

**FINANCIAL DEVELOPMENT AND ECONOMIC
GROWTH IN NEPAL**

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By

KAMAL SAPKOTA

Roll No.:13/072

T.U. Regd. No.: 5-2-48-1378-2008

Central Department of Economics

Tribhuvan University

Kirtipur, Kathmandu, Nepal

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DECLARATION

I hereby declare that the work reported in thesis entitled, **Financial Development and Economic Growth in Nepal**, submitted to Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University is my original work and it contains no material previously published or submitted anywhere else is done in the form of partial fulfillment of the requirements of Master's of Arts (MA) in Economics under the guidance and supervision of **Prof. Dr. Ram Prasad Gyanwali**, Professor of Central Department of Economics, Tribhuvan University, Kirtipur, Kathmandu, Nepal.

.....
Kamal Sapkota

Researcher

T.U. Regd.No: 5-2-48-1378-2008

Campus Roll. No: 13/072

Date: 08/04/2022

LETTER OF RECOMMENDATION

This thesis entitled, **Financial Development and Economic Growth in Nepal**, is submitted by Mr. Kamal Sapkota under my supervision for partial fulfillment of the requirements for the degree of MASTER OF ARTS in ECONOMICS. I forward it with a recommendation for approval.

.....
Dr. Ram Prasad Gyanwali
Professor
(Thesis Supervisor)

Date: 02/05/2022

APPROVAL LETTER

We certify that this thesis entitled **Financial Development and Economic Growth in Nepal** submitted by Mr. Kamal Sapkota to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, in the partial fulfillment of the requirement for the MASTER OF ARTS in ECONOMICS has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said degree.

Thesis Committee

.....
Prof. Dr. Shiva Raj Adhikari
(Head of the Department)

.....
Prof. Dr. Keshab Khadka
(External Examiner)

.....
Dr. Ram Prasad Gyanwali
Professor
(Thesis Supervisor)

Date: 09/05/2022

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LIST OF ABBREVIATIONS/ ACRONYMS

AD	Anno Domini
ADB	Agricultural Development Bank
ARDL	Autoregressive Distributed Lag
BAFIA	Bank and Financial Institution Act
BFI	Banking and Financial Institutions
CPI	Consumer Price Index
ECC	Electronic Cheque Clearing
FSDI	Financial Sector Development Index
FY	Fiscal Year
GCF	Gross Capital Formation
GDP	Gross Domestic Product
GMM	Generalized Method of Moments
IMF	International Monetary Fund
IPS	Interbank Payment System
LM	Lagrange Multiplier
MA	Master of Arts
MENA	Middle East and North Africa
NBL	Nepal Bank Limited
NEPSE	Nepal Stock Exchange
NIDC	National Industrial Development Corporation
NRB	Nepal Rastra Bank
OECD	Organization for Economic Co-operation and Development
PSC	Private Sector Credit
QR	Quick Response
SAP	Structural Adjustment Program
SEBON	Security Board of Nepal
TT	Total Trade
USD	United States Dollar
VAR	Vector Autoregressive Models
VARMA	Vector Autoregressive Moving Average
VEC	Vancouver Economic Commission
VECM	Vector Error Correction Model

CHAPTER I

INTRODUCTION

This chapter consists of a general background of the study, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

1.1 General Background

The term finance refers to raising and spending of needed funds. In simple sense finance can be defined as the process of collecting and utilization of funds. In broad sense Finance is defined as the management of money and includes activities like investing, borrowing, lending, budgeting, saving, and forecasting. Finance represents money management and process of acquiring needed funds. Finance also incorporate the creation and study of money, banking, credit, investment, assets and liabilities that make up financial systems (Bhattarai, 2017). Financial system refers to the existence of banks and non-bank financial institution in a formal and organized way in the economy. Commercial banks primarily accept deposits and extend credit. And, other financial institutions include development banks, finance companies, savings and credit unions, insurance companies, pension funds and provident funds. Financial intermediaries channelize the financial resources from surplus units to the deficit units or sectors in the economy. The financial intermediaries plays a central role in allocating capital to its best possible use. The well-developed financial system spurs growth in technological innovations by redistributing resources from low productive sector to more productive sectors (Schumpeter, 1911).

A financial market is widening its scope from a particular place to a process (system) of buying and selling of financial instruments. Financial market can be classified on the several bases. Market may be debt or equity market, private or public market, exchange or over the counter market. Financial market can be further divided into money market and capital market on the basis of the nature of the instrument dealt in the market. Money market basically involves the trading of short-term securities with maturity period of a year or less. Capital market is the market for long-term debt and corporate stocks. Capital market can further be classified as primary market and

secondary market. Newly issued securities are traded in the primary market whereas trading of once issued securities are traded in the secondary market. A wide variety of financial institutions may exist in the financial market.

The history of the modern financial system of Nepal was started in 1937 with the establishment of Nepal bank limited as the first commercial bank of the country. It was established as a semi private commercial bank under Nepal bank act. It was the only formal financial institution before the establishment of the Nepal Rastra Bank (NRB) as the central bank of Nepal. NRB was established in 1956 under the NRB Act 1955. (NRB, 2005) Establishment of the NRB as a central bank of Nepal was another major step in the development. A number of financial institutions with varied nature of operations came into existence offering a wide range of financial services. Since the second half of the 1980s, significant achievements have been made in the Nepalese financial system. During a short period of last two and half decades, the Nepalese financial system has grown significantly both in terms of business volume and the size of the market.

Broadly, Nepalese financial sector can be divided into two parts, namely the banking sector and the non-bank financial sector. The banking sector institutions consists of Commercial Banks, Development Banks, Finance Companies, Rural Micro Finance Development Banks (licensed by NRB), Saving and Credit Cooperative Societies with limited banking activities (licensed by NRB) and Non-Government Organizations with limited banking activities (licensed by NRB). As of Mid-February 2022 the number of Commercial Banks were 27 where as there are 17 Development Banks, 17 Finance Companies, 66 Micro finance companies.(NRB Mid Feb2022)

Growth of financial sector helps development of economy through easing the exchange of goods and services by providing payment services, mobilizing and pooling savings from a large number of investors, acquiring and processing information about investments and enterprises, allocating society's savings to its most productive use, monitoring investments and exerting corporate governance after providing finance and helping diversification and reducing liquidity risk. Nepalese financial sector has grown at a rapid pace during the last three decades. The number of commercial banks are decreasing to keep Paid up capital as directed by Nepal Rastra Bank and most development Banks are merged into the commercial banks so

the number of development banks are decreasing rapidly. where in case of finance companies merging and acquisition process is in trending situation. It is important to assess the role of the growth of financial sector in enhancing level of access to finance in the economy. Access to finance refers to the possibility that economic agents can access financial services, including credit, deposit, payment, insurance, and other risk management services. Those who involuntarily have no or only limited access to financial services is referred to as the unbanked or underbanked, respectively. Out of 753 local levels 3 local levels has not get access of commercial banks

There are large number of branches of banks and financial institutions in some urban areas while there is low presence of the branches in remote areas. Under this background, the study entitled "financial development and economic growth in Nepal" attempts to study the growth of financial sector, access to financial services and relationship between financial development, and economic growth in Nepal.

1.2 Statement of the Problem

The relationship between financial development and economic growth has great deal of attention during recent decades. There exists a considerable literature on the relationship between financial development and economic growth. The studies have argued the financial development in fostering economic growth for a last few decades. The directional effect about the financial development and economic growth has been foremost important thing for policy makers to make a development plan. Financial liberalization policy after 1980s played a crucial role for the establishment and development of commercial banks and financial institutions in Nepal. Financial development may predict growth simply because financial system develop in anticipation of future economic growth. Financial Liberalization and economic growth are closely associated. Financial liberalization helped to improve the functioning of financial system by increasing the availability of funds and allowing risks diversification and increased investment. aThe financial development between the countries is different according to the level of development, economy structure, and available resources. The increase in the number of branches of banks and financial institutions causes the increase in total assets, deposit and lending in the whole financial system and consequently the contributing the economic development of the country through mobilization of funds and utilization of its funds to increase the

aggregated demand in the economy. The study will focus on the following research questions:

1. What is the trend and structure of financial development in Nepal?
2. What is the nature of relationship between financial development and economic growth in Nepal?

1.3 Objectives of the Study

The general objective of the study is to analyze the relationship between financial development and economic growth. The following are the specific objectives of the study:

- i. To examine the structure and trend of financial development in Nepal
- ii. To identify the relationship between financial development and economic growth in Nepal.

1.4 Contributions of the Study

The study will empirically investigate the relationship of financial development and economic growth and examine whether the financial development has impact on economic growth of Nepal. The effectiveness of financial development and consolidation policies in terms of economic development is also unclear. On the other hand, the studies undertaken in Nepalese perspective are not found to be incorporating the issue of causality that have been conducted and effectiveness of consolidation process incorporating financial- led or growth led hypothesis. Hence, a separate study seems to be necessary to examine the relationship between financial development and economic growth. The study has examined the growth of financial sectors and access to finance in the Nepalese economy. Moreover, it also analyzes the role of the financial sector in supporting growth in the economy.

The finding of this study will also be useful in further studies in examining the casual relationship between financial development and economic growth In Nepal. This study is important for policy makers in advising the government and other stake holders on what level of economic growth should be maintained. This study thus be useful to the Central Bank of Nepal, banking industry, other financial institutions

government and monetary policy makers in evaluation of policy options. Similarly this study could be foundation for academicians for further research. Analysis of information and the findings made in such issues shall add the literature for policy recommendation and future researches as well. It is expected that the findings and recommendations of the study will be useful for the policy makers and for further studies also. Nepal has been following the increasing pace of financial institutions, financial instruments, financial markets, and increasing interest of the people towards the financial system, and thus the development of such a system will play a significant role in the economic growth of the country. So, the study has focused on examining the linkage between financial sector development and economic growth, knowing the financial development index in Nepal. There are several studies on the same topic nationally and internationally, however, most of the earlier research only relating to the causal relationship between financial development and economic growth and was concentrated on developed countries particularly on capitalist countries. Their relevance to developing countries like Nepal is limited due to the existence of gigantic differences in socio-economic and political characteristics between developed and developing countries.

Due to such reasons, the study aims to examine the link between financial development and economic growth in the case of Nepal and it attempts to establish the hypothesis that there is a positive relationship between financial development and economic growth. Similarly, the study also focuses on calculating the financial development index in Nepal by using several econometric models as there is a need to construct an index as a single measure that represents the overall development in the financial sector by taking the relevant financial proxies into account.

Therefore, the study under the title “Financial Development and Economic Growth in Nepal” is an attempt to construct a financial development index for Nepal (which is very useful as a financial development index shows how developed financial institutions and financial markets in terms of their depth, access, and efficiency) and examine its relationship with economic growth to ascertain the nature of the association between financial development and economic growth in the country.

The findings of this study will also be useful in further studies in examining the causal relationship between financial development and economic growth in Nepal. It will

contribute to narrowing the research gap in Nepal related to the study of finance and economic growth with the help of a composite financial development index. Furthermore, it may be helpful for academic persons by assisting lecturers, students, instructors, and future researchers to approach the subject matters with a deeper understanding and as the source of reference to those involved in the financial sector.

1.5 Hypothesis of the Study

To obtain the objectives of study the following hypothesis has been formulated and tested for empirical verification

- i. H_0 = There is no positive and significant relationship between financial development and economic growth.
- ii. H_1 = There is positive and significant relationship between financial development and economic growth.

1.6 Limitations of the Study

This research study also has some limitations:-

- i. This study attempts to cover most of the activities of Nepalese financial sector. This study covers the period from FY 2000 to 2021 that helps to conduct empirical analysis. The period of data is comparatively low to reach the objective of the study and which may affect the result.
- ii. The source of data is secondary. Hence, any errors in the key information like data and other sources might affect the accuracy of the outcome of the study. Due to applied methodology and limited proxies, the constructed index may not represent the full-fledged financial development of Nepal.

1.7 Organization of the Study

The study is divided into five chapters in which the first chapter is of introduction which includes the background of the study, statement of the problem, objectives of the study, the hypothesis of the study, the significance of the study, limitations of the study, and organization of the study.

The second chapter of the study is the review of literature which includes a theoretical as well as an empirical review of the international and Nepalese context along with the research gap.

The third chapter is the research methodology with the conceptual framework, research design, and econometric models and tests used in the study.

The fourth chapter is an analysis and presentation of data and in which a brief description regarding the financial sector development of Nepal, the construction of financial development index for Nepal, and the relationship between financial development and economic growth in Nepal are presented.

The fifth chapter comprises the major findings of the study, the conclusion of the study, and recommendations drawn by the study.

CHAPTER II

REVIEW OF LITERATURE

This chapter deals with the available literature about the concept of financial development, major determinants of economic growth and development. For this, efforts have been made to review some books, journals, previous research findings, and other published documents.

2.1 Conceptual Overview

Financial system comprises financial institutions, financial instruments and financial markets in the economy. A sound financial system accelerates the economic development by facilitating intermediation, maturity transformation, credit allocation and payment system with financial discipline. A well-developed financial system promotes investment by identifying and financing lucrative business opportunities, mobilizing savings, efficiently allocating resources, helping diversify risks and facilitating the exchange of goods and services. Financial market plays a role of joining suppliers of funds and fund borrowers through financial intermediaries directly or indirectly. These intermediaries channelize nation's savings into most productive uses. Financial market in functional perspective is a rational system of collecting savings and allocating them efficiently to the ultimate users for investment in productive assets or current consumption (Kidwell & Peterson; 1981). Hicks (1969) argues that financial development played a crucial role in igniting industrialization in England. The industrial revolution required funds for long-term capital investment. Emergence of financial markets that traded a variety of securities encouraged savers to hold such assets, and these availed liquid funds for long-term investment. "The industrial revolution may not have occurred without this liquidity transformation (Levine 1997).

Rajan & Zingales (2009) agrees that what works for a developed country does not necessarily work for a developing one and that in most developing countries today, the goal of financial sector development should not be to push for an immediate development of stock markets. But he argues that the future development of stock markets should not be ignored either—since institutions are not built overnight, one

should not only look at present needs, but future ones as well. Regarding present needs, he disagrees with over-reliance on microfinance, as while it is a great instrument to alleviate the most severe needs, he considers it an unproven one to promote development. He supports the championing of small banks though, as local banks have better local knowledge that he considers crucial in developing countries. He argues that large state-owned banks are often a major barrier to the development of small banks, as they control territory and maintain political consensus. Overall, he is in favor of a more fragmented and competitive banking sector, which he thinks will also facilitate the transition from a pure banking system to a system that relies both on markets and banks, as a country's needs develop.

These arguments highlight the role of the financial system in economic development.

The growth of financial services sector is theoretically important for a nation's economic growth and development. Its importance to economic growth emanates from its critical role in facilitating financial intermediation and enhancing trade related payments. The efficacy of financial system to reduce information and transaction costs plays an important role in determining the rate of savings, investment decisions, technological innovations and hence the rate of economic growth. This hypothesis has been supported by the number of studies such as McKinnon (1973); Shaw (1973); Greenwood and Jovanovic (1990) and Levine (1997). These studies share a common view that financial development is pre-requisite for the economic growth of a nation. Further, Levine (1997) states that the level of financial development is a good predictor of future rates of economic growth, capital accumulation, and technological change. He also concludes that countries with larger banks and more active stock markets grow faster over subsequent decades even after controlling for many other factors underlying economic growth.

Availability of external financing for firms depends on the wider institutional environment; lack of availability does constrain firm growth, and it is one of the more important business obstacles firms have to overcome. Access to finance contributes to firm entry, growth, and innovation, among other things. Small and new firms are affected the most by financing constraints. Yet they also benefit the most as financial systems develop and financing constraints consequently ease. Empirical evidence suggests that it is through improving access for enterprises that financial sector

development makes an important contribution to economic growth (The World Bank, 2008). The access to finance and the quality and cost of the service that small businesses receive from banks are keys to their profitability and prosperity (and that of the economy). For a household, the implication of a lack of access to banking services is severe. The issue of access affects the ability of a household to receive government transfers, or to make payments or to accumulate cash surpluses for planned expenses or emergencies. Individuals who have no option but to carry cash are exposed to security risks. The lack of a vehicle for saving may result in low-income households resorting to expensive short-term debt.

Financial inclusion or inclusive financing is the delivery of financial services at affordable costs to sections of disadvantaged and low income segments of society. Unrestrained access to public goods and services is the sine qua non of an open and efficient society. It is argued that as banking services are in the nature of public good, it is essential that availability of banking and payment services to the entire population without discrimination is the prime objective of public policy. The term "financial inclusion" has gained importance since the early 2000s, and is a result of findings about financial exclusion and its direct correlation to poverty. Financial inclusion is now a common objective for many central banks among the developing nations.

Financial inclusion includes accessing of financial products and services such as savings facility, credit and debit cards, overdraft facility, cheque, payment and remittances etc. It is important to distinguish between access to—the possibility to use—and actual use of financial services. Exclusion can be voluntary, where a person or business has access to services but no need to use them, or involuntary, where price barriers or discrimination, for example, bar access. Failure to make this distinction can complicate efforts to define and measure access. Without inclusive financial systems, these individuals and enterprises with promising opportunities are limited to their own savings and earnings. This access dimension of financial development has often been overlooked, mostly because of serious data gaps on who has access to which financial services and a lack of systematic information on the barriers to broader access (The World Bank, 2008).

It is difficult to define and measure because access has many dimensions. Financial depth (total loan outstanding/GDP), more generally, can be broad indicator with direct and indirect effects on small firms. Greater depth is likely to be associated with greater access for firms, which will make them better able to take advantage of investment opportunities.

2.2 Empirical Overview

An empirical review of literature is more systematic examining past empirical studies to answer a particular research question. Thus, an empirical review is based on a review of actual observation, experiments and evidence conducted to answer a specific question or to test a hypothesis. The formal empirical study of the importance of financial development in economic growth was re-energized in the early 1990s after the research by King and Levine (1993). This study suggested that financial development influences long-run economic growth, capital accumulation, and productivity growth, positively and significantly.

2.2.1 International Context

Hicks (1969) maintained that financial systems played a significant role in igniting the industrial revolution in England by mobilizing savings and channeling capital to large projects with the capacity to generate large profits and production efficiencies. Goldsmith (1969) affirmed that the financial superstructure of a country stimulates output growth by facilitating the transfer of capital to the best possible users. Bencivenga and Smith (1991) developed a financial development model integrating financial intermediaries in endogenous growth models developed by Romer (1986) and Lucas Jr. (1988). They argued that financial institutions transform savings that people generate into productive capital by channeling these to productive economic activities, thus playing the role of the growth-inducing medium. Further, they emphasize that the development of financial intermediaries decreases socially unwanted capital insolvency, and hence provide an impetus to economic growth through this avenue too.

Gregorio and Guidotti (1995) found that financial development hurts the economic growth of the countries, especially in Latin America. The study found that the ratio

between bank credit to the private sector and GDP is positively correlated with growth in a large cross-country sample, but its impact changes across countries and is negative in panel data for Latin America. The study further argued that the latter finding is the result of financial liberalization in a poor regulatory environment. The study also shows that the main channel of transmission from financial development to growth is efficiency, rather than the volume, of investment.

Neusser and Kugler (1998) examined the finance-growth relationship for 13 Organization for Economic Cooperation and Development (OECD) countries for the period 1970-1991. Using time series analysis, the study showed a positive correlation between financial development and growth. The study found that the causal structure underlying the relationship varies widely across countries.

Using cross-section regression techniques to analyze the data from 1976-1993 across 47 countries, Levine and Zervos (1998) inferred that financial deepening influences real growth strongly and positively through the channels of capital accumulation and productivity enhancement. Besides, their study asserted the larger impact of financial markets than banks in economic growth.

Likewise, Rajan and Zingales (1998) used panels of industrial data from 1980-1990 across 41 economies to examine the impact of financial development on output growth. They inferred that financial improvement is positively linked with real output growth. Also, their study discovered that, in nations with large and efficient financial markets, financial development can exert incomparably higher effects in industrial expansion by reducing the cost of borrowing funds from external sources. Demetriades and Hussein (1996), and Blackburn and Huang (1998) believed in two-way causality. They argued that financial development and economic growth support each other. If financial development helps economic growth; economic growth helps to develop financial systems. In the early period, for example, Patrick (1966) claims that the causality goes from finance to growth and then switch from growth to finance. In other words, financial sector development encourages real capital formation per capita, consequently, when the economy is in the growth stage, increasing demand for financial services induces an expansion not only in the financial sector but also in the real sector.

Kar and Pentecost (2000) attempted to examine the causal relationship between financial development and economic growth in Turkey. The study was conducted for 32 years (1963-1995). The variables used in this study were broad money, banking deposit liabilities, and private sector claim. The data analyzed by using Granger causality, co-integration, and vector error correction methodology (VECM). The result showed that the direction of causality between financial development and economic growth is varying according to the selection of proxies used for financial development. So, there is no full acceptance of the view that finance leads to growth or finance allows growth in the case of Turkey. Fatima (2004) examined the causal relationship between financial development and economic growth in Morocco for the period 1970-2000. The ratio of liquid liabilities (M3) to GDP, the ratio of domestic credit provided by the banking sector to GDP, and domestic credit to the private sector to GDP was the financial depth indicators used. Using the Granger causality test, the study found a short-run relationship between financial development and economic growth.

To illustrate, the bank-based approach highlights the idea that banking institutions are necessary to spur economic growth in the early stage of economic development because capital markets are small and inefficient, and hence cannot accelerate economic growth. In such a setting, banking institutions are necessary to exploit economies of scale and scope in information gathering and processing as well (Tadesse, 2002; Chakraborty & Ray, 2006; and Lee, 2012).

Shan, Morris, and Sun (2001) examined the relationship between financial development and economic growth for 9 OECD countries and China using the VAR model. The result showed that 5 out of 10 countries have a bilateral Granger causality, 3 of them have reverse causality with economic growth leading to financial development and the other 2 countries do not have a causal effect at all. Sinha and Macri (2001) investigated the relationship between financial development and economic growth for 8 Asian countries which consist of 7 developing countries and Japan. Their result confirmed that a bilateral causal relationship exists for 3 countries, a unidirectional relationship from finance to growth for 2 countries, reverse causality from growth to finance for 3 countries including South Korea.

Minsky (1991) underpins the leading role of finance; however, the study cautions that as the financial sector observes vigorous growth, financial institutions often adopt risky behavior, which, as a consequence, may lead to financial crisis and stagnation. According to Minsky and later writers, the risky behavior of financial institutions increases leverage and encourages speculative activities in the economy. In turn, the speculative activities lead debtors and firms to default on loans, and eventually, the economy may plunge into recession. In the late 1990s, there emerged four different theories of financial structure, which are: (i) bank-based theory; (ii) market-based theory; (iii) financial services-based theory; and (iv) law and finance-based theory. These theories offer varying explanations to assess the link between financial development and economic growth.

Calderon and Liu (2003) employs the Geweke decomposition test on pooled data of 109 developing and industrial countries from 1960 to 1994 to examine the direction of causality between financial development and economic growth. The paper finds that (1) financial development generally leads to economic growth; (2) the Granger causality from financial development to economic growth and the Granger causality from economic growth to financial development coexist; (3) financial deepening contributes more to the causal relationships in the developing countries than in the industrial countries; (4) the longer the sampling interval, the larger the effect of financial development on economic growth; (5) financial deepening propels economic growth through both a more rapid capital accumulation and productivity growth, with the latter channel being the strongest.

On the other hand, the market-based theory stresses that big, liquid, and well-functioning stock markets (and other financial markets) can accelerate economic growth by improving corporate governance; facilitating diversification and the management of risk; allowing exit channels to entrepreneurial investors; supplying long term capital for large and indivisible projects with potentially high productivity; and providing information about the quality of investments (Levine, 1997; Rousseau & Wachtel, 2000).

Aug (2005) studied the role of saving, investment, trade openness, and real interest rate in determining the finance growth nexus in the small, developing economy of Malaysia for a period from 1960-2001. The researcher applied principal component

analysis to measure the depth of financial development by the construction of a financial development index. The analysis is done by using co-integration using the Johansen approach. The result showed that economic growth causes financial development in the long run.

Khan et al., (2005) investigated the link between financial development and economic growth in Pakistan over the period 1971-2004. By employing the autoregressive distributed lag approach, the study found that financial depth exerted a positive impact on economic growth in the long run, but the relationship was insignificant in the short run. The ratio of investment to GDP exerted a positive influence on economic growth in the short run but also insignificant in the long run. The study also showed that there is a positive impact of real deposit rate on economic growth. The authors recommended that policymakers should focus attention on long-run policies to promote economic growth, for example, the creation of modern financial institutions, in the banking sector and the stock market.

Abu-Bader and Abu-Qurn (2006) examines the causal relationship between financial development and economic growth in five Middle Eastern and North African (MENA) countries for different periods ranging from 1960 to 2004, within a trivariate vector autoregressive (VAR) framework. We employ four different measures of financial development and apply Granger causality tests using the cointegration and vector error-correction (VEC) methodology. Our empirical results show weak support for a long-run relationship between financial development and economic growth, and for the hypothesis that finance leads growth. In cases where cointegration was detected, Granger causality was either bidirectional or it ran from output to financial development.

Khan (2006) examined the impact of trade and financial liberalization on economic growth in Pakistan. The researcher has taken annual observations over a period from 1961-2005. The ARDL method was applied for the analysis. The study revealed a positive and significant impact of the financial sector development index (FSDI) and the ratio of discount rate and trade openness on real GDP. However, in the short run, FSDI exerted a statistically insignificant negative association with economic growth.

Odhiambo (2010) examined the dynamic relationship between interest rate reforms, financial development, and economic growth in South Africa. In assessing the causal relationship, the study introduced investment as an intermittent variable to develop a trivariate causality model. The study found that financial development does not Granger cause investment and economic growth. Rather, there was evidence of uni-directional causal flow from investment to financial development and prima-facie causal flow from investment to growth. The study, therefore, concluded that although interest rate reforms have exerted a positive effect on the financial depth in South Africa, the causal relationship between financial depth and economic growth was taking a demand-following path.

Adamopoulos (2008) focused on a study to examine the long-run relationship between economic growth and financial development of Ireland. The study has two objectives - to apply the Granger Causality test based on a Vector error correction model to examine the causal relationship between the examined variables taking into Johansen Cointegration analysis and to examine the effect of stock and credit market development on economic growth taking into account the positive effect of industrial production. The main variables used in the study were GDP, general stock market index, domestic bank credits to the private sector, and industrial production index. The results of the Granger causality test indicated that there is a bidirectional causal relationship between economic growth and the credit market.

Rioja and Valev (2014) studied the effects of stock markets and banks on the sources of economic growth, productivity and capital accumulation, using a large cross country panel that included high- and low-income countries. The study focused on the impact of stock markets and banks on productivity growth; physical capital accumulation and compare the effect of bank and stock market on the sources of growth in low and high income countries. The data set consisted of a panel of observations for 62 countries for which stock market data is taken for the period 1980–2009. The study used dynamic panel generalized-method-of-moments (GMM) techniques to address potential endogeneity in the data. Studying panel data for a world sample, it was found that bank credit primarily affects capital accumulation across all countries and stock markets primarily affect productivity growth. In low income countries, banks are essential as they have a sizable positive effect on capital

accumulation. Meanwhile, stock markets, however, have not contributed to capital accumulation or productivity growth in these countries. In high-income countries, stock markets are generally found to have sizable positive effects on both productivity and capital growth, while banks only affect capital accumulation.

Kabir and Halder (2018) investigate the relationship between financial sector development and economic growth in Bangladesh. The study finds that the causality runs from financial development to economic growth. They use data from 1977 to 2016 and employ the Vector error correction framework and granger causality tests as a methodology.

Ibrahim and Alagidede (2018) examines the overall economic growth effect when the growth in finance and real sector is disproportionate relying on panel data for 29 sub-Saharan African countries over the period 1980–2014. Results from the system generalized methods of moments (GMM) reveal that, while financial development supports economic growth, the extent to which finance helps growth depends crucially on the simultaneous growth of real and financial sectors. The elasticity of growth to changes in either size of the real or financial sector is higher under balanced sectoral growth. We also show that rapid and unbridled credit growth comes at a huge cost to economic growth with consequences stemming from financing of risky and unsustainable investments coupled with superfluous consumption fueling inflation. However, the pass-through excess finance–economic growth effect via the investment channel is stronger.

Camba and Camba (2020) investigated the dynamic relationship between domestic credit and stock market liquidity on the economic growth of the Philippines. The study covers the data of the Philippines for the period 1995- 2018. The findings of the study support the belief that economic growth is affected by the development of the banking sector and the stock market.

2.2.2 National Context

Kafle (1990) analyzed the process of monetary and financial sector reform in Nepal by dividing the two broad periods: (i) before and (ii) after the implementation of the Structural Adjustment Program in 1987. Reforms before the implementation of the South Asian Partnership (SAP) were categorized as: Interest rate reform,

Exchange rate reform, Entry of the joint venture banks, and Branches of the Agricultural Development Bank allowed for commercial banking activities. The main objectives of the monetary and financial sector reforms under the structural adjustment program were, to increase the mobilization of domestic resources, improve the utilization of foreign aid, and to promote a more efficient allocation of resources.

A comprehensive set of monetary and financial sector reforms under the SAP in coordination with other macro-economic policies were aimed to contribute to the acceleration of the pace of economic development. Monetary and financial sector reform measures have been implemented to maintain the external as well as internal stability of the economy and to correct structural constraints for improving allocates efficiency of the economy. Maskay and Subedi (2009) analyzed the development of the Nepalese financial system. The paper concluded that despite significant financial deepening in the context of financial liberalization and integration with the external economy, there is still scope for geographically balanced financial development. For addressing, these challenges in a comprehensive manner, the study proposed initiating the development of a financial sector master plan.

Bhetuwal (2007) also studied the financial liberalization and financial development in Nepal. This study argued that financial liberalization improves the functioning of the financial system by increasing the availability of funds and allowing risk diversification and increased investment. The study also used principal component analysis to construct financial liberalization and financial development index. The study found a continuous and gradual process of financial liberalization and showed the bi-directional causal relationship between the liberalization of the financial system and the financial sector development in Nepal.

Shrestha and Chowdhury (2006) assessed the relationship between financial liberalization and economic development in Nepal by constructing a financial liberalization index based on principal component methods. Representing eight major financial liberalization components, their index examined the extent of financial liberalization in Nepal from 1984 to 2005. They found the degree of liberalization in Nepal was highest during 1984-1994. Likewise, in another study, Shrestha and Shrestha and Chowdhury (2007) examined the financial liberalization hypothesis

employing the autoregressive distributed lag (ARDL) modeling approach on Nepalese data. Their results showed that the real interest rate affects both savings and investment positively.

Kharel and Pokhrel (2012) analyzed whether the financial structure of Nepal matter for economic growth. The empirical results using Johansen's co-integrating vector error correction model suggest that the banking sector plays a key role in promoting economic growth compared to the capital market in Nepal. The result implies that the policy should focus on banking sector development by enhancing its quality and outreach as it promotes economic growth in Nepal.

Bhusal (2012) analyzed the impact of policy reforms on financial development and economic growth covering the data from 1965 to 2009 and applying the unit root test and the exogenous break test. Variables used in the study for the estimation of the impact of policy reforms on financial development and economic growth are domestic credit, private sector credit, and broad money. The study suggested that some problems in the banking sector, such as the inadequate expansion of commercial banks and their branches in the rural non-monetized sector, non-performing loans that discouraged credit allocation, and so on, maybe the reasons for policy reforms and financial development were ineffective.

Dhungana (2014) investigated the causality of economic growth and financial institutions. The study used gross domestic product, broad money, and domestic credit to private sectors as the variables and used vector error model, Granger causality, and Wald statistics techniques to find the short run and long run causal relationship between the financial institution and economic growth. The result shows that there is the existence of a long-run association among the variables. The study suggested that regulatory authority and financial institutions should accelerate financial reforms to improve the efficiency of the financial system that helps to stimulate adequate capital formation and investment in the productive sectors.

Gyanwaly (2014) examined the effect of financial development on economic development of Nepal by constructing a composite index of financial development by using the principal component. Private sector credit to GDP ratio, M2 to GDP ratio, Commercial bank assets to total assets had been used as indicators of financial

development and thus were used to construct the composite index and financial index. Using the data from 1975 to 2012 and using total factor productivity approach and error correction modeling his study reached the conclusion that financial development, real stock of capital, real per capita income, labor force, real export and government expenditure has positive impact on economic development whereas inflation and trade openness are negative impact on economic growth in Nepal.

Oguntade et al. (2014) studied bidirectional relationship between financial development and economic growth in Nigeria by using money supply as financial development proxy and GDP as economic growth of Federal Republic of Nigeria for the 30 years' data. The study applied Granger Causality test and VARMA model in the study and shown the evidence that Granger Causality test is an effective tool in time series predictive causality to know the type of causality in existence in the two-time series variables under consideration and which one can statistically predicts the other. Thus, the study concluded that there was bidirectional relationship between financial development and economic growth. Gautam (2014) examines the relationship between financial development and economic growth in Nepal using time series data between 1975 and 2012 employing Granger causality tests and concludes that there is a strong relationship between financial development and economic growth in Nepal.

Paudel et al., (2018) examined the relationship among proxies of financial development and real sector growth with economic growth in the short-run as well as the long run and also predict the direction of causality among these variables. The results conclude that although finance-led growth yields positive consequences, the growth itself affects the financial development system and real sectors like CPI have more impact on real GDP than financial development indicators (M2Y, CPY) in Nepal.

Paudel (2020) investigated the role of financial development and economic growth of Nepal with time-series data of 1980-2017. The study used the ARDL approach to cointegration with structural break analysis. The author used the most recent index of financial development developed in Svirydzhenka (2016) as a proxy of financial development and gross domestic product as a proxy of economic growth. The study confirmed that there is a strong long-term relationship between financial development

and economic growth in Nepal. Furthermore, the study suggested that the development of the strategies for proper financial development, improving the financial institution's quality, and widening the financial market to improve capital formation are the best ways to accelerate economic growth in Nepal.

Mahara (2020) examined the relationship between money supply and economic growth of Nepal including the time series data of 45 years from 1976-2019. The study used the ARDL approach to cointegration techniques to trace the relationship between money supply and economic growth in Nepal. The study found that there is a positive and strong relationship between broad money supply and economic growth in Nepal both in the short and long-run.

Gyanwaly (2014) examined the effect of financial development on economic development of Nepal by constructing a composite index of financial development by using the principal component. Private sector credit to GDP ratio, M2 to GDP ratio, Commercial bank assets to total assets had been used as indicators of financial development and thus were used to construct the composite index and financial index. Using the data from 1975 to 2012 and using total factor productivity approach and error correction modeling his study reached the conclusion that financial development, real stock of capital, real per capita income, labor force, real export and government expenditure has positive impact on economic development whereas inflation and trade openness are negative impact on economic growth in Nepal.

2.3 Research Gap

There are only a few studies done on the financial development and economic growth issue of Nepal. It is found that most of the studies have considered only one or two proxy variables for financial development and those variables are used to assess the relationship between financial development and economic growth. All analyses in previous studies had been done with conventional or traditional methods or models such as regression. Hence, the study tried to fulfill the vacuum in the literature of financial development and economic growth in Nepal by analyzing relationship between financial development economic growth both descriptive and analytical method.

CHAPTER III

RESEARCH METHODOLOGY

This chapter contains extensive discussion the methodology employed in this study. This chapter has been divided into different four sections. The first section describes the conceptual framework and research design used in the study. Second section deals with the nature and source of data. The third section describes the selected variables for the study. Similarly, the fourth section describes the method of analysis including empirical models.

3.1 Conceptual Framework and Research Design

A Conceptual framework is a structure that can best explain the inherent movement of the phenomenon to be studied. The conceptual framework describes the relationship between specific variables identified in the study. It also outlines the input, process, and output of the whole investigation. Research design is a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings. It is a plan that describes how, when, and where data are to be collected and analyzed. This study has applied descriptive and causal-comparative research designs to deal with the different issues related to the financial sector and economic growth in the case of Nepal. The descriptive research design has been adopted to determine adequate information associated with financial development of financial sector and economic growth in Nepal. Similarly, the descriptive research design is also helpful in organizing, tabulating, depicting, and describing the data. It involves the collection, verification, and synthesis of evidence to establish facts that defend a hypothesis. This research design involved the use of secondary sources of data.

This section deals with how the collected data are managed and proceed to be used in the study and finding the result of the intended issue. In this study, since all the needed data are collected from secondary sources of data, thus different tables, figures, econometric tools are used in the organization and processing of the associated data and information.

3.2 Nature and Sources of Data

The required data and information for the study were gathered from secondary sources of information. For descriptive analysis and presentation development of banking and financial institutions, trend of total trade of Nepal, trend of GDP, development of capital market, indicators of financial access and deepening are used. For the detailed and empirical analysis, the necessary data and information at the macro level such as gross domestic product (GDP), Development of broad money supply (M2), private sector credit (PSC), total trade (TT), Banking and financial institution (BFIs), Gross capital formation (GCF) are collected from the publication of government and non-governmental institutions that are published in books, magazine, journal, etc. The data have been collected from the publication of the Ministry of Finance (MoF), Nepal Rasta Bank (NRB), and the World Bank Group.

This study integrates 46 years of data after the systematic record and availability of time series data of the Nepalese economy. All data are time-series data from 1975 to 2021 that are collected on the respective heading of dependent and independent variables of the study. The basic reason behind taking data since 1976 is the lack of a systematic record of data related to selected variables before the year 1975. The sample is regarded as sufficient to capture the characteristics of the role of financial sector development in economic growth. Data include the real GDP growth rate, broad money supply, domestic credit of bank and financial institutions, private sector credit, trade openness, and working-age population of Nepal. The indicator of economic activity is the growth rate of real gross domestic product and financial development is represented by the financial development and its indicators.

3.3 Model Specification

Based on the theoretical review and different empirical literature, the general model of the study is expressed as below.

$$RGDP = f(FD) \dots\dots\dots (i)$$

Where RGDP is real gross domestic product and FD is measure of financial development. Financial development is being represented by broad money supply and

domestic credit provided by the banking sector. Thus, the detailed models are represented as

$$RGDP = f(M2) \dots\dots\dots (ii) \text{ and}$$

$$RGDP = f(DC) \dots\dots\dots (iii)$$

The standard model can be further designed as

$$LnRGDP = \alpha + \beta_1 FD_t + \epsilon_t \dots\dots\dots (iv)$$

Where α is constant term and β_1 is coefficient of measure of financial development, and ϵ is error term. FD is being replaced by broad money supply and domestic credit as the measures of financial sector development.

3.4 Tools and Methods of Data Analysis

The following are the major tools that the study has used to answer the research questions.

3.4.1 Unit Root Test

Unit root test is important while examining the stationarity of a time series because a non-stationary regressor invalidates many standard empirical results and thus requires special considerations. The presence of a stochastic trend is determined by testing the presence of unit roots in time series data. Non-stationary of unit root can be tested using the Dickey and Fuller tests (Bhusal, 2013). This test is t statistic on ϕ in the following regression.

$$\Delta Y_t = \alpha_0 + \alpha_1 t + \phi Y_{t-1} + \sum \psi_i \Delta Y_{t-i} + \epsilon_t \dots\dots\dots (v)$$

Where Y is the variable under consideration, Δ is the first difference operator, t is time trend, ϵ_t is a random variable. The optimum lag length is identified so as to ensure that the error term is white noise. α_0, α_1, ϕ and ψ_i are the parameters to be estimated. If we reject the null hypothesis $\phi = 0$ then we conclude that the series under consideration has a unit root and is therefore non-stationary.

3.4.2 Test of Cointegration

The cointegration test is based on the methodology developed by Johansen (1991), and Johansen and Juselius (1993). Johansen's method is to test the restrictions imposed by cointegration the unrestricted VAR involving the series.

$$Z_t = K_1 Z_{t-1} + K_2 Z_{t-2} + K_3 Z_{(t-3)} + \dots + K_{t-1} Z_{t-k} + \mu + v_t \dots \dots \dots \text{(vi)}$$

Where Z is (RGDP, FD) is a variable vector. RGDP and FD are real gross domestic product and financial development respectively. The variables are stationary of order first. K_i is matrix of parameters, μ is a vector of constant and v_t is a vector of normally and independently distributed error term.

The error correction model can be expressed as.

$$\Delta \ln RGDP_t = \alpha_0 + \sum_{i=1}^m \alpha_{1i} \Delta \ln RGDP_{t-i} + \sum_{i=1}^n \alpha_{2i} \Delta \ln FD_{t-i} + \lambda ECM_{t-1} + \mu_t \dots \dots \dots \text{(vii)}$$

$$\Delta \ln FD_t = \beta_0 + \sum_{i=1}^m \beta_{1i} \Delta \ln RGDP_{t-i} + \sum_{i=1}^n \beta_{2i} \Delta \ln FD_{t-i} + \theta ECM_{t-1} + \mu_t \dots \dots \dots \text{(viii)}$$

Where Δ is the difference operator, m and n are the numbers of lags, α' s and β' s are parameters to be estimated and λ and θ are the error correction term which is derived from the long-run co-integration relationship. Given such a specification, the presence of the short-run and long-run causality could be tested (Bhusal, 2014).

3.4.3 Granger Causality Test

The Granger Causality test is a Wald test with the null hypothesis that financial development does not granger cause economic growth. The bivariate regressions are expressed below.

$$FD_t = r_0 + \sum \alpha_j FD_{t-j} + \sum \beta_i RGDP_{t-i} + \epsilon_t \dots \dots \dots \text{(ix)}$$

$$RGDP_t = g_0 + \sum \gamma_j RGDP_{t-j} + \sum \delta_j FD_{t-j} + u_t \dots \dots \dots \text{(x)}$$

Where FD_t and $RGDP_t$ are two stationary series representing financial sector development and real GDP respectively and i and j stand for lag lengths.

3.4.4 Residual Diagnostic Tests

For the diagnostic test of residuals, the study has used VEC serial correlation test, JB normality test and Whites heteroscedasticity test.

CHAPTER IV

DATA ANALYSIS AND DISCUSSION

This chapter analyzes financial development and its relation with economic growth, highlights the financial development and condition of Nepal in current scenario and examines its link with economic growth with detailed descriptive and multivariate analysis.

4.1 Introduction to Financial Development and Economic Growth

The formal development of the financial sector in Nepal originated with the establishment of Nepal Bank Limited (NBL) in 1937 AD. NBL, however, alone could not make a significant impact in the mobilization and allocation of resources through banking activities because the NBL was the only commercial bank in operation until the mid of the 1950s in Nepal. The development of financial institutions was constrained during this first phase as a consequence of a range of institutional absences, including the lack of a central monetary authority that could enact policies to promote a stable economy and to encourage financial inclusion.

The second phase of financial development started with the establishment of Nepal Rastra Bank (NRB) in 1956 which is the Apex Monetary Authority (central bank) of Nepal. The major objective behind the establishment of the NRB was to accelerate the development of financial institutions. However, progress was slow with only three banks, all under government ownership and all policy banks being established over the next decade and a half. In 1959, the Nepal Industrial Development Corporation (NIDC) was instituted to promote the development of the industrial sector. This was followed, in 1966, by Rashtriya Banijya Bank which was established with a broader mandate to expand banking service to nearly every corner of Nepal. Finally, in 1968, the Agricultural Development Bank (ADB/N) was established to encourage agricultural development (Maskay & Subedi, 2009).

However, after 1966 the NRB took full charge of controlling the exchange rate, determining interest rates (especially the allowable range of lending and deposit rates applying to all financial institutions), and various prudential measures such as capital reserve ratios. Before 1966, the central bank did not interfere in the determination of

interest rates; nevertheless, the interest rate in Nepal was heavily influenced by interest rates in India (Demetriades & Luintel, 1996). In 1968, the NRB declared the 'Banking Development Plan' which provisioned incentives such as the subsidization of operational capital for new branches of commercial banks and promoted the active involvement of the central bank in the expansion of bank branches. As a result, the number of bank branches rose from 80 in 1970 to 241 in 1980. In 1974, the NRB introduced new banking regulations such as a liquidity ratio which obliged banks to hold a certain proportion of cash and marketable securities against outstanding debt. Similarly, a directed credit program was introduced in the same year, which required commercial banks to lend a certain proportion of their total deposits to preferential sectors.

While looking at the development of the non-banking sector or security market, the institutional development of the capital market has been started after the establishment of the Securities Exchange Center (SEC) in 1976 to facilitate and promote the growth of the capital market.

The third phase of financial sector development started with the promulgation of a liberalization policy in the mid-1980s. Nepal experienced a prolonged balance of payments crisis in the early 1980s which induced the government to liberalize the economy (Maskay & Subedi, 2009). After embracing this liberalization policy, private banks, fully financed by the capital of Nepalese citizens, were allowed to operate for the first time. Additionally, the government of Nepal permitted foreign banks to operate inside the country under joint venture arrangements of Nepalese and foreign investors, which generated a wave of banking sector expansion and development (Shrestha, 2004).

The financial sector was further liberalized again during the third phase under the 'Structural Adjustment Program (SAP)' of the International Monetary Fund (IMF) in 1987. Furthermore, on the banking front, the NRB eliminated all kinds of interest rate restrictions except the prescription of a minimum deposit rate in 1986. By 1989, commercial banks in Nepal were given full autonomy to determine all other interest rates except those applying to 'Priority Sector' credit. In the non-banking sector, the industrial policy of the government encouraged the promotion of securities exchange in Nepal. Nepal government under a program initiated to reform the capital market

converted SEC into Nepal Stock Exchange (NEPSE) in 1993 as a non-profit organization under the Securities Exchange Act, 1983. Similarly, in the same year, the Securities Board of Nepal (SEBON) was also established by the government of Nepal as an apex regulatory body of the Securities Market. SEBON regulates the market under the Securities Act, 2006.

The fourth phase of the financial sector development of Nepal commenced with the promulgation of the NRB Act - 2002, which continues to the present day. Nepal Rastra Bank Act - 2002 was reformulated to reform the financial sector and to improve its performance. Central to this was the granting of greater autonomy to the NRB in making and implementing decisions related to foreign exchange policy, as well as improving its supervision and control of financial institutions throughout the nation. In such phase of financial sector development of Nepal, various kinds of depository institutions such as commercial banks, development banks, finance companies, and microcredit development banks were authorized to execute different functions, as a consequence of which, however, the NRB experienced difficulties in the supervision and control of the activities of all the financial institutions under a single category. Hence, the NRB formulated the 'Bank and Financial Institution Act (BAFIA), 2006, which is also known as the "Umbrella Act".

After 2002, the number of financial institutions increased rapidly. However, the distribution of financial institutions is not balanced across the nation. A large proportion of banks and bank branches are concentrated in the central (including the capital, Kathmandu), eastern and western development regions, while only a few are operating in the mid-western and far-western regions (even though these two regions cover nearly half of the land area of Nepal). Thus, after looking at the historical development of the financial sector development of Nepal, it can be said that more improvement in financial markets occurred during the fourth phase of financial development since its initial phase.

4.2 Descriptive Analysis

4.2.1 Financial Access in Nepal

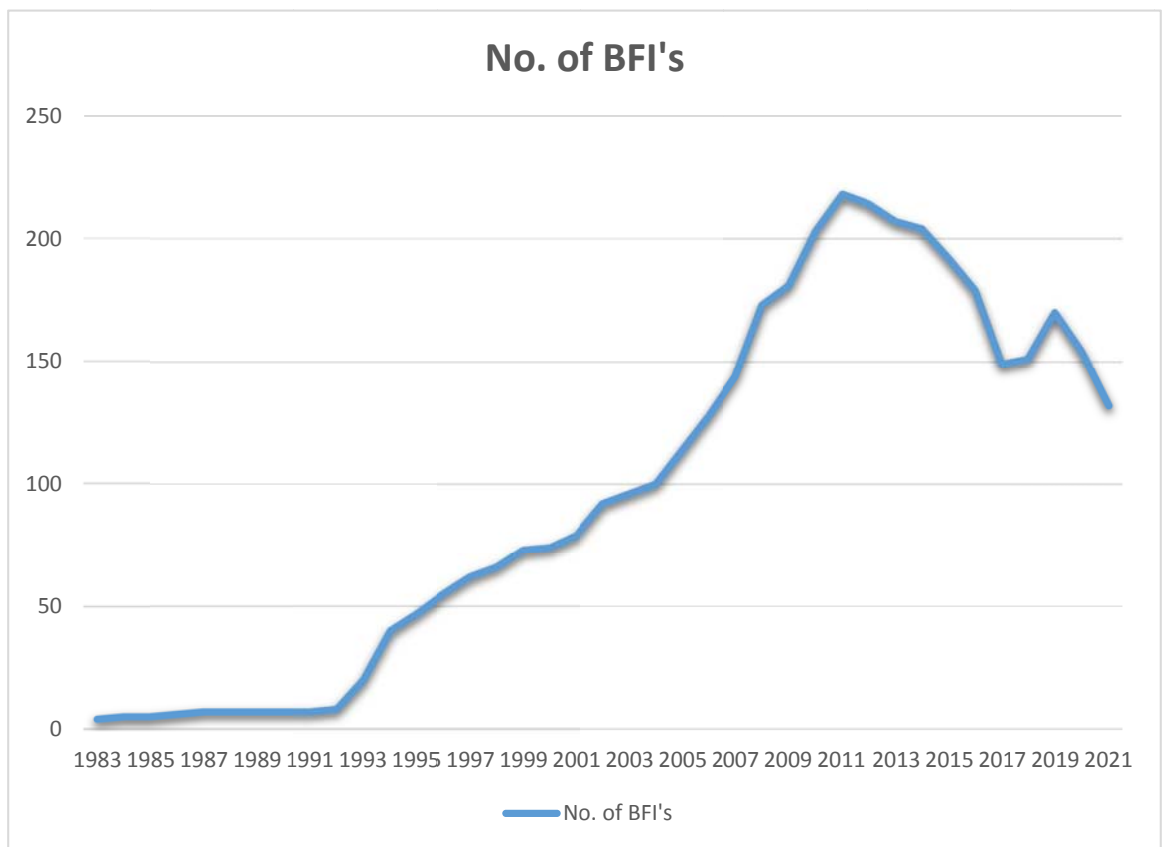
Table no. 4.1
Number of Banks and Financial Institutions from 1983-2021

Year	Commercial Banks	Development Banks	Finance Companies	Microfinance FIs	Total No. of BFIs
1983	2	2	-	-	4
1989	5	2	-	-	7
1995	10	3	30	4	47
2001	15	8	48	8	79
2007	20	38	74	12	144
2013	31	86	59	31	207
2019	28	29	23	90	170
2020	27	20	22	85	154
2021	27	18	17	70	132

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Table 4.1 indicates the total number of banking and financial intuitions of 39 years and shows that at the beginning there were only few bank and financial institutions up to year 1992 than after that the number of commercial banks, development banks and other financial institutions had increased tremendously. In year 2011 the number of commercial banks, development banks, and other financial institutions had risen at peak value which collectively taken also gives maximum number of banking and financial institutions. After the year 2011-2016 number of commercial banks were decreasing at decreasing rate while the number of development bank were decreasing at increasing rate and the number of finance companies and micro finance companies were in same number. After the directives of merger and acquisition policy directed by NRB the number of development banks were decreasing tremendously due to merger and acquisition of development bank with commercial bank to make paid up capital of Rs 8 Arab. But the number of microfinance companies were increasing during last year's i.e. the access of BFIS had scattered to rural areas and financial access had increased.

Figure 4.1
Trend in development of Banking ad financial institutions



Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Figure 4.1 shows the trend of number of banking and financial institutions explains that at initial stage of development of banking and financial institutions the number of banking and financial institutions were not increasing up to the year 1993 than after 1993 onward the no of BFIS were increasing at increasing rate. And in 2011 maximum number of BFIs were in operation. While after that period number of BFIS were decreasing and after 2017 thee were decreasing trend in number of banking and financial institutions due to merger and acquisition directive policy of Nepal Rastra Bank.

Table 4.2
Banking and Financial institutions (Province Wise)

Provinces	Number of BFI's
Province 1	728
Madhesh	549
Bagmati	1664
Gandaki	577
Lumbini	726
Karnali	192
Sudurpaschim	317
Total	4753

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

The table 4.2 shows the province wise distribution of BFIS recent statistics from which we know that in Bagmati Province the maximum number altogether 1664 BFIS branches and is followed by province 1 728. There are only 192 BFIS branches in Karnali which is least of all the provinces. There is less financial access of BFIS in Karnali province it is due to the difficult land topography low population density and remoteness of place. While due to the development of infrastructure and other services Bagmati province is in topmost position in number of BFIS.

Table 4.3
Number of Commercial Banks (Province Wise)

Province	No. of Local Levels	2018	2019	2020	2021
1	137	112	136	136	137
Madhesh	136	122	134	136	136
Bagmati	119	107	117	117	118
Gandaki	85	74	84	85	85
Lumbini	109	99	109	109	109
Karnali	79	54	73	78	78
Sudur Paschim	88	63	82	86	87
Total	753	631	735	747	750

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Table 4.3 shows the data of financial access to the local level after establishment of federal system of government consisting of 7 provinces and 753 local levels. Among 7 provinces local level of Madhesh province had get access to commercial bank in year 2020 while in the year 2021 province 1 and Gandaki province Lumbini province and Karnali province had get access to commercial banks. Out of 753 Local levels three local levels of Bagmati province Karnali province and sudur Paschim Pradesh are still deprived from the facility of commercial banks. The above statistics shows that in 2018, 83 percent of local level are in access of commercial banks. While the number of commercial bank increase from 631 to 735 in year 2019 which clearly shows that rapid development of commercial banks. And in year 2020 and 2021 number of commercial banks are increase by 3 and gives final number as 750 which is above 99 percent. Thus we can clearly say that there is near about cent percent access to local levels.

Table 4.4
Province-wise Distribution of Banks and Financial Institutions

Provinces/Number of Branches of	Commercial Banks	Development Banks	Finance Companies	Microfinance
1	728	177	25	783
Madhesh	549	79	25	954
Bagmati	1664	295	95	681
Gandaki	577	182	33	574
Lumbini	726	227	35	1085
Karnali	192	17	3	200
Sudur Paschim	317	46	6	408
Total	4753	1023	222	4685

Source: Economic Survey, 2021.

Table 4.4 shows that the access of banking and financial institutions is highest in Bagmati province whereas Karnali has least number of banking and financial institutions. Bagmati province has the largest number of bank branches with 2,675 branches whereas the Karnali province has the lowest number, 412 branches.

4.2.2 Financial Deepening in Nepal

Financial deepening is continuously increasing in the economy. Gradual improvement is experienced in areas of broad money supply, debt flow to private sector and total deposits to GDP ratio. Due to Covid-19 outbreak, credit flow to private sector was contracted in fiscal year 2019/20 whereas gradual improvement has taken place in current fiscal year. In fiscal year 2019/20, the ratio of broad money supply to GDP was 108.1 percent, the ratio of debt flow to private sector to GDP was 83.7 percent and total deposit to GDP ratio was 98.1 percent.

Financial access is increasing with the implementation of fiscal federalism. In recent years, remarkable progress has been achieved in areas of expansion of branches of banks and financial institutions. Of the total 753 local levels, commercial bank branches have reached to 750 local levels, the remaining 3 will have the bank branches as early as easing some of the technical issues. Local levels where commercial bank branches are yet to be established are: Rubi valley, Dhading, Juni Chande, Jajarkot and Saipal of Bajhang. As of mid-March 2021, the number of deposit accounts in banks and financial institutions is 35.766 million, the number of loan accounts is 1.651 million, the number of mobile banking users is 13.267 million

and the number of users of internet banking services is 1.131 million. In the eight months of the current fiscal year, about 108 thousand loan accounts and 3.313 million deposit accounts have been added.

On the basis of the total number of branches of banks and financial institutions (including microfinance) the service has reached to an average of 2,913 people per branch in mid-March 2021. Such number of people having per branch service was 3,072 during the mid-March 2020 of previous fiscal year. If compared the provinces, the number of population per branch is the highest in Karnali province. With the increased financial access and branch expansion, banks and financial institutions have progressed significantly. There are altogether 10,430 branches of bank and financial institutions (including micro finance companies).

Table 4.5
Number of Electronic Transactions in Recent Years

Details	Number of Transactions (2020)	Number of Transactions (2021)
Real -Time Gross Settlement* (RTGS)	37297	48765
Automated Teller Machine (ATM)	6302846	7472259
Electronic Check Clearing (ECC)	1260169	1104909
Interbank Payment System (IPS)	596538	907398
Connect IPS	696447	1603598
Debit Card	3316554	8215170
Credit Card	119610	189166
Prepaid Card	5249	11491
Internet Banking	653459	267582
Mobile Banking	5817681	10082655
Branchless Banking	83249	51093
Wallet	10179557	10614268
Based on Quick Response (QR)	-	635738

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Financial access has been expanding in recent years. Financial transactions have been linked with electronic system. Banking systems have adequate liquidity and the interest rates have been reduced. The credit flow has expanded due to the policy-wise easing adopted to reduce the impact of Covid-19 on the economy. The share of non-performing loans has increased marginally due to the flexibility tied in debt

classification and loss management. There has been significant increment in the number and amount of electronic transactions. Electronic payment in transaction has been growing remarkably due to the development of infrastructure related to electronic payment, incentives provided for electronic transactions and increasing public access to and use of electronic devices. Fear of the Covid-19 infection and the lockdown imposed to control the infection have also helped to increase the use of electronic payments.

4.2.3 Current Status of Capital Market in Nepal

Table 4.6
Overview of Capital Market

Year	No. of Listed Companies	Paid-up Value of Listed Shares	Market Capitalization	Trading Turnover	Nepse Index
1994 Jul	66.0	2,182.2	13,872.0	441.6	226.0
1995 Jul	79.0	2,961.8	12,963.0	1,054.3	195.5
1996 Jul	89.0	3,358.5	12,295.0	209.9	185.6
1997 Jul	95.0	4,476.5	12,698.0	416.2	176.3
1998 Jul	101.0	4,959.8	14,289.0	202.6	163.4
1999 Jul	107.0	6,487.4	23,508.0	73.8	216.9
2000 Jul	110.0	7,347.4	43,123.3	283.7	360.7
2001 Jul	115.0	7,939.0	46,349.4	128.0	348.4
2002 Jul	96.0	8,680.2	34,704.0	80.9	227.5
2003 Jul	108.0	11,898.0	35,240.0	64.7	204.9
2004 Jul	114.0	12,016.0	41,425.0	255.5	222.0
2005 Jul	125.0	16,776.0	61,365.9	198.0	286.7
2006 Jul	134.0	19,958.0	96,763.8	327.9	386.8
2007 Jul	135.0	21,746.0	186,301.3	1,432.1	683.9
2008 Jul	142.0	29,465.0	366,247.6	2,648.2	963.4
2009 Jul	159.0	61,140.0	512,939.1	1,475.2	749.1
2010 Jul	176.0	79,786.0	376,871.4	586.4	477.7
2011 Jul	209.0	100,238.0	323,484.3	913.0	362.9
2012 Jul	216.0	110,610.0	368,262.1	1,258.5	389.7
2013 Jul	230.0	126,064.0	514,492.1	1,786.6	518.3
2014 Jul	237.0	146,519.7	1,057,165.8	7,729.2	1,036.1
2015 Jul	232.0	179,689.7	989,404.0	5,845.1	961.2
2016 Jul	230.0	204,019.6	1,890,130.0	31,655.8	1,718.2
2017 Jul	208.0	289,590.4	1,856,829.4	12,331.4	1,582.7
2018 Jul	196.0	352,094.6	1,435,137.7	6,633.1	1,212.4
2019 Jul	215.0	412,280.7	1,567,499.4	10,804.0	1,259.0
2020 Jul	212.0	473,389.6	1,792,762.7	11,111.6	1,362.4
2021 July	219.0	573,236.2	4,010,957.8	1,454,443.9	2,883.4

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Table 4.6 shows that in 2021 the paid up value of shares listed on Nepal Stock Exchange Limited has reached Rs. 573.23 billion. The value of such shares was Rs. 458.49 billion during the corresponding period of the previous year. As of fiscal year 2020/21, capital equivalent to Rs. 46.97 billion is mobilized through the primary market. During the corresponding period of the previous fiscal year Rs. 30.41 billion was mobilized through primary market. During this period, the capital equivalent to Rs. 11.59 billion through primary issuance of ordinary shares, Rs. 2.48 billion through right shares, Rs. 29.60 billion through debenture and Rs. 3.30 billion through mutual funds have been mobilized. As of mid-March 2020, the number of companies listed in Nepses was 212 whereas such number has reached to 219 in 2021. Motivation of investors in capital market is in rise.

4.2.4 Current Economic status of Nepal

The Nepalese economic growth has become negative by 2.12 percent first time in the last two decades in fiscal year 2019/20 due to the impact of Covid-19 pandemic, which is severer than that of the economic loss caused by the devastating earthquake of fiscal year 2014/15. The Nepalese economic growth rate was projected to grow at a level of 4.01 percent in current fiscal year in the expectation of gradual improvement in the health crisis but the widely spreading second-wave of the Covid-19 during the third quarter of the current fiscal year has become challenging in achieving the estimated growth rate.

The gross value added in agriculture, industry and service sector is expected to increase by 2.6 percent, 5.0 percent and 4.4 percent respectively, in current fiscal year 2020/21. Accordingly, the contribution of agriculture, industry and service sectors in gross value added is estimated to remain 25.8 percent, 13.1 percent and 61.1 percent, respectively in the current fiscal year.

Out of the total estimated GDP of Rs. 4266.32 billion (producer price), in current fiscal year 2020/21. In fiscal year 2019/20, the gross investment was contracted by 30.4 percent whereas it is estimated to increase by 18.1 percent to Rs. 1312.71 billion in fiscal year 2020/21. The per capita GDP (at current price) is estimated to increase by 5.8 percent to US \$ 1191 in current fiscal year. Likewise, per capita gross national income (at current price) is estimated to have increased by 5.0 percent to US \$ 1196

and per capita gross national disposable income (at current price) is estimated to have increased by 4.5 percent to US \$ 1486. 11. In recent years the average price levels of goods and services have remained within the desired limits. By mid-March of fiscal year 2020/21, the average consumer price inflation has remained 3.5 percent. Such inflation rate was 6.5 percent in the corresponding period of the previous year. In fiscal year 2019/20, the average consumer price inflation was 6.2 percent. The aggregate expenditure of federal, provinces and local levels was Rs. 1191.6 billion in fiscal year 2019/20. Of the aggregate expenditure, the current expenditure has occupied 56.0 percent, capital expenditure 34.1 percent and financing 9.9 percent.

Table 4.7
GDP of Nepal from 1974/75 to 2020/21

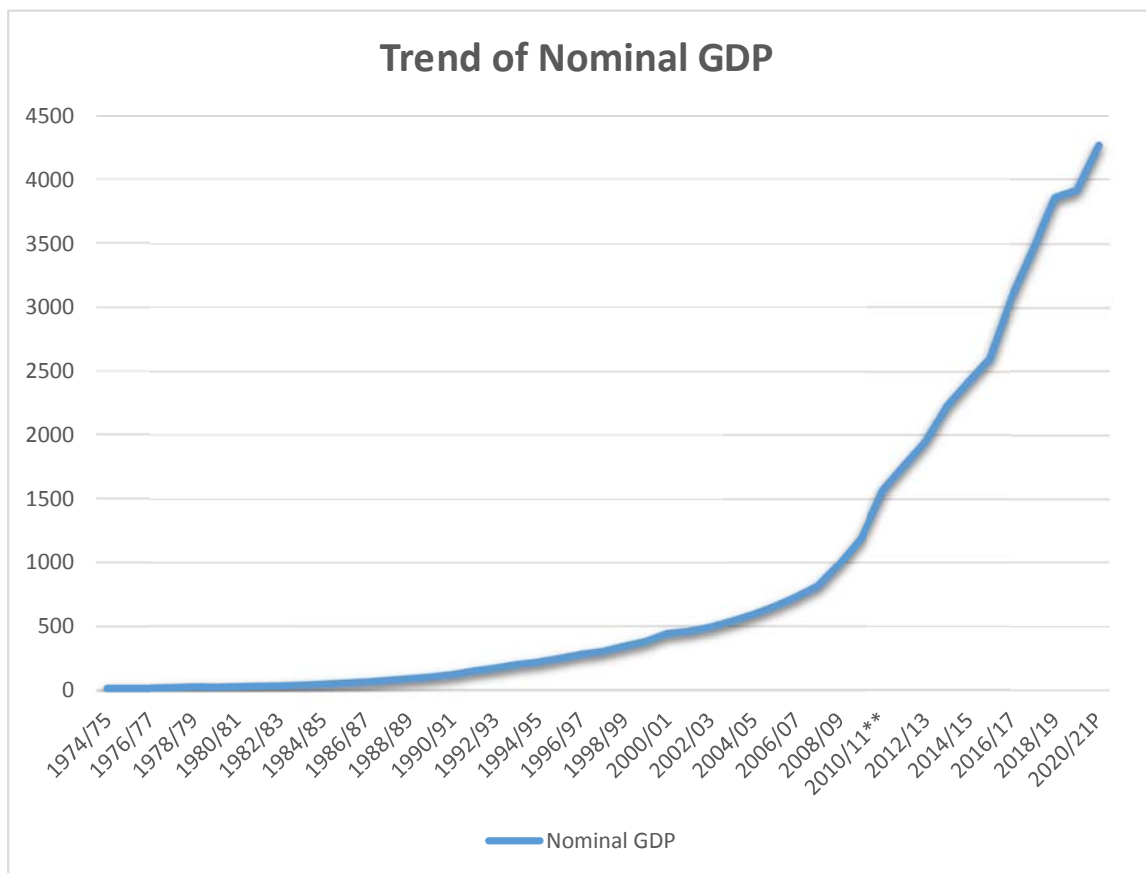
Year	Nominal GDP (Rs. in billion)	Agriculture	Industry	Service
1974/75	16.60	71.6	8.2	20.2
1979/80	23.35	61.8	11.9	26.3
1984/85	46.59	51.2	15.0	33.8
1989/90	103.42	50.6	15.9	33.5
1994/95	219.18	40.8	22.2	37.0
1999/00	379.49	39.6	21.5	38.9
2004/05	589.41	35.2	17.1	47.7
2009/10	1192.77	35.4	15.1	49.5
2014/15	2423.64	29.4	14.6	56.0
2015/16	2608.18	28.4	14.1	57.5
2016/17	3077.14	26.8	14.5	58.6
2017/18	3455.95	25.6	15.2	59.2
2018/19	3858.93	24.9	15.0	60.1
2019/20 ^R	3914.7	26.2	13.4	60.4
2020/21 ^P	4266.3	25.8	13.1	61.1

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Table 4.7 shows that the contribution of major three sector of economy ie agriculture sector industry sector and service sector contribution on nominal GDP of a country. From the above table we can find that the major sector for contribution of economy is agricultural sector for many years. And up to year 1992 agricultural sector is most dominant sector among three sectors. Industrial sector had contribute as third sector in

an economy as whole in all years. From year 2006 the share of GDP in service sector had appeared first so it is regarded as the leading sector for share contribution in an economy. Gradually share of agriculture sector in an economy was in decreasing trend while the share of industry sector was more uniform or constant as compared to other sectors of an economy.

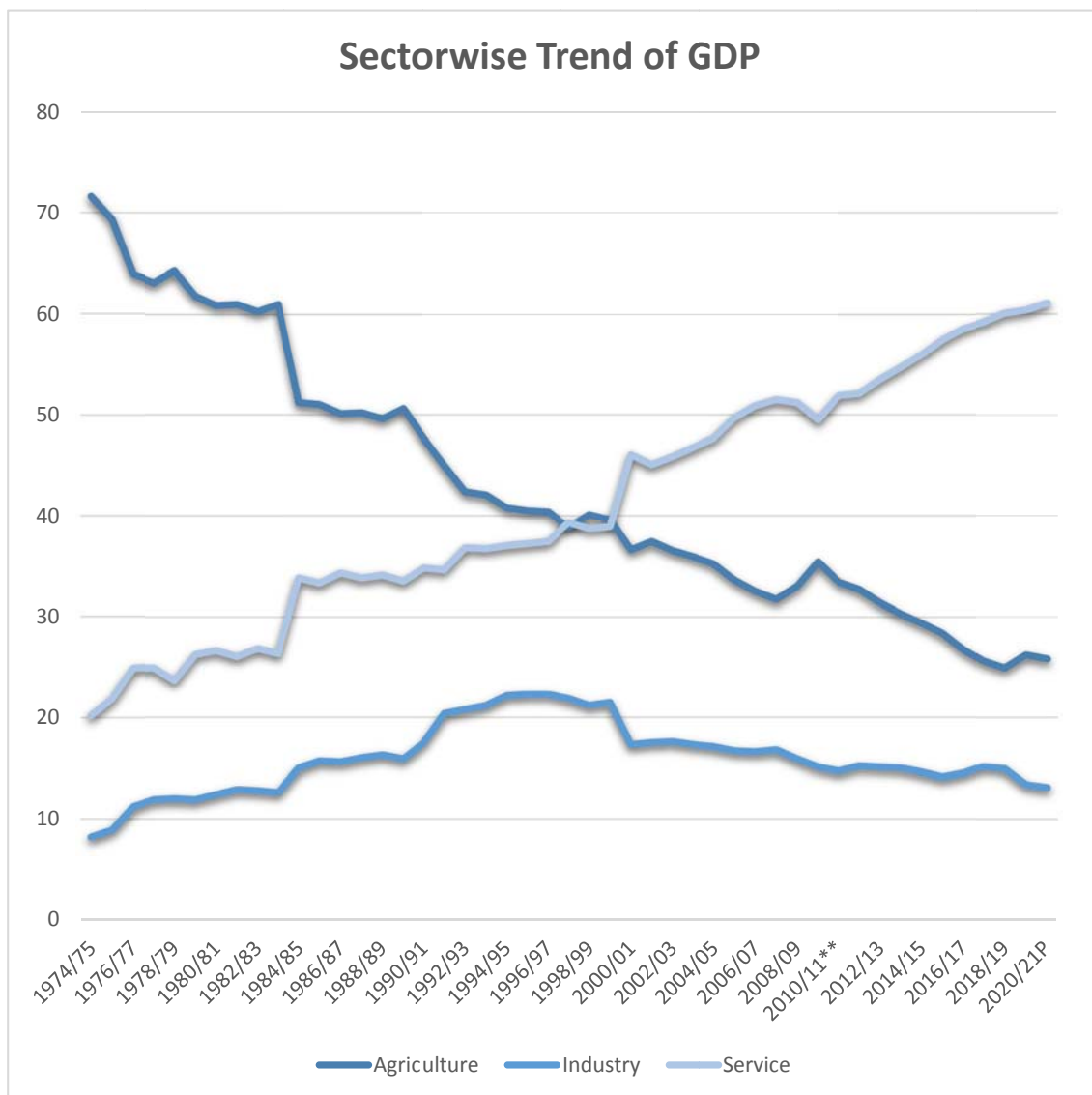
Figure 4.2
Trend of Nominal GDP in Nepal



Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Table 4.2 shows the trend of Nominal GDP is presented by the above trend structure which study nominal GDP data year wise. From the above trend figure it shows that Nominal GDP is in about constant trend up to year 1992-1993. Than from 1992-1993 year onwards Nominal GDP is increasing slowly up to the year 2010-2011. After this time period the trend line is increasing with increasing year.

Figure 4.3
Sectorwise Trend of GDP in Nepal



Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Figure 4.3 shows that share of agriculture sector in GDP is in decreasing trend while the share of industry sector was more uniform or constant as compared to other sectors of an economy, whereas share of service sector in GDP is increasing constantly with increasing years.

Table 4.8
Real GDP Growth in Nepal

Year	Real GDP Growth Rate at Producers Price	Real GDP at Producers Price in Billion	Real GDP at Basic Price in Billion	Per Capita GDP in USD
1974/75	-	349.5	341.6	122.6
1979/80	-1.5	379.0	361.3	133.0
1984/85	5.4	501.2	480.3	159.1
1989/90	4.6	626.6	600.7	199.4
1994/95	3.5	806.9	762.4	216.9
1999/00	6.1	1021.1	966.8	242.7
2004/05	3.5	1215.9	1134.8	327.8
2009/10	4.8	1511.0	1386.2	609.5
2014/15	4.0	1862.4	1700.4	871.4
2015/16	0.4	1870.4	1700.4	865.6
2016/17	9.0	2038.3	1846.5	1009.0
2017/18	7.6	2193.7	1982.7	1137.8
2018/19	6.7	2339.7	2109.3	1159.1
2019/20 ^R	-2.1	2290.9	2064.6	1125.9
2020/21 ^P	4.0	2382.7	2146.8	1191.0

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

The table 4.8 shows the trend line of Real GDP from year 1974/1975 to year 2020/2021 (projection) the trend line shows the increasing trend on value of Real GDP with increasing year and in fiscal year 2019/2020 due to pandemic cause of covid 19 Real GDP has slightly decreasing then trend of line is as that of previous years.

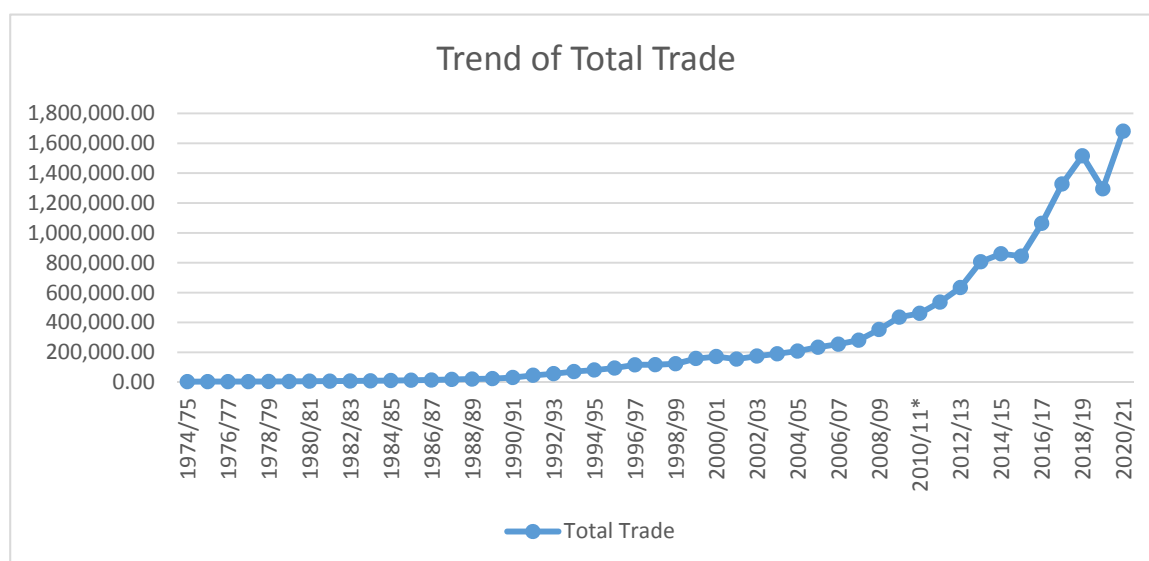
Table 4.9
Trend of Total Trade in Nepal

Year	Total Trade (in Million Rs.)
1974/75	2,704.2
1979/80	4,630.6
1984/85	10,482.7
1989/90	23,481.1
1994/95	81,318.7
1999/00	158,327.6
2004/05	208,179.3
2009/10	435,159.2
2014/15	860,003.3
2015/16	843,716.3
2016/17	1,063,162.3
2017/18	1,326,463.0
2018/19	1,515,644.9
2019/20	1,294,508.2
2020/21	1,680,961.2

Source: Current Macroeconomic and Financial Situation, NRB, 2021.

Table 4.9 and Figure 4.4 shows that total trade in million from the year 1974/75 up to 2020/2021 which shows the increase in value of total trade with increasing years. That means there is an increasing trend of trade in Nepalese economy with the increasing year up to FY 2018/2019 than after due to pandemic cause of covid 19 total trade is decreasing for one fiscal year than trend started to increase as that of previous years.

Figure 4.4
Trend of Total Trade in Nepal



Source: *Current Macroeconomic and Financial Situation, NRB, 2021.*

4.3 Multivariate Analysis

4.3.1 Results of Unit Root Tests

Table 4.10
Results of Unit Root Tests

Variables	Augmented Dickey-Fuller Statistic	
	Level	First Difference
Real GDP (LnRGDP)	-3.481431*	-4.424886***
Broad Money Supply (LnM2)	-4.123120*	-6.661293***
Domestic Credit (LnDC)	-2.964340	-7.502525***

Source: *Author's Calculation.*

Table 4.10 shows the results of the unit root test of the variables used in the model. All the variables are stationary at a one percent level of significance in first order with the trend only. Thus, this allowed using of Johansen Cointegration Test to trace the long-run association between variables in consideration.

4.3.2 Model I

Table 4.11
Result of Johansen Cointegration Test

Trend assumption: Linear deterministic trend				
Series: LNRGDP LNRM2				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.378238	21.07744	15.49471	0.0065
At most 1	0.003828	0.168764	3.841466	0.6812
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
1 Cointegrating Equation(s):				
Normalized cointegrating coefficients (standard error in parentheses)				
LNRGDP	LNRM2			
1.000000	-0.546993			
	(0.00814)			
Log Likelihood	173.9298			

Source: Author's Calculation

In the table 4.11, the normalized cointegration equation shows the long-run relationship between the variables set in the model. The interpretation requires the reversion of the sign of the coefficients. Thus, observing the above table, it can be said that, in the long-run, log of the broad money supply has a positive impact on the log of real gross domestic product. Specifically, when the money supply increase by one percent, economic growth increases by 0.546 percent, and other things remain the same. The coefficient is statistically significant at a 1 percent level of significance. So, we can say that there is a significant and long-run relationship between financial sector development and economic growth in Nepal.

Table 4.12
Estimation of the VEC Model

Vector Error Correction Estimates		
Standard errors in () & t-statistics in []		
Error Correction:	$\Delta(\text{LNRGDP})$	$\Delta(\text{LNRM2})$
CointEq1	-0.267480**	0.705669
	(0.08121)	(0.21247)
	[-3.29384]	[3.32123]
$\Delta\text{LNRGDP}(-1)$	-0.180709	-0.128406
	(0.14460)	(0.37835)
	[-1.24969]	[-0.33938]
$\Delta\text{LNRM2}(-1)$	0.058240**	0.104623
	(0.05400)	(0.14130)
	[1.07843]	[0.74043]
R-squared	0.294350	0.217784
Adj. R-squared	0.241426	0.159118
Log likelihood	108.0126	65.69244

Source: Authors Calculation

The Table 4.12 shows the short-run coefficients of the model. The results of the short-run coefficient show that there is a positive and significant effect of financial development on the economic growth of Nepal. The error correction term is negative in sign as -0.267480 and which is statistically significant. This also confirms that there exists a long-run relationship between financial sector development and economic growth in Nepal. This means that previous years' deviation from the long-run equilibrium is corrected in the current period at an adjustment speed of 26 percent per year.

Looking at the value of the short-run coefficient, money supply as a proxy of financial development is if increases by one percent then economic growth increases by 0.05824 percent other thing remains the same in the short-run.

4.3.3 Test for Autocorrelation

The following table 4.13 shows the result of autocorrelation.

Table 4.13
Result of Autocorrelation Test

VEC Residual Serial Correlation LM Tests						
Null hypothesis: No serial correlation at lag h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	1.110984	4	0.8925	0.275936	(4, 68.0)	0.8925

Source: Authors Calculation

The probability value of the VEC residual serial correlation LM test is greater than five percent which indicates that the null hypothesis of no serial correlation cannot be rejected. So, this confirms that the model is free from the problem of serial correlation.

Table 4.14
Result of Autocorrelation Test

VEC Residual Normality Tests				
Orthogonalization: Cholesky (Lutkepohl)				
Null Hypothesis: Residuals are multivariate normal				
Component	Jarque-Bera	df	Prob.	
1	2.861571	2	0.2391	
2	0.035145	2	0.9826	
Joint	2.896715	4	0.5753	

Source: Authors Calculation

Table 4.14 shows the result of the normality test of the residuals. The joint probability of the JB test is greater than 0.05 so this confirms that residual terms are normally distributed.

Table 4.15
Result of Heteroscedasticity Test

VEC Residual Heteroskedasticity Tests (Includes Cross Terms)			
Joint test:			
Chi-sq	df	Prob.	
71.33600	60	0.1501	

Source: Authors Calculation

Table 4.15 shows that the probability value of the Whites heteroscedasticity test is greater than five percent thus this confirms that the model is free from the problem of heteroscedasticity.

4.3.4 Model II

Table 4.16
Trend assumption: Linear deterministic trend

Trend assumption: Linear deterministic trend				
Series: LNRGDP LNRDC				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.347874	18.90800	15.49471	0.0147
At most 1	0.002207	0.097208	3.841466	0.7552
Trace test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
1 Cointegrating Equation(s):				
Normalized cointegrating coefficients (standard error in parentheses)				
LNRGDP	LNRDC			
1.000000	-0.557487			
	(0.01573)			
Log Likelihood 170.4842				

Source: Authors Calculation

In the table 4.16, the normalized cointegration equation shows the long-run relationship between real gross domestic product and domestic credit. The result shows that there is positive and significant relationship between real GDP and real value of domestic credit.. In long-run, when domestic credit increases by 1 percent, economic growth increases by 0.55 percent keeping other things remains constant.

Table 4.17
Vector Error Correction Estimates

Vector Error Correction Estimates		
Error Correction:	$\Delta(\text{LNRGDP})$	$\Delta(\text{LNRDC})$
CointEq1	-0.126198**	0.423579
	(0.04462)	(0.12185)
	[-2.82835]	[3.47632]
$\Delta\text{LNRGDP}(-1)$	-0.205516	0.273179
	(0.15076)	(0.41169)
	[-1.36322]	[0.66355]
$\Delta\text{LNRDC}(-1)$	0.092096**	-0.070105
	(0.05160)	(0.14092)
	[1.78468]	[-0.49748]
R-squared	0.271415	0.248181
Adj. R-squared	0.216771	0.191795
Log likelihood	107.3089	63.10625

Source: Authors Calculation

The Table 4.17 shows the short-run relationship between real GDP and real value of domestic credit. The result shows that there is positive and significant relationship between real GDP and one year lagged value of domestic credit in short-run. In short-run, when real value of domestic credit increases by 1 percent then real GDP increases by 0.092 percent keeping other things remaining constant. This relationship is significant at 10 percent level of significance.

The error correction term is negative in sign as -0.1261 and which is statistically significant. This also confirms that there exists a long-run relationship between domestic credit and economic growth in Nepal. This means that previous years'

deviation from the long-run equilibrium is corrected in the current period at an adjustment speed of 12.61 percent per year.

Table 4.18
VEC Residual Serial Correlation LM Tests

VEC Residual Serial Correlation LM Tests						
Null hypothesis: No serial correlation at lag h						
Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	1.401359	4	0.8440	0.348918	(4, 74.0)	0.8440

Source: Authors Calculation

The probability value of the VEC residual serial correlation LM test is 0.84 which is greater than five percent. It means we cannot reject the null hypothesis of no serial auto correlation. Therefore, this confirms that the model is free from the problem of autocorrelation.

Table 4.19
VEC Residual Normality Tests

VEC Residual Normality Tests				
VEC Residual Normality Tests				
Component	Jarque-Bera	df	Prob.	
1	9.953074	2	0.0069	
2	7.678120	2	0.0215	
Joint	17.63119	4	0.0015	

Source: Authors Calculation

The Table 4.19 shows that the result of Jarque-Bera test. The joint probability value of Larque-Bera test is 0.15 which is greater than 5 percent. It means we cannot reject the null hypothesis that the model is normally distributed. Therefore, this result shows that model is normally distributed.

Table 4.20
VEC Residual Heteroskedasticity Tests (Includes Cross Terms)

VEC Residual Heteroskedasticity Tests (Includes Cross Terms)		
Joint test:		
Chi-sq	df	Prob.
30.63098	27	0.2866

Source: Authors Calculation

Table 4.10 shows that the probability value of the Whites heteroscedasticity test is 0.28 which is greater than five percent thus this confirms that the model is free from the problem of heteroscedasticity.

4.3.5 Pairwise Granger Casualty Test

The following table shows the results of simple pairwise Granger causality between financial development and economic growth in Nepal.

Table 4.21
Result of Pairwise Granger Causality Test

Null Hypothesis:	Observations	F-Statistic	Prob.
LNRM2 does not Granger Cause LNRGDP	44	7.02192	0.0025
LNRGDP does not Granger Cause LNRM2		5.39249	0.0086
LNRDC does not Granger Cause LNRGDP	44	6.16796	0.0047
LNRGDP does not Granger Cause LNRDC		4.50841	0.0173
LNRDC does not Granger Cause LNRM2	44	4.44875	0.0182
LNRM2 does not Granger Cause LNRDC		8.01064	0.0012

Source: Authors Calculation

Table 4.21 shows the result of a simple pairwise Granger causality test between financial development and economic growth. Both the proxies of financial development cause economic growth and economic growth also matter for financial development. This verifies there is a bidirectional relationship between financial development and economic growth in Nepal.

4.3.6 Determinants of GDP in Nepal

This section analyses the effects of different macro-economic variables on GDP and its growth rate in Nepal using data from 1974/75 to 2020/21. Using multiple regression analysis, nominal GDP is taken as dependent variable whereas variables like private sector credit, gross capital formation, total trade of country, broad money, and number of banking and financial institutions, consumer price index are taken as independent variables.

Table 4.22
Result of Regression Analysis

	Coefficients	Standard Error	t Stat	P-value
Intercept	3.307755882	0.300680237	11.00090885	1.14936E-13
CPI	-0.177163047	0.102388972	-1.730294223	0.091287353
Total Trade	0.031653174	0.017452276	1.813698954	0.077231278
BFIS	0.02919191	0.012824073	2.276336848	0.028252183
PSC	0.00158368	0.011495661	0.137763304	0.891118647
M2	0.183189106	0.038081556	4.810441752	2.16189E-05
GCF	0.13333468	0.049383268	2.699997086	0.010113754

Source : Authors calculation from NRB data.

Table 4.22 shows the relationship between the nominal gross domestic products with other 6 different independent macroeconomic variables. Coefficients of all these macroeconomic variables indicated that there is negative relationship between the growth of consumer price index in Nepal and nominal gross domestic product of Nepal. Higher the inflation results lower the GDP and vice-versa. Total trade, number of banking and financial institutions, private sector credit, broad money and gross capital formation is found to have positive association with the GDP and its growth rate in Nepal.

The balance of trade and total trade is one of the key components of a country's gross domestic product. This result supports this theory also. Investment, money supply, private sector credit etc are the dynamic elements of Gross Domestic Product (GDP), the only one that allows domestic production to increase. It impacts the consumer and

government spending, the latter through increased tax revenues. When the GDP growth rate shows rising economic productivity, the value of money in circulation increases. This is because each unit of currency can subsequently be exchanged for more valuable goods and services.

These results shows strong evidence that proves the primary role of financial sector development in growth is improving the efficiency of investment, trade, production and thereby contributing to higher economy wide productivity, GDP and its growth.

Table 4.23
Regression Statistics

Regression Statistics	
Multiple R	0.998977223
R Square	0.997955491
Adjusted R Square	0.997648815
Standard Error	0.028046835
Observations	47

Table 4.23 shows the calculated value of multiple R, R^2 and adjusted R^2 . The values of which are very high which indicates that there is strong significancy in chosen regression model.

CHAPTER V

MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This chapter has tried to highlight the conclusion of the study including a recommendation on the basis of the study.

5.1 Major Findings

This study's purpose is to examine the relationship between financial development and economic growth in Nepal using annual time series data for 46 years from 1976 to 2021. Thus, the study attempted to find out the nature of the relationship between financial development and economic growth. Financial development is measured by considering the important financial development indicators and variables. After the establishment of Nepal Bank Limited in 1937 AD, the formal financial activities in Nepal were started. The general people got access to a banking transaction. NRB was established in 1956 as a central bank. After the establishment of the central bank, the development of commercial banks and the financial sector took the place. Nepal adopted the liberal policy in the 1980s and after it, the financial sector geared quickly. Specifically, after the promulgation of the NRB Act -2002, the process of the financial sector reform attained its peak. Financial sector reforms have made drastic changes in the economy and financial intermediaries and thus structural break was found out in the data.

Major findings of this study are stated as follows:

- The descriptive analysis explains that the policy changes that took place in Nepal during the sample period had very important role in developing an establishing new banking and financial institutions. A rise in number of BFIS and financial deepening and access also indicates an increase in financial development.
- Financial access is increasing with the implementation of fiscal federalism. In recent years, remarkable progress has been achieved in areas of expansion of branches of banks and financial institutions. Of the total 753 local levels,

commercial bank branches have reached to 750 local levels. Financial access has been expanding in recent years. Financial transactions have been linked with electronic system. Share of agriculture sector in GDP is in decreasing trend while the share of industry sector was more uniform or constant as compared to other sectors of an economy, whereas share of service sector in GDP is increasing constantly with increasing years.

- The normalized cointegration equation shows the long-run relationship between real gross domestic product and domestic credit. The result shows that there is positive and significant relationship between real GDP and real value of domestic credit.
- The result of a simple pairwise Granger causality test between financial development and economic growth. Both the proxies of financial development cause economic growth and economic growth also matter for financial development. This verifies there is a bidirectional relationship between financial development and economic growth in Nepal.
- VEC estimate shows the short-run relationship between real GDP and real value of domestic credit. The result shows that there is positive and significant relationship between real GDP and one year lagged value of domestic credit in short-run.
- This finding of the study supports the endogenous theories of economic growth.

5.2 Conclusions

One of the central objective of macroeconomic policy of Nepal is to attain the high level of economic growth. To achieve this objective both monetary and fiscal policies implement various instruments. However, low economic growth is the major characteristic of Nepalese economy. In this regard, examining the relationship between financial development and economic growth is necessary. Therefore, the central objective of this study is to examine the nexus between economic growth and financial sector development.

The study found a positive and significant relationship between financial development and economic growth in Nepal both in the short run as well as in the

long run. The economic growth is positively related with money supply and domestic credit in short-run as well as in long run. Similarly, the result of Granger causality test shows that bidirectional relationship between financial development including money supply and domestic credit as a proxy variable and economic growth in Nepal. This indicates that financial development plays significant role for economic growth as well as economic growth also matters for financial development. The study supports both demand-driven and supply-leading hypotheses in the context of Nepal.

5.3 Recommendations

From the above conclusions, this study recommended the following points:

- 1) The study found that positive and significant relationship between economic growth and money supply in long-run as well as short-run. Therefore, Nepal Rastra Bank Could adopts expansionary monetary policy for achieving high level of economic growth.
- 2) The study also found that economic growth is also significantly associated with domestic credit in long-run as well as short-run. Therefore, Nepal Rastra Bank also encourages the private sector lending especially in productive sector to achieve high level of economic growth.
- 3) The Granger causality result shows that bidirectional relationship between economic growth and financial sector developments. Therefore, both government of Nepal and central bank focus on economic growth for financial development.

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ANNEX

Table 1 /Data Used for Regression

FY	Consumer Price Index	Total Trade	Banking and Financial Institutions
1974/75	4	890	4
1975/76	4	1186	4
1976/77	4	1165	4
1977/78	5	1046	4
1778/79	5	1297	4
1979/80	5	1151	4
1980/81	6	1609	4
1981/82	7	1492	4
1982/83	8	1132	4
1983/84	8	1704	5
1984/85	8	2741	5
1985/86	10	3078	6
1986/87	11	2991	7
1987/88	12	4115	7
1988/89	13	4195	7
1989/90	15	5156	7
1990/91	16	7388	7
1991/92	20	13707	8
1992/93	21	17267	20
1993/94	23	19293	40
1994/95	25	17639	47
1995/96	27	19881	55
1996/97	29	22637	62
1997/98	32	27514	66
1998/99	35	35676	73
1999/2000	36	49823	74
2000/01	37	55654	79
2001/02	38	46945	92
2002/03	40	49931	96
2003/04	42	53911	100
2004/05	44	58706	114
2005/06	47	60234	128
2006/07	50	59383	144
2007/08	53	59267	173
2008/09	60	67698	181
2009/10	66	60824	203
2010/11	72	64339	218
2011/12	78	74261	214

2012/13	86	76917	207
2013/14	93	91991	204
2014/15	100	85319	192
2015/16	110	70117	179
2016/17	115	73049	149
2017/18	120	81360	151
2018/19	125	97110	170
2019/20	133	97709	154
2020/21	138	141124	132

Table 2 / Data Used for Regression

All data are presented in Million Rs. But nominal GDP is presented in billion Rs.

FY	Private Sector Credit	Broad Money	Gross Capital Formation	NGDP
1974/75	783	2064	2223	17
1975/76	716	2524	2443	17
1976/77	864	3223	2580	17
1977/78	1071	3772	3294	20
1978/79	1332	4511	3263	26
1979/80	1917	5285	3681	23
1980/81	2498	6308	4299	27
1981/82	2638	7458	5465	31
1982/83	2699	9222	6576	34
1983/84	3174	10455	6907	39
1984/85	4037	12297	9386	47
1985/86	5168	15159	9431	56
1986/87	6133	17498	11825	64
1987/88	7947	21423	13414	77
1988/89	10357	26605	16392	89
1989/90	11688	31552	17002	103
1990/91	14109	37713	22780	120
1991/92	17780	45671	29277	149
1992/93	21209	58323	37278	171
1993/94	29607	69777	42032	199
1994/95	41943	80985	48370	219
1995/96	55525	92652	56081	249
1996/97	64659	103721	60794	281
1997/98	76830	126463	65375	301
1998/99	90801	152800	65269	342
1999/00	109448	186121	73324	379
2000/01	126758	214454	84751	442
2001/02	133315	223988	89889	459
2002/03	150957	245911	98073	492
2003/04	172517	277306	109181	537
2004/05	197017	300440	117539	589
2005/06	243570	346824	135532	654
2006/07	273477	395518	153337	728
2007/08	339834	495377	178446	816
2008/09	438354	630521	211039	988
2009/10	500651	719599	264888	1193
2010/11	727322	921320	292730	1563
2011/12	809826	1130302	317185	1758
2012/13	973026	1315376	382972	1949

2013/14	1150825	1565967	462017	2233
2014/15	1373945	1877802	595823	2424
2015/16	1692306	2244579	647294	2608
2016/17	1997160	2591702	840693	3077
2017/18	2442784	3094467	1025648	3456
2018/19	291027	3582130	1304000	3859
2019/20	327689	4230970	1184900	3889
2020/21	413955	5154850	1276900	4277