

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Within a short period of last two decades, the Nepalese financial system has grown significantly both in terms of business volume and the size of the market. 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. Broadly, Nepalese financial sector can be divided into two parts, namely the banking system and the non-bank financial system. The banking system comprises Nepal Rastra Bank and all Commercial Banks while, the non-bank financial system consists of the Development Banks, Finance Companies, Rural Micro Finance Development Banks (licensed by NRB), Savings and Credit Cooperative Societies with limited banking activities (licensed by NRB) and Non-Government Organizations with limited banking activities (licensed by NRB). Moreover, Employees Provident Fund, Nepal Stock Exchange Limited, Insurances Companies, Deposit Insurance and Credit Guarantee Corporation, Credit Information Center Limited, Citizen Investment Trust and Postal Saving offices are also categorized under the non-bank financial system but do not come under the jurisdiction of central bank for their regulation and supervision. The Gross Domestic Product (GDP) in Nepal expanded 7.10 percent in 2018 from the previous year. GDP Annual Growth Rate in Nepal averaged 4.61 percent from 1993 until 2018, reaching an all time high of 8.60 percent in 1993 and a record low of 0.10 percent in 2001 (NRB, Annual Report, 2018). Per capita income of Nepal is 1034 USD approximately which is highest till now (NRB, Annual Report, 2018).

Financial institutions play important role in activity of the national economy. They perform a wide variety of functions in the financial system. Economic development demands transformation of savings or resources into the actual investment. It is financial funds from surplus spending units to deficit units. Capital formation is one of the important factors in the economic development. The capital formation leads to increase in size of national output, income and employment. Profit made by business community constituted the major parts of savings. A key factor in the development of an economy is the mobilization of domestic resources. An intermediary, the financial institution refers to that business concern which is only confined to finance for the development of trade, commerce and industry. Such financial institutions play a significant role to uplift the economy of any country. The financial

development is required for every nation and increasing its role every period of time. Financial institution and banking system may make a positive contribution to economic growth, this effect may be counteracted by other factors in the economy, such as “an unfavorable resource endowment, a population that grows either too slowly or too rapidly, or inept government policies” (Cameron, 1972). In the same way, a bad banking system on the economy may not have a substantial negative impact in growth if other factors offset this impact. In any case, it is possible to think of a banking system which may contribute more or less to the economic development of a country, depending on the different policies adopted.

The relationship between financial systems and economic growth is increasing issues, in both theoretical and applied research. The roles of financial system in economic growth has debate and it is inadequately conceptualized and poorly understood, something, which can be partly attributed to the lack of a generalized or unifying theory, and the myopic way conventional economies approach the issue. There are various debates for the role of financial system and commercial bank in the economic growth. There are several partial theories that discuss the role of various factors in determining economic growth.

Thus, the main issue of this graduate research project is to analyze the development of commercial bank in the economic growth of Nepal. In the previous study there are a various gaps, shortcomings and unresolved issues in the literature on the linkage between financial institutions and economic growth. It is anticipated that this graduate research project, by using different methods and approaches will help to bridge the gap. The main aim of this research is to make a contribution towards our understanding of the relationship between financial institution and economic growth of Nepal. Lending (also known as "financing") in its most general sense is the temporary giving of money or property to another person with the expectation that it will be repaid. In a business and financial context, lending includes many different types of commercial loans. Lending and borrowing are the same transactions from the two viewpoints. Lending facilities are in form of loan, advances, overdraft, bills, discounted bond etc. Lending is the one of the most intricate services rendered by banks and credit facilities are integral part of the bank. It is the indisputable fact that most important assets items in the balance sheet of banks are loan and advances, these items are reported for good reason from the bank perspective they are largest source of income. Loan and advances are basically guided by monetary and the guidelines set minimum and maximum level of credit that could be given to particular sector of economy. Bankers are therefore advised to follow strictly these guidelines and receipts on appraisal of a customer proposal for loan. There are some conditions, which must be fulfilled by bank/customer before such facilities are granted which include character of borrower, the amount to be borrowed, purpose of loan etc. for eg. Deprived sector loan. GDP refers to income generated by factors of production within the country from its own resources. Domestic income includes wages and salaries, rents,

interest, dividends, undistributed corporate profits, direct taxes. Since domestic income does not include income earned from abroad, it can also be shown as: Domestic Income = National Income – Net Income earned from abroad. Thus the difference between income and national income is the net income earned from the abroad.

Economic growth is the increase in the amount of the goods and services produced by an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP. Growth is usually calculated in real terms, i.e. inflation-adjusted terms, in order to obviate the distorting effect of inflation on the price of the goods produced.

An economy refers to the economic system of an area, region or country. It is a system by which people get a living. An economy is a system of parts which are interrelated and interdependent like the cells of an animal or plants. Despite the complexities of specialization involved, it is a system of mutual exchange between producers and consumers. There are three main functions of economies. They are production, consumption and growth.

Commercial banks also extend credit when they purchase securities; and this category of assets may be especially attractive when loan demand is slack, as a way of employing loan able funds. A very high percentage of these securities represent the obligations of government units. The remainder is corporate notes and bonds. Nepalese commercial banks have invested on shares and debentures of Nepal Insurance and Transport Company, National Insurance Company, Nepal Oil Corporation, Credit Guarantee Corporation, Agricultural Projects Service Centre, Rural Development banks and so on. Investment of the commercial banks consist government treasury bills, government saving bonds, central bank bonds, foreign securities, local licensed institutions, foreign banks, corporate shares, corporate bonds and debentures and other investments.

Commercial banks accept deposits from individuals, partnership firms and corporations. It is the most important function of the commercial bank. In the context of commercial banks in Nepal, there are basically, non-interest bearing deposits and interest bearing deposits. The non-interest bearing deposits include current deposits, margin deposits and other deposits. But interest bearing deposits consists of savings, fixed deposits, call deposits, and certificate of deposits.

1.2 Statement of the Problem

Although, the number of financial institutions including Commercial Banks have increased rapidly; with the introduction of liberalized economic policy after 1990's. Capital resource is the prime source of the economic development of the country. Economic development of a country succeeds only when the development of the capital formation mechanism exists. The major cause of this chronic problem is the lack of economic development or the slow rate of

the national economic growth. With the increased sophistication and liberalization of financial markets, this has made the problem of debt management one of the most important issues in economic policy. The coverage of Commercial Banks has not spread throughout the nation uniformly. Most of them centered in limited and facilitated urban areas like Kathmandu Valley and other major cities. The increase in the number of Commercial Banks causes the increase of its share in the whole financial system and consequently the contribution in the economic development of the country through mobilization of funds and utilization of its funds to increase the aggregate demand in the economy. It has been apparent that there is a difficult for long term and medium-term loan as the procedure to provide such facilities to the customers is very lengthy. On the other hand, due to the lack of deposit habit of the Nepalese people, a low rate of deposit formation has been observed, which ultimately has been affecting the lending procedure of the bank. Banks have to hugely depend on mortgage of properties; however, in case of default the bank is incapable to get back its funds promptly and effectively due to the lack of proper legal procedures.

Based in this statement, this study is focused on the following research questions:

- i) What is the status of GDP of Nepal, Deposit, Investment and Lending of commercial banks of Nepal?
- ii) What is relationship GDP with Lending, Deposit and Investment of commercial banks of Nepal?
- iii) What is impact of Lending, Deposit and Investment of commercial banks on GDP of Nepal?

1.3 Objectives of the Study

The general objective of the study is to examine the role of Commercial Banks in the entire financial system of Nepalese economy. Based on the above general objective the following are the specific objectives of this study:

- i. To identify the status of GDP of Nepal, Bank lending, Deposit and Investment of commercial banks in Nepal
- ii. To examine the relationship of GDP with Lending, Deposit and Investment of commercial banks in Nepal
- iii. To examine the impact of Lending, Deposit and Investment on GDP with lending of commercial banks in Nepal

1.4 Significance of the Study

The emergence of the Commercial Banks in the field of banking service industry in Nepal is playing a significant role. It has also contributed in the Nepalese economy gradually. Due to the lack of time series data during a short span of time, limited study has been made in this research. Hence, the role of the Commercial Banks in the Nepalese economy should be assessed with the help of using certain statistical tools with quantifiable variables as well as the descriptive analysis. It is expected that the findings and recommendations of this study will be useful for the policy makers and for further studies also. Probably, this study is a first in kind with respect to assessing the economic contribution of Commercial Banks in economic development of Nepalese economy. Banks are the backbone of financial system. They accept the deposits from natural persons, government institutions, business units & non-business sectors. They generate funds available through their lending and investing activities to borrowing; individuals, business firm and government establishments. In doing so, they assist both the flow of goods and services from the products to consumers and the financial activities of the government. These facts show the banking system of nation is important to the functioning of the economy.

Bank creates funds from its client by saving and lends the some to needing person or business institutions in terms of Lending, Deposit and investment. So, proper financial decision making is more important in banking transaction for its efficiency and profitability. Most of the financial decision making are concerned with lending policy and lending management. It plays the vital role in the business succession, so efficient lending management is needed. This study deals with the lending position, non-performing loan, lending portfolio management and relation of lending in profitability of the bank.

1.5 Limitations of the Study

This study has been conducted appropriately for academic purposes; however there were several complications. As this research tries to justify the events in accordance with the well-known or already established tools and techniques, emphasis is not given to fundamental and decision-oriented study. There are certain drawbacks on the present study of lending of commercial banks, which emerged as limitations of the study. Due to the time limitations, it consists only commercial banks of Nepal. There are more variables of banking sector but only limited variables has been taken i.e. research only focuses on the Lending, Deposit and Investment of commercial banks and GDP of Nepal. Lending management concept has appeared as a major research gap in Nepalese commercial banks. There is lack of scientific research that could identify the issues of Lending management in commercial banks. In this

regard, the performance of the commercial banks is to be analyzed in terms of lending, Deposit and Investment.

1.6 Chapter Plan

This research thesis will be organized into five distinctive chapters. Chapter one will be the introduction part and provides background theory, statement of problem, significance of study, research objectives and limitations of the study will be included. Chapter two will be the literature review on previous studies and related researches. Chapter three presents the research methodology including research design, population and sampling, source of data, data collection and processing procedure and data analysis tools and techniques. Chapter four will outline the results and discussion. Chapter five is the major findings, summary, conclusion and recommendation. This chapter will provide a discussion in the light of main research questions and literature review.

CHAPTER 2: LITERATURE REVIEW

2.1 Conceptual Review

Literature review is the review of some related literature on the specific topic or the review of previous studies and conceptual framework for the related studies. To present the real framework of the research, only analysis of data is not enough, review of some related materials are also essential to give the research a clear vision. It covers those studies, which are conducted within or outside the country. Literature review is basically a, stock taking of available literature in ones field of research.

This chapter basically concerned with review of literature related to the impact of commercial banks in the economic growth of Nepal. It supports the researcher to explore the relevant and true facts for the reporting purpose in the field of study. Every possible efforts has been made to grasp knowledge and information that is available from libraries, books, articles, journals, national and international publications and other information bureaus. Many researchers have conducted their research in the field of commercial bank and its impact on economic growth of Nepal. Besides this, there are some books, articles, journals and other relevant study concerned with the aspects of financial institution which will be taken as the literature review for the study. Some of the relevant studies, their objectives, findings and conclusions and other literature relating to the topics have been reviewed in this study.

2.1.1 Lending, GDP and Economic growth

In financial terms loan or debt means principal or interest availed to the borrowers against the security. Debt means money that bank owes or lend to individual or person. Likewise, the term loan is defined as lending. Delivery by one party and receipt by another party, a sum of money upon agreement expressed or implied, to repay it with or without interest. Anything furnished for temporary use to a person at his request, on that condition it shall be returned or its equivalent in kind, with or without compensation for its use. Loan includes:

1. The acceptance of debt arising from a loan.
2. The creation of debt persuades to a lender credit card or similar arrangement.
3. The creation of debt by credit to an account with the lender upon which the debtor is entitled to draw immediately.
4. The certain of debt by the lender's payment of or agreement to pay money to the debtor or to a third party of the debtor.

Further debt means "Principal and Interest" provided to debtor by financial institutions, with the pledge of immovable or movable property, securities, guarantee, without guarantee and the word also means over dues of the transaction beyond balance or fees, commission and interest incurred in that relation. The supreme court of India has defined the debt during the decision of

the case “In the case in hand, there cannot be any dispute that the expression ‘debt’ has to be given the widest amplitude to mean any liability which is alleged as dues from any person by a bank during the course of any business activities undertaken by the bank either in cash or otherwise, whether secured or unsecured, whether payable under a decree or order of any court or otherwise and legally recoverable on the date of the application.

Financial institution play very important and significant role in the economic growth of Nepal. There is no suspicion that the banking sector is important for both developed and developing economies. Developed economies already have a highly sophisticated financial market in place whereas developing economies have no or only undeveloped institutions in place. To offer a detailed and realistic study of Nepalese banking and institutions as rural and the urban areas over the recent decades; Pokharel (2009) has carried a research on “A Short Review on Financial Institutions in Economic Growth of Nepal”. Pokharel in his research his objective of the research is to investigate the contribution of commercial banks to the economic growth of Nepal. Another objective is to analyze the capital, GRDP (GDP ratio), Population and employer expenditure in commercial banks. In his study he has used production function model and analysed the data with multi – variate regression analysis. Major findings of the study he has found that, in the context of Nepalese economy, there are enormous differences between the urban and the rural sides which are seen as the regional and the rural economy. At the urban region, huge quantity of finance is focused into the industrial sectors where the people are also of upper class grade whose income is higher than general average income level of the country. Total capital is doubling and the population is also increasing in which population is effected by banking and financial institutions in affected areas. The review of the analysis indicates that the GRDP is crucial for the enhancement of per capita income and economic development of the country.

A research on the topic “A study of the financial system and economic growth: the experts view” (Bhandari, 2011). In his study his objectives is to describe the expert’s view regarding the relationship between financial system and economic growth in the Nepal and will try to makes significant contribution in area of financial sectors. The study will based on empirical analysis using questionnaire survey collection from various experts of different fields. The survey has identified a number of important factors that determinants of economic growth of the Nepal. The relationship between financial structure and economic growth determinants are consistent but it has highlights the increasing influence of political and institutional factors. Another finding was that the legal environment of Nepal.

In a article “Impact of Bank’s deposit in economic growth of Nepal” has examines the bank’s deposit and its impact on economic growth of Nepal over the period of 1990 to 2010 AD (Dhungana B. , 2011). The study was focused on the study the impact of commercial bank on economic growth of Nepal. Trend analysis has been done to reach to the conclusion. From the

trend analysis in this article he has found that higher the deposit of the financial institutions, higher the level of GDP and economic growth of the nation. Similarly, higher level of the deposit of commercial banks has been contributing for the enhancement of nominal GDP and economic growth of the nation.

The main objective of financial liberalisation index for Nepal was to evaluate the impact of the various liberalization measures on financial system and economic growth of Nepal. To examine the rationale of executing financial liberalization policy (Shrestha M. B., 2006). And to prepare an account of the evolution, process and sequencing of the financial liberalization in Nepal. The methods used in this study to analyze the data are used of econometric models. The models used in this study are co-integration and ARDL models to reach to the definite conclusion. Based on the study he reached to the conclusion that the number of per capita bank branches is significantly associated with the widening of the financial sector, and that the financial widening affects financial development. The policy implication of the findings is that the government should encourage the branch extension of banks in order to speed up the financial development in the country. Another finding of this study is that the real deposit rate is the key determinant of the time deposits whereas income is not. Overall the result shows that the financial liberalization in Nepal has brought some positive impact on financial development and economic growth, but some negative impact on the redistribution and financial stability aspects has been carried a work on “Financial institution and economic growth: The case of Nepal”. The objective of the study (Dhungana B. , 2014) is to investigate the contribution of financial institutions to the economic growth using Deposit/GDP ratio, etc., in a developing country setting in Nepal; and to study the development of the commercial banks in Nepal in recent decades.

2.1.2 Types of Loans

Banks make a wide variety of loans to wide variety of customers for many different purposes. For customers, the cause of loan purchasing may be investment in business, purchasing automobiles, take dream vacations, pursuing college educations, constructing home and office building so on. On the basis of loan purpose, bank loans can be divided into following categories.

1. Term loan

Term Loan is money lent to the borrowers in a lump sum. Generally, subsequent debt in the loan account is not allowed except by way of interest, incidental charges, insurance premiums, expenses incurred for the protection of the security. Term loans are generally granted for long period to finance fixed assets and are repayable on installments over the period of loan.

2. Project Loan

Project loan is granted to customers on the basis of the viability of the project. The financial institution asks the borrower to invest certain proportion to the project from their equity and the rest be financed as project loan. The debt equity ratio in case of project loan is generally 60:40. The project loan includes the term loan and working capital loan required by the project.

3. Working Capital Loan

Working Capital is the difference between current assets and current liabilities. This type of loan is granted to the customer to meet their working capital gap. Working capital can be divided into fixed working capital and variable working capital. Fixed working capital is financed by way of short-term loan while variable working capital is financed by overdraft.

4. Loan against Fixed Deposit Receipt

The depositor keeps fixed deposits for a specified period. If a depositor needs money before its maturity date, he can obtain loan against the security of such fixed deposits.

5. Priority/Deprived Sector Loan

Development banks are required to extend advances to the priority sector and deprived sector. Out of the total credit facility of the development bank must be extended towards 15% loan priority sector loan including productive sector loan & deprived sector loan.

6. Overdraft

Overdraft facility is a kind of working capital loan. This facility is allowed in current accounts and for one-year period. Overdraft is an agreement by which the banker allows the customers to draw over and above the current account balance. The borrower cannot exceed the limit sanctioned to customer. In this account, the balance is fluctuating because of withdrawal and repayment of money by the borrower. Interest on overdraft is charged on debit balance on daily basis. Overdraft is generally granted to the businessmen for the fulfillment of their short-term needs.

7. Cash Credit

Cash Credit is similar to the overdraft account by which the customer is allowed to overdraw his account. Under cash credit, the bank offers its customer to take a loan up to a certain limit. The borrower may operate the account within stipulated limit and when required. Cash credit is provided against the pledge or stock in trade, goods, Plants and machinery, land and buildings so on. Interest is charged only on the amount of loan taken by the customer and not on the amount of credit sanctioned.

8. Hire-Purchase Financing

Hire purchase is a type of installment credit under which the hire purchaser, called the hirer, agrees to take the goods on hire at a stated rental, which is inclusive of repayment of principal as well as interest, with an optional to purchase. Goods for the purchase of hire purchase may be bus, truck, car, jeep, and machinery so on. Hire purchase facility can be granted to the person

having fixed source of income. The facility can also be granted to the institutions.

9. Bill Purchase and Discount

Purchasing of bill of exchange of customers in whose favors limit is sanctioned is called purchasing of bills. Bills may be either documentary bills or clean bill. If a bill is accompanied documents of title to the goods (Railway Receipt, Truck receipt, Airway Bill) it is called documentary bill. In the absence of such document, it is called clean bill.

10. Bridge-Gap Loan

If a term loan is approved to some customers and the approving institution cannot disburse the facility because of incompleteness of legal and other formalities. In this situation customer may ask as bridge gap loan.

11. Consortium Loan

While a single financial institution cannot grant credit to a project because of single borrower limit or other reasons, two or more such institutions may agree to grant credit facility to the project. Such kind of loan is called consortium loan. Financial institutions may also go on consortium financing to share the risk of project between them.

12. Real Estate Loan

It is the credit extended to purchase or improves real property, such as land and buildings. Real property-land buildings and other structure secure such loans. Real estate loans include longer-term loan to finance the purchase of farmland, house, apartments, commercial structure and foreign properties.

13. Commercial and Industrial Loan

Commercial and industrial loans are extended to business firms to support the production and distribution of their products and services. It is granted business to cover such expenses as purchasing inventories, paying tax, meeting payrolls too.

14. Housing Loan

Financial institutions also extend housing loan to their customers. Housing loans may be of different nature e.g., residential building, commercial complex, construction of warehouse etc, housing loans are granted to the customer if they have regular source of income or if they earn revenue from the housing project itself.

15. Off -Balance Sheet Transaction

The bank provides the facilities to the client being the guarantor in some transaction. This facility provided to the client mainly in two ways. First bank guarantee and second is Letters of credit. This transaction is also called off balance sheet transaction.

a. Bank Guarantee

Bank guarantee expresses a commitment of the bank to pay or fulfillment of the responsibility of any financial loss and beneficiary of the guarantee may sustain when the party named in Guarantee on whose behalf the guarantee is issued falls to perform the contract and or discharge his/her obligation.

b. Letter of Credit

Letter of Credit is a commitment by a bank on behalf of its customer to pay the counter value of goods/services within a given date of its supplier according to agreed stipulated and against presentation of specified documents. Letter of Credit is used an instrument for settlement of payment arising out of the commercial transaction like sales/purchases so on. In such credit payment obligation arises only upon fulfillment of specified conditions. (www.wikipedia.com)

2.1.3 Sound Lending Policy of Nepal

The income and profit of the commercial banks depend upon its lending procedure. The greater the credit created by bank, the higher is the profitability. A sound lending policy is not only prerequisite for banks profitability, but also crucially significant for the promotion of saving of backward of country (Shrestha M. , 2009). Some features of Sound lending policy are considered as under:

1. Safety

Safety is the most important principle of good lending. If borrower invests the money in an unproductive or speculative venture, or if the borrower is dishonest, the advance would be in jeopardy. Similarly, if the borrower suffers losses in his business due to his incompetence, the recovery of the money may become difficult. The banker ensure that the money advanced by customer goes to the right type of borrower and is utilized in such a way that it is not only be safe at the time of lending but remains so throughout, and after serving a useful purpose in the trade or industries where it is employed, is repaid with interest.

2. Liquidity

The borrower must be in a position to repay within a reasonable time after a demand for repayment is made. This can be possible only if the money is employed by borrower for short-term requirements and not locked up in acquiring fixed assets, or in schemes, which take a long time to pay their way. The source of repayment must also be definite. The reason why bankers attach as much importance to “liquidity” as to “safety” of their funds is that a bulk of their deposits is repayable on demand or at short notice.

3. Purpose

The purpose should be productive so that the money not only remains safe but also provide a definite source of repayment. The banker must closely scrutinize the purpose for which the money is required, and ensure, as far as he can, that the borrower applies the money borrowed

for a particular purpose accordingly.

4. Profitability

Like other business institutions, banks must make profit. They have to pay interest on deposits received by them. They have to incur expenses on establishment, rent, stationery, salary etc. they have to make provision for depreciation of their fixed assets, and also for possible bad or doubtful debts. After meeting all these items of expenditure which enter the running cost of banks, a reasonable profit must be made; otherwise, it is not possible to carry anything to the reserve of pay dividend to the shareholders. It is after considering all these factors that a bank decides upon its lending rate.

5. Collateral/Security

It has been the practice of banks not to lend as far as possible except against security. Security can be considered as insurance. Security may be generally classified as personal and tangible, as well as primary and collateral. The banker carefully scrutinizes all the different aspects of an advance before granting it. At the same time, he provides for an unexpected change in circumstance which affected the safety and liquidity of advance.

6. Spread

Another important principle of good lending is the diversification of advances. An element of risk is always present in every advance, however secure it might appear to be. In fact, the entire banking business is one of taking calculated risks and successful banker is an expert in assessing such risks. He is keen on spreading the risks involved in lending, over a large number of borrowers, industries and over different type of securities.

7. Legality

Illegal securities bring out many problems for the investor. Development banks must follow the rules and regulation as well as different directions issued by Nepal Rastra Bank, Ministry of Finance and other while mobilizing its funds.

8. National Interest

Even when an advance satisfies all the aforesaid principles, it may still not be suitable. The advance may run counter to national interest. It in the changing concept of banking factors such as purpose of the advance, viability of the proposal and national interest are assuming a greater importance than security and export-oriented industries.

2.1.4 Deposit and Investment of Commercial Banks

The largest source by far of funds for banks is deposits; money that account holders entrust to the bank for safekeeping and use in future transactions, as well as modest amounts of interest. Generally referred to as "core deposits," these are typically the checking and savings accounts that so many people currently have. In most cases, these deposits have very short terms. While people will typically maintain accounts for years at a time with a particular bank, the customer

reserves the right to withdraw the full amount at any time. Customers have the option to withdraw money upon demand and the balances are fully insured, up to \$250,000, therefore, banks do not have to pay much for this money. Many banks pay no interest at all on checking account balances, or at least pay very little, and pay interest rates for savings accounts that are well below U.S. Treasury bond rates. A deposit is the act of placing cash (or cash equivalents) with some entity, most commonly with a financial institution such as a bank.

The deposit is a credit for the party (individual or organization) who placed it, and it may be taken back (withdrawn) in accordance with the terms agreed at time of deposit, transferred to some other party, or used for a purchase at a later date. Deposits are usually the main source of funding for banks. Fixed, Saving are the types of deposit of banks.

In finance, the benefit from an investment is called a return. The return may consist of a gain (or loss) realised from the sale of property or an investment, unrealised capital appreciation (or depreciation), or investment income such as dividends, interest, rental income etc., or a combination of capital gain and income. The return may also include currency gains or losses due to changes in the foreign currency exchange rates. Investors generally expect higher returns from riskier their investments. When a low risk investment is made, the return is also generally low. Similarly, high risk comes with high returns. Investors, particularly novices, are often advised to adopt a particular investment strategy and diversify their portfolio. Diversification has the statistical effect of reducing overall risk. An investor may bear a risk of loss of some or all of their capital invested. Investment differs from arbitrage, in which profit is generated without investing capital or bearing risk. Savings bear the (normally remote) risk that the financial provider may default.

Foreign currency savings also bear foreign exchange risk: if the currency of a savings account differs from the account holder's home currency, then there is the risk that the exchange rate between the two currencies will move unfavourably, so that the value of the savings account decreases, measured in the account holder's home currency. In contrast with savings, investments tend to carry more risk, in the form of both a wider variety of risk factors, and a greater level of uncertainty.

Table 2.1: Capital Requirements to establish a Financial Institution.

| Grade / Operation level | Minimum Paid-up capital required | | |
|-------------------------|----------------------------------|----------------|---------------|
| | National Level | 4-10 districts | 1-3 districts |
| ‘Ka’ Grade | 8 Billion | | |
| ‘Kha’ Grade | 2.5 Billion | 1.20 Billion | 500 million |
| ‘Ga’ Grade | 800 Million | 800 million | 400 million |

2.1.5 Concept of Commercial Banks

Commercial banks are those financial institutions, which deals in accepting deposits from persons and institutions and giving loans against securities. They provide working capital needs or trade, industry and even to agriculture sectors. Moreover commercial banks also provide technical and administrative assistance to industries trades and business enterprises. Under the Commercial Bank Act 1947, the commercial banks are those banks which provide short term and long term debts whenever necessary for trade and commerce. They accept deposits from the public and grant loans in different form, purchase and discount the bill for exchange, promissory notes exchange foreign currency. A commercial bank is one which exchange money, deposits money accepts deposit, grants loan and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, industry or for such specific purpose (Nepal Commercial Bank Act 1974).

Commercial banks are the suppliers of finance for trade and industry, which plays vital role in the economic and financial life of the country. They help in the formation of capital by investing the savings in productive areas. Rural people of under developed countries like Nepal need various banking facilities to enhance its economy. In most of the countries, the banks are generally concentrated in urban and semi-urban sectors. They neglect rural sector due to heavy risk and low return, which is in fact, the main key to economic development without it other sectors of economy cannot be flourished. Banks hold cash assets to meet legal requirements and daily transaction needs and they have “correspondent” relationships with other banks. Most bank funds, however, are used to acquire earnings assets. The most important of these are loans to business firms and to consumers. Banks also hold government securities for both liquidity and income reasons. The history of modern financial system of Nepal was begun in 1937 with the establishment of the Nepal Bank Limited (NBL) as the first commercial bank of Nepal with the joint ownership of government and general public. However, the activities of the bank was confined to accepting deposits and providing loans only to the commercial sector in Kathmandu and other limited urban areas. Nepal Rastra Bank (NRB), the central bank of Nepal, was established in 1956 with the central banking responsibilities of guiding the development of the embryonic domestic financial sector. After the establishment of NRB, Nepal witnessed a systematic development of the financial system. In the initial year of operation, the NRB has been focusing towards monetization of the economy by circulating Nepalese currency all over the country. After achieving some progress, it started taking initiation towards institutional development. Consequently, Nepal Industrial Development Bank, Employee’s Provident Fund (EPF), Cooperative Bank, National Insurance Corporation, Agricultural Development Bank (ADB/N) and Rastriya Banijya Bank (RBB) had been established.

Commercial banks act as business firms to operate efficiently. Commercial banks's mission, goals, objectives and policies are similar to those of other financial institutions. All business organization look for long run profits by lending and investing funds at their disposal as high rate of return as is consistent with an appropriate degree of safety of principal. But unlike many other lenders, banks must be prepared to meet the withdrawal of these funds virtually on demand.

2.1.6 Growth of commercial banks in Nepal

The history of financial system of Nepal began in 1937 with the establishment of the Nepal Bank Ltd. as the first commercial bank of Nepal with the joint ownership of government and general public. Nepal Rastra Bank was established after 19 years since the establishment of the first commercial bank. A decade after the establishment of NRB, Rastriya Banijya Bank, a commercial bank under the ownership of Government Nepal was established. In the context of banking development, the 1980s saw a major structural change in financial sector policies, regulations and institutional developments.

Table 2.2: Growth of commercial banks of Nepal

(Source: Nepal Rastra Bank, 2019)

| | | | | | | | |
|-------------------------|------|------|------|------|------|------|------|
| Year | 1985 | 1990 | 1995 | 2000 | 2005 | 2006 | |
| No. of commercial Banks | 3 | 5 | 10 | 13 | 17 | 18 | |
| Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | |
| No. of commercial Banks | 20 | 25 | 26 | 27 | 31 | 32 | |
| Year | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| No. of commercial Banks | 31 | 30 | 30 | 27 | 28 | 28 | 28 |

Government emphasized the role of the private sector for the investment in the financial sector. With the adoption of the financial sector liberalization by the government in 80's, the door opened for foreign banks to open Joint Venture Banks in Nepal.

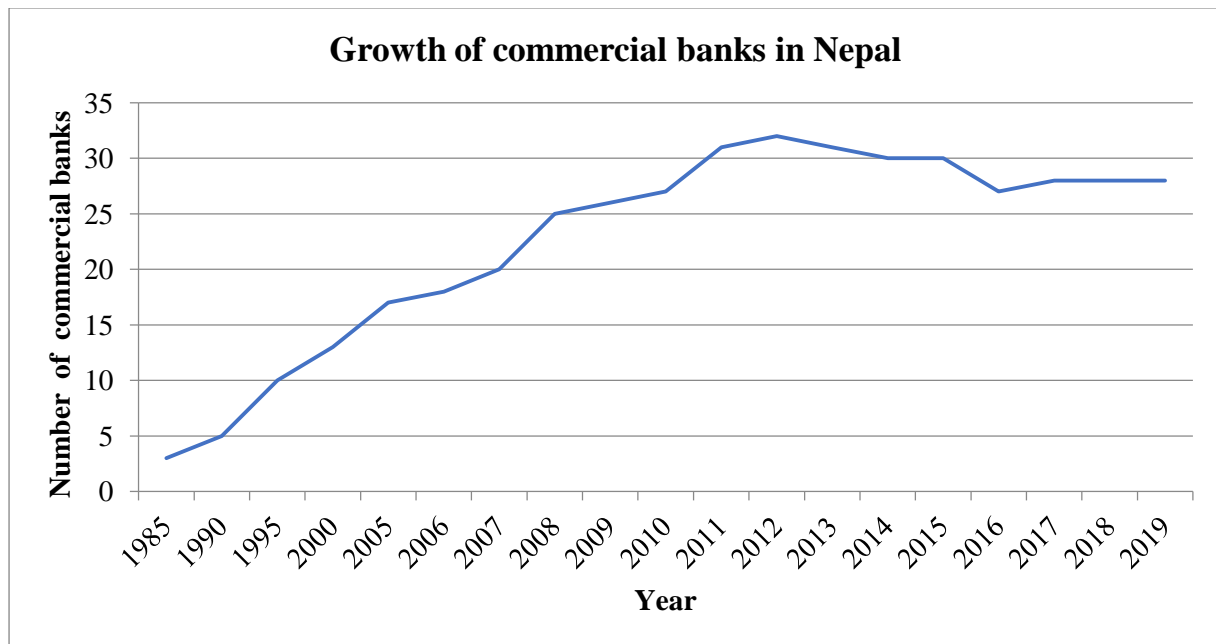


Figure 2.1: Growth of commercial bank of Nepal

As a result, various banking and non-banking financial institutions have come into existence. Consequently, by the end of mid – July 2015, altogether 241 banks and non- bank financial institutions licensed by NRB are in operation. Out of them, 30 are “A” class commercial banks, 76 “B” class development banks, 47 “C” class finance companies, 38 “D” class micro-credit development banks, 15 saving and credit co-operatives and 27 NGOs and 8 other institutions. In mid- July 2015, the total banks branches reached 3,838 with the population of seven thousand two hundred and six per branch as the record of Nepal Rastra Bank. Present development of financial institutions in Nepal. Now due to merger policy of Nepal Rastra Bank number of financial institutions can seen lesser.

2.1.7 Functions of Commercial Banks

The functions of commercial banks are broader in scope, size and magnitudes. Commercial Banks are one of the major financial intermediaries whose primary function is the transfer of monetary resources from the savers to the users. The functions of commercial banks are as follows:

2.1.7.1 Primary Functions:

a) Accepting Deposits:

Commercial banks accept deposits from individuals, partnership firms and corporations. It is the most important function of the commercial bank. In the context of commercial banks in Nepal, there are basically, non-interest bearing deposits and interest bearing deposits.

The non-interest bearing deposits include current deposits, margin deposits and other deposits. But interest bearing deposits consists of savings, fixed deposits, call deposits, and certificate of deposits. Current or demand deposit, often referred to as “checking accounts” are essentially

working balances that individuals, businesses, financial institutions, and government units use to make payments when they need cash. The amount deposit in this account can be withdrawn by drawing cheque without prior information and no interest is offered in this account. Saving deposits generally are in small amount. They bear a relatively low interest rate but may be withdrawn by the depositor with no notice. Interest rate on savings deposit varies from 2 percent to 6 percent as provided by different commercial banks.

Time deposits carry a fixed maturity, a penalty is charged for early withdrawals. This type of deposit usually offers the highest interest rates a bank can pay. However, the depositor can take loan from the bank against the security of fixed deposit receipt. The fixed deposit in commercial banks belong to various maturity structure such as taking from 7 days, 14 days, 1 month, 3 months, 6 months, 1 year, and 2 years and above. Margin deposits are used as margin on lending. Such margin is maintained for giving the loan since commercial banks demand certain margin like 10 to 15 percent of the total loan amount especially in case of automobile loans, vehicles loans and other hire-purchase loan. At present, hire purchase loan are popular in providing share loan although, NRB has controlled on such margin lending due to excessive speculation in share transactions. Call deposits are deposits that are called on short notice. It is also known as money at call and short notice. This kind of deposit is preferred by business communities that need liquidity so that money can be withdrawn immediately after giving notice to the commercial banks.

b) Providing Loans:

The second important function of a bank is to provide different types of loans. The principal business of commercial banks is to make loans to qualified borrowers. The commercial bank earns profit by giving the amounts deposited with it in the forms of loans. Bank loans may be classified as; Loans and Advances, Overdraft, cash credit, discounting of a bills and so on. Loans and advances are major component of bank's lending portfolio. There are mostly commercial loans that are secured and constitute main sources of bank's assets. The excess loan taken more than deposit balance is overdraft. The credit taken for a short period of overnight is cash credit. Banks discount the bills on the basis of providing exports credit using the documents like bill of lading and other supporting documents. Loan may also be provided on the security backing of fixed time deposits certificates. The secured loans of commercial banks consists of moveable/ immovable guarantee of local licensed banks, government guarantee, internationally rated banks, export documents, fixed deposits receipt, government bond, counter guarantee, personal guarantee. But in most of cases, the moveable/ immoveable assets constitute more than 90 percent of the secured loan of the commercial banks. The rest 10 percent comes from others.

The bank charges interest on loans which are higher than those offered on other deposits. Since the banks in Nepal are now free to fix interest rates, the rate of interest on both deposits and loans varies from bank to bank.

c) Investments

Commercial banks also extend credit when they purchase securities; and this category of assets may be especially attractive when loan demand is slack, as a way of employing loanable funds. A very high percentage of these securities represent the obligations of government units. The remainder is corporate notes and bonds. Nepalese commercial banks have invested on shares and debentures of Nepal Insurance and Transport Company, National Insurance Company, Nepal Oil Corporation, Credit Guarantee Corporation, Agricultural Projects

Service Centre, Rural Development banks and so on. Investment of the commercial banks consist government treasury bills, government saving bonds, central bank bonds, foreign securities, local licensed institutions, foreign banks, corporate shares, corporate bonds and debentures and other investments. However, in practice, commercial banks make major investment in government Treasury bills and foreign banks to maintain the liquidity with minimum risks. But in rest, the investment constitutes not very significance. Investment in government Treasury bills is more than 50 percent and then followed by 40 percent investment in foreign banks and other 10 percent in other sectors.

2.1.7.2 Secondary Functions

Besides the primary functions of accepting deposits and lending money, banks perform a number of other functions which are called secondary functions. These are as follows:

- Issuing letters of credit, traveller's cheques, circular notes etc.
- Undertaking safe custody of valuables, important documents, and securities by providing safe deposit vaults or lockers.
- Providing customers with facilities of foreign exchange.
- Transferring money from one place to another, and from one branch to another branch of the bank
- Standing guarantee on behalf of its customers, for making payments for purchase of goods, machinery, vehicles etc.
- Collecting and supplying business information.
- Issuing demand drafts and pay orders
- Providing reports on the credit worthiness of customers.

2.1.8 List of Commercial Banks in Nepal

Table 2.3 : List of commercial banks of Nepal

(Source: Bank and Financial Institutions Regulation Department, Nepal Rastra Bank 2019)

| S. N. | Name of the banks | Established date | Head office | Paid of capital (In Rs. crore) |
|-------|-----------------------------------|------------------|----------------------------|--------------------------------|
| 1 | Kumari Bank Ltd | 2001/04/03 | Durbarmarg, Kathmandu | 596.95 |
| 2 | Agriculture Development Bank Ltd | 1968/01/21 | Ramshahpath, Kathmandu | 1393.79 |
| 3 | Nabil Bank Ltd | 1984/07/12 | Beena Marg, Kathmandu | 804.32 |
| 4 | Nepal Investment Bank Ltd | 1986/03/09 | Durbarmarg, Kathmandu | 1064.56 |
| 5 | Standard Chartered Bank Nepal Ltd | 1987/02/28 | Nayabaneshwor, Kathmandu | 801.14 |
| 6 | Himalayan Bank Ltd | 1993/01/18 | Kamaladi, Kathmandu | 811.45 |
| 7 | Nepal SBI Bank Ltd | 1993/07/07 | Kesharmahal, Kathmandu | 804.69 |
| 8 | Nepal Bangladesh Bank Ltd | 1994/06/06 | Kamaladi, Kathmandu | 808.81 |
| 9 | Everest Bank Ltd | 1994/10/18 | Lazimpat, Kathmandu | 810.69 |
| 10 | Nepal Bank Ltd | 1937/11/15 | Dharmapath, Kathmandu | 804.27 |
| 11 | Laxmi Bank Ltd | 2002/04/03 | Hattisar, Kathmandu | 822.17 |
| 12 | Citizens Bank International Ltd | 2007/04/20 | Narayanhitipath, Kathmandu | 803.32 |
| 13 | Prime Commercial Bank Ltd | 2007/09/24 | Kamalpokhari, Kathmandu | 803.33 |

| | | | | |
|----|------------------------------------|------------|------------------------------|--------|
| 14 | Sunrise Bank Ltd | 2007/10/12 | Gairidhara, Kathmandu | 815.26 |
| 15 | Century Commercial Bank Ltd | 2011/03/10 | Putalisadak, Kathmandu | 806.34 |
| 16 | Sanima Bank Ltd | 2012/02/15 | Nagpokhari, Kathmandu | 800.13 |
| 17 | Machhapuchhre Bank Ltd | 2012/07/09 | Lazimpat, Kathmandu | 805.57 |
| 18 | NIC Asia Bank Ltd | 2013/06/30 | Thapathali, Kathmandu | 803.11 |
| 19 | Global IME Bank Ltd | 2014/04/09 | Panipokhari, Kathmandu | 888.84 |
| 20 | NMB Bank Ltd | 2015/10/18 | Babarmahal, Kathmandu | 646.18 |
| 21 | Prabhu Bank Ltd | 2014/09/14 | Babarmahal, Kathmandu | 800.13 |
| 22 | Siddhartha Bank Ltd | 2016/07/21 | Hattisar, Kathmandu | 846.44 |
| 23 | Bank of Kathmandu Ltd | 2016/07/14 | Kamaladi, Kathmandu | 924.54 |
| 24 | Civil Bank Ltd | 2016/10/17 | Kamaladi, Kathmandu | 725.93 |
| 25 | Nepal Credit and Commerce Bank Ltd | 2017/01/01 | Bagbazar, Kathmandu | 467.91 |
| 26 | Janata Bank Nepal Limited | 2017/04/07 | Thapathali, Kathmandu | 800.08 |
| 27 | Rastriya Banijya Bank | 2018/05/02 | Singhadurbarplaza, Kathmandu | 900.48 |
| 28 | Mega Bank Nepal Ltd | 2018/05/13 | Kamaladi, Kathmandu | 928.68 |

2.2 Review of Journal Articles

Financial institution is an important activity in the economy. They perform a wide variety of functions in financial system. The traditional macroeconomic view about the role of financial institution does not consistent. The specific roles of bank in economic development are not clearly defined in any formal theories. However, according to various theoretical literatures about finance and economic growth are based on banks' role in the economy. The roles of banks are providing insurance as well as better project selection.

The financial development is required for every nation and increasingly its roles every period of time. Finance is a key factor for the growth, so every country has to develop their financial system. Financial institution and banking system may make a positive contribution to economic growth; this effect may be countered by other factors in the economy, such as "an unfavorable resource endowment, a population that grows either too slowly or too rapidly. In a same way, a bad banking system on the economy may not have a substantial negative impact in growth if other factors offset this impact. In any case, it is possible to think of a banking system which may contribute more or less to the economic development of a country, depending on the different policies adopted.

Another famous economist Joseph Shumpeter (1911) believed that there were closed relationship between financial institution and economic development. According to him, the banks were needed for the technological innovation. The technological innovation is one of the most important factors of economic development. Among the various services associated with financial intermediaries, one may refer mobilizing savings, evaluating projects, managing risk, monitoring managers and facilitating transactions. Many are the authors who, almost ninety years after Shumpeter, in recent studies on economic growth, pay a particular attention to links between financial systems and the pace of economic development. Goldsmith (1969), Mckinnon (1973) and Shaw (1973), who produced evidence that banks and financial institutions are positively correlates with the economic growth, defending the idea that financial repression was at the heart of the poor performance of investment and growth in developing country, Robinson's (1952) view that finance was essentially the handmaiden to industry, responding passively to other factors that produced cross-country differences in growth. (King and Levine, 1993) for a long period, numerous influential economists believed that finance had a relatively unimportant role in the economic development. This could be interpreted as natural consequences of the mechanism of the neoclassical growth model, where financial systems were thought to have only minor effects on the rate of investment in physical capital, and changes in investment were viewed as having only minor effects on economic growth.

The channels through which interest rates affect investment and growth have been more carefully investigated. It is now accepted that higher interest rates have ambiguous effects on the total amount of savings because there are substitution and income effects working in opposite directions. As stated by Marco Pagano (1993) the revival of interest in the influence of financial development on growth was the result of the theoretical advances of growth theory, namely the “insights and techniques of endogenous growth models, which have shown that there can be self-sustaining growth without exogenous technical progress and that the growth rate can be related to preferences, technology, income distribution and institutional arrangements” (Pagano, 1993). In this theoretical framework, financial intermediaries may be found to have “not only level effects, but also growth effects.

One may therefore distinguish between a traditional view and a new view both on the role of financial intermediaries and on how the economic growth process works. King and Levine (1993) explained that traditionally financial intermediaries were viewed as organizations which passively funnelled household saving to business investment. A new view has emerged, considering that financial intermediaries have an active perhaps dominant role in the organization of the industry. With respect to the growth process, the traditional view is reflected in Solow’s work, as mentioned below, which led many economists to believe that the extent to which government policies, including financial market policies, could be potential determinants of the economic growth process was limited. The new economics of growth and development, originated by the work of Romer (1986) and Lucas (1988), “suggests that a range of economic policies can have important effects on a country’s growth rate over lengthy periods. In fact, within some „endogenous growth“ models, policies particularly those that influence the private costs and benefits of investing in human capital and productivity enhancement can permanently influence the growth rate of an economy” (King and Levine, 1993). This new line of research allowed for a different perspective on the potential influence of financial intermediaries on the level of economic development and the rate of economic growth. “Finance and financial institutions become relevant in a world of positive information, transaction and monitoring costs” (Fry, 1997).

When individuals have a choice between unproductive assets (consumer goods or community money) and an investment in a firm, uncertainty may lead to resource misallocation by individuals. The investment in a firm takes time to become productive, thus it is illiquid. Nonetheless, a two-period investment in a firm has a higher expected return than consumer goods or currency. “Uncertainty may force some individuals to liquidate or abandon their investments in firms after only one period. In such case, they would be worse off than had they

held solely an inventory of consumer goods or currency” (Fry, 1997). When banks are introduced, this uncertainty may be avoided, given that banks are institutions which may exploit the law of large numbers, ensuring they never have to liquidate capital prematurely. Banks may also “estimate deposit withdrawals which are unpredictable individually but predictable for the economy as a whole” (Fry, 1997). According to Greenwood and Smith (1997), “institution is necessarily growth-enhancing”.

Other studies, not based on the Diamond Dybvig model, present different ways by which banks can stimulate endogenous growth. The role of financial intermediaries in pooling funds and acquiring information, enabling capital to be allocated to its highest value (raising the average return to capital) is stressed, for example, by Greenwood and Jovanovic (1990).

Most scholars have agreed that there is relationship between bank lending and economic growth. However, scholars have differed on the direction of causality between bank lending and economic growth (Oluitan, 2009). Mohd and Osman (1997) broadly categorized the causality into demand-following relationship and supply- following relationship. The proponents of demand-following hypothesis argued that economic growth is a causal factor for bank lending, not the reverse.

Robinson (1952) maintains that economic growth propels banks to finance enterprises. Gurley & Shaw (1969) also argued that as the economy expands and grows, the increasing demand for financial services stimulates banks to provide more credit. Similarly, Oluitan (2009) is of the opinion that policy makers should focus less on measures leading to increase in bank lending and concentrate more on legal, regulatory and policy reforms that boost the functioning of markets and banks. Muhsin & Eric (2000) in their study on Turkey concluded that economic growth lead to financial sector development.

However, the proponents of supply-leading hypothesis are of the belief that bank lending is a veritable tool for attainment of economic growth and development. The hypothesis was originally credited to the works of Schumpeter (1934). Schumpeter strongly believed that efficient allocation of savings by means of identification and funding of entrepreneurs who invest such funds in innovation and production of goods and services, thus leading to economic growth. This view was supported by other scholars like McKinnon (1973), Shaw (1973), Fry (1988), and Greenwood & Jovanic (1990). Studies conducted across countries and continents have also supported the postulations of the supply-leading hypothesis. King and Levine (1990) conducted a study involving seventy-seven countries made of developed and developing economies using cross-country growth regression. The objective of the study was essentially to find out the correlation between bank lending, capital accumulation, economic growth and

efficiency. The result of the study indicated that bank lending leads to economic growth and efficiency. Similarly, Diego (2003), came out with similar result from his study of fifteen European Union economies, using panel estimation technique to assess the mechanisms through which policy changes have influence the economic growth of the countries. Habibullah and Eng (2006) conducted causality testing analysis on 13 Asian developing countries and also found that bank lending promotes economic growth. Similarly, the IMF 2008 Global Financial Stability Report indicated a statistically significant impact of credit growth on GDP growth. Specifically, it was revealed that “ a credit squeeze and credit spread evenly over three quarters in USA will reduce GDP growth by about 0.8% and 1.4% points year-on-year respectively assuming no other supply shocks to the system” (Oluitan, 2009).

In addition studies were conducted to test the old Schumpeterian hypothesis, for example; Jao (1976) used cross- section data averaged over 1967-72 in 44 developing countries and 22 developed economies, to study the relationship between bank lending and economic growth. The study found that the money balance-GDP ratio and growth of per capita real money balances (proxy of financial intermediation variables) had a strong positive relationship with economic growth (Tang, 2003).

Fritz (1984) examined the direction of causation between economic development and financial intermediation. Using data from the Philippines, the study discovered that financial intermediation brings about economic development at the early stage of economic growth/development and the direction of causation was reversed at a later stage. This assertion is supported by the work of Rousseau and Wachtel (1998), who examined the links between the intensity of financial intermediation and the economic performance of five industrialized countries. The duo discovered that intermediation played an important role in the rapid industrial transformations of those countries (Tang, 2003)

According to Lang and Nakamura (1995) bank lending alone cannot lead to economic growth. They believe that other monetary policies of central banks are equally important in making bank loans to make the desired impact on economic growth. This is an important contribution to the discourse on supply-leading hypothesis. A more recent research work by Swiston (2008) conducted in USA detected quantitatively, the significance of bank lending on economic growth. He posited that credit availability is an important driver of the business cycle, accounting for over 20% of the typical contribution of financial factors to growth. He further argued that a net tightening in lending standards of 20% reduces economic activity by 0.75% after one year and 1.25% after two years. The key findings of all the studies are that financial intermediaries (proxy deposit money banks (DMBs), have significant positive impact on productivity of factors of

production which leads to increase in real GDP and economic growth. Bank lending refers to funds granted to individuals and organizations to meet their temporary or long-term deficit operations (Mbat, 2006). Bank lending includes Short, Medium and Long Term Loans and Advances. Bank lending can be categorized into two: lending to the private sector and lending to the public sector. It has been empirically proven that lending to the public sector is weak in generating growth within the economy because it is prone to waste and politically motivated projects which may not yield or deliver the best result (Oluitan, 2009). This position is supported by Crowly (2005) and Boyreau-Debray (2003). Beck, Demirguc-Kunt and Levine (2005) maintain that lending to the private sector make more impact on economic growth than the one to the public sector. Based on this undisputable fact, the study will concentrate on the impact of bank lending to the private sector.

There are many indicators of economic growth. They include money supply, Consumer Price Index (CPI), Producer Price Index (PPI), Consumer Confidence Survey (CCS), Current Employment Statistics (CES) and Real GDP (www.aimr.org). Though any or combination of the indicators can be used in measuring the economic growth of a country, this study use the Real GDP and per capita income indicator.

2.3 Research Gap

On review of various studies related to lending, investment, fund mobilizing and financial performance of various banks, it has been noticed that studies are focusing on the policies implemented by banks for their financial performance. The purpose of this research is to develop some expertise in one's area, to see what new contribution can be made and to receive some ideas, knowledge and suggestions in relation to lending practices of commercial banks of Nepal. Previous studies cannot be ignored because they provide the foundation to the present study and guide the research to the new level without repetition of work. After the study of past research work and NRB directives it is found that number of research work has been done in regards to the study of credit risk management of finance companies and commercial banks, comparative studies of two or more banks. Lots of work has been done in the study of lending policies and lending practices of commercial banks. A very little work has been done on study of lending practices in the field of commercial banks. Research work on effects of lending, Deposits and investment on GDP has not been done yet. So, to fulfill this research gap this study is selected. There are more thesis related to this research in which some have been done research of two or three banks. In some research lending effects only for development bank has been done. In 2011, related thesis has been done but now environment is different i.e. GDP, per capita income, Lending has been vigorously changed. In some research only two or more variables has been taken. In previous research, calculation has been done by manually but in my research result has

been done by using Statistical package for the social science (SPSS). Effects of banking variables were not assessed with GDP in Nepal with commercial banks constraints but it has been done some part in African countries. But same with this research is not found yet.

2.4 Conceptual Framework

A deep and efficient financial system can robustly contribute to sustained economic growth and lower poverty. The role of financial system is considered to be the key to economic growth. 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 (T. Beck, 2000). The existence of banks and other non-bank financial institutions in a formal and organized way is collectively known as the financial system of a country. Financial institutions help to mobilize savings by issuing liabilities in form of different types of financial instruments. People and organizations wanting to borrow money are brought together with those having surplus funds in the financial market. The process of financial intermediation has been presented in the figure in the following way:

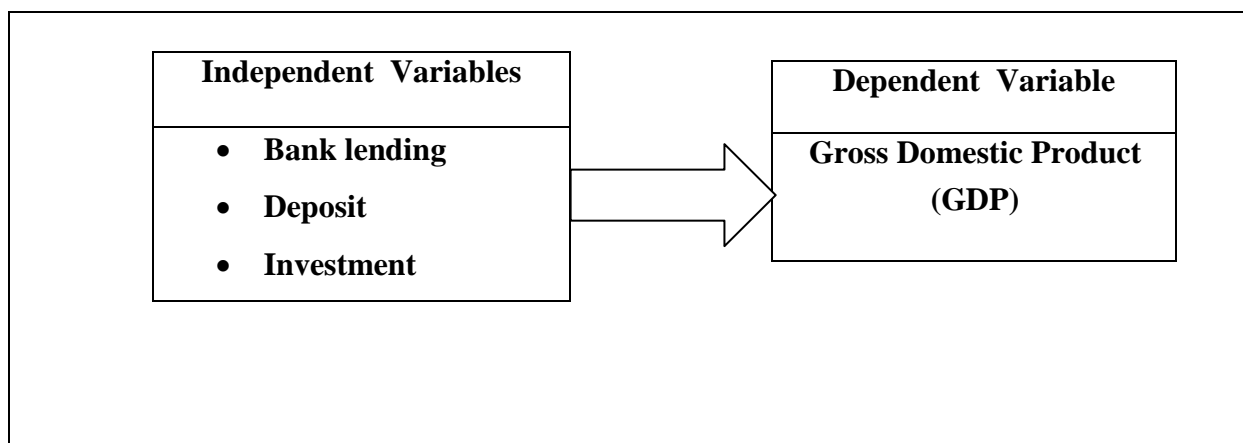


Figure 2.2 : Theoretical framework

Transfers of capital between savers and those who need financial resources take place in different ways: direct and indirect transfer, through investment banker and indirect transfer through financial intermediaries. Banks and financial institutions are also considered as financial intermediaries. They provide financial intermediations through indirect transfer of financial resources between the deficit sectors and surplus sectors in the economy.

Financial system plays vital role in meeting financial needs of productive units through generating saving from the surplus-generating units of the economy. A formal financial intermediary can be more efficient in allocating financial resources in productive ways. It is, therefore, argued that an effective and efficient financial system is more important for the nation's economic development process. Encouraging competition within the system, developing

a strong and transparent institutional and legal framework for financial system services, establishing a prudent regulatory and supervisory mechanism and ensuring strong creditor rights and contract enforcement are some of the key factors that lead to build-up a sound financial system in the country. Therefore, it is argued that countries should adopt appropriate macroeconomic policies, which are crucial for the growth and development of the financial system. Economists and financial experts have generally reached a consensus on the central role of financial system in economic development. The theoretical argument is that policies to develop the financial system are expected to raise economic growth and, therefore, more developed countries have more developed financial systems.

It is generally agreed that the development of financial system is a critical path of the growth process and it is also a good predictor of future growth. Financial structure, the mix of financial instruments markets and institutions, arises to mitigate the effects of information and transaction costs and thereby increases saving mobilization rates. In organizing the functions of financial system, Levine summarizes the primary functions into five broad areas: to facilitate the trading, hedging, diversifying and pooling of risk; to allocate resources; to monitor managers and exert corporate controls; to mobilize savings; and to facilitate the exchange of goods and services. He proposes the following theoretical approach to finance and growth. The figure 2.2 sketched above shows that the emergence of financial markets arises due to the costs involved in acquiring information and making transactions. Different types and combinations of information and transaction costs are ameliorated by financial system. A particular friction motivates the need of distinct financial contract, market or institution. Financial institutions and intermediaries perform certain financial functions, which ultimately affect economic growth through two different channels. In the capital accumulation channel, the financial system affects capital formation either by altering saving rates or by reallocating savings among different capital producing technologies.

Technological innovation, the second class of growth channel, Caprio and Honohan (2001) focus on the invention of new production processes in which financial system affects growth by altering the rate of technological innovation. Therefore, a particular market friction in the economy is the starting point that drives the need for a financial system. The financial system comprising of financial institutions and intermediaries performs certain financial functions to have desired affects on savings and allocation decisions and such decisions influence economic growth through different channels. Broad and deep financial markets facilitate savings mobilization by offering both individual and institutional savers and investors' additional instruments and channels for placement of their funds at more attractive returns than are available on bank deposits. At the same time, the competition also makes such access more

affordable. Developed financial markets also have the capacity to reduce volatility, distortions and risk by operating in an environment that is transparent, competitive, and characterized by the presence of a diverse array of products and services, including derivative instruments that allow for effective risk management.

Hence, reforms in a country's financial architecture often lay the groundwork for improved economic performance. In almost all advanced economies, financial system delivers a broad range of financial services and sophisticated products, and the efficiency of such well-developed systems has contributed to macroeconomic stability and sustained economic growth and prosperity. Increased availability of funding and more efficient allocation of capital for productive private sector investment is beneficial economy-wide, with particular benefits for small and medium sized enterprises that are often constrained in their financing options prior to effective banking reforms and non-bank financial sector development. According to recent analysis, growth in private credit volumes and equity market capitalization as a percent of GDP has consistently been correlated with growth in per-capita income. Thus, robust growth and effective functioning of a full service financial system is essential for economic development and prosperity (patric, 2001). Commercial banks are those financial institutions, which deals in accepting deposits from persons and institutions and giving loans against securities. They provide working capital needs or trade, industry and even to agriculture sectors. Moreover commercial banks also provide technical and administrative assistance to industries trades and business enterprises.

Under the Commercial Bank Act 1947, the commercial banks are those banks which provide short term and long term debts whenever necessary for trade and commerce. They accept deposits from the public and grant loans in different form, purchase and discount the bill for exchange, promissory notes exchange foreign currency. A commercial bank is one which exchange money, deposits money accepts deposit, grants loan and performs commercial banking functions and which is not a bank meant for co-operative, agriculture, and industry of for such specific purpose (NRB, Nepal Commercial Bank Act 1974, 1974).

Commercial banks are the suppliers of finance for trade land industry, which plays vital role in the economic and financial life of the country. They help in the formation of capital by investing the savings in productive areas. Rural people of under developed countries like Nepal need various banking facilities to enhance its economy. In most of the countries, the banks are generally concentrated in urban and semi-urban sectors. They neglect rural sector due to heavy risk and low return, which is in fact, the main key to economic development without it other sectors of economy cannot be flourished. Banks hold cash assets to meet legal requirements and daily transaction needs and they have “correspondent” relationships with other banks. Most bank

funds, however, are used to acquire earnings assets. The most important of these are loans to business firms and to consumers. Banks also hold government securities for both liquidity and income reasons.

The history of modern financial system of Nepal was begun in 1937 with the establishment of the Nepal Bank Limited (NBL) as the first commercial bank of Nepal with the joint ownership of government and general public. However, the activities of the bank was confined to accepting deposits and providing loans only to the commercial sector in Kathmandu and other limited urban areas. Nepal Rastra Bank (NRB), the central bank of Nepal, was established in 1956 with the central banking responsibilities of guiding the development of the embryonic domestic financial sector. After the establishment of NRB, Nepal witnessed a systematic development of the financial system. In the initial year of operation, the NRB has been focusing towards monetization of the economy by circulating Nepalese currency all over the country. After achieving some progress, it started taking initiation towards institutional development. Consequently, Nepal Industrial Development Bank, Employee's Provident Fund (EPF), Cooperative Bank, National Insurance Corporation, Agricultural Development Bank (ADB/N) and Rastriya Banijya Bank (RBB) had been established.

Commercial banks act as business firms to operate efficiently. Commercial banks's mission, goals, objectives and policies are similar to those of other financial institutions. All business organization look for long run profits by lending and investing funds at their disposal as high rate of return as is consistent with an appropriate degree of safety of principal. But unlike many other lenders, banks must be prepared to meet the withdrawal of these funds virtually on demand.

CHAPTER 3: RESEARCH METHODOLOGY

Research methodology generally refers research design, Population and sample, Data collection, data analysis techniques as well hypothesis test. In this research, linear regression analysis as well as hypothesis has been done. In research design mainly descriptive, qualitative and quantitative analysis has been also done.

3.1 Research Design

Descriptive analysis has been done to measure the mean, standard deviation, variance, minimum and maximum value of the various parameters in the study period of nineteen years data. This research is also described by the qualitative research. The study has been divided into both the quantitative and qualitative analysis. The quantitative research design has been based on the regression analysis. The relation between the finance and the economic development has also been measured through the quantitative analysis. Similarly, the qualitative research design has also been made on the basis of the descriptive inferential analysis. Various qualitative inferences are derived from the descriptive analysis. It basically focuses the status in different segments of the whole financial system and the status of the commercial banks in Nepalese perspective.

3.2 Population and sample

The total of twenty eight commercial banks in the country are operating in our country shall constitute the population of the data and the bank under study constitutes the sample of the study. There are twenty eight commercial banks in operating under the banking industry. Banks are the organization with vast exposure and turn over. The panel data of lending, deposit, investment of all commercial banks as well as gross domestic product of Nepal has been taken for the study due to time limitation. The panel data has been taken directly from the report of Nepal Rastra Bank of Nepal.

3.3 Data Collection Procedure

The data for this study has been taken from the secondary sources, thus the nature of the data is secondary one. Mostly the data have been taken from the publications made by Nepal Rastra Bank and Ministry of Finance, the Government of Nepal. The main source of data for the study are Economic Surveys, published by the Ministry of Finance, Government of Nepal, Quarterly Economic Bulletin and the Banking and Financial Statistics published by Nepal Rastra Bank and other relevant sources. Throughout this study since we have used the annual data, i.e. fiscal year ended as of mid-July each year and necessary adjustments in the data have been made to evolve continuous and comparable series.

3.4 Data Analysis Techniques

In this study statistical data have been regressed in the log linear functional form. The statistical data have been tested in the computer by using the Microsoft Excel and their results drawn from the regression analysis have interpreted in this study. Both descriptive and empirical methods have been used to analyze the results and data in this study. In this research work, the qualitative method is used for the analysis of time series data. Based on the actual data, the analysis has been done with the help of percentage, average, ratio and graph charts etc. The quantitative method has been used to know the impact of independent variable in the dependent variable using by SPSS. The followings are the data analysis techniques used in this study:

3.4.1 Descriptive Statistics

In descriptive analysis, mean, standard deviation, variance, minimum and maximum values of the various parameters has been calculate by using SPSS tool which is beneficial for the management research. Descriptive statistics simply describes what is or what the data shows. With inferential statistics, you are trying to reach conclusions that extend beyond the immediate data alone. For instance, we use inferential statistics to try to infer from the sample data what the population might think. We use inferential statistics to make judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in this study. Thus, we use inferential statistics to make inferences from our data to more general conditions; we use descriptive statistics simply to describe what's going on in our data. Descriptive statistics has been used to explain the demographic characteristics of the various indicators of the commercial banks. Descriptive analytical tools like frequency, percentage and mean has been calculated by using SPSS. The analyzed data has been presented by using of percentages, frequency tables.

a. Mean

There are several kinds of means in various branches of mathematics (especially statistics). For a data set, the arithmetic mean, also called the mathematical expectation or average, is the central value of a discrete set of numbers: specifically, the sum of the values divided by the number of values. The arithmetic mean of a set of numbers x_1, x_2, \dots, x_n is typically denoted by $\bar{x} = \frac{\sum X}{N}$. If the data set were based on a series of observations obtained by sampling from a statistical population, the arithmetic mean is the sample mean (denoted to distinguish it from the mean of the underlying distribution).

In probability and statistics, the population mean, or expected value, is a measure of the central tendency either of a probability distribution or of the random variable characterized by that distribution. In the case of a discrete probability distribution of a random variable X , the mean is

equal to the sum over every possible value weighted by the probability of that value; that is, it is computed by taking the product of each possible value x of X and its probability $p(x)$, and then adding all these products together, giving $\mu = \sum xP(x)$ (Kuby, 2000). An analogous formula applies to the case of a continuous probability distribution. Not every probability distribution has a defined mean; see the Cauchy distribution for an example. Moreover, for some distributions the mean is infinite. For a finite population, the population mean of a property is equal to the arithmetic mean of the given property while considering every member of the population.

b. Mode

The mode of a set of data values is the value that appears most often. If X is a discrete random variable, the mode is the value x (i.e, $X = x$) at which the probability mass function takes its maximum value. In other words, it is the value that is most likely to be sampled. Like the statistical mean and median, the mode is a way of expressing, in a (usually) single number, important information about a random variable or a population. The numerical value of the mode is the same as that of the mean and median in a normal distribution, and it may be very different in highly skewed distributions.

The mode is not necessarily unique to a given discrete distribution, since the probability mass function may take the same maximum value at several points x_1, x_2 , etc. The most extreme case occurs in uniform distributions, where all values occur equally frequently. When the probability density function of a continuous distribution has multiple local maxima it is common to refer to all of the local maxima as modes of the distribution. Such a continuous distribution is called multimodal (as opposed to unimodal). A mode of a continuous probability distribution is often considered to be any value x at which its probability density function has a locally maximum value, so any peak is a mode. In symmetric unimodal distributions, such as the normal distribution, the mean (if defined), median and mode all coincide. For samples, if it is known that they are drawn from a symmetric unimodal distribution, the sample mean can be used as an estimate of the population mode (Gujaratif, 2006).

c. Frequency

In statistics the frequency (or absolute frequency) of an event is the number of times the event occurred in an experiment or study. These frequencies are often graphically represented in histograms. The cumulative frequency is the total of the absolute frequencies of all events at or below a certain point in an ordered list of events. The relative frequency (or empirical probability) of an event is the absolute frequency normalized by the total number of event (Princeton & Keeping, 1962).

d. Standard deviation

In finance, standard deviation is often used as a measure of the risk associated with price-fluctuations of a given asset (stocks, bonds, property, etc.), or the risk of a portfolio of assets (actively managed mutual funds, index mutual funds, or ETFs). Risk is an important factor in determining how to efficiently manage a portfolio of investments because it determines the variation in returns on the asset and/or portfolio and gives investors a mathematical basis for investment decisions (known as mean-variance optimization). The fundamental concept of risk is that as it increases, the expected return on an investment should increase as well, an increase known as the risk premium.

Standard deviation determines the reliability of central tendency or mean. It measures the dispersion. Dispersion is variability of data and it finds out how individual values fall apart on an average. The higher standard deviation has higher variability. It is presented as,

$$\sigma = \sqrt{\frac{\sum x^2}{N}}$$

Where, $x = (\bar{X} - X)$

\bar{X} = Mean

$$\sigma = \sqrt{\frac{\sum fx^2}{N}}$$

Where, $x = (\bar{X} - X)$ and 'f' denotes frequency

$$\sigma = \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum d^2}{N} \right)^2}$$

In other words, investors should expect a higher return on an investment when that investment carries a higher level of risk or uncertainty. When evaluating investments, investors should estimate both the expected return and the uncertainty of future returns. Standard deviation provides a quantified estimate of the uncertainty of future returns.

Calculating the average (or arithmetic mean) of the return of a security over a given period will generate the expected return of the asset. For each period, subtracting the expected return from the actual return results in the difference from the mean. Squaring the difference in each period and taking the average gives the overall variance of the return of the asset. The larger the variance, the greater risk the security carries. Finding the square root of this variance will give the standard deviation of the investment tool in question. Population standard deviation is used to set the width of Bollinger Bands, a widely adopted technical analysis tool. For example, the

upper Bollinger Band is given as $x + n\sigma_x$. The most commonly used value for n is 2; there is about a five percent chance of going outside, assuming a normal distribution of returns.

Financial time series are known to be non-stationary series, whereas the statistical calculations above, such as standard deviation, apply only to stationary series. To apply the above statistical tools to non-stationary series, the series first must be transformed to a stationary series, enabling use of statistical tools that now have a valid basis from which to work.

e. Variance

In probability theory and statistics, variance is the expectation of the squared deviation of a random variable from its mean. Informally, it measures how far a set of (random) numbers are spread out from their average value. Variance has a central role in statistics, where some ideas that use it include descriptive statistics, statistical inference, hypothesis testing, goodness of fit, and Monte Carlo sampling. Variance is an important tool in the sciences, where statistical analysis of data is common. The variance is the square of the standard deviation, the second central moment of a distribution, and the covariance of the random variable with itself. and it is often represented by σ^2 .

3.4.2 Pearson's correlation coefficient

Pearson's correlation coefficient will be used in this research in order to examine the relationships between two or more research variables. If the value of the correlation coefficient is 1.0, then there is a perfect positive correlation between two variables (they increase together). In contrast, if the value of correlation coefficient is -1.0, it can be concluded that there is a perfect negative correlation between two variables (one increases while the other decreases). In addition, there is no relationship between two variables if the value of correlation coefficient is zero. We examine the relation between the various variables. The correlation between the different variables of a bank is compared to measures the performance of the bank. The correlation coefficient between the two variables describes the degree of relationship between those two variables. The reliability of the value of coefficient of correlation is measured by probable error (P.Er).

Correlation refers to the degree of relationship between two variables. If increase or decrease in one variable impacts the increase or decrease in another, then such variables are correlated variables. This, measures of correlation, calculates the mathematical relationship between two variables. "The measures of correlation called the correlation coefficient or correlation index summarizes in one figure the directions and degree of correlation (Gupta, 1989).

The Karl Pearson's Coefficient of Correlation is given by the following formula

$$\text{Coefficient of correlation (r)} = \frac{\sum XY}{N \sigma_x \sigma_y}$$

Where,

$$\begin{aligned} X &= (x - \text{Mean } x); Y = (y - \text{Mean } y) \\ \sigma_x &= \text{Standard Deviation of Series } x \\ \sigma_y &= \text{Standard Deviation of Series } y \\ N &= \text{Number of Observations} \end{aligned}$$

And,

$$\text{Probable Error of r (P.Er)} = 0.6745 \frac{1 - r^2}{\sqrt{N}}$$

3.4.3 Multiple regression analysis

Linear regression, while a useful tool, has significant limits. As its name implies, it can't easily match any data set that is non-linear. It can only be used to make predictions that fit within the range of the training data set. And, most importantly for this article, it can only be fit to data sets with a single dependent variable and a single independent variable. This is where multiple regression comes in. While it can't overcome all three of those weaknesses of linear regression, it is specifically designed to create regressions on models with a single dependent variable and multiple independent variables.

The general form of the equation for linear regression is: $y = A + B * x$

where y is the dependent variable, x is the independent variable, and A and B are coefficients dictating the equation. The difference between the equation for linear regression and the equation for multiple regression is that the equation for multiple regression must be able to handle multiple inputs, instead of only the one input of linear regression. To account for this change, the equation for multiple regression takes the form: $y = B_1 * x_1 + B_2 * x_2 + \dots + B_n * x_n + A$. In this equation, the subscripts denote the different independent variables. x_1 is the value of the first independent variable, x_2 is the value of the second independent variable, and so on. It keeps going as more and more independent variables are added until the last independent variable, x_n , is added to the equation. Note that this model allows you to have any number, n , independent variables and more terms are added as needed. The B coefficients employ the same coefficients, indicating that they are the coefficients linked to each independent variable. A , as before, is simply a constant stating the value of the dependent variable, y , when all of the independent variables, the x s, are zero.

Similarly to how we minimized the sum of squared errors to find B in the linear regression example, we minimize the sum of squared errors to find all of the B terms in multiple regression. The difference here is that since there are multiple terms, and an unspecified number of terms until you create the model, there isn't a simple algebraic solution to find the A and B terms. This means we need to use stochastic gradient descent. Stochastic gradient descent is a big enough topic to need another article. However, a good description of it can be found in *Data Science from Scratch* by Joel Gros. Fortunately, we can still present the equations needed to implement this solution before reading about the details. The first step is summing the squared errors on each point. This takes the form of: $\text{Error_Point} = (\text{Actual} - \text{Prediction})$.

where Error is the error in the model when predicting a person's commute time, Actual is the actual value (Or that person's actual commute time), and Prediction is the value predicted by the model (Or that person's commute time predicted by the model). $\text{Actual} - \text{Prediction}$ yields the error for a point, then squaring it yields the squared error for a point. Remember that squaring the error is important because some errors will be positive while others will be negative and, if not squared, these errors will cancel each other out making the total error of the model look far smaller than it really is. To find the error in the model, the error from each point must be summed across the entire data set. This essentially means that you use the model to predict the commute time for each data point that you have, subtract that value from the actual commute time in the data point to find the error, square that error, then sum all of the squared errors together. In other words, the error of the model is: $\text{Error_Model} = (\text{Actual}_i - \text{Prediction}_i)^2$

Where i is an index iterating through all points in the data set.

Once the error function is determined, you need to put model and error function through a stochastic gradient descent algorithm to minimize the error. It will do this by minimizing the B terms in the equation. I'll write a detailed article on how to create a stochastic gradient descent algorithm soon, but for now you can find the details in *Data Science from Scratch* or utilize tools in the Python scikit-learn package. Once you've fit the model to your training data, the next step is to ensure that it fits the model well.

The short answer is: Use the same r^2 value that was used for linear regression. The r^2 value, also called the coefficient of determination, states the portion of change in the data set that is predicted by the model. It's a value ranging from 0 to 1, with 0 stating that the model has no ability to predict the result and 1 stating that the model predicts the result perfectly. You should expect the r^2 value of any model you create to be between those two values. The coefficient of determination for a model can be calculated using the following equations:

$$r^2 = 1 - (\text{Sum of squared errors}) / (\text{Total sum of squares})$$

$$(\text{Total sum of squares}) = \text{Sum}(y_i - \text{mean}(y))^2$$

(Sum of squared errors) = $\sum((\text{Actual}_i - \text{Prediction}_i)^2)$

Additional terms will always improve the model whether the new term adds significant value to the model or not. Here's where testing the fit of a multiple regression model gets complicated. Adding more terms to the multiple regression inherently improves the fit. It gives a new term for the model to use to fit the data, and a new coefficient that it can vary to force a better fit. Additional terms will always improve the model whether the new term adds significant value to the model or not. As a matter of fact, adding new variables can actually make the model worse. Adding more and more variables makes it more and more likely that you will overfit your model to the training data. This can result in a model that is making up trends that don't really exist just to force the model to match the points that do exist. This fact has important implications when developing multiple regression models. Yes, you could keep adding more and more terms to the equation until you either get a perfect match or run out variables to add. But then you'd end up with a very large, very complex model that is full of terms which aren't actually relevant to the case you're predicting.

One way is to calculate the standard error of each coefficient. The standard error states how confident the model is about each coefficient, with larger values indicating that the model is less sure of that parameter. This is intuitive even without seeing the underlying equations — If the error associated with a term is typically high, that implies that it's not having a very strong impact on matching the model to the data set. Calculating the standard error is an involved statistical process, and can't be succinctly described in a quick Medium article. Fortunately, there are Python packages available that you can use to do it for you. The question has been both asked and answered on Stack Overflow at least once. Those tools should get you started. After calculating the standard error of each coefficient, you can use the results to identify which coefficients are highest and which are lowest. Since high values indicate that those terms add less predictive value to the model, you can know that those terms are the least important to keep. At this point you can start choosing which terms in the model can be removed to reduce the number of terms in the equation without dramatically reducing the predictive power of the model.

Another method is to use a technique called regularization. Regularization works by adding a new term to the error calculation that is based on the number of terms in the multiple regression equation. More terms in the equation will inherently lead to a higher regularization error, while fewer terms inherently lead to a lower regularization error. Additionally, the penalty for adding terms in the regularization equation can be increased or decreased as desired. Increasing the penalty will also lead to a higher regularization error, while decreasing it will lead to a lower regularization error. With a regularization term added to the error equation, minimizing the error means not just minimizing the error in the model but also minimizing the number of terms in the

equation. This will inherently lead to a model with a worse fit to the training data, but will also inherently lead to a model with fewer terms in the equation. Higher penalty/term values in the regularization error create more pressure on the model to have fewer terms.

Multiple regression analysis will be used to analyze the relationship between several independent variables and a single dependent variable. This analysis technique allows researchers to indicate how much of the variance in the dependent variable is explained by a set of independent variables. Multiple regression analysis was used to examine the simultaneous effects of several independent variables on a dependent variable (Aliyu Mamman, 2014).

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + u_t$$

Where,

Y = Gross Domestic Product in millions

X₁ = Bank lending of commercial banks in millions

X₂ = Deposits of commercial banks in millions

X₃ = Investments of commercial banks in millions

β₀ = Base constant

β₁, β₂, β₃ = Regression coefficients

u_t = Error

3.4.4 Hypotheses

Scientists generally base scientific hypotheses on previous observations that cannot satisfactorily be explained with the available scientific theories. Even though the words "hypothesis" and "theory" are often used synonymously, a scientific hypothesis is not the same as a scientific theory. A working hypothesis is a provisionally accepted hypothesis proposed for further research (Hilborn & Mangel, 22 August 2011.), in a process beginning with an educated guess or thought. A different meaning of the term hypothesis is used in formal logic, to denote the antecedent of a proposition; thus in the proposition "If P, then Q", P denotes the hypothesis (or antecedent); Q can be called a consequent. P is the assumption in possibly counterfactual. On the basis of theoretical framework and literature review following hypotheses has been developed:

H₀: There is insignificant relationship between GDP and bank lending in Nepal.

H₁: There is significant relationship between GDP and bank lending in Nepal.

H₀: There is insignificant relationship between GDP and Deposits in commercial banks in Nepal.

H₁: There is significant relationship between GDP and Deposits in commercial banks in Nepal.

H₀: There is insignificant relationship between GDP and Investments of commercial banks in Nepal.

H1: There is significant relationship between GDP and Investments of commercial banks in Nepal.

3.4.5 Collinearity

In statistics, collinearity (also multicollinearity) is in which one predictor variable in a multiple regression model can be linearly predicted from the others with a substantial degree of accuracy. In this situation the coefficient estimates of the multiple regression may change erratically in response to small changes in the model or the data. Multicollinearity does not reduce the predictive power or reliability of the model as a whole, at least within the sample data set; it only affects calculations regarding individual predictors. That is, a multivariate regression model with collinear predictors can indicate how well the entire bundle of predictors predicts the outcome variable, but it may not give valid results about any individual predictor, or about which predictors are redundant with respect to others. Note that in statements of the assumptions underlying regression analyses such as ordinary least squares, the phrase "no multicollinearity" usually refers to the absence of perfect multicollinearity which is an exact (non-stochastic) linear relation among the predictors. In such case, the data matrix has less than full rank, and therefore the moment matrix cannot be inverted. Under these circumstances, for a general linear model, the ordinary least squares estimator does not exist. In any case, multicollinearity is a characteristic of the data matrix, not the underlying statistical model. Since it is generally more severe in small samples, Arthur Goldberger went so far as to call it "micronumerosity" (Goldberger, 1991). Multicollinearity refers to a situation in which two or more explanatory variables in a multiple regression model are highly linearly related. We have perfect multicollinearity if, for example as in the equation above, the correlation between two independent variables is equal to 1 or -1 . In practice, we rarely face perfect multicollinearity in a data set. More commonly, the issue of multicollinearity arises when there is an approximate linear relationship among two or more independent variables. Mathematically, a set of variables is perfectly multicollinear if there exist one or more exact linear relationships among some of the variables. Indicators that multicollinearity may be present in a model include the following:

- i. Large changes in the estimated regression coefficients when a predictor variable is added or deleted
- ii. Insignificant regression coefficients for the affected variables in the multiple regression, but a rejection of the joint hypothesis that those coefficients are all zero (using an F-test)
- iii. If a multivariable regression finds an insignificant coefficient of a particular explanator, yet a simple linear regression of the explained variable on this explanatory variable shows its coefficient to be significantly different from zero, this situation indicates multicollinearity in the multivariable regression.

- iv. Some authors have suggested a formal detection-tolerance or the variance inflation factor (VIF) for multicollinearity: $VIF = 1 \div \text{Tolerance}$, where $\text{tolerance} = 1 - R^2$ where R^2 is the coefficient of determination of a regression of explanator j on all the other explanators. A tolerance of less than 0.20 or 0.10 and/or a VIF of 5 or 10 and above indicates a multicollinearity problem.
- v. Farrar–Glauber test: (Farrar & Glauber, 1967) If the variables are found to be orthogonal, there is no multicollinearity; if the variables are not orthogonal, then at least some degree of multicollinearity is present. C. Robert Wichers has argued that Farrar–Glauber partial correlation test is ineffective in that a given partial correlation may be compatible with different multicollinearity patterns. The Farrar–Glauber test has also been criticized by other researchers.
- vi. Condition number test: The standard measure of ill-conditioning in a matrix is the condition index. It will indicate that the inversion of the matrix is numerically unstable with finite-precision numbers (standard computer floats and doubles). This indicates the potential sensitivity of the computed inverse to small changes in the original matrix. The condition number is computed by finding the square root of the maximum eigenvalue divided by the minimum eigenvalue of the design matrix. If the condition number is above 30, the regression may have severe multicollinearity; multicollinearity exists if, in addition, two or more of the variables related to the high condition number have high proportions of variance explained. One advantage of this method is that it also shows which variables are causing the problem (Belsley, 1991).
- vii. Perturbing the data. Multicollinearity can be detected by adding random noise to the data and re-running the regression many times and seeing how much the coefficients change. Construction of a correlation matrix among the explanatory variables will yield indications as to the likelihood that any given couplet of right-hand-side variables are creating multicollinearity problems. Correlation values (off-diagonal elements) of at least 0.4 are sometimes interpreted as indicating a multicollinearity problem. This procedure is, however, highly problematic and cannot be recommended. Intuitively, correlation describes a bivariate relationship, whereas collinearity is a multivariate phenomenon.

Remedies for multicollinearity. Make sure you have not fallen into the dummy variable trap; including a dummy variable for every category (e.g., summer, autumn, winter, and spring) and including a constant term in the regression together guarantee perfect multicollinearity.

- i. Try seeing what happens if you use independent subsets of your data for estimation and apply those estimates to the whole data set. Theoretically you should obtain somewhat higher variance from the smaller datasets used for

estimation, but the expectation of the coefficient values should be the same. Naturally, the observed coefficient values will vary, but look at how much they vary.

- ii. Leave the model as is, despite multicollinearity. The presence of multicollinearity doesn't affect the efficiency of extrapolating the fitted model to new data provided that the predictor variables follow the same pattern of multicollinearity in the new data as in the data on which the regression model is based.
- iii. Drop one of the variables. An explanatory variable may be dropped to produce a model with significant coefficients. However, you lose information (because you've dropped a variable). Omission of a relevant variable results in biased coefficient estimates for the remaining explanatory variables that are correlated with the dropped variable.
- iv. Obtain more data, if possible. This is the preferred solution. More data can produce more precise parameter estimates (with lower standard errors), as seen from the formula in variance inflation factor for the variance of the estimate of a regression coefficient in terms of the sample size and the degree of multicollinearity.
- v. Standardize your independent variables. This may help reduce a false flagging of a condition index above 30.
- vi. It has also been suggested that using the Shapley value, a game theory tool, the model could account for the effects of multicollinearity. The Shapley value assigns a value for each predictor and assesses all possible combinations of importance.^[12]
- vii. Ridge regression or principal component regression or partial least squares regression can be used.
- viii. If the correlated explanators are different lagged values of the same underlying explainer, then a distributed lag technique can be used, imposing a general structure on the relative values of the coefficients to be estimated.

CHAPTER 4: RESULTS

4.1 Data Presentation and Analysis

4.1.1 Lending and GDP Status of Commercial Banks of Nepal

The Lending rate of commercial Banks is 12.26% per annum in November 2018 and stayed also constant in October 2018. Nepal Rastra Bank updates lending rate monthly and average is 10.30% per annum from 2013 to 2018. GDP of Nepal is increasing per annum with certain ratio which has been varying yearly. With change on GDP more variables affect it. From the figure 4.1, GDP is increasing as well as Bank Lending, Deposit and Investment are also increasing. Investment is increasing with very slow rate shown in graph but other variables are increasing rapidly.

Table 4.1: Data of lending of commercial banks and GDP of Nepal

(Source: Nepal Rastra Bank, Banks and financial Institution Regulation Department, 2019)

| Year | GDP | Lending | Deposit | Investment |
|------|---------|---------|------------|------------|
| 2001 | 441519 | 107119 | 181767 | 25446.5 |
| 2002 | 459443 | 111694 | 185144.7 | 34209.8 |
| 2003 | 492231 | 123211 | 203879.3 | 45386.3 |
| 2004 | 536749 | 138923 | 233811.2 | 49668.6 |
| 2005 | 589412 | 157199 | 252409.8 | 60181.1 |
| 2006 | 654055 | 173383 | 291245.5 | 82173.7 |
| 2007 | 727089 | 228952 | 337497.2 | 93530.8 |
| 2008 | 818401 | 302913 | 426080.3 | 108954.8 |
| 2009 | 960011 | 398143 | 563604.4 | 130856.9 |
| 2010 | 1170993 | 467107 | 630880.84 | 134041.09 |
| 2011 | 1345767 | 522853 | 687587.89 | 149557.36 |
| 2012 | 1558174 | 612323 | 867978.25 | 181272.66 |
| 2013 | 1701191 | 748760 | 1020830.81 | 209926.28 |
| 2014 | 1928517 | 891629 | 1204463.4 | 226365.31 |
| 2015 | 2124650 | 1087487 | 1462896.12 | 282160.39 |
| 2016 | 2119870 | 1392503 | 1764592.44 | 229827.62 |
| 2017 | 2488320 | 1735899 | 2093255.77 | 226810.98 |
| 2018 | 2881007 | 2112330 | 2471514.17 | 321107.09 |
| 2019 | 2981326 | 2376290 | 2622299.7 | 294351.85 |

The data reached an all-time high of 12.470 % pa in Aug 2018 and a record low of 8.620 % pa in Oct 2016. Nepal's Commercial Banks: Lending Rate: Average data remains active status in CEIC and is reported by Nepal Rastra Bank (NRB, Statistics of economics of Nepal, 2019). It can be seen increasing the lending; GDP of the Nepal is also increasing from the flowing graph. In 2016, due to blockade and devastating earthquake, graph shows the decreasing GDP.

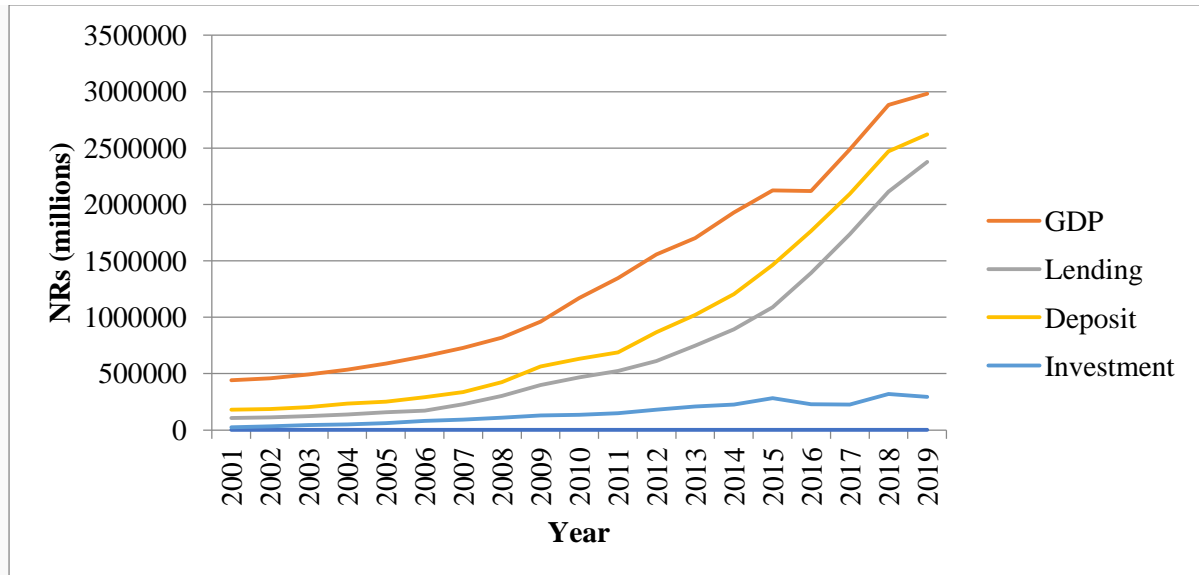


Figure 4.1: GDP, Bank lending, Deposits and Investments of commercial banks of Nepal

Using the National GDP calculation formula, it has been calculated. The Lending provided by the commercial banks covers most of the lending provided by all financial institutions which helps to invest in the productive sector which earns revenues and creates more job positions. Deposit in banks increases the lending power as well as investment power of banks. Deposits may be fixed, saving, current, and call deposits with their features. Banks can directly invest in the productive sectors to earn profit.

4.1.2 Gross Development Product (GDP) Growth Rate of Nepal

Economic development in Nepal has been complicated and affected by constant changes in political scenarios which have ranged from monarchy to being ruled by the Communist party in 2019. An isolated, agrarian society until the mid-20th century, Nepal entered the modern era in 1951 without schools, hospitals, roads, telecommunications, electric power, industry, or civil service. The country has, however, made progress toward sustainable economic growth since the 1950s and opened the country to economic liberalization leading to economic growth and improvement in living standards compared to the past. The biggest challenges faced by the country in achieving higher economic development are the frequent changes in political leadership as well as corruption. Nepal has used a series of five-year plans in an attempt to make progress in economic development. It completed its ninth economic development plan in 2002; its currency has been made convertible, and 17 state enterprises have been privatized. Foreign aid to Nepal accounts for more than half of the development budget. Government priorities over the years have been the development of transportation and communication facilities, agriculture, and industry. Since 1975, improved government administration and rural development efforts have been emphasized.

Agriculture remains Nepal's principal economic activity, employing about 65% of the population and providing 31.7% of GDP. Only about 20% of the total area is cultivable; another 40.7% is forested (i.e., covered by shrubs, pastureland and forest); most of the rest is mountainous. Fruits and vegetables such as apples, pears, tomatoes, various salads, peach, nectarine, potatoes, as well as rice and wheat are the main food crops. The lowland Terai region produces an agricultural surplus, part of which supplies the food-deficient hill areas.

GDP is heavily dependent on remittances (9.1%) of foreign workers. Subsequently, economic development in social services and infrastructure in Nepal has not made dramatic progress. A countrywide primary education system is under development, and Tribhuvan University has several campuses. Although eradication efforts continue, malaria had been controlled in the fertile but previously uninhabitable Terai region in the south. Kathmandu is linked to India and nearby hill regions by road and an expanding highway network. The capital was almost out of fuel and transport of supplies caused by a crippling general strike in southern Nepal on 17 February 2008. Major towns are connected to the capital by telephone and domestic air services. The export-oriented carpet and garment industries have grown rapidly in recent years and together now account for approximately 70% of merchandise exports.

The Cost of Living Index in Nepal is comparatively lower than many countries but not the least. The quality of life has declined to much less desirable value in recent years. Nepal was ranked 54th worst of 81 ranked countries (those with GHI > 5.0) on the Global Hunger Index in 2011, between Cambodia and Togo. In 2016 huge decrease in GDP due to devastating earthquake and blockade in Nepal- India border then it started to rise sharply and it is in up-down position (Bank, 2019)

4.1.3 Status of GDP of Nepal and Lending, Deposit and Investment of commercial banks of Nepal

Table 4.2 shows the descriptive statistics of lending of the commercial banks of Nepal, GDP and per capita income of Nepal has been calculated using by SPSS. GDP of Nepal has Mean value is more than NRs. 1.3673E6 millions while minimum is NRs. 441519 millions and maximum is NRs. 2981326 millions with frequency is 19 and standard deviation is NRs. 8.47303E5 millions and variance is NRs. 7.179E11 millions which stands the deviation from the center value. Mean value of commercial Bank lending is NRs. 720458.87 millions while minimum and maximum values are NRs. 107118.90 million and NRs. 2376290 millions respectively, and standard deviation and variance are NRs. 7.07877E5 and 5.011E11 millions. Deposit of commercial banks of Nepal has Mean value is more than NRs. 921144.14 millions while minimum is NRs. 181767 millions and maximum is NRs. 2622299.66 millions with and standard deviation is NRs. 8.00728E5 millions and variance is NRs. 6.412E11 millions. Investment of commercial banks of Nepal has Mean value is more than NRs. 151885.74 millions while minimum is NRs. 25446.50

millions and maximum is NRs 321107.09 millions with and standard deviation is NRs. 93773.09 millions and variance is NRs. 8.793E9 millions.

Table 4.2 Descriptive Statistics of GDP; Bank lending, Deposit and Investment of commercial Banks

(Source: SPSS)

| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
|-----------------------------------|----|-----------|------------|-----------|----------------|----------|
| Gross Domestic product | 19 | 441519.00 | 2981326.00 | 1.3673E6 | 8.47303E5 | 7.179E11 |
| Lending Commercial Banks of Nepal | 19 | 107118.90 | 2376290.00 | 720458.87 | 7.07877E5 | 5.011E11 |
| Deposit in Commercial Banks | 19 | 181767.00 | 2622299.66 | 921144.14 | 8.00728E5 | 6.412E11 |
| Investment of Commercial Banks | 19 | 25446.50 | 321107.09 | 151885.74 | 93773.09 | 8.793E9 |

4.1.4 Correlation between GDP with Lending, Deposit and Investment of Commercial Banks in Nepal

The correlation between GDP of Nepal & lending of commercial banks of Nepal describes the degree of relationship between these two variables. How a unit increase lending impact the GDP is measured by correlation. Here, lending is the independent variable and the GDP is the dependent variable. Table describes the relationship between total lending of commercial banks and GDP has been calculated by using SPSS. As prominent from the table, it can be seen that there is a high degree of positive correlation between the two variables. This indicates that GDP is highly dependable on the amount of lending. Since the value of (r) the correlation between these two variables is significant. As noted the value of coefficient of determination is 0.970, it indicates that 97 % of the variation in GDP is explained by lending and the rest of 3% is due to other factors. The relationship between Deposit of commercial banks and GDP has been calculated by using SPSS. From the table, it can be seen that there is a high degree of positive correlation between the two variables. This indicates that GDP is highly dependable on the amount of deposit. Since the value of (r) the correlation between these two variables is significant. As noted the value of coefficient of determination is 0.983, it indicates that 98.3 % of the variation in GDP is explained by deposit of commercial banks and the rest of 2% is due to other factors. The relationship between investment of commercial banks and GDP has been calculated by using SPSS. As from the table, it can be seen that there is a high degree of positive correlation between these two variables. This indicates that GDP is highly dependable on the amount of investment. Since the value of (r) the correlation between these two variables is significant. As noted the value of coefficient of determination is 0.972, it indicates that 97.2 % of the variation in GDP is explained by investment and the rest of 3% is due to other factors.

Table 4.3: Correlation of GDP with lending, Deposit and Investment of commercial banks of Nepal**Correlation**

| Control Variables | | Lending Commercial bank | Deposit in Commercial Bank | Investment of Bank | Gross Domestic product |
|---|---|-------------------------------|----------------------------------|-----------------------|------------------------------|
| Lending Commercial Banks of Nepal | Correlation | 1.000 | .997 | .903 | .970 |
| | Significance (2- tailed) | . | .000 | .000 | .000 |
| | df | 0 | 17 | 17 | 17 |
| | | | | | |
| Deposit Commercial Bank | in Correlation | .997 | 1.000 | .928 | .983 |
| | Significance (2- tailed) | .000 | . | .000 | .000 |
| | df | 17 | 0 | 17 | 17 |
| | | | | | |
| Investment Bank | of Correlation | .903 | .928 | 1.000 | .972 |
| | Significance (2- tailed) | .000 | .000 | . | .000 |
| | df | 17 | 17 | 0 | 17 |
| | | | | | |
| Gross Domestic product | Correlation | .970 | .983 | .972 | 1.000 |
| | Significance (2- tailed) | .000 | .000 | .000 | . |
| | df | 17 | 17 | 17 | 0 |
| | | | | | |
| GDP | Lending Commercial Banks of Nepal | Correlation | 1.000 | .966 | -.689 |
| | | Significance (2- tailed) | . | .000 | .002 |
| | | df | 0 | 16 | 16 |
| | | | | | |
| | Deposit Commercial Bank | in Correlation | .966 | 1.000 | -.642 |
| | | Significance (2- tailed) | .000 | . | .004 |
| df | | 16 | 0 | 16 | |
| | | | | | |
| Investment Bank | of Correlation | -.689 | -.642 | 1.000 | |
| | Significance (2- tailed) | .002 | .004 | . | |
| | df | 16 | 16 | 0 | |
| | | | | | |

4.1.5 Effects of Bank Lending, Deposit and Investment of commercial Banks on GDP in Nepal

From the output of SPSS, the following table has been generated which gives the regression coefficients. Table 4.4 shows the coefficients of the parameter estimate. It can infer from table 4.7 that the slope of the model (β_0) is statistically significant at 5% level of significance, since the P-value stood at 0.000, which is higher than 0.05. Similarly, the coefficient of beta (β_1) Bank Lending (x_1) indicate a positive relationship with GDP, and statistically significant at 5% level of significance with β_1 stood at 0.634 and P-value stood at 0.000, which is lower than 0.05. Thus, arising from this result we reject the null hypothesis which states that there is insignificant relationship between aggregate bank lending and GDP of Nepal; since there is enough evidence to suggest a statistically significant relationship between bank lending and GDP in Nepal. Meanwhile, the coefficient of β_2 Deposits of commercial banks (x_2), stood at -0.003 and P-value stood at 0.501. At 5% level of significance the results indicate a statistically insignificant relationship between GDP and bank deposit of commercial banks in Nepal, since P-value (0.501) is higher than 0.05. Thus, we conclude that there is not enough evidence to suggest a significant relationship between GDP and deposit of commercial banks in Nepal. The coefficient of β_3 Investment of commercial banks (x_3), stood at 4.562 and P-value stood at 0.000. At 5% level of significance the results indicate a statistically significant relationship between GDP and investment of commercial banks in Nepal, since P-value (0.000) is lower than 0.05. Thus, we conclude that there is enough evidence to suggest a significant relationship between GDP and investment of commercial banks in Nepal

Table 4.4: Coefficients

(Source: SPSS)

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|--------------------------------|-----------------------------|------------|---------------------------|-------|------|
| | B | Std. Error | Beta | | |
| 1 (Constant) | 225105.78 | 45274.05 | | 4.972 | .000 |
| Lending of commercial Banks | .634 | .088 | .530 | 7.213 | .000 |
| Deposit in commercial Banks | -.003 | .005 | -.025 | -.689 | .501 |
| Investment of commercial Banks | 4.562 | .565 | .505 | 8.076 | .000 |

a. Dependent Variable: Gross Domestic product

Finally, from the foregoing analysis and the results in table 4.4, one variable deposit of commercial banks is insignificant, and other variables Lending and Investment are significant.

From the above table analyzed by SPSS, the regression of economic growth of Nepal is given by the following equation:

$$\text{Gross Domestic Product} = 225105.78 + 0.634x_1 - 0.03x_2 + 4.562x_3$$

$$\text{Standard Error} = (45274.05) \quad (0.088) \quad (0.005) \quad (0.565)$$

Also, the significance of the coefficient of determination of the multiple regression results is shown in table 4.5. The F-statistics indicated a statistically significant impact of Bank lending, deposit and investment on GDP in Nepal since the F-statistics calculated stood at 546.456 against the tabulated F-statistics (6.39), at 5% level of significance.

Table 4.5: ANOVA

(Source: SPSS)

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|---------|-------------------|
| 1 | Regression | 1.281E13 | 3 | 4.268E12 | 546.456 | .000 ^a |
| | Residual | 1.172E11 | 15 | 7.811E9 | | |
| | Total | 1.292E13 | 18 | | | |

a. Predictors: (Constant), Investment of Bank, Deposit in Bank, Lending commercial bank of Nepal

b. Dependent Variable: Gross Domestic product

4.2 Major Findings

- i. The status of bank lending, Deposit and Investment of commercial banks is also increasing while the GDP is increasing annually by 8% in 2017 AD and it is lowest in 2016 AD in 0.413% because of blockade from India and devastating earthquake in Nepal. Lending can role to develop the country which is also increasing. Deposit and investment are also increasing gradually year by year.
- ii. The relationship between lending and GDP of Nepal seems that there is a high degree of positive correlation between these two variables. As noted the value of coefficient of determination is 0.97, it indicates that 97% of the variation in GDP is explained by lending and the rest of 3% is due to other factors, which is essential and requirement for banking operation.
- iii. The relationship between GDP and deposit of commercial banks of Nepal seems that there is a high degree of positive correlation between the two variables. As noted the

value of coefficient of determination is 0.983, it indicates that 98.3% of the variation in per capita income is explained by lending and the rest of $\sim 2\%$ is due to other variables.

- iv. The relationship between investment of commercial banks and GDP has been calculated by using SPSS. This indicates that GDP is highly dependable on the amount of investment. Since the value of (r) the correlation between these two variables is significant. As noted the value of coefficient of determination is 0.972, it indicates that 97.2 % of the variation in GDP is explained by investment and the rest of 3% is due to other factors.
- v. The slope of the model is statistically significant at 5% level of significance, the p-value is lower than 0.05. Similarly, the coefficient lending indicate a positive relationship with bank GDP, and statistically significant at 5% level of significance P-value which is lower than 0.05. Thus, arising from this result we reject the null hypothesis which states that there is not significant relationship between aggregate bank lending and GDP economic growth in Nepal; since there is enough evidence to suggest a statistically significant relationship between bank lending and GDP in Nepal. At 5% level of significance the results indicate a statistically insignificant relationship between deposit and GDP in Nepal, since P-value is higher than 0.05. Thus, we conclude that there is not enough evidence to suggest a significant relationship between GDP and deposit in Nepal. At 5% level of significance the results indicate a statistically significant relationship between investment and GDP in Nepal, since P-value is higher than 0.05. Thus, we conclude that there is enough evidence to suggest a significant relationship between GDP and investment in Nepal.
- vi. Finally, from the foregoing analysis and the results, one variable deposit is insignificant, and other variables bank lending and investment are significant. The regression equation of multiple regression analysis is: Gross Domestic Product = $225105.78 + 0.634x_1 - 0.03 x_2 + 4.562 x_3$

Thus, the GDP is key of national economy and all commercial banks should pay its attention to the overall macro economic situation of the country as well as the factors affecting the GDP. If GDP is highly increased then other factors also increase and give profitability to commercial banks. Deposit and investment should be in balance to increase the good profitability. All economic indicators should be in positive for good GDP increment and to develop the country.

CHAPTER 5: CONCLUSIONS

In this chapter we examine the processed data to come into summary, conclusions on the performance of the bank on an individual basis and put some recommendation for the subject bank in order to improve its weaknesses. This chapter is divided into summary, conclusions and recommendations.

5.1 Discussion

Lending management is very integral part of the bank and most probably the existence of the bank depends upon lending. The bank gains the interest income from loans and advances that it provides to the business entity and individuals for different purposes. Bank always fits itself into an economy with an important role of capital provider. The function of commercial bank is lending and borrowing. But the things have changed and modern banking system provides many more advanced and new facilities, so the function of commercial banks push the national economy, mobilize the collected fund and canalize into productive sectors. These can easily achieve investment objective of gaining maximum return. The credit is the reason that the bank exists and it is what is fueling the economy of the Nepalese economy and world around us. Hence the management of credit of the bank is an important for the existence of banks. The main objective of this study is to supplement the prior studies in loan disbursement of lending practices of commercial banks in Nepal and provide some insight into how much the impact of lending, deposit and investment position on GDP. Relationship of GDP to lending, deposit and investment has been calculated and shown in results.

The lending position has been analyzed by calculating correlations of GDP with lending, deposit and investment of Nepal. It can be seen that there is a high degree of positive correlation of GDP with lending, deposit and investment. This indicates that GDP is highly dependable on the amount of lending, deposit and investment of commercial banks of Nepal. Since the value of (r) the correlation between GDP and bank lending is significant. The value of coefficient of determination is 0.97, it indicates that 97 % of the variation in GDP is explained by lending and the rest of 3% is due to other factors but in Nigeria there is significant relationship between GDP and bank lending with 5% level of significance. There is positive relationship between GDP and lending of commercial banks in Nepal in 2011 which was done by Yasodha Pokhrel. Neelam Timilsina had derived the positive relationship of GDP with bank lending in her research in 2016.

From the descriptive statistics of lending, deposit and investment of the commercial banks of Nepal and GDP of Nepal has been calculated using by SPSS. GDP of Nepal has Mean value is

1.3673E6 millions and which is more than previous research done in 2011 and 2015 in Nepal. Mean value of commercial bank lending is NPR 720458.87 millions which is also higher than other previous researches as well as other statistical values such as maximum, minimum, standard deviation and covariance when data has been taken from 2001 to 2019 are also higher than other research results. The mean value of deposit and investment of commercial banks are NRs. 921144.14 and 151885.74 millions respectively and are increasing and higher than previous research which is good sign of national development. GDP shows the significance relationship with lending and investment of commercial banks of Nepal but insignificant relation with deposit of commercial banks of Nepal. However in some previous research, deposit and investment were correlated with lending and other variables.

The GDP is barometer of economy and all commercial banks should pay its attention to the overall macro economic situation of the country as well as the factors affecting the GDP. If GDP is highly increased then other factors also increase and give profitability to commercial banks or vice-versa. Deposit and investment should be in balance, if not there can be raised problem to stock money without investment.

5.2 Conclusions

The lending, deposit and investment of commercial banks are key of economic growth of Nepal. The lending practices of commercial banks in term of exposure of loans and advances are quite good. The correlations of GDP with lending, deposit and investment of commercial banks, indicate positive relationship. Total loans & Advances are the major area of fund mobilization of commercial banks which covers maximum economy among all financial institutes.

The value of correlation coefficient (r) is significant and there is positive correlation between total lending and GDP of Nepal. It can be concluded that an increase or decrease in lending of commercial banks positively affects the increment or decrement to GDP. Correlation between lending and GDP as well as correlation between GDP and investment and deposit is significant.

The relationship between total lending of commercial banks and GDP has been calculated by using SPSS. As prominent from the table, it can be seen that there is a high degree of positive correlation between the variables. This indicates that GDP is highly dependable on the amount of lending, deposit and investment. Since the value of (r) is the correlation between GDP and lending is significant. As noted the value of coefficient of determination is 0.97, it indicates that 97 % of the variation in GDP is explained by lending and the rest of 3% is due to other factors.

The relationship between lending and GDP of Nepal seems that there is a high degree of positive correlation between the two variables. GDP and investment of commercial banks seems higher degree of positive correlation and insignificant relationship with deposit which directly not involved in development. From the foregoing analysis and the results, one variable deposit is insignificant, and two variables lending and investment are significant.

The loans and advances of the bank during research period are increasing. An average growth rate of total loans and advances looks good in term of earning. It is due to the goodwill of company and regular interest adjustment on deposit & loans and advances according to market fluctuation. The annual average growth rate of net profit is in increasing trend which concludes that the bank's total deposit increases with lesser cost and higher rate of fees and commissions in total loans and advances so that the profit level of bank is increasing. Certain investment of commercial banks also helps to increase profitability of commercial banks.

5.3 Implications

Firstly, the federal government of Nepal through the central bank of Nepal Rastra Bank (NRB) should strengthened the banking sector to ensure an improve credit flow to the activity sectors because of its strategic importance in creating and generating growth of the economy. Secondly, the government of Nepal through the NRB should ensure the financial stability of the Nepalese economy by initiating programmes that would enhance the growth, operation, and quality of banks in Nepal. No doubt, there is a significant contribution of the commercial banks in Nepalese economy. But, the concentration of banks and financial institutions including the commercial banks in the urban areas leads to the possibility of creating defaulters chain.

- i. Increasing number of commercial banks creates challenge to the regulatory and supervisory authority to enhance its efficiency and effectiveness. Hence, the regulatory and supervisory authority. Researcher can research on impact of increasing financial institutes.
- ii. The outcome of the present study felt that there is a great need to revise the existing licensing policy to divert the existence of financial institutions in the needy areas of the country.
- iii. To increase the outreach of the banking services even by the commercial bank, it requires minimum infrastructure throughout the country by which the commercial bank will also encouraged expanding its network in the semi-urban areas and gradually in remote areas. Researcher can research on impact of financial institutions on rural area.

- iv. There are more variables related to this research, study can be done on interest rate, loan loss, shareholder's equity, net asset and on various ratios of commercial banks or development banks or microfinance or other financial institutions be done.
- v. Performance measurement of two or more banks on the basis of lending can be topic of the research. SPSS has more features, using these features comparison can be done with different parameters.

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