selection techniques were used. The AIC and SIC computations are the most often used for times series data. The suitable lag length is 1 because of the majority.

Table 5.3 Long Run Coefficients for ARDL Approach

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNRM(-1)	0.007685	0.216589	0.035484	0.9721
LNRREM	0.130397	0.096142	1.356294	0.0193
LNRM2	0.677424	0.181018	3.742308	0.0018
LNRFOA	-0.086787	0.122043	-0.711123	0.4872
C	2.268906	0.643807	-3.524201	0.0028
R – squared 0.977669				
Adjusted R – Squared 0.972087				
F – statistic – 175.1254				
Prob (F- statistic) 0.000000				
Durbin-Watson Stat 1.891391				

The output of an ARDL model over a long period is shown in Table 5.3. According to the long run ARDL data that was examined at, Nepal's imports are positively but insignificantly impacted by lagged import. According to the coefficient of lagged import, a 1% rise in the rate of lagged import increased Nepal's current imports by 0.0076% in a year. It means that current import is positively but insignificantly influenced by the previous import.

The examined result of current remittance shows a positive and significant ($p<0.05$) effect in import,the coefficient of LNRREM is that one percent increase in the real remittance boosted the current import of Nepal by 0.13percent in one year. It means that remittance is positively affects to the import as hypothesized.

The examined result of broad money supply (M2)has a strong positive and significant ($p<0.05$) effect on the import of Nepal. The results of LNRM2 coefficient shows that 1percent increase in broad money supply increase the import by 0.67percent per annum.

Similarly, it is found that there is negative but insignificant effect (p>0.05) of current years foreign assistance on import. The result of LNFOAspecifies that 1percent increase in foreign assistance decreases the import by 0.086percent annually.

Table 5.4 Bound Test

F – Statistics 7.989348		
Critical Value Bounds		
Significance	I(0) Lower Bounds	I(1) Upper Bounds
10%	2.37	3.2
5%	2.79	3.67
2.50%	3.15	4.08
1%	3.65	4.64

On the basis of table 5.4, the value of F statistics is more than the I(1), It indicates import is co-integrated with remittance, money supply, and foreign aid and that the null hypothesis of no co-integrating link is rejected. As a result, the variables have a long-termrelationship.

Table 5.5 Cointegration and long run adjustment

Variable	**Coefficient**	**Std. Error**	**t-statistic**	**Prob.**
CointEq(-1)*	-0.992315	0.140428	-7.066358	0.0000

Since the cointegration Eq(-1), is negative with a coefficient of -0.287025. This suggests that the system corrects its prior period disequilibrium at a pace of 99.23% during one period of time, or that the speed of adjustment toward long-term equilibrium is 99.23%. The t-statistic is -7.066358 and the coefficient is statistically significant 0.0000<0.05.

Residual Diagnostics

The test's residuals, as determined by Jarque-Bera, are normal. The fact that the value is more than 0.05 and the p value is bigger than 0.750584 indicates that the data is normally distributed.

Residual Diagnostics

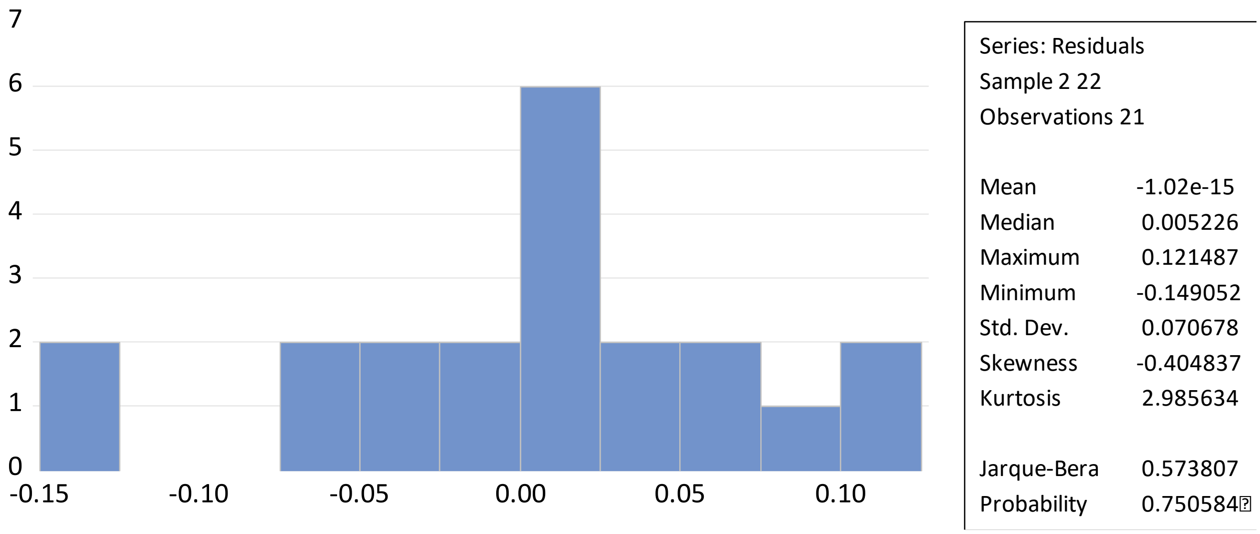


Table 5.6Breusch – Godfrey Serial Correlation LM Test

F –statistic	**0.002867**	**Prob. F(2,14)**	**0.9971**
Obs* R-squared	0.007703	Prob. Chi- Square(2)	0.9962

In the table 5.6, the probability value of Chi-square is 0.9962, hence null hypothesis can't be rejected. It is therefore established that serial correlation is absent in the residual derived from the ARDL model.

Table 5.7Breusch-Pagan-Godfrey heteroscedasticity Test

F- statistic	1.757348	Prob.F (4,16)	0.1207
Obs* R-squared	12.57892	Prob. Chi-Square(4)	0.1212
Scaled explained SS	8.164568	Prob. Chi-Square(4)	0.4176

The outcomes of heteroscedasticity and serial correlation are shown in Table 5.7. The issue of heteroscedasticity in the residuals was investigated using the Breusch-Pagan-Godfrey test. Based on the estimated P-value, which is higher than 0.05, the evaluated heteroscedasticity results show that there is no issue with heteroscedasticity in our data.

Table 5.8Ramsey RESET Test

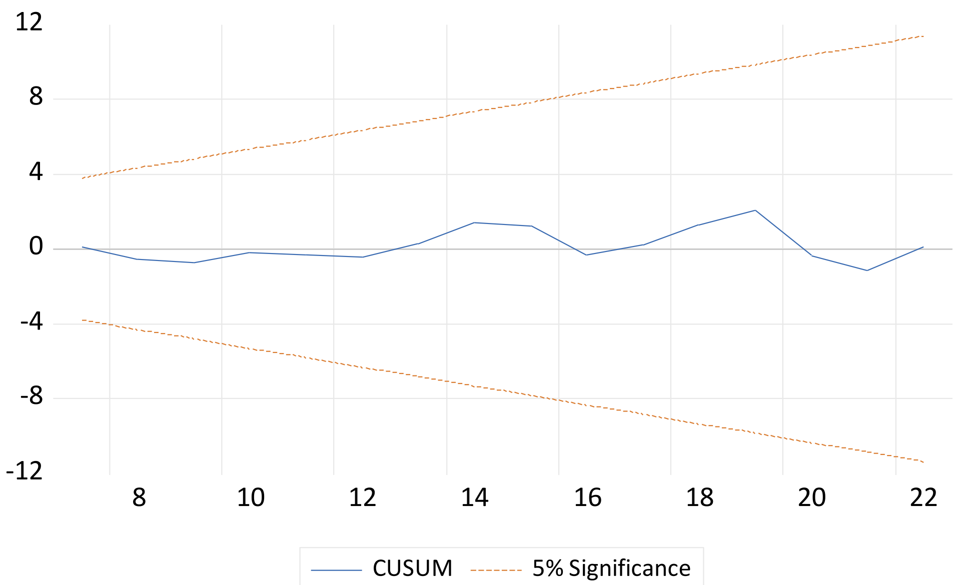
	Value	df	Probability
t-statistic	1.820722	15	0.0777
F statistic	3.315028	(1,15)	0.0777

This test was performed to ensure that the functional form was correct. The F statistic's probability value of 0.0777 indicates that the model is well-specified, meaning that no variables have been omitted out.

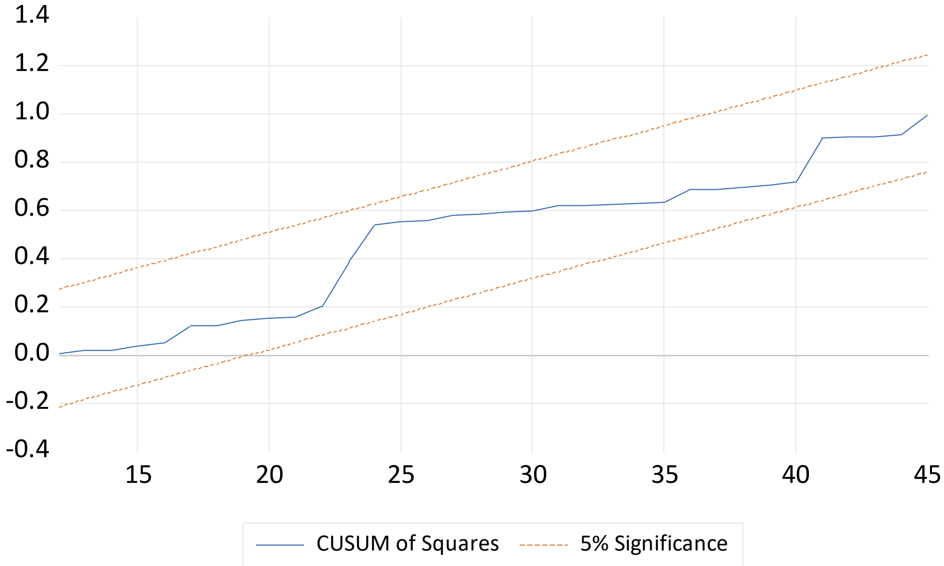
Stability Diagnostics

The CUSUM and CUSUM of squares plots stayed under the 5 percent threshold boundaries, demonstrating the parameter stability. The model's structural stability is good. However, if CUSUM and CUSUMQ are more than the 5% critical boundaries, we can establish the coefficient's instability.

CUSUM



CUSUMQ



The CUSUM and CUSUMQ graphs are shown in the figures above. The CUSUM and CUSUMQ tools were used to test the coefficient's stability. The graphs of CUSUM and CUSUMQ are used to test the stability of the coefficients of the long run and the short run ARDL, according to Brown et al. (1975). The blue line lies between the red lines in the CUSUM and CUSUMQ graph, which demonstrated that the long-run coefficients are stable.

CHAPTER VI

MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The main objective of this research is to find the relationship between remittance income and imports and also to find the trend of remittance, import and other macroeconomic variables. The preceding chapters of this work were divided into 5 chapters i.e., introduction, literature review, research methodology, analysis of data and relationship between remittance and import. This final chapter provides major empirical findings, conclusions and recommendation based on evidence from literature and empirical analysis. This chapter is divided into 3 parts in which section 6.1 provides major findings of the study; section 6.2 offers conclusions and finally section 6.3 presents policy recommendations.

6.1 Major Findings

International remittances have become an important source of external finance in developing countries. Remittances have both effect in the national economy. In one hand, remittance has generated various positive effect on the economy through increasing savings, investment, growth, consumption, and reducing poverty and income distribution and contributing GDP significantly. In the other hand, remittance has also negative effect on the economy through increasing import and thereby trade deficit, increasing human and social cost, demonstration effect on consumption etc.

The study is based on secondary time series data of 22 observations and 13 key macroeconomic variables that are collected from MoF, NRB, World Bank etc. over the period of 2000/01 to 2021/22. This study has hypothesized that the remittance volume has positively influence the import and other macroeconomic variables. For the quantitative analysis of secondary data EVIEWS software was used. To fulfill the research objectives, trend analysis, descriptive statistics, correlation analysis and regression analysis were presented. Based on the analysis of the data, following are the major findings of this study:

- The GDP is highest in 2020/21 and lowest in 2000/01. In the same way, GDP growth rate was maximum in 2016/17 and minimum was in 2001/02. According to the data, the GDP growth rate was fluctuating during the study period.

- Gross Fixed Capital Formation is highest in 2021/22 and lowest in 2000/01. The GFCF has been multiplied by about17 times from the then and now.
- Gross consumption was minimum in 2000/01 and maximum in 2021/22, in this period the gross consumption has been multiplied by more than 11 times.
- Gross National Saving was maximum in 2018/19 and minimum in 2001/02. In this period of 22 years the Gross National Saving was multiplied by more than 14.5 times.
- The GNI was maximum in 2021/22 and minimum in 2000/01. The trend of GNI was increasing during the study period.
- During the study period, the CPI is maximum in 2008/09 and minimum in 2001/02 and the data of CPI is fluctuating during the study period.
- The size of total foreign financing (foreign grants and loan) is maximum in 2019/20 and minimum in 2001/02. The size of total foreign financing is also fluctuating during the study period.
- During this study period, the amount of export income is maximum in 2021/22 and minimum in 2001/02. In this period of 22 years, the size of export income is multiplied more than 4 times. The export income was reduced in the year of 2001/02 and in 2008/09 and heavily reduced after 2013/14 to 2015/16.
- The size of import volume was remained near constant in 2014/15 and greatly reduced in 2018/19 to 2019/20, except these years, the volume of import is continuously increasing during the study period of 45 years.
- In the study period, Nepal has faced always trade deficit i.e., Nepal is heavily dependent on consumer goods as well as capital goods to other country. The trade deficit was maximum in 2021/22 and minimum in 2000/01. The trade deficit was multiplied by 175728.65 times during this period. Deficit trade balance was only decreased in the year 2018/19; except this, it is continuously increasing which is worsening the economic health of Nepal.
- BOP includes the value of all kinds of merchandise trade as well as the services whereas BOT includes only the difference between merchandise trade. There were many fluctuations in BOP realized many times. In the period of 2014/15 to 2018/19, BOP reduced dramatically. It was remained maximum in 2019/20 and minimum in 2021/22.

- The major deterministic variable on other macroeconomic variables assumed in this research is remittance. In the study period, it is continuously increasing. It was remained maximum in2021/22 and remained minimum in 2000/01. During this study period, it has been multiplied by more than 21 times.

6.2 Conclusions

The major conclusion of this study is found thatremittance has a positive relationship with importswhich is the main hypothesis of study. It means that, as the remittance income increases in the economy, it leads to the increase in imports.The main reason behind this is remittance has increased the income of the recipients and due to absent of active labor force, the domestic production hasn't increased significantly hence, and the mismatch between the increased demand and stagnant supply has increased the volume of imports. Remittance is also positively affecting change in stock and gross fixed capital formation. Similarly, the increased broad money supply (M2) increases the import significantly and but the foreign assistance hasdecreases the import insignificantly.

On the basis of trend line, it can be concluded that remittance has positive impact on gross domestic saving and balance of payment. It also greatly increases the gross national saving and gross national investment thereafter.

6.3 Recommendation

Based on the above descriptive and econometric analysis, the following recommendations are prescribed:

i. Theremittance has positive impact on import in Nepalese economy. Therefore, it is recommended that the government should develop the most effective and practical policies to make the productive use of remittances which increases the productive capacity of the nation and lowers the imports further.

ii. The broad money supply (M2) also significantly boosted Nepalese imports. As a result, it is advised that the central bank must adopt an appropriate money supply policy which would regulate the imports

iii. The foreign assistance has negative impact on imports. So, it is recommended that the government has to formulate the proper policy to use foreign assistance more productively which helps to reduce the size of import.

iv. The foreign employment profession should be regarded as a respectable occupation as well, as it helps to boost the country's economy. For this, the government must develop an appropriate strategy and enhance migrant workers' access to social security.

v. Remittances in the form of a public-private partnership can be used to finance a national megaproject that has the potential to boost the domestic economy. Government must start such project and conduct a feasibility and sustainability analysis.

vi. On the basis of result, another important deterministic variable of import is gross investment. To establish the industries and firms, capital goods and respective raw materials have to import. To reduce the import, large scale capital goods producing industries has to be established and domestic raw material using policy and guidelines has to be formulated.

vii. Government expenditure also positively affects to the import level. So, as far as possible, domestically produced goods using policy has to be formulated in the government institution.

viii. Another significant macroeconomic factor that influences the imports volume is the size and trend of domestic consumption. The government must create the right policy to enhance domestic production and consumption in order to achieve this.

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APPENDIX 1

EMPIRICAL DATA USED IN THE ANALYSIS

(NPR in ten million)

FY	RM	RREM	RM2	RFOA
2000/01	31088.25	12688.23	57629.55	5051.364
2001/02	28047.79	12415.5	58501.13	3757.013
2002/03	31005.64	13514.92	61314.86	3960.851
2003/04	32683.72	14051.23	66507.08	4535.814
2004/05	34292.2	15036.45	68926.88	5427.453
2005/06	36928.23	20758.76	73699.93	4683.872
2006/07	39067.52	20095.11	79364.85	5187.958
2007/08	41735.98	26831.86	93156.96	5510.056
2008/09	47516.77	35027.28	105319.9	6072.056
2009/10	57063.16	35323.9	125150.1	7586.781
2010/11	55123.02	35278.64	128190.5	8316.467
2011/12	59304.31	46187.17	145194.9	7259.23
2012/13	65111.19	50824.65	153834.2	6059.136
2013/14	76590.5	58249.11	167894.7	5906.736
2014/15	77468.24	61727.74	187779.7	6563.825
2015/16	70366.64	60494.3	204167.1	6935.888
2016/17	86224.26	60563.65	225699	7832.883
2017/18	104105.6	63131.99	258734.7	11172.17
2018/19	113355.9	70263.01	286250.4	9907.711
2019/20	90093.27	65870.75	318501.2	14469.66
2020/21	111890.5	69833.93	374571.3	11456.09
2021/22	131249.9	68842.74	376257.6	10110.33