BUDGET DEFICIT AND ITS EFFECTS ON ECONOMIC GROWTH IN NEPAL

A Thesis

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CHAPTER: I

INTRODUCTION

1.1. Background of the Study

The government's delays and failures in collection of the revenues, taxes and other sources of revenues results in budget deficit. The economy of Nepal is currently going through a period of continuous budget deficit. The impact of budget deficit in the country's economic growth is much controversial. There are various views of economist in the relationship between budget deficit and economic growth. According to Keynesian economists deficits have a positive influence on economy due to increases in domestic production and private investment and on the contrary, neoclassical economists argue about the negative consequences because governments shift tax burdens to the future. As a result, even though current private consumption is bound to increase, personal savings are likely to decline. In this scenario, interest rates are expected to rise in order to restore equilibrium in the capital market. Higher interest rates would in turn trigger a decline in private investments. While Keynesian economists and neoclassical economists have contradicting views about the relationship between deficit and growth, Barro proposes the "Ricardian equivalence" theorem, which posits that the relationship is neutral. An increase in budget deficits today must be compensated by future tax increases, thereby leaving the interest rates and private consumption unaffected (Bernheim, 1989).

Several empirical studies suggest that although budget deficits are not a true representative of fiscal policy, and that it is not easy to estimate the impact of fiscal policy, fiscal deficits are the most reliable and measurable indicator for economic growth and development Fischer (1993). It is also important to stress that there is a bidirectional relationship between budget deficits and other macroeconomic indicators. However, budget deficits have been found to impact economic growth either positively or negatively depending on the sources of the deficit Kneller, Bleaney, & Gemmel (1999). According to (Eminer, 2015) an increase in a budget deficit will impact economic growth positively if the deficit is geared towards productive spending and negatively if it is geared towards non-productive spending. In any case, the term "productive spending" is relative, and dependent on the

discretion of the policy maker. Also, the full realization of the impact of budget deficits is dependent on the duration (short or long run) of the policy.

In Nepalese context, Budget deficit of the Government has increased to Rs.138.23 billion in ten months of 2017/18 from a deficit of Rs.0.51 billion in the corresponding period of the previous year (NRB, 2018)

According to the Current Macroeconomic and Financial Situation of Nepal based on Ten Months Data of 2017/18 released by Nepal Rastra Bank, the current account deficit widened further to Rs.191.02 billion in the review period from a deficit of Rs. 7.57 billion in the same period of the previous year. The elevated level of imports widened the current account deficits. As a result, the overall Balance of Payment (BOP) turned into a deficit of Rs.18.93 billion in contrast to a surplus of Rs.53.81 billion in the same period of the previous year (NRB, 2018).

According to NRB, the overall economic activity is expected to remain on track as reflected in the recent GDP estimates by the Central Bureau of Statistics (CBS) for 2017/18. The estimate of real GDP growth of about 6 percent has been broad-based with slightly lower than expected growth in agriculture on account of widespread flood and inundation in the southern plain at the beginning of the current fiscal year (CBS, 2018).

The report on economic activities recently released by Nepal Rastra Bank shows a rise in the industrial capacity utilization to 58 percent during six months of 2017/18 from 54.2 percent a year ago (NRB, 2018).

Nepal's budget deficit is due to an outrageous recurrent expenditure which makes up more than 60 percent of total government spending. In contrast, capital expenditure remains below 40 percent. This shows that the budget deficit is not growth-friendly and needs to be reduced. In the short run, the budget deficit can be reduced by increasing tax revenue and decreasing government expenditure. However, in the long run, other things being equal, cutting government spending will cause the economy's overall output to fall, and that an increment in taxes will lead to a reduction in private sector investment (MoF, 2018).

1.2. Statement of the Problem

Nepal has been experiencing continuous budget deficits and rising levels of debt over the years. Every year government announces budget and expenditure is allocated including the sources of revenue collection with the objective of increasing the economic growth of the country. Even when the size of the national budget was many times less than the present budget, the government at that time had been unable to collect the targeted revenues. The existence of high budget deficit distorts the all economic activities.

This study has raised the following research questions:

a) What is the trend of budget deficit and economic growth?
b) What is the relationship between budget deficit and economic growth?

1.3. Objectives of the Study

The general objective of the study is to examine the budget deficit and its effect on economic growth of Nepal. The specific objectives of the study are as of:

a) To analyze the trend of budget deficit and its effect on economic growth
b) To show the relationship between economic growth and budget deficit.

1.4. Hypothesis of the Study

The study tests the null hypothesis (H_0) and alternative hypothesis (H_1) to investigate the relationship between budget deficit and economic growth.

a) Null Hypothesis: There is no significant relationship between budget deficit and economic growth.

b) Alternative Hypothesis: There is significant relationship between budget deficit and economic growth.

1.5. Significance of the Study

The study is completely concerned with the relationship between budget deficit and economic growth, the findings of the study would be applicable to the several stakeholders. Firstly, it would be applicable to future researchers and scholars in fiscal policy especially in the areas of budget deficit. This study would suggest area

for further research where the researchers and scholars can expand the knowledge about budget deficit and at the same times it provides the source of reference material. Finally, this study would provide the knowledge about impact of budget deficit on economic growth which benefits the policy maker, academicians, bureaucrats, administrator and general people. The study justifies my present work. The study is of great value from both socio- economic as well as academic point of view.

1.6. Limitations of the Study

Like other research this study is not free from limitation. Following are the limitations of the study

Due to unavailability of the data, this study is based on the data of 44 years from 1974/75 to 2018/19 has been used

No attempts have been made to examine the reliability of the secondary data. So the relation of secondary data depends upon the validity of secondary data.

1.7. Organization of the Study

The study is organized into five chapters. The first chapter is the Introduction that deals with Background of the Study, Statement of the Problem, Objectives of the Study, Hypothesis of the Study, Significance of the Study, Limitations and the Organization of the Study. The second chapter is for Review of Literature including theoretical concept, empirical review such as international context and national context, Summary of Literature and Research Gap. Likewise, chapter third is for Research Methodology that includes Research Design, Nature and Sources of Data, Sample Period, Tools and methods of data collection, Data Organization and Processing, Tools and Methods of Data Analysis, Model specification. Chapter four is for Public Finance of Nepal, Fifth chapter is about Data Presentation and Analysis and the last chapter is for Summary, Conclusions and Recommendations

CHAAPTER: II

REVIEW OF LITERATURE

2.1 INTERNATIONAL CONTEXT

The phenomenon of nexus between budget deficit and economic growth has been discussed since the periods of classical economist. Different economic schools of thought have given their opinion about relationship between economic growth and budget deficit. There are different views on the relationship between budget deficit and economic growth, Keynesian argues on the positive impact of budget deficit on the economic growth, the neo-classical school on the contrary argues for the opposite. Meanwhile, the Ricardian equivalence hypothesis suggests a neutral relationship between them.

Bernheim (1989) "It is remarkable that among these three schools of thought, one can find support for every conceivable normative position. Whether one thinks of deficit as good, bad or irrelevant therefore depends fundamentally on one`s choice of paradigm. Certainly, no single paradigm corresponds exactly to reality"

Keynesian economists believed that budget deficit brings positive impact by increasing the economic growth. Keynesian economists emphasized the "crowding-in" effects of budget deficits on the economy due to increases in domestic production and private investment. This was because, assuming some economic resources are unemployed, an increased deficit spending leads to increase in aggregate demand, private investment and savings at a particular level of interest. Budget deficit stimulated the accumulation of capital and growth through increased domestic production.

Bernheim (1989) believed that under the Keynesian view, a significant fraction of the population is thought of as either myopic or liquidity constrained. These individuals have very high propensities to consume out of current disposable income. A temporary tax reduction therefore has an immediate and quantitatively significant impact on aggregate demand. If the economy's resources are initially under-employed, national income rises, thereby generating second round effects and the well-known Keynesian multiplier. Since deficits stimulated both consumption and

national income, saving and capital accumulation need not be adversely affected. Thus, appropriately timed deficits had beneficial consequences.

Budget deficit is a situation of excess expenditure over revenue collected from different tax and non- tax sources. According to Keynesian view, deficit budget accelerated the growth of GDP in the developing countries. Increased government expenditure results in increment of aggregate demand of a country and ultimately it leads to accelerated economic growth.

Eisner (1986) explained the relationship between the budget deficit and economic growth saying that deficit on budget can leads to an increase in aggregate demand which ultimately increases savings and private investment. (Eisner, 1986) Further added on the Keynesian outlook on budget deficit which pre-suppose that government can and will "fine tune" fiscal policy. He argued that any effort made to reduce the budget deficit may harm the economy. He further stated that deficits may actually stimulate aggregate savings and investments despite the fact that they raise interest rates. Keynes believed that aggregate real income would continue to increase as more and more capital is accumulated. This increase in income results in an increase in aggregate savings and an increase in the average propensity to save.

Chakraborty & Chakraborty (2006) explained the Keynesian views, in the context of the existence of some unemployed resources, arguing the crowd-in effect by making reference to the expansionary effect of budget deficit. They have argued that an increase in government spending enhances domestic output and stimulate the economy in the short-run by making households feel wealthier, thus rising total private and public consumption expenditure. Through the resulting increase in the aggregate demand, budget deficit has a positive effect on macroeconomic activity, thereby stimulating saving and capital formation. This is known as the "crowding-in" effect, which has a positive impact on growth.

Keynes (1936) "With the confused psychology which often prevails, the government program may, through its effect on confidence, increase liquidity-preference or diminish the marginal efficiency of capital, which, again, may retard other investment unless measures are taken to offset it"

The Neo-classical has argued negative relationship between budget deficit and economic growth. This school of thought assumes an individual who plan his/her consumption over their life. Neo-classical school has stated that budget deficits raise total lifetime consumption by shifting taxes to the following generation. If economic resources are fully employed, increased consumption results in decreased saving. Interest rates then will rise to bring capital markets into balance. Thus, higher interest rates discourage the private expenditure and private investments thereby increasing inflation and leading to deteriorate the economic growth rate through resources crowding out.

Bernheim (1989) found three different features of neo-classical model each of which has an important role in determining the impact of budget deficits.

a) The consumption of each individual is determined as the solution to inter- temporal optimization problem, where both borrowing and lending are permitted at the market rate of interest.

b) Individuals have finite life spans. Each consumer belongs to a specific cohort or generation and the life spans of successive generation overlaps.

c) Market clearing is generally assumed in all periods.

Ramzan, Saleem, & Butt (2013) concluded that if consumers are rational, farsighted and have access to perfect capital markets, then permanent deficits significantly depress capital accumulation and temporary deficits have either a negligible or perverse effect on the most economic variables (including consumption, savings and interest). Similarly, if many consumers are either liquidity constrained or myopic, the impact of permanent deficits remains qualitatively unchanged. However temporary deficits should depress savings and raise interest rates in the short run.

Diamond (1965) paper was the first effort to study formally the effects of budget deficits in neo-classical models. Diamond argued that a permanent increase in the ratio of domestically held debt to national income depresses the steady state capital-labor ratio.

King & Baxter (1993) defined the Neo-classical model which implied that there exists a negative impact of government spending on GDP. If government

borrowing creates a greater demand for money and funds than it supplied, it leads to higher interest rates resulting in increased cost for private firms to borrow money. The private firm takes participation on fewer investments, they also produce less and reduce output and thus GDP falls. Neo-classical model assumed an economy to be at full employment suggested that increase in deficit will also create long term inflationary effects. Thus, Neo-classical economists always argued to have existence of negative relationship between government spending and GDP.

Bernheim (1989) believed that an increase in debt financed deficits causes a rise in interest rates; higher interest rates reduce private investment thereby lowering output. On the other hand, tax financed government expenditure, shifted taxes to future generations leading to fiscal deficits increasing current consumption. This implies a decrease in savings and a rise in interest rates so as to bring equilibrium in capital markets. Higher interest rates in turn crowd out private investment thereby retarding economic growth.

Yellen (1989) argued on the selection of method by the government to finance the excess expenditure over the revenue affects investment, consumption and net export. If government expenditure is financed by issuing bonds rather than current taxation, then it results in increasing consumption expenditure and lower national saving. If resources are fully employed, so that output forms of spending is fixed, higher current consumption implies an equal and offsetting reduction in other forms of spending. Thus, investment must be fully "crowding out".

Another view on the effect of budget deficit on economic growth is Ricardian Equivalence. The Ricardian School was first proposed by David Ricardo and was later advanced by Barro. According to Ricardian Equivalence approach, there is no direct relationship between budget deficit and economic growth. Barro (1989) argued that both tax and debt financed budget deficits have an equivalent effect on the economy. The theory puts forward that debt financed deficits will be repaid through increased taxes in the future. An increase in desired private saving is offset by the decrement in government saving and there is no change in desired national saving. Since the desired national saving does not change, the real interest rate also does not rise in a closed economy to maintain balance between the desired national saving and investment demand. Similarly, the current account balance will not be affected

because of enough rise in desired private saving to avoid borrowing from abroad in case of an open economy. Budget deficits would not cause current account deficits. Therefore, He concluded that households would reflect the same response whether the government finances their deficits by loans or taxes. According to Ricardo budget deficits would not increase aggregate demand therefore in the short the relation between budget deficit and economic growth will be neutral.

Bittante (2013) explored that an increase in deficits is compensated by future tax increases, leaving interest rates and private consumption unaffected. Budget deficits have no real effects on economic growth as overall level of demand in the economy remains same. The reason behind this is future rise in tax burden automatically balance the current budget deficit financed through borrowing. Lower taxes in the present are offset by higher taxes in the future. In this sense, budget deficits and taxation have equivalent effects on the economy.

Mankiw (2010) argued that people are forward looking (at least in the long run), they will take their spending decision not only based on their current income but expected future income. As a result, consumer will save rather than spend implying neutral relationship between deficit budget and economic growth; which is also known as Ricardian equivalence. Chakraborty & Chakraborty (2006) Fiscal deficit simply represents a transfer of expenditure resources from the private to the public sector and "variation in budget deficit is neutral to economic activity"

Chrystal & Thornton (1988) concluded that deficit will not be associated with increase in real interest rates, output, prices or the trade deficit. Deficit spending merely results in a redistribution of income and the national debt represents the cumulative amount of this net transfer.

Friedman (1978) stated that the economic consequences of government budget deficits are usually alleged to be either inflationary (in the sense of rising prices) or deflationary (in the sense of depressing investment and hence economic growth) or both. That is, debt financed deficits need not crowd out any private investments and may even crowd in some.

Brender & Drazen (2008) have given a different perspective in the impact of budget deficit. Budget deficit can reduce the economic growth of a country based on

the perspective of politics and election process. They argued that high budget deficits recorded by a country will give negative signals to the citizens as an indication of the inability of the government to perform well in managing the resources of a country. As a result, there is a probability of re-election process to be conducted to replace the authorities. Indirectly the authorities who did not perform well may not be able to bring the country to the upper level. Hence, it will not contribute to high economic growth due to lack of confidence among citizens, investors, and other bordering countries.

Spencer & Carlson (1975) have explained that crowding out generally referred to the economic effects of expansionary fiscal actions. If an increase in Government demand, financed by either taxes or debt issuance to the public, fails to stimulate total economic activity, the private sector is said to have been 'crowded out" by the Government action. Increase in real Government demand financed by real taxes or debt has no lasting effect on real income. Increased Government demand may crowd out exactly the same amount of private demand, slightly less, or slightly more. The increased Government demand may increase aggregate demand temporarily, permanently, or not at all.

Yavas (1998) explained that if the economy is at underdeveloped state than increase in size of fiscal deficit will increase level of output and will decrease the level of output if the economy is developed. A significant portion of the deficits is directed to the building of the infrastructure of the economy in the underdeveloped countries and this type of expenditure will have a stimulating effect on private sector production. In the contrary, a major part of their deficit spending is on welfare programs in case of developed countries because they already have most of their infrastructure built. Therefore, spending on infrastructure development will have more positive effect on the output then spending on different social welfare programs.

Ball & Mankiw (1995) defined that budget deficits financed through debt can lead to an increase in taxes or reduction in government spending or transfer payments so as to free up funds to pay for the debt. The increase in taxes reduces household income which in turns reduces output, whereas the reduction in government spending reduces output. .

Amwaama (2018) carried a study to assess the relationship between budget deficit and economic growth in Namibia using time series quarterly secondary data covering the period, 1993 Q4 to 2015, Q4. The study employed the Auto Regressive Distributed Lag (ARDL) bounds test and estimates the coefficients of the variables from the unrestricted error correction model in examining the relationship between budget deficit and economic growth. The unit root test results showed that real GDP, debt and budget deficits are integrated of order zero, I (0), while investment is integrated of order one, I (1) making the highest order of integration I (1). The Toda Yamamoto Granger non-causality test results indicated evidence of bi-directional causality between real GDP, growth and budget deficit and a unidirectional causality from real GDP growth to debt. The study also found a bi-directional causality between debt and budget deficit. Co-integration test results confirm a relationship between real GDP and the explanatory variables. The overall findings have indicated that budget deficit negatively affected growth rate both in the short run and long run. This is in conformity with the neo-classical theory which holds that fiscal deficits lead to a fall in real GDP growth. Therefore, holding other variables constant, in the long run, an increase in the fiscal deficit by 1 percentage point of GDP is associated with a lower real GDP growth rate, by about 0.23 percentage points.

Odhiambo, Monyani, Othuon, & Aila (2013) studied the relationship between fiscal deficits and economic Growth in Kenya by using both exploratory and causal research designs and employ annual time series secondary data for a period of 38 years (1970-2007) and further investigated the ways in which fiscal deficit have effects on the growth and development of the Kenyan economy. Time series properties of the data are examined by carrying out unit root test Augmented Dickey Fuller (ADF) test as well as Johansen co-integration test. Based on the dynamic growth model, the study concluded that fiscal deficits can increase economic growth as it enhances productivity by providing infrastructure, education, Health and harmonize private and social interest. The study therefore found a positive relationship between economic growth and budget deficits in Kenya.

Ghana Antwi, Zhao, & Mills (2013) studied the consequential effects of budget deficit on economic growth by applying the annual time series data for the period 1960-2010 using the present value budget constraint approach. The test for co-integration favors the sustainability of budget deficits of Ghana.

Eminer (2015) showed the causal relationship of budget deficit and economic growth in the long run by using time series secondary data for 28 years (1983-2010). Granger Causality test and with other econometric methods such as; Dickey Fuller and Augmented Dikey Fuller unit root tests was used to test the relationship. Autoregressive Distributed Lag approach was also used to estimate the relation between all other variables (Budget deficit, economic growth, productive expenditure, non-productive expenditure). The study found that a productive expenditure causes economic growth. He thus, concluded that budget deficit does not always result in negative effects on economic growth. There could be different effects of budget deficit on economic growth depending with the expenditure productivity.

Aslam (2016) found the dynamic relationship between the budget deficit and the economic growth of Sri Lanka using annual time series data from 1959 to 2013 by taking the budget deficit as main independent variable and the gross domestic product in constant price as dependent variable. The exports earnings, exchange rate, inflation rate were used as supportive independent variables of this study. The Johansen co-integration technique and Vector Error Correction Model were employed to test the long and short - run dynamic relationship between the budget deficit and the economic growth of Sri Lanka. This study found that the budget deficit and economic growth of Sri Lanka had a long- run dynamic relationship but no short- run dynamic relationship. In addition, the budget deficit had positive relationship with economic growth of Sri Lanka.

Rath & Sar (2016) found the relationship between fiscal deficit and economic growth for the period 1950-51 to 2014-15 in case of Odisha. They used the Johansen co-integration approach with other econometric methods such as ADF and Phillips-Perron (PP) to test unit root as well as Granger causality to identify the direction of causality. Johansen co-integration approach established the long run association between fiscal deficit and economic growth and through VECM model they concluded unidirectional causality that runs from fiscal deficit to economic growth both in the short run and long run. Both fiscal deficit and economic growth have long run association and fiscal deficit causes economic growth rate both in the long run and short run but not the reverse.

Duokit & Ekong (2016) provided evidence that budget deficit is positively related to economic growth of Sierra Leone. The study employed the Classical Ordinary Least Square (OLS) technique and Engle- Granger Two Step (EGTS) procedure in examining the effects of budget deficit on economic growth in Sierra Leone with time series data for a 30 year period. The ADF unit root test is used in order to check for stationary of the variables.

Osoro (2016) examined the impact of budget deficit and economic growth and determined the level of budget deficit favorable to the economy of Kenya using time series data for the period 1980 to 2014 by employing Ordinary Least Squares (OLS) method of estimation. A positive relationship between budget deficit and economic growth was found. This positive impact of budget deficit to economic growth showed that an increase in government spending in Kenya accelerate aggregate demand which leads to employment of idle resources and thus increase output. But With increase in the size of budget deficit, its impact on growth seemed to be negative. The study identified the optimal level of 3.696 per cent budget deficit has to be maintained, beyond this level, the benefits start increasing at a reducing rate and eventually become detrimental on GDP growth.

Al-Khedair (1996) found that the budget deficit showed a positive and significant impact on the economic growth of the country. The Researcher explained that in short run there was an increase in interest rates due to budget deficit, but in long run no impact was explored. The Researcher further studied taking VAR model by selecting data of G-7 countries for the period 1964-1993. The Researcher also explored that the deficit negatively affects the trade balance.

Bose, Haque, & Oshborn (2007) looked at the relationship between budget deficit and economic growth for 30 developing countries from 1970 to 1990. By using panel data analysis, they found deficits due to productive expenditures that the budget deficit helped the economy to grow. That is if the amount of expenditure is made on productive sector such as health education and capital expenditure then there would be positive relationship between budget deficit and economic growth.

Saleh (2003) investigated the impact of budget deficit on different economic variable, concluded that budget deficit has diverse impact on different economic variables. The range of impact varied from country to country but could not ascertain

the true impact on economic growth. He applied the IS-LM model to explain the impact of budget deficit on different variables, including interest rate, using simultaneous equations model for trade deficit and used simple equation model in to assess its impact on the GDP. He reported a positive and significant relationship between budget deficit and economic growth.

Navaratanam & Mayandy (2016) tried to examine the impact of fiscal deficit on economic growth in selected South Asian countries, namely, Bangladesh, India, Nepal, Pakistan and Sri Lanka using time series annual data over the period 1980 to 2014. They used co-integration analysis, error correction modeling and Granger causality test under a Vector Auto regression (VAR) framework. The study confirmed that the fiscal deficit has a negative impact on economic growth in the South Asian countries except Nepal, which confirmed the positive impact. The results also highlighted that the direction of causality for the SAARC countries is mixed where fiscal deficit causes economic growth for Bangladesh, Nepal and Pakistan, but the reverse is true for India and Sri Lanka. A large fiscal deficit played as an important issue in the South Asian countries though it is not accompanied by an improvement in economic growth.

Gosh & Hendrik (2009) have explored how the US budget deficit affects US economic growth. They used time series data covering the period 1973-2004 to a simultaneous equation model to estimate the various direct and indirect effects of budget deficits on economic growth. The PP and KPSS unit root tests are used to detect the existence of unit root in variables. The econometric model is estimated by three stage least squares (3SLS).They found a negative impact of relationship between budget deficit and economic growth.

Kurantin (2017) studied the Effects of Budget Deficit on Economic Growth and Development by using Application of unit root test and Ordinary Least Squares (OLS) associated with regression modeling of selected data-sets of Ghana, sourced from the time period 1994 to 2014. Results obtained from the modeling and analysis showed an adverse impact of continued budget deficit on the processes of economic growth and development as well as the governance structure of the country.

Keho (2010) conducted a research to find the causality between budget deficits and economic growth in seven member countries of the West African

Economic and Monetary Union (WAEMU) by using the Granger causality test developed by Toda and Yamato (1995). Annual time series data on real GDP growth, ratio of gross fixed capital formation and public deficit or surplus as a percentage of GDP are used. He found mixed result among different countries. Findings indicate a two-way causality in three countries (Benin, Burkina Faso and Mali), where budget deficits have negative impact on economic growth. But in case of Niger a unidirectional causality running from deficit to growth was found. In all cases where causality existed, budget deficit retarded economic growth rates.

Fatima, Ahmed, & Rehman (2011) have investigated the relationship between budget deficit and economic growth by applying an application of unit root test and OLS model taking the sample data for the period 1978 to 2009. Regression analysis conducted to ascertain the impact of Budget deficit on the GDP explored a negative impact of budget deficit on the economic growth due to shortage of the resources of the government to meet their expenses in the long run. The revenue generated by the government as well as their past savings were not enough to meet their expenses. The expenditure made by the government on different development projects increased their growth on the one hand, but on the other hand make the administration in jeopardy to meet the actual expenses. Similarly in 2011, they analyzed the impact of fiscal deficit on investment and economic growth by taking a data for the period of 1980 to 2009 and concluded the adverse effect of fiscal deficit on economic growth.

Molefe & Maredza (2017) have explored the consequential effects of budget deficit on economic growth of South Africa by using six different variable namely : real GDP, budget deficit, real interest rate, labor, gross fixed capital formation and unemployment. The Vector Error Correction Model (VECM) was used by taking Annual time series data for the period 1985 to 2015, the study revealed that budget deficits has an adverse effect on economic growth .It was therefore concluded that high levels of budget deficit in South Africa have decremented effects on the growth of the economy.

Zoto & Berisha (2016) have analyzed the short term and long run impact of the budget deficit on the economic growth in Albania (measured by GDP) for the period 1993-2014 by using Co-integration Test taking dependent variable as GDP and independent variables as foreign direct investment and budget deficit. The Granger

test was used to detect the casuality relationships between the variables. Casuality relationship between GDP and budget deficit was not found. Similarly, casuality relationship between foreign direct investment and budget deficit was also not found. The study concluded the negative relationship between budget deficit and the economic growth in the long run.

Awe & Funlayo (2014) have also investigated the short and long run implications of budget deficit on economic growth in Nigeria by taking a time-series data covering period of 1980-2011. Regression analysis was conducted to ascertain and affirm the impact of Budget Deficit on the Economic growth. A negative relationship between budget deficit and economic growth was found from the OLS regression analysis. Johansen co-integration technique was used to investigate the long run effect of budget deficit and found a significant long-run relationship between budget deficit and economic growth. The error correction model revealed that budget deficit shows a negative relationship with gross domestic product while gross capital formation (investment) shows a positive relationship with GDP.

Brima & Manasaray-Pearce (2015) presented an investigation to find the relationship between budget deficit and macroeconomic variable in sierra-leone by using time series data for a period of 34 years (1980-2014). They used an econometric approach to derive the long run and short run relationships in which the Johansen's test of co-integration, vector error correction model (VECM) and the granger causality test techniques were employed. Results from the long run relationship show that exchange rate, gross domestic product and money supply have a negative and significant relationship with budget deficit whereas interest rate and inflation have a positive one, though interest rate is insignificant in the long run. The short run results are consistent with results from the long run except for exchange rate. Results from the granger causality test confirm causal link between exchange rate, gross domestic product, inflation, money supply and budget deficit. However, there was no causal relation between interest rate and budget deficit; exchange rate and interest rate; money supply and exchange rate; gross domestic product and money supply.

Dlamini & Amanja (2015) applied the Autoregressive Distribution Lag (ARDL) approach and other econometric tests such as Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) for unit root in investigating the nature of the

relationship between fiscal deficits and economic growth in the Kingdom of Swaziland using time series secondary data from 1981-2013.They found that fiscal deficit and government recurrent expenditure negatively affected economic growth whereas government investment and inflation have a positively affected on economic growth.

In Ghana, Nkrumah, Orkoh, & Owusu (2016) explored the budget deficit-economic growth nexus. In the paper they combined Auto Regressive Distributed Lag (ARDL) approach with trend analysis to assess the relationship between budget deficit and economic growth from 2000 to 2015 using quarterly data. The trend analysis revealed that since 2000, years of high budget deficit are usually followed by years of low economic growth and vice versa. This phenomenon was pronounced in 2009, when the Gross Domestic Product (GDP) growth rate fell from 7.3 percent in 2008 to 4 percent in 2009, following an increase in the budget deficit from 8 percent in 2007 to 11.5 percent in 2008. The same phenomenon was also observed between 2012 and 2015. Unit roots test was first conducted in order to examine the stationarity properties of the variables in the study. The results from the ADF and PP unit roots tests indicates that all the variables of interest are integrated of order one variables. The pairwise Granger causality test reveals a bi-directional causality between budget deficit and economic growth in Ghana. The econometric result showed a significantly negative effect of budget deficits on economic growth. Thus, 100 percent increase in budget deficit in the long run lead to a 3 percent decrease in real GDP, remaining other factors constant. The results confirm the Neoclassical proposition that high budget deficit does not necessarily translate into economic growth.

Zuze (2016) conducted the examination to investigate the relationship between fiscal deficit and economic growth in Zimbabwe for the period 1980-2015 by employing Vector Auto Regression (VAR) model coupled with variance decomposition and impulse response functions. Variables are tested for unit root using the Augmented Dickey-Fuller (ADF) test. The ADF tests results revealed that both budget deficit and economic growth are integrated of order one. The regression results revealed a negative relationship between budget deficit and economic growth. The results from the study confirmed that the fiscal deficit-economic growth relationship is a one-way relationship. While fiscal deficit matters for economic growth, the reverse is not equally true.

Mohanty conducted a research to find both the short run and long run relationship between fiscal deficit and economic growth in India by covering the time period from 1970-71 to 2011-12 by using Johansen Co-integration test, Granger Causality test, And Vector Error correction Model (VECM).The result thus obtained from johansen co-integration test indicated the existence of negative and significant relationship between fiscal deficit and economic growth in the long run. One percent increase in Fiscal deficit is likely to significantly decrease gross domestic product by 0.216537. But the Vector Error Correction model and Granger Causality test discards the short run relationship between fiscal deficit and economic growth. The findings of study also revealed the negative impact of post- reform fiscal deficit on economic growth is more than the impact of pre-reform's fiscal deficit.

Fischer (1993) derived a conclusion that Maximum budget deficit helped Morocco and Italy to grow since the excessive spending helped to raise the level of private consumption in the short-run. It was due to the deficits which were used to reduce the burden of taxation from the consumers' perspective. In the long-run, huge budget deficits ruined the level of economic growth for these two countries since they have to struggle in paying back all the national debts.

Ezeabasili, Tsegba, & Ezi-Herbert (2012) have suggested that a fiscal deficit affects negatively on economic growth (a one percent increase in fiscal deficit can cause a decrease in economic growth by 0.023 percent). The study considered the data of Neigeria over the period of 1970-2006 where the researchers used co-integration and structural analysis methods.

Huynh (2007) conducted his study while collecting data from the developing Asian Countries for the period of 1990 to 2006. He concluded that there is negative impact of the budget deficit on the GDP growth of the country while simply analyzing the trends in Vietnam. Furthermore, he concluded the crowding-out effect surfaces as the budget deficit burden increases.

Aisen & Hauner (2008) explored that the budget deficit negatively affecting the interest rate. The results were taken from the study of the period 1985-1994 for different countries. However, the effect is positive after the year 1995. They further argued that there is a positive effect of budget deficit on interest rate, which the effect varies from state to state.

Keho (2010) estimated the causality between budget deficits and economic growth in seven member countries of the West African Economic and Monetary Union (WAEMU). The study employed the Granger causality test developed by Toda and Yamato (1995). Annual time series data on real GDP growth, ratio of gross fixed capital formation and public deficit or surplus as a percentage of GDP are used in the estimation. The empirical results are mixed across countries. In three cases (Cote de Ivoire, Senegal and Togo) the author found no causality evidence between fiscal deficits and growth.

Dalyop (2010) used OLS and data covering the period 1982-2008, examined the effectiveness of fiscal deficits on the growth rate of the real GDP. The study employed both theoretical and empirical approaches to determine the effectiveness of fiscal deficits in expanding the level of economic activity in Nigeria. The study concluded that fiscal deficits have little effect on the level of economic activity in Nigeria.

Van & Sudhipongpracha (2015) have showed the relationship between budget deficit and economic growth in vietnam by using descriptive statistics and panel data for the period 1989 to 2011. They concluded that government budget deficit had no direct effects on the Vietnam`s economic productivity Instead, the article discovered that foreign direct investment (FDI) played an important role in Vietnam`s economic productivity over the same period while real interest rates adversely affect growth.

Bayat, Kayhan, & Senturk (2012) in their study, applied the conventional Toda-Yamamoto (1995) linear Granger type causality test and Hacker and Hatemi-J (2005, 2006) bootstrap process-based Toda-Yamamoto linear Granger type causality test to investigate the causality between budget deficits and its ratio to gross domestic product and interest rate in the Turkish economy during years between 2006 and 2011. The study also uses the KPSS test developed by Kwiatkowski et al (1992) as well as DF-GLS test developed by Elliot, Rothenberg and Stock (1996) for unit root testing. They found no causal relation between budget deficits and nominal interest rates.

Aisen & Hauner (2008) explored that the budget deficit negatively affecting the interest rate. The results were taken from the study of the period 1985-1994 for different countries. However, the effect is positive after the year 1995. They further

argued that there is a positive effect of budget deficit on interest rate, which the effect varies from state to state.

Rahman (2012) examined the relationship between budget deficit and economic growth from Malaysian perspective. He used quarterly data for the period 2000 to 2011 for four variables namely GDP, government debt, productive expenditure and nonproductive expenditure to develop an ARDL model. It was found that there is no long-run relationship between budget deficit and economic growth in Malaysia.

Ahmad (2013) investigated the relation between Budget Deficit and Gross Domestic Product of Pakistan in which GDP was taken as dependent variable and FDI and budget deficit as independent variables. The results followed the Ricardian approach who said that there is neutral relation between budget deficit and economic growth of the country. Budget deficit has no role in bringing the economy to its equilibrium.

2.2 NATIONAL CONTEXT

Dahal (2001) employed a modified version of the Harrod-Domar type of growth model to examine the effect of budget deficit and other government fiscal policy variables on GDP growth in the context of Nepal. The data for the study were time series and obtained from secondary sources, the coverage of the study was 1974/75-1997/98.The study found that budget deficit variable exercised a negative but generally insignificant impact on GDP growth of Nepal and it appeared statistically significant in one period lagged form. The government revenue variable showed a positive but statistically insignificant impact on the economic growth of Nepal whereas defence expenditure exercised a statistically negative and significant effect on the GDP growth on the country. The gross fixed capital formation taken as another variable showed a positive weak impact and the effect of population growth appeared to be positive and significant on economic growth of Nepal. Lastly inflation showed a weak negative impact on the GDP growth of the economy.

Paudyal (2013) derived the relationship between interest rates and budget deficits for Nepal using the data for 1988 to 2011 by applying Engle and Granger Error Correction Mechanism (ECM). The results showed that budget deficits do not have significant effects on nominal interest rates in Nepal. So, budget deficits in

Nepal are interest rates neutral. He concluded that budget deficits are not crowding out the private investment in this country. However, deficit increased the burden of loans financing current consumption at the expense of the future consumption, which could have serious implications on the growth of economy.

Thapa (1996) described about the deficit financing having important role for economic development. It is more significant and useful in the context of dealing with problem of stabilization. The fundamental virtue of deficit financing is that it helps to reduce the level of unemployment. From the point of economic view, deficit financing is desirable and will remain a continuous feature in the budget of developing countries and so in Nepal. However, deficit financing is inflationary and therefore, it must be within the desirable limit. After analyzing the deficit financing in Nepal, Thapa found the fiscal deficit should be at level of 7 percent of GDP whereas the level of overall budget deficit should be at around 5 percent of GDP.

2.3 Research Gap

To estimate the relationship between growth and budget deficit is one of the burning issue in the world. It is necessary to estimate the relationship between budget deficit and its impact on economic growth. Only few studies have been carried out which are based on descriptive analysis. But no remarkable attempt has been done so far in the particular field related to the trend and relationship between budget deficit and economic growth. Hence the study justifies the present work.

CHAPTER: III

RESEARCH METHODOLOGY

3.1 Research Design

The research design followed in the study is analytical as well as descriptive. The research design study focuses particularly on finding relationship between the budget deficit and economic growth. Different tools and techniques has been used. The information relating to budget deficit and economic growth of before and now, as well as, various theoretical aspects and empirical results and experiences has been taken in the way of this study for its good picture. On the basis of survey and collecting the published quantitative and qualitative data, this study tries to analyze and describe the result of the survey. This follows the analytical cum descriptive research design, which is supported by secondary data.

3.2 Nature and Sources of Data

The nature of data is secondary and covers the period of 44 years from 1974/75 to 2017/2018. The major sources of data are the information derived from books, journals, reports and dissertations etc. Also the sources of data are budget speeches and economic survey, publications of Ministry of Finance, quartile economic bulletin of Nepal Rastra Bank (NRB), National Account of Nepal and statistical year book published by Central Bureau of Statistics(CBS), Website of World Bank, Dissertations related to budget deficit and economic growth available in different libraries, economic review and indicators from Nepal Rastra Bank etc. and other relevant records and data related to this study. The major variable used in this study are real GDP(RGDP) as dependent variable, and budget deficit, real value of Gross fixed capital formation(RGFCF), real export(REX) and money supply(MS2) are used as independent variable.

3.3 Sample Period

The study covers the period of 44 years from the fiscal year 1974/75AD to 2017/2018 AD. This time period is chosen due to the unavailability of data of all variables before this time period.

3.4 Tools and Methods of data collection

The required data and information were collected by the researcher by himself by visiting concerned institutions and collected various published documents of these institution like Quarterly Economic Bulletin from Nepal Rastra Bank, Economic Survey Reports from Ministry of Finance (MOF), Statistical Year Book of Nepal from CBS.

3.5 Data Organization and Processing

The collected data and information were organized and processed as per the objectives of the study. The nominal GDP, nominal values of gross fixed capital formation, budget deficit, total export and broad money supply in nominal term were converted into real term (base year 200/01) by dividing the value of GDP deflator.

3.6 Tools and Methods of Data Analysis

To analyze the trend of budget deficit and economic growth trend line were derived. The study used different statistical tools such as mean, median, standard deviation mode, kurtosis to analyze the descriptive statistics of the variables. Likewise, correlation co-efficient between the variables were also calculated. The ADF (Augmented Dickey Fuller) test was applied to test the stationary of the variables. Similarly, the study uses Ordinary Least Square (OLS) method to examine the relationship between budget deficit and economic growth and E-views, "Econometric Views" software for data analysis. R^2 was calculated to check the overall significance of the model.

3.6.1 Unit root test

This empirical analysis is based on time series data, assumes that the underlying time series should be stationary. Time series data is said to be stationary if it's mean, variance and covariance do not vary over time. But it is now a well-known fact that most of the macroeconomics time series are non-stationary Dickey-fuller (1979) Gujarati (1995). If we apply the regression model in non-stationary data it gives a spurious relationship which makes hypothetical test results unreliable. Hence, to avoid a spurious relationship, detecting the stationary or non-stationary of time series is crucial. There are several methods to tests stationary such as graphical

analysis, the Correlogram test, and unit root test. However, this study only discusses the unit root test using the Augmented Dickey Fuller test.

Augmented Dickey Fuller Test (ADF)

This test was Developed by Dickey and Fuller in 1970 and named after them as Dickey-Fuller test. The Augumented Dickey- Fuller as follows:

The equation for no intercept and no trend is,

$$\Delta y_i = \beta_1 y_{i-1} + \sum_{j=1}^{p} \gamma_j \Delta y_{i-j} + \varepsilon_i \quad \text{…….. (i)}$$

The equation for only intercept and no trend is,

$$\Delta y_i = \beta_0 + \beta_1 y_{i-1} + \sum_{j=1}^{p} \gamma_j \Delta y_{i-j} + \varepsilon_i \quad \text{…….. (ii)}$$

The equation for both intercept and trend is,

$$\Delta y_i = \beta_0 + \beta_1 y_{i-1} + \beta_2 i + \sum_{j=1}^{p} \gamma_j \Delta y_{i-j} + \varepsilon_i \quad \text{…….. (iii)}$$

Where Δy_i = First difference

The null hypothesis of ADF is $\beta_1=0$ against the alternative hypothesis of $\beta_1<0$. If we do not reject null, the series is non-stationary whereas rejection means is stationary. If the series is stationary without any differencing, it is said to be I(0) or integrated with order 0. Similarly, if the series is stationary after a first difference is said to be I(1) or integrated of order 1.

3.6.2 Model Specification

To examine the relationship between budget deficit and economic growth following OLS method is used:

$RGDP_t = \beta_0 + \beta_1 BD_t + \beta_2 X_t + \varepsilon_t$ …….. (i)

Where $RGDP_t$ = Real GDP at time period‘t’

BD_t = Real Budget Deficit at time period’t’

X_t = Control variables including investment, gross fixed capital formation, real export, money supply.

The equation (i) can be generalized into following equation

$$LnRGDP = \beta_0 + \beta_1 LnRBD + \beta_2 LnRGFCF + \beta_3 LnRX + \beta_4 LnRM2 + \mathcal{E} \quad \text{……(ii)}$$

Where,

LnRGDP=Natural log of Real Gross Domestic Production at factor cost.

LnRBD= Natural log of Real Budget Deficit.

LnRGFCF=Natural log of Real Gross Fixed Capital Formation.

LnRX= Natural log of Real Export

LnRM2 =Natural log of Real Money Supply

3.7 Test statistics

1) t-test: A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related in certain features.

2) F-test: An *F*-test is any statistical test in which the test statistic has an F-distribution under the null-hypothesis. It is most often used when comparing ststistical models that have been fitted to a data set, in order to identify the model that best fits the population from which the data were sampled.

3)R-squared : R-squared (R^2) is a statistical measure that represents the proportion of the variance for a dependent variable that's explained by an independent variable or variables in a regression model. Whereas correlation explains the strength of the relationship between an independent and dependent variable, R-squared explains to what extent the variance of one variable explains the variance of the second variable.

$$R^2 = 1 - \frac{Total\ Variation}{Explained\ Variation}$$

3.8 Definition of variables

Various variables have been used in this study for both qualitative and quantitative purpose which can be defined as below:

a. **Real GDP:** output of the economy which is calculated after adjusting inflation or annual gross domestic product of the country at base year price 2000/01. This study used the real GDP at factor cost is a dependent variable. The real GDP at factor cost is calculated by using following formula:

$$RGDP = \frac{Nominal\ GDP\ at\ factor\ cost}{Implicit\ GDP\ Deflator} * 100$$

b. **Investment:** The gross capital formation (GFCF) is known as investment. The nominal gross fixed capital formation has been converted into real form by using following formula:

$$Real\ GFCF = \frac{Nominal\ GFCF}{Implicit\ GDP\ Deflator} * 100$$

c. **Real Export:** Total amount of annual export is called real export. The value of total export has also converted into real form by using following formula:

$$Real\ Export = \frac{Total\ Export}{Implicit\ GDP\ Deflator} * 100$$

d. **Money Supply:** The total value of monetary assets available in an economy at a specific time period can be said as money supply. In other words, the total stock of money circulating in an economy is the money supply. The circulating money involves the currency, printed notes, money in the deposit accounts and in the form of other liquid assets. Money supply is closely watched as an indicator of future inflation as a target of central bank.

CHAPTER IV

REVENUE, EXPENDITURE AND DEFICIT FINANCING TREND IN NEPALESE ECONOMY

4.1 Government Expenditure

Expenditure to be done by the Government for the Public welfare can be said as Government Expenditure. It is the money spent by the public sector for the purchase of goods and services. They include public consumption, public investment, transfer payments etc. The main objective of Government expenditure is to stimulate economic growth and satisfy the individual or collective needs of the public sector. As the responsibilities of the government in UDCs are increasing and there is the need of expansion of the traditional activities the government expenses are growing steadily and so is the case also in Nepal. It is for protecting the citizens for promoting the common and social welfare. Government Expenditure in developing economies should play an important role in reducing regional disparities, creation of infrastructure, Growth of capital goods industries and promotion of development agenda. The growth of government expenditure in Nepal has been phenomenal as evident from the fact that finance minister ever since the beginning of the budgeting system in 1951 has presented a public expenditure program larger than that of the previous year. The government expenses affect the distribution, production and consumption pattern of the economy.

1. Recurrent Expenditure

Expenditure which does not result in the creation of fixed assets is Recurrent Expenditure. It is the expenses incurred to run the regular government activities. It consists of various types of expenditure such as General administration, social services, defense, interest payments, subsidies and transfers.

2. Capital Expenditure

Capital expenditure refers to the public investment made for capital formation or on the development activities. It is an indispensible weapon for the economic growth of a country like Nepal.

3. Principal repayments

Principal repayment refers to the expenses made to repay back the principal of internal and external loans. Its share is nominal while comparing with the whole budget.

4.1.1 Trend of Government Expenditure

As the responsibilities of the government in Nepal are increasing, the government expenses are growing steadily. From the very beginning of the budgeting system in Nepal there is the trend of rise in expenses in each successive year. Here we examine the trends of the Government expenditure in Nepal during the period 1974/75 - 2017/18.

Figure 4.1.1 shows the trend analysis of capital expenditure, recurrent expenditure and principal repayment of Nepalese economy. The trend analysis in the figure shows the cross shape of capital expenditure and recurrent expenditure. It shows that the capital expenditure is nearly 64percent whereas recurrent expenditure is 35 percent and nearly 1 percent is principal repayment in FY1974/75. The capital expenditure is 71 percent of total expenditure in FY1982/83 which is all time high of the study period whereas recurrent expenditure is 27 percent which is all time low of the study and principal repayment is nearly 1.5percent. In FY 1997/98 the capital expenditure is nearly 52percent and recurrent expenditure is nearly 41 percent and principal repayment is 7percent. After this period capital expenditure is always less than 50percent and recurrent expenditure is always greater than 50 percent. In FY 2009/10 the recurrent expenditure is 71.85percent which is all time high of the study period and in FY 2011/12 Capital expenditure is 15.15 percent which is all time low of the study period. Similarly in FY 2014/15 the principal repayment is all time high which is 19.44 percent and at that time period capital expenditure is 16.70 percent and recurrent expenditure is 63.85 percent.

4.1.2 Growth Rate of Government Expenditure

The expenditure of government increases every year. Here we examine the trend of growth rate of government expenditure during the period 1974/75- 2017/18.

Figure 4.1.2 shows the growth rate of the total expenditure and its components during the period under study. The average growth rate of the total expenditure was 16.71 percent during the period. The growth rate of total expenditure was highest in FY 2016/17 which was 39.30 percent and it was lowest in the FY 2001/02 which was only 0.3 percent. The growth of total expenditure has a fluctuating trend. In the FY 2017/18 the change in total expenditure was more than average which was nearly 25 percent.

The change in recurrent expenditure was in double digit till the FY 2000/01 except FY 1977/78, FY 1979/80 and FY 1993/94 and it remained constant in the year from FY 2001/02 to FY 2004/05 as 6.6. The recurrent expenditure has a highest growth rate in FY 2008/09 which was 39.9 percent and lowest in FY 2012/13 which was 1.6 percent. The average growth rate of recurrent expenditure was 18.73 percent.

The capital expenditure had the negative change or decreased in some fiscal year. It reached highest growth rate of 70 percent in FY 2016/17 and the lowest growth rate -44.6 percent in FY 2009/10. The capital expenditure was 14.3 percent in FY2017/18. The average growth rate was only 15.3 percent during the period. The trend of total and recurrent expenditure growth was similar means the volume of total expenditure was fluctuated by the necessity of the recurrent expenditure. During the period the trend of capital expenditure growth was also similar to total expenditure growth but not as much as the recurrent expenditure.

The principal repayment expenditure had the average growth rate of 26 percent during the period which was quite higher than the other component's average growth. This component had the negative growth rate in FY 1980/81, 1982/83, 1990/91, 2007/08 and 2017/18. The growth rate was highest in FY 1983/84 which was 77.88 percent and again it reached to 73 percent in FY2009/10. The principal repayment had a fluctuating trend.

4.2 Government Revenue

Revenues earned by the government are received from different sources such as taxes levied on the incomes and wealth accumulation of individuals and corporations and on the goods and services produced, exports and imports etc are known as government Revenue. Government uses its revenue to develop the nation. To meet the Government Expenditure is the main objectives of Government Revenue.

When the Government Revenue equals to the government expenditure then there will not be budget deficit. There are mainly two types of government revenues:

Tax revenues

Tax revenue comprises customs, tax on consumption and product of goods and services, land revenue and registration, and tax on property, profit and incomes. Tax is a major source of government revenue.

Non-tax revenues

Non-Tax revenue comprises charges, fee fines and forfeiture receipts from sales of commodities and services, dividend royalty and sale of fixed assets principal and interest payment and miscellaneous items. Its contribution to total revenue has been less significant in comparison to the tax revenue.

For developing countries like Nepal, the problems of development are enormous and complex in nature. A government needs income for the performance of a variety of functions and meeting its expenditure. Dalton has defined the revenue in two senses; it includes all the income and receipts, irrespective of their sources and nature, which the government happens to obtain during any period of time. In the narrow sense, it includes only these sources of income of the government which are described as revenue sources. So, it is widely recognized that government revenue is the major source of resource for financing the public expenditure of developing countries. Nepal has also realized this fact. The government revenue is necessary even to run the government itself and to run other development and social welfare activities. So the government revenue and policies related to the government revenue has significant effects in the economy. In Nepal the government revenue has been remaining quite lower than the resources needed. Therefore, Nepal has been making constant effort to increase the revenue in its every budget. The public revenue in Nepal has been increasing continuously but only marginal increase has been evident.

4.2.1 Trend of Government Revenue in Nepal

Tax Revenue and Non-tax Revenue are the two main sources of the revenue in Nepal. So, we examine trend of share of Tax and Non-tax revenue during the period from 1974/75-2017/18.

Figure 4.2.1 shows the trend analysis of Tax and Non tax revenue of the Government of Nepal. It shows that tax revenue is 83.52 percent of total revenue in FY1974/75 whereas Non Tax revenue is 16.47 percent for that period. Tax revenue is 73 percent in FY 1991/92 which is all time low of the study period whereas Non tax revenue is nearly 27 percent which is all time high of the study period. Similarly, in FY 2017/18 the Non tax revenue is nearly 10 percent which is all time low of the study period and tax revenue is 90 percent which is all time high of the study period**.** There is nearly a stable trend of both tax and non-tax revenue.

4.2.2 Components of Government Income

There are different components of Government income namely tax revenue, non-tax revenue, foreign grants. Here we examine the trend of components of Government Income in Nepal during the study periods 1974/75-2017/18.

Figure 4.2.2 shows the trend of government income as percentage of total income during the study period. Foreign grants as percentage of total income had the average share of 10.49 percent during the period. Foreign grants had the highest share in FY 1979/80 which was 29.88 percent and lowest in FY 2017/18 which was 4.70 percent of total income. On an average 16.39 percent share of the foreign grants implies that the foreign grants had the significant share in the total income. There is no certainty of foreign grants and its volume but in the budgetary operation of Nepal government it played a significant role during the whole period under study.

The share of tax revenue being the highest during the period, the total revenue as percentage of total income had the same tendency as shown by the tax revenue. The share of total revenue was increasing gradually as the share of tax revenue was growing. The foreign grants and non-tax revenue components have the more or less equal share in the total income and more or less opposite tendency. From FY 1974/75 to FY 1985/86 foreign grant is greater than that of non-tax revenue and after that the trend became opposite till FY 2008/09. From FY 2009/10 foreign grants and non-tax revenue showed the same tendency as both are was gradually decreasing. In short, the trend line showed that when non-tax revenue is moving upward then foreign grants is moving downward and vice- versa.

4.2.3 Annual Percentage Change in Government Income Components

There is a fluctuation in the different income components of the government. So, here we examine trend of annual percentage change in government income components during the study periods 1974/75-2017/18.

Figure 4.2.3 shows the annual change in government income during the study period. The average growth rate tax revenue, non- tax revenue, foreign grants and total income was nearly 16percent. The growth rate of government income was highest in FY 1987/88 which is 34.77 percent and lowest in FY 1988/89 which was -0.81 percent. The growth rate of the government income is in fluctuating trend. The average annual growth rate of the tax revenue was nearly 17 percent during the period. The growth rate was highest in FY 2008/09 which was 37.5 percent thus the change in total government income was second highest that is 32.75 percent in that year. Similarly, the growth rate was lowest in FY 2001/02 which was 1.20 percent thus the change in total government income was 2.66 percent in that year. Since the share of tax revenue was higher the change in total income was mostly affected by the change in the tax revenue. The trend of change in tax revenue and total income was quite similar during the period. The growth rate of tax revenue in FY 2017/18 was 16.98 percent.

The non-tax revenue had the average annual growth rate of 16.70 percent during the period and had the negative growth rate also in some year which means the non-tax revenue was decreasing in some years. The change was highest in FY 2086/87 which was 62.57 percent and lowest in FY 2009/10 which was -31.09 percent. The change in non-tax revenue was highly fluctuating during the period. The average annual change in total government revenue was 16.25 percent during the period. The foreign grants had the average annual growth rate of 15.40 percent during the period under study and had the negative growth rate also in some years means the foreign grants was decreasing in some years. Foreign grants had the highest change rate in FY 1992/93 and lowest in the FY 1998/99 and FY 2016/17 which was nearly -19 percent. In a particular year this component was increasing drastically and in next year falling drastically.

4.2.4 Components of Government Income as Percentage of GDP

Here we examine the trend of Government income as percentage of Gross Domestic Product of the Country during the study period 1974/75-2017/18.

Figure 4.2.4 shows the components of revenue as percentage of GDP. The total revenue as percentage of GDP was 6 percent in FY 1974/75 which was lowest of the study period and 24.35 percent in FY 2017/18 which was highest of the study period. It was stable around 8 percent from FY 1979/80 to FY 1985/86 and was around 11 percent from FY 2001/02 to 2005/06 then afterwards the percentage was increasing slightly and it reached to highest in FY 2017/18 which was 24.35 percent. The average ratio of total revenue to GDP was 11.6 percent during the period. Tax revenue as percentage of GDP was increasing in the later years than in the previous years and reached highest in the fiscal year 2017/18 which was 21.93 percent. Total revenue and tax revenue both had the same tendency during the period since tax revenue had the 4/5 share in the total revenue during the period.

The non-tax revenue as percentage of GDP was quite lower during the period as it never touched the percent 3 during the period. It was highest in FY 2002/03 and 2007/08 in which the value was 2.8 percent. The average ratio was 2.06 percent during the period. The foreign grant as percentage of GDP had same tendency as of non-tax revenue which was quite lower during the period. On an average the percentage was 2.09 percent during the period and it was highest 3.4 percent in FY 1979/80 and FY 2010/11.

The ratios of total revenue and tax revenue with GDP both had the same trends during the period. So the total revenue and tax revenue as percentage of GDP were highest in the FY 2017/18. The ratios were increasing in the recent years.

The percentage of foreign grants and non-tax revenue were quite low and more or less stable during the period. Non tax revenue had the higher value than foreign grants before FY 2008/09 and after FY 2008/09 to FY 2011/12 foreign grants had the higher value than non-tax revenue. And again after FY 2012/13non-tax revenue had the higher value than foreign grants.

4.3 Sources of Deficit Financing

Deficit financing is the term used to denote the direct addition of deficit amount to gross national expenditure through various sources. We found budget deficit as the permanent feature of the country's budgetary operation, country used the various sources to finance such deficit in the budget. Deficit financing is the process

of mobilization of additional resources from the sources other than the regular sources of revenue such as foreign grants, internal borrowing and external borrowing. Since the expenditure exceeds the revenue sources of country deficit financing act as the supplementary factors to the government revenue.

Deficit financing has emerged as an important tool of financing government expenditure. It can fill up the gap caused by the excess of government expenditure over its receipts. It can be financed in two ways. First, borrowing from foreign loan and domestic loan, which is called debt financing, and second, fiscal deficit can be financed by printing new money is called money financing of budget deficit.

The deficit before grants or the fiscal deficit actually shows the actual resource gap in public sector. Ahuja (2012) If foreign grant is considered as the regular source of revenue then deficit after grants is the actual deficit which is called budget deficit.

Table 4.3.1: Sources of Budget Deficit in Nominal Terms (Rs.in million)

Year	total budget deficit	Domestic loan	foreign loan	cash balance
1975/76	441.7	200.0	146.0	95.7
1980/81	823.0	250.0	693.3	-120.3
1985/86	3,979.7	1,403.4	2,501.1	75.2
1990/91	10,654.6	4,552.7	6,256.7	-154.8
1995/96	13,824.2	2,200.0	9,463.9	2,160.3
2000/01	24,188.1	7,000.0	12,044.0	5,144.1
2005/06	24,779.6	11,834.2	8,214.3	4,731.1
2010/11	49,622.3	42,515.8	12,075.6	-4,969.1
2013/14	29,353.1	19,982.9	17,998.8	-8,628.6
2014/15	85,217.9	42,367.6	25,531.3	17,319.1
2015/16	76,248.9	87,774.5	34,455.9	-45,981.5
2016/17	192,717.3	88,337.7	58,013.0	46,366.6
2017/18	281,995.9	144,750.9	74,919.8	62,325.2

Note: Five years gap has been taken in the data

Source: Various issues of Economic Survey from FY 1974 to FY 2018

Table 4.3.1 shows the budget deficit and it's financing through different sources. During the period budget deficit remained in the range of Rs.441.7 million in FY 1974/75 to Rs.281995.9 million in FY 2017/18. During the period the government used the three sources to finance such deficit in the budget that is foreign loan, domestic loan and changing cash balances. To finance the deficit, government used the loan which can be both foreign and domestic as the main source and the changing

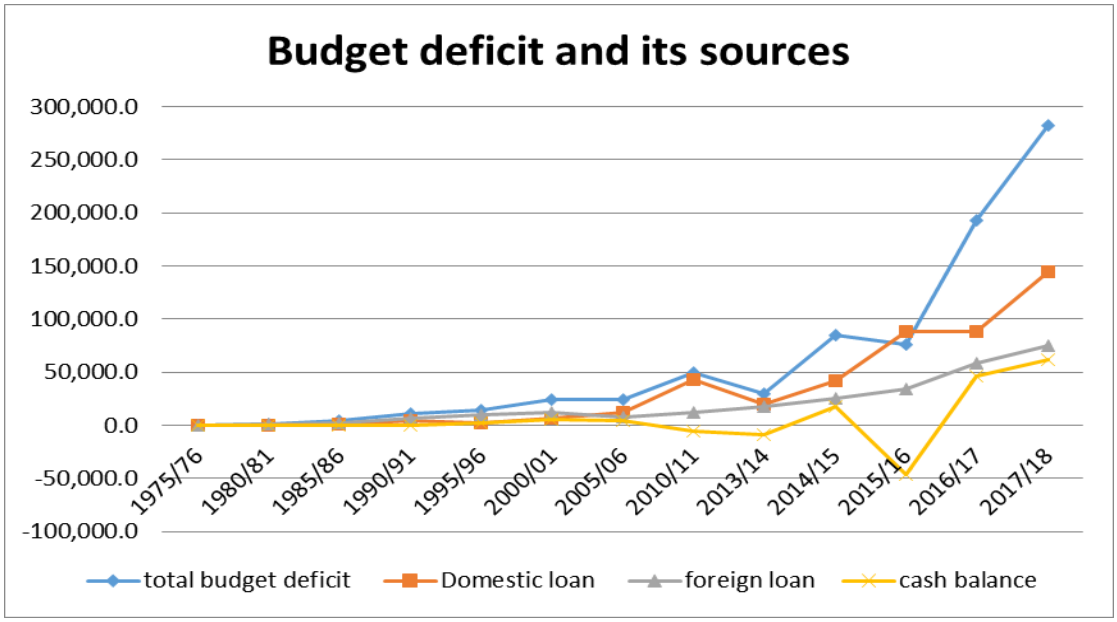
cash balances had significant contribution in some years and in other years it had the surplus or increased due to the excess borrowing than the deficit. In the initial period the foreign borrowing was higher than the domestic borrowing which implies that the government used the foreign borrowing as the more dependable source of deficit financing. But after 2005/06 the trend has changed and government started borrowing more from domestic sources rather than from foreign sources.

The foreign borrowing and domestic borrowing both do not have the smooth trend of increment or fall till the FY 2013/14. It seems that the government used the sources according to the easiness and the availability to receive the resources in each year. But after that period both borrowing are in increasing trend.

4.3.1 Trend of Budget deficit and Sources of Deficit Financing

Different sources have been used to finance the deficit budget. So, here we examine the trend of budget deficit and sources of deficit financing in Nepal during the period 1975/76-2017/18. Five years gap has been taken to analysis the trend.

Figure: 4.3.1 Trend of Budget Deficit and Sources of Deficit Financing



Note: Five years gap has been taken on presented data

Source: Author's derivation based on the data of Various Economic Surveys.

Figure 4.3.1 shows the sources of deficit financing used by the government of Nepal during the period form 1975/76 to 2017/18. For the easiness of study researches breaks the data with the gap of 5 year period till the FY 2013/14 and after that the data is continued till last Fiscal Year. Budget deficit and domestic loan had the slow increasing trend till the FY 2010/11 and after that both fluctuated till FY2013/14 and then started increasing rapidly whereas domestic loan had increasing trend. Change in cash balance had slow increasing trend till FY2005/06 and after this FY it started fluctuating highly as in some year it was higher positive value and in the next year it had the negative value. Negative value signifies the surplus or increment in cash balance. In the fiscal year 2015/16 it had the highest negative value. It showed the negative relation with the domestic borrowing. In those years when the domestic borrowing was increasing it was declining and in those years when the domestic borrowing was declining it was increasing. In FY 2008/09 the budget deficit increased sharply and the domestic borrowing declined but the change in cash balance increased sharply and it was highest of the period. It implies that the government was using the change in cash balance as the substitute of the domestic borrowing as if government failed to raise the domestic loan properly it could finance the deficit by mobilizing the cash balances. In FY 2012/13 as the deficit declined sharply with domestic borrowing, cash balance had the surplus or the negative value but the external loan was not changed much according to the sharp fall of budget deficit. In FY 2015/16 there was highest level of surplus in the cash balance as it was more than foreign loan.

For financing the deficit budget, borrowing from external sources played an important role before the period of 2000/01. But after 2005/06 internal borrowing had much changing contribution. From 1990/91 to 2010/11 external borrowing remained roughly stable whatever the level of domestic borrowing and budget deficit. Thus the change in budget deficit and the change in the level of domestic borrowing had the direct effect on the cash balance. Before FY 2005/06 the relative contribution of the domestic borrowing and the external borrowing was equal but in the later period domestic borrowing had the higher share in the total deficit financing. The gap between the domestic and external borrowing was increasing during the period from FY 2010/11.0. The relative dependence on domestic loan can be considered as good from the perspective of the national security and mobilization of the idle domestic resource.

CHAPTER V

PRESENTATION AND ANALYSIS OF DATA

5.1 Historical Trend of Budget Deficit and GDP

The trend of budget deficit and economic growth shows the change in budget deficit and economic growth over the study periods.

5.1.1 Budget deficit

Budget deficit is a situation in which government fails to meet its expenditure through the general sources of revenue. The term budget deficit refers to the excess of government expenditure over the government revenue. In other words when the government allocates more resources than its revenue it is called the deficit in the budget. Budget deficit is financed through the mechanism of internal and external borrowing, which is called deficit financing.

Budgetary Deficit=Total Expenditure-Total Receipts (Total revenue + grants). The status of budget deficit is presented in fig 5.1.1

Figure 5.1.1 shows that the trend of real budget deficit in Nepal goes on increasing till FY 1982/83. The size of budget deficit was Rs.1962.81million in 1974/75 and reached to 16088.02million in FY 1982/83. There is no systematic pattern after that period. It goes on fluctuating. The minimum value of deficit is Rs.1962.81million in FY 1974/75 and maximum value is Rs.82688.08million in FY 2017/18. After a peoples movement in 2006 country required a huge amount of money to establish Change in political condition which could be the reason for increment in budget deficit from the period of FY 2005/06 to FY 2008/09. After 2016 the size of budget deficit became double the size of previous year. It increased from Rs.26038.83 million in FY 2015/16 to Rs.61172.33million. Nepal promulgated the new constitution in 2015 "constitution of Nepal" which divided country into 7 federal state and due to this country required a huge budget which could be the main reason for huge budget deficit after 2016.

5.1.2 GDP

Gross domestic product (GDP) is the total market value of all final goods and services produced by citizens or foreigners within the country's boundaries in a specific time period. The Organization for Economic co-operation and Development (OECD) defines GDP as "an aggregate measure of production equal to the sum of gross values added of all resident and institutional units engaged in production". It is considered as the "world's most powerful statistical indicator of national development and progress".

There are three different approaches for the calculation of GDP

a) Production approach:

Gross value added =gross value of output- value of intermediate consumption

Gross value added in the various economic activities is known as "GDP at factor cost".

GDP at Producer price= GDP at factor cost+indirect taxes- subsidies

b) Income approach

GDP= COE+GMI+$T_{P\&M}$ −$S_{P\&M.}$

Where, COE=compensation of employees, GOS= gross operating surplus, GMI=gross mixed income, $T_{P\&M}$=taxes less subsidies and $S_{P\&M}$=imports.

c) Expenditure approach

It is the sum of consumption, investment, government spending and net export.

GDP=C + I + G + (X - M).

Figure 5.1.2 shows that the trend of real GDP goes on increasing every year in Nepal. The RGDP was Rs.145468 million in 1974/75 and reached to Rs.881798 million in 2017/18. There were only two exceptional year when RGDP falls from its previous year. It was FY 1979/80 where RGDP falls from Rs.166908 million to Rs.163037 million and FY 1982/83 where RGDP falls from Rs.183312 million to Rs.178176million. Figure shows the increasing trend of GDP in the country which means that every year the size of the economy is increasing.

5.2 Historical Trends of Change in Budget Deficit and Economic Growth in Nepal

The trend of growth rate of budget deficit and real GDP shows the change in budget deficit and economic growth over the study periods 1974/75-2017/18.

Figure 5.2.1 shows that Nepalese economy has been suffering from volatile rates of change in budget deficit and economic growth. The trend analysis in figure indicates that the budget deficit rate was increased by 96.12 percent in 1975/76 whereas economic growth rate was nearly 4percent. Similarly, In FY 1977/78 growth rate was 4.37 percent but the deficit rate was decreased by 1.23 percent. Likewise, In 1979/80 there was a negative growth rate of -2.31 percent whereas budget deficit was increased by nearly 20 percent. Again, in FY 1982/83 there was a negative growth rate of -2.80 percent but the budget deficit increased by 60.73 percent. In 1983/84 growth rate was nearly 9.20percent whereas deficit decreased by nearly -3 percent. In 1994/95 economic growth rate was nearly 3.5 percent followed by 14.63 percent decreased in deficit. In 2001/02 economic growth rate was nearly about 0 percent and deficit was decreased by nearly 8.74 percent. In 2007/08 economic growth reached to 6.10 percent and budget deficit was found to be increased by nearly 5percent. In 2012/13 there was a decrement in budget deficit by nearly about 53 percent whereas growth rate was found to be nearly 4 percent. And in 2014/15 economic growth rate was 3.22 percent and budget deficit reached to all time high of 176 percent And again in 2015/16 economic growth reached to 0.67percent and deficit was – 16 percent. And again in 2016/17 economic growth rate became 9percent whereas budget deficit reached to 134 percent. If we analyze the above figure, 5.2.1 we can conclude that the GDP growth rate and deficit growth rate has highly fluctuated. Sometime budget deficit is decreased and economic growth increased and vice versa. Sometime both GDP growth rate and deficit rate decreased and increased simultaneously. So it is difficult to find out the relationship between real GDP growth rate and budget deficit rate from the figure 5.2.1.

5.3 Ratio of Budget Deficit to GDP

The ratio of budget deficit to GDP ratio shows the percentage of budget deficit in comparison to gross domestic product of the country.

Figure 5.3.1 shows the historical trend of ratio of budget deficit to real GDP. In 1974/75 budget deficit was 1.34 percent of real GDP. And deficit reached to 9 percent in 1982/83 and 9.57 percent which was all time high in 1988/89. BD to real GDP goes on fluctuating and reached to 1.49 percent which was all time low in 2013/14. Similarly BD equal to 9.37 percent of real GDP was recorded in 2017/18. The ratio of budget deficit started increasing in the initial period from FY 1974/75 to FY 1982/83 and it falls from FY 1988/89 to FY 2014/15.

Figure 5.3.2 shows that Nepalese economy has been suffering from volatile rates of budget deficit and economic growth. The trend analysis in figure indicates that the BD to RGDP ratio was all time low of the study period in 1974/75. In 1975/76 budget deficit was 2.53 percent of GDP whereas economic growth was 4.20 percent. In the FY 1979/80 growth rate was negative and BD rate was 3.46 percent. But in FY 1980/81 economic growth rate was 8.34 percent and deficit rate was 3.01 percent. And again in FY 1982/83 economic growth rate was negative and deficit reached to 9 percent of RGDP. In FY 1983/84 economic growth rate was 9.20 percent which is maximum in the whole study period. In that period budget deficit was also more than 8 percent. From FY 1984/85 to FY 1992/93 Budget deficit rate was continuously more than economic growth. In this period, deficit rate reached to 9.57 percent of RGDP which was all time high of the study periods. In FY 2001/02 economic growth rate was nearly 0 percent whereas budget deficit rate was nearly 5 percent. In FY 2017/18 deficit rate was 9.37 percent and economic growth rate was 5.12 percent. If we analyze the above figure 4.3.2 we may conclude that the economic growth rate and BD as percentage of RGDP has highly fluctuated. Sometime deficit rate increase and growth rate of real GDP decrease and vice versa. Sometime both deficit rate and economic growth increased and decreased simultaneously. So it is difficult to find out the relationship between real GDP and deficit rate from the figure 4.3.2. The relationship between budget deficit rate and economic growth could not be easily understood through the plotting their trends over time.

5.4 Descriptive Statistics of the Variables

The descriptive statistics of Real GDP (RGDP), Real value of Gross Fixed Capital Formation (RGFCF), Real Export (REX), Budget Deficit (BD), and money supply includes mean, median, maximum value, minimum value; standard deviation, skewness, kurtosis and standard error are presented in following table 5.4.1

Table 5.4.1 Descriptive Statistics of the variable for the period 1975-2018

Variables	RGDP	RGFCF	REX	BD	MONEY SUPPLY
Mean	400495.90	105334.34	26334.23	19469.2226	229752.4934
Median	359949	77400.5	27433.96	19186.9351	133526.6165
Maximum	881798	843084	55653.97	82688.088	907373.2309
Minimum	145468	19479	5963.60	1962.8154	18089.4475
Standard deviation	213798.94	131648.95	14951.39	13731.6614	233632.7578
Skewness	0.638636	4.37	0.292076	2.8436	1.451188
Kurtosis	-0.698637	23.41	-1.1161	11.3728	1.3632
S.E	32231.40	19846.82	2254.00	2070.125	35221.4634
Observation	44	44	44	44	44

Source: Author's calculation through excel using the data of economic survey

Table 5.4.1 shows that the mean value of real GDP is Rs.400495.90 million with standard deviation 213798.94. Its maximum and minimum values are Rs.881798 and Rs.145468 million respectively. Similarly, the mean value of real gross fixed capital formation, real export and budget deficit are Rs.1053334.34 million, Rs.26334.23 million and 19469.22 million respectively. The maximum value of RGFCF, REX and BD are Rs.843084 million, Rs.55653.91 and 82688.088 million respectively. The minimum values of these variables are Rs.19479 million, Rs.5963.60 million and 1962.81 million respectively. Similarly, the average money supply is 229752.49 with standard deviation 233632.7578. The maximum and minimum values of money supply are 907373.23 million and 18089.44 million respectively. The value of standard deviation indicates that most of the variables are highly volatile during the study preiods of 44 years. Skewness of the variable shows

that all five variables including Real GDP, Real Gross Fixed Capital Formation, Real Export, Budget Deficit and Money Supply are positively skewed.

5.5 Stationary Test of the Variables

The time series data should be stationary. If the time series data are non-stationary it may provide the spurious result. The present study used Augumented dickey fuller (ADF) test to test the stationary of the variables at level and fist difference. The result of ADF test is presented in following table 5.5.1

Table: 5.5.1 Result of Augmented Dickey fuller Unit Root Test

Variables	Constant		Constant and Trend		Remarks
	t-statistics	p-value	t-statistcs	p-value	
LnRGDP	0.532019	0.9860	-3.1912	0.0997	
LnBD	-2.3338	0.1664	-3.0062	0.1424	
LnRGFCF	0.473722	0.9838	-1.482322	0.8204	
LnREX	-0.57165	0.8861	-2.980089	0.1522	
LnM2	-0.90977	0.7756	-3.7747	0.0277	
ΔLnRGDP	-8.163110	0.0000	-8.189165	0.0000	I(1)
ΔLnBD	-6.5595	0.0000	-6.442147	0.0000	I(1)
ΔLnRGFCF	-3.620830	0.0095	-3.5803023	0.0441	I(1)
ΔLnREX	-5.840331	0.0000	-5.8915	0.0001	I(1)
ΔLnM2	-5.5985	0.0000	-5.4973	0.0003	I(1)

Source: Author's own calculation form E-views.

The table 5.5.1 shows the result of the ADF test statistics of concerned variables used in this study. If the variables are stationary in level then that variables

are known as I(0) and if variables are stationary only after first difference then it is called I(1). The result of ADF test shows that all variables are non-stationary at level but stationary only after first differences. So these all variables is called I(1). In the above table 5.3, all variables LnRGDP, LnRGFCF, LnREX and LnMN2 are stationary at first difference.

5.6 Result of OLS Regression model

Ordinary least squares (OLS) regression is a statistical method of analysis that estimates the relationship between one or more independent variables and a dependent variable; the method estimates the relationship by minimizing the sum of the squares in the difference between the observed and predicted values of the dependent variable configured as a straight line. The long run model has been derived by using OLS method as below in table 5.6.1

Table: 5.6.1 Long run model by using OLS Method where LnRGDP as dependent variable.

Variable	coefficient	Std. Error	t-statistic	p-value
C	8.249927	0.266473	30.95972	0.0000
LNBD	-0.055121	0.009879	-5.579782	0.0000
LNGFCF	0.166942	0.025439	6.562530	0.0000
LNREX	0.036765	0.011149	3.297580	0.0021
LNM2	0.244253	0.039769	6.141788	0.0000
R-squared=0.997566			Durbin-Watson Statistic=1.56	
Adjusted R-squared=0.997317			Akaiake info criterion=-4.168153	
Sum of squared residual=0.028543			Schwarz criterion=-3.965404	
F-statistic= 3996.913			Hannan-Quinn Criterion=-4.092964	
Prob(F-statistic)=0.000000				

Source: Author's calculation through E-views.

Table 5.6.1 shows the long run model and the coefficient gives the long run coefficient. The result implies that real gross fixed capital formation, real export and money supply have significant positive role in increasing real GDP but budget deficit has significant negative effect on real GDP.

The coefficient of LnRGFCF is 0.17 and it depicits that one percent point increase in real fixed capital formation increases the real GDP by 0.17 percent. This effect is significant at 1 percent level.

Similarly, the coefficient of LnRX is 0.036 and is significant at 1percent level. It indicates that when real export is increases by 1 percent then real GDP at factor cost will increase by 0.036 percent with the assumption that other variables are constant.

In table 5.6.1, the value of R-squared is 0.9975. it means in long run, 99.75 percent of total variation in real GDP is explained by explanatory variables and 0.25 percent is due error. Similarly, the probability value of F-statistic is less than 1 percent which shows that there is overall significant of long run model.

The durbin-watson statistic is 1.56. This shows that the model is free from autocorrelation.

CHAPTER: VI

MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.1 Major Findings

The main objective of this study was to examine the trend of budget deficit and economic growth in Nepal, and to investigate the relationship between Budget deficit and economic growth in Nepal. To fulfill this objective, this study used the dataset of 44 years over 1975-2018. To analyze historical trend of budget deficit and economic growth, this study used trend line and table. The ADF test was applied to test the stationary of the time series data. The long run model was estimated by using OLS method. Similarly, correlation test was done to analysis the correlation between the variables. The major findings of the study are listed as given below:

1) The trend analysis of the budget deficit and economic growth shows that budget deficit and economic growth are highly fluctuated during the study periods. The maximum increment in budget deficit was 63.85percent in FY 2014/15. Similarly, the maximum growth rate was 9.80 percent in FY 1993/94 and minimum growth rate was -2.8 percent in FY 1982/83.

2) The result of ADF test shows that all variables are stationary only after the first difference i.e. all variables used in this study.

3) The long-run OLS model shows that budget deficit has significant negative effect on real GDP in long run whereas real gross fixed capital formation and real export have significant positive effect on real GDP in long-run. It means there is negative relationship between budget deficit and economic growth. And positive relationship between real gross fixed capital formation and real export and economic growth. One percent increase in real gross fixed capital formation and real export leads to 0.17 percent and 0.04 percent increase in Real GDP respectively. Similarly, one percent increase in budget deficit leads to 0.055 percent decrease in real GDP.

4) Before the FY 1996/97 the capital expenditure was greater than recurrent expenditure where capital expenditure was more than 50 percent and recurrent

expenditure was less than 50 percent. But after this period the scenario became opposite where the share of capital expenditure in total expenditure became less than 50 percent.

6.2 Conclusion

One of the central objectives of the macroeconomic policy of Nepal is to attain the high economic growth with low level of budget deficit. To achieve this objective both monetary and fiscal policy should be implemented with various instruments. However, low economic growth with high budget deficit is the major characteristic of Nepalese economy. In this regard, examining the relationship between these two variables is necessary. So, the central focus of this study is to examine the relationship between budget deficit–growth. Before examining this relationship, this study also analyzed the nature and trend of revenue and expenditure pattern.

Before FY1997/98 capital expenditure was greater than recurrent expenditure but after this period recurrent expenditures became more than capital expenditure which is not good sign for the economic growth of a country.

In the long run, economic growth is only driven by the real factors like gross fixed capital formation, real export and money supply. The real gross fixed capital formation and real export and money supply are positively driving the growth process of the economy.

6.3 Recommendations

From the above finding and conclusions of the study, this study recommended the following points.

Firstly, the findings indicate that budget deficit negatively and significantly affects the economic growth in Nepal. So, Government should use contractionary fiscal policy for achieving higher economic growth by reducing the budget deficit**.** This can be done by improving effective tax policy and tax administration.

Secondly, the real gross fixed capital and real export are significant and positive impact on real GDP in long run. So government should made investment friendly environment and adopt promotion policy for supporting growth.

Thirdly, real export have significant positive role in increasing real GDP in long run. So government should promote domestic product by provide subsidies in domestic product and focus on export oriented environment.

Fourthly, the authorities should concentrate more on reducing budget deficit. In doing this, expenditure should be re-aligned from the non-productive sectors to investments in more productive and profitable sectors that will enhance productivity contribute to faster economic growth in the long run.

Lastly, a high level permanent central revenue board should be established with the objectives of determining revenue policy conducting revenue administration based on short, medium and long term regular study and research on revenue policy, revenue administration and revenue related rules and regulations.

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LETTER OF RECOMMENDATION

This thesis entitled **Budget Deficit and its Effects on Economic Growth in Nepal** has been prepared by Mr. Lila Dhwaj Basnet under my supervision and guidance. I hereby recommend this thesis for examination by the Thesis Committee as a partial fulfillment of the requirements for the **Master of Arts in Economics**.

……

Prof. Dr. Sohan Kumar Karna

(Thesis Supervisor)

Date: 2076/05/25 B.S.

11/09/2019 A.D.

LETTER OF APPROVAL

We certify that this entitled **Budget Deficit and its Effects on Economic Growth in Nepal** submitted by **Mr. Lila Dhwaj Basnet** to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan University, in partial fulfillment of the requirements for the **Master of Arts in Economics** has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the said degree.

Thesis Committee

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I take sole responsibility for any errors and discrepancies that might have been occurred in this study.

Lila Dhwaj Basnet

September, 2019

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ABBREVIATIONS

ADF	-	Augumented Dickey Fuller Test
CBS	-	Central Bureau of Statistics
CPI	-	Consumer Price Index
FY	-	Fiscal Year
GDP	-	Gross Domestic Product
GFCG	-	Gross Fixed Capital Formation
MoF	-	Ministry of Finance
NRB	-	Nepal Rastra Bank
OLS	-	Ordinary Least squares
RGDP	-	Real Gross Domestic Product
WB	-	World Bank
REX	-	Real Export

APPENDIX-I

Required Data in Real Form (Rs.In million)

FY	Real GDP	Real M2	REX	Real GFCF	Real deficit
1974/75	145468	18089.45	7795.181	2223	1962.815
1975/76	151592	21997.05	10334.43	2443	3849.484
1976/77	156165	29127.28	10525.77	2580	5479.327
1977/78	163004	31168.78	8644.728	3294	5411.425
1978/79	166908	33895.4	9743.217	3263	4683.777
1979/80	163037	36901.86	8032.767	3681	5641.439
1980/81	176636	40801.66	10405.95	4299	5323.615
1981/82	183312	44118.49	8823.107	5465	10009.18
1982/83	178176	48585.45	5963.603	6576	16088.03
1983/84	194577	51777.73	8438.296	6907	15621.67
1984/85	207064	54654.43	12181.09	9386	15799.94
1985/86	216552	58899.7	11959.45	9431	15462.97
1986/87	220185	60328.75	10313.48	11825	14663.12
1987/88	237132	66054.42	12686.64	13414	14608.53
1988/89	247402	73732.99	11626.79	16392	23689.25
1989/90	258865	78980.42	12906.75	17002	21041.49
1990/91	267720	83877.9	16430.84	22780	23697.33
1991/92	280599	85727.39	25728.26	29277	21139.16
1992/93	290563	98827.67	29258.14	37278	20259.48
1993/94	322152	112804.9	31190.6	42032	18790.44
1994/95	333326	123163.2	26826.07	48370	16041.16
1995/96	351086	130684	28041.87	56081	19498.74
1996/97	368812	136369.3	29761.91	60794	18882.89
1997/98	379936	159709.3	34746.72	65375	22451.54
1998/99	396701	177221.2	41378.2	65269	20866.88
1999/2000	421297	206626	55311.74	73324	19618.09
2000/01	441519	214453.7	55653.97	84751	24188.02
2001/02	442049	215508.4	45167.52	89889	22071.96
2002/03	459488	229553.3	46609.24	98073	15343.85
2003/04	481004	248506	48311.71	109181	14184.34
2004/05	497739	253711.7	49575.03	117539	15238.63

2005/06	514486	272803.1	47378.63	135532	19490.98
2006/07	532038	289121.9	43408.76	153337	21996.89
2007/08	564517	342850.6	41018.35	178446	23120.62
2008/09	590107	376490.4	40422.85	211039	29738.85
2009/10	618529	373157.8	31541.1	264888	21363.42
2010/11	639694	431150.5	30108.51	292730	23221.77
2011/12	670279	496036.2	32589.64	317185	23608.58
2012/13	697954	541632	31672.11	382972	10966.14
2013/14	739754	589670.5	34639.69	462017	11053
2014/15	764336	673788.7	30614.02	595823	30577.72
2015/16	769450	766519	23944.86	647294	26038.83
2016/17	838812	822658.1	23187.23	840693	61172.33
2017/18	881798	907373.2	23807.37	1025648	82688.09

Source: Various issues of Economic Survey

APPENDIX-II

Required Data in log Form

FY	LNRGDP	LNRM2	LNREX	LNRGFCF	LNBD
1974/75	11.88771	9.803084	8.961261	7.706613	7.582135
1975/76	11.92895	9.998664	9.243236	7.800982	8.255694
1976/77	11.95867	10.27943	9.261581	7.855545	8.608737
1977/78	12.00153	10.34717	9.064705	8.099858	8.596268
1978/79	12.0252	10.43103	9.184327	8.090402	8.45186
1979/80	12.00173	10.51602	8.991284	8.21094	8.637895
1980/81	12.08185	10.61648	9.250133	8.366138	8.579908
1981/82	12.11894	10.69463	9.085129	8.606119	9.211258
1982/83	12.09053	10.79108	8.69343	8.791182	9.685831
1983/84	12.17858	10.85472	9.040536	8.840291	9.656414
1984/85	12.24078	10.90879	9.40764	9.146974	9.667762
1985/86	12.28559	10.98359	9.389277	9.151757	9.646203
1986/87	12.30222	11.00756	9.241208	9.377971	9.593091
1987/88	12.37637	11.09823	9.448305	9.504054	9.589361
1988/89	12.41877	11.20821	9.361068	9.704549	10.07278
1989/90	12.46406	11.27696	9.465505	9.741086	9.954251
1990/91	12.4977	11.33712	9.706915	10.03364	10.07312
1991/92	12.54468	11.35893	10.15535	10.28456	9.958883
1992/93	12.57958	11.50113	10.28391	10.52616	9.916378
1993/94	12.68278	11.63341	10.34787	10.64619	9.841103
1994/95	12.71688	11.72127	10.19713	10.78664	9.682913
1995/96	12.76879	11.78054	10.24145	10.93455	9.878105
1996/97	12.81804	11.82312	10.30098	11.01525	9.846012
1997/98	12.84776	11.98111	10.45584	11.0879	10.01911
1998/99	12.89094	12.08515	10.63051	11.08627	9.945919
1999/2000	12.95109	12.23867	10.92074	11.20264	9.884208
2000/01	12.99798	12.27585	10.92691	11.34747	10.09361
2001/02	12.99918	12.28075	10.71813	11.40633	10.00206
2002/03	13.03787	12.34389	10.74955	11.49347	9.63847
2003/04	13.08363	12.42322	10.78543	11.60076	9.559894
2004/05	13.11783	12.44395	10.81124	11.67453	9.631589

2005/06	13.15092	12.51651	10.76593	11.81696	9.877707
2006/07	13.18447	12.5746	10.67842	11.94039	9.998656
2007/08	13.24373	12.74505	10.62177	12.09204	10.04848
2008/09	13.28806	12.83865	10.60715	12.2598	10.30021
2009/10	13.3351	12.82976	10.35905	12.48706	9.969435
2010/11	13.36875	12.97421	10.31256	12.58701	10.05285
2011/12	13.41545	13.1144	10.39175	12.66724	10.06937
2012/13	13.45591	13.20234	10.36319	12.85572	9.302567
2013/14	13.51407	13.28732	10.45276	13.04336	9.310457
2014/15	13.54676	13.42067	10.32921	13.2977	10.32803
2015/16	13.55343	13.54961	10.08351	13.38056	10.16734
2016/17	13.63974	13.6203	10.05136	13.64198	11.02145
2017/18	13.68972	13.71831	10.07775	13.84084	11.32283

Source: Various issues of Economic Survey

APPENDIX-III

Result of OLS

Dependent Variable: LNRGDP
Method: Least Squares
Date: 06/01/19 Time: 09:56
Sample: 1975 2018
Included observations: 44

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.249927	0.266473	30.95972	0.0000
LNBD	-0.055121	0.009879	-5.579782	0.0000
LNGFCF	0.166942	0.025439	6.562530	0.0000
LNREX	0.036765	0.011149	3.297580	0.0021
LNM2	0.244253	0.039769	6.141788	0.0000

R-squared	0.997566	Mean dependent var	12.75642
Adjusted R-squared	0.997317	S.D. dependent var	0.551034
S.E. of regression	0.028543	Akaike info criterion	-4.168153
Sum squared resid	0.031774	Schwarz criterion	-3.965404
Log likelihood	96.69936	Hannan-Quinn criter.	-4.092964
F-statistic	3996.713	Durbin-Watson stat	0.930506
Prob(F-statistic)	0.000000		

APPENDIX-IV

Result of Augmented Dickey fuller Unit Root Test

Variables	Constant		Constant and Trend		Remarks
	t-statistics	p-value	t-statistcs	p-value	
LnRGDP	0.532019	0.9860	-3.1912	0.0997	
LnBD	-2.3338	0.1664	-3.0062	0.1424	
LnRGFCF	0.473722	0.9838	-1.482322	0.8204	
LnREX	-0.57165	0.8861	-2.980089	0.1522	
LnM2	-0.90977	0.7756	-3.7747	0.0277	
ΔLnRGDP	-8.163110	0.0000	-8.189165	0.0000	I(1)
ΔLnBD	-6.5595	0.0000	-6.442147	0.0000	I(1)
ΔLnRGFCF	-3.620830	0.0095	-3.5803023	0.0441	I(1)
ΔLnREX	-5.840331	0.0000	-5.8915	0.0001	I(1)
ΔLnM2	-5.5985	0.0000	-5.4973	0.0003	I(1)