

AN ANALYTICAL APPROACH TO DEFICIT FINANCING IN NEPAL

By

DAMARU BALLABHA PAUDEL

Submitted to
Central Department of Public Administration
Faculty of Management
Tribhuvan University

In Partial Fulfillment of the Requirements for the Degree of
Master of Public Administration (MPA)
March, 2005

RECOMMENDATION

This is to certify that Mr. Damaru Ballabha Paudel has prepared this thesis on "An Analytical Approach to Deficit Financing in Nepal" under my guidance and supervision. He has successfully completed the course and thesis is in the form as required by the Department.

I forward this thesis for examination to the evaluation committee and also recommend for acceptance.

Date:

.....
Arjun Raj Joshi
Reader
Thesis Advisor
Central Department of Public Administration
Tribhuvan University
Kathmandu, Nepal.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to Mr. Arjun Raj Joshi, Reader, Central Department of Public Administration, for his advice, encouragement and expert guidance, which proved to be highly important throughout the preparation of this thesis. I have no adequate words to thank him from the core of my heart. I am immensely indebted to the whole Department for constant encouragement and kind treatment in the course of the preparation of this thesis.

I also wish to express my sincere thanks to Mr. Rudra Prasad Paudel, Lecturer of Ratna Rajya Laxmi Campus for teaching me some methodological aspects. I have greatly appreciated the assistance of the Nepal Rastra Bank Library and The Central Library of Kirtipur, which provided easy access to books, articles and literature on my research topic. I also express the words of thank to Mr. Raju Paudel for his help in typing of this thesis.

Finally, I want to take the full responsibility for the errors that have been made within this thesis.

Date:

.....

Damaru Ballabha Paudel

TABLE OF CONTENTS

	Page
APPROVAL SHEET	
RECOMMENDATION	
ACKNOWLEDGEMENT	i
TABLE OF CONTENTS	ii
LIST OF TABLES	vi
LIST OF FIGURES	vii
ABBREVIATIONS	viii
 Chapter 1	
INTRODUCTION	1-7
1.1 General Background	1
1.2 Statement of the Problem	4
1.3 Objectives of the Study	6
1.4 Significance of the Study	6
1.5 Hypothesis	6
1.6 Limitations	7
1.7 Chapter Scheme	7

Chapter 2

THEORETICAL CONCEPT AND REVIEW OF LITERATURE	8-32
2.1 Theoretical Concept	8
2.1.1 Meaning of Deficit Financing	8
2.1.2 Deficit Budgeting	9
2.1.3 Difference between Deficit Financing and Budget Deficit	10
2.1.4 Historical Background of Deficit Financing	11
2.1.5 Role of Deficit Financing in Different Stages	12
2.1.6 Sources of Deficit Financing	15
2.1.7 Types of Deficit Financing	17
2.2 Review of Literature	18
2.2.1 Deficit Financing: Theoretical Developments	18
2.2.2 Deficit Financing: Empirical Readings	22

Chapter 3

METHODOLOGY OF THE STUDY	33-45
3.1 Descriptive Analysis	33
3.2 Quantitative Analysis	35
3.2.1 Basic Concept	35
3.2.2 Variables	35
3.2.3 Correlation Coefficient between the Variables	38
3.2.4 Regression Analysis between the Variables	38
3.2.5 Coefficient of Determination	39

3.2.6 Autocorrelation Test	40
3.2.7 F-Test Statistics	41
3.2.8 t-Test Statistics	42
3.2.9 The Models	43
3.3 Range of Study Period	44
3.4 Sources of Literature	44
3.5 Sources of Data	45
3.6 Methods of Data Processing	45
3.7 Device for Data Calculation	45
 Chapter 4	
PRESENTATION AND ANALYSIS	46-81
4.1 Trend Analysis	46
4.1.1 Fiscal Aggregates	46
4.1.2 Components of Expenditures and Receipts	50
4.1.3 Surplus Budget for Development Expenditure	53
4.1.4 Revenue and Budget Deficits	55
4.1.5 Deficit Financing During Different Plan Periods	57
4.1.6 Sources of Deficit Financing	59
4.1.7 Composition of External Sources of Deficit Financing	61
4.1.8 Contribution of Foreign Grants	63
4.1.9 Contribution of Foreign Loans	65
4.1.10 Composition of Internal Sources of Deficit Financing	68

4.1.11 Contribution of Internal Borrowing	70
4.1.12 Factors Responsible for Growing Deficit	
Financing in Nepal	72
4.2 Impact Analysis	75
4.2.1 Impact of Deficit Financing on Narrow Money Supply	75
4.2.2 Impact of Deficit Financing and Narrow Money Supply on Price Level	77
4.2.3 Impact of Government Expenditure on Deficit Financing	79
 Chapter 5	
SUMMARY, CONCLUSIONS AND SUGGESTIONS	82-88
5.1 Summary	82
5.2 Conclusions	84
5.3 Suggestions	86
5.4 Implementation Plan for Major Suggestions	88
 BIBLIOGRAPHY	89-92
 APPENDICES	93-96

LIST OF TABLES

Table	Page
1.1 Resource Gap (1984/85-2003/04)	5
4.1 Growth Rate of Fiscal Aggregates	48
4.2 Composition of Public Expenditure and Receipts	50
4.3 Surplus Budget for Development Expenditure	53
4.4 Revenue and Budget Deficits	56
4.5 Deficit Financing During Different Plans	58
4.6 Sources of Deficit Financing	60
4.7 Composition of External Sources of Deficit Financing	62
4.8 Composition of Foreign Grants	64
4.9 Composition of Foreign Loans	66
4.10 Composition of Internal Sources of Deficit Financing	68
4.11 Composition of Internal Borrowing	70
4.12 Regression Results in Impact of DF_t on M_{1t}	75
4.13 Regression Results in Impact of DF_t and M_{1t} on P_t	78
4.14 Regression Results in Impact of GE_t on DF_t	80
5.1 Implementation Plan for the Major Suggestions	88

LIST OF FIGURES

Figure	Page
2.1 Relationship between Different Deficit Concepts	21
4.1 Growth Trend of Fiscal Aggregates	49
4.2 Trend of Public Expenditure	52
4.3 Trend of Public Receipts	52
4.4 Trend of Surplus Budget for Development Expenditure	54
4.5 Trend of Revenue and Budget Deficits	57
4.6 Trend of Deficit Financing During Different Plans	59
4.7 Trend of Sources of Deficit Financing	61
4.8 Trend of External Sources of Deficit Financing	63
4.9 Trend of Components of Foreign Grants	65
4.10 Trend of Components of Foreign Loans	67
4.11 Trend of Internal Sources of Deficit Financing	69
4.12 Trend of components of Internal Borrowing	72

ABBREVIATIONS

C	=	Currency Held by the Public
CBS	=	Central Bureau of Statistics
CEDA	=	Centre for Economic Development and Administration
D.F.	=	Degree of Freedom
DCs	=	Developed Countries
DE	=	Development Expenditure
DF	=	Deficit Financing
ES	=	External Sources
GDP	=	Gross Domestic Product
GE	=	Government Expenditure
HMG/N	=	His Majesty Government of Nepal
IB	=	Total Internal Borrowing
IDS	=	Integrated Development System
IMF	=	International Monetary Fund
IS	=	Internal Sources
M ₁	=	Narrow Money Supply
MOF	=	Ministry of Finance
NPC	=	National Planning Commission
NRB	=	Nepal Rastra Bank
OLS	=	Ordinary Least Square
P	=	Price Level

PSBR	=	Public Sector Borrowing Requirement
RD	=	Revenue Deficit
Rs.	=	Rupees
SE	=	Standard Error
T.U.	=	Tribhuvan University
TE	=	Total Expenditure
TG	=	Total Foreign Grants
TL	=	Total Foreign Loans
TR	=	Total Receipts
UDCs	=	Underdeveloped Countries
US	=	United States
USA	=	United States of America
VAT	=	Value Added Tax
WDR	=	World Development Report

Chapter 1

INTRODUCTION

1.1. General Background

Nepal is a small landlocked country with underdeveloped economy. The country is mainly based on agriculture. Agricultural sector provides employment to about 75% of the country's labor force and contributes approximately 42% of the GDP. One third of the agricultural GDP is contributed by the income obtained from livestock. According to World Development Report 2005, Nepal remains in general poverty with very low per capita income about 240 US dollars. As we see the population growth rate of Nepal stated by Central Bureau of Statistics, Population Census 2001 is 2.24%. It means that the very low productivity and heavy population pressure are still dominant features of the Nepalese economy. Factors of production are of poor quality. The economy is characterized by surplus unskilled labor and acute shortage of skill manpower and capital. There is lack of entrepreneurship talent because cast, religion, sex etc. govern entrepreneur class and economic activities are performed based on prescription not on ascription. The economic scenario suggests a paradoxical case in that there is shortage of financial resources on the one hand and the existence of underutilization of available factors of production on the other hand. Even the small industrial capacity whatever exists is not fully utilized. The managerial and administrative capabilities are yet to be standardized in the formal sectors of the economy as well. The paces of technological innovation in all spheres of economic activities are yet to be enhanced.

Nepal has already undertaken four and half decades of planned development efforts. Nine periodic plans are completed and now we are running in tenth plan. In the past nine plans, we have done some progress on the field of infrastructure like transport,

power, communication, education and health sectors. However, this progress is not sufficient and Nepal has yet to achieve a favorable record of economic management. For this, the resources raised domestically, received in aid from international agencies and friendly countries should be put to the best use.

The main problem of underdeveloped countries like Nepal is to achieve economic stability and to accelerate economic development. For economic development, we should have both fiscal and monetary measures. As an agricultural country, Nepal has many unutilized resources because of the lack of adequate capital, infrastructures and modern technology. Therefore, the necessity is those traditional ideas and techniques should be replaced by new ideas and inventions.

Fiscal as well as monetary measures are important for running the pace of economic development. Fiscal measures indicate the government revenue, expenditure, budgeting, deficit finance, tax structure, debt policy etc. and monetary measures emphasize the activities related to the central bank, commercial banks, financial institutions, development banks, co-operatives etc. The objective of both fiscal and monetary policies is the economic stability and development in the country. The research focuses mainly on the fiscal policy and deficit financing which is an instrument of resource mobilization.

The major instrument of democratic government to intervene the public economy is the fiscal policy, which is guided by different philosophies. Chelliah states: "Under fiscal policy the government uses its expenditure and revenue programs to produce desirable effects and avoid undesirable effects on the national income, production and employment"(Chelliah 19). There are mainly two types of fiscal policies, one is expansionary and the other is contractionary. The choice of the policy depends upon the goal of the economy. Basically, the choice of the policy adopted by the country appears

through the budgetary system. Theoretically, there are three types of budgetary policies in an economy. They are:

- Balanced Budget
- Surplus Budget
- Deficit Budget

The balanced budgeting represents the situation where the total public receipts (income) equal to public expenditures. In surplus budget, total receipts of the government exceed its expenditures. On the contrary, when the expenditure exceeds income then we generally denote it as the deficit budget or fiscal deficit.

Budgetary deficit is defined as loan financing of all excess governmental outlay over revenue receipts. Deficit financing is known as the tool to manage the funds for deficit budgeting. In this context, Tyagi states:

Deficit financing mainly takes the shape of borrowing from the central bank. The simple mechanism is that government hands over its securities to the central bank, on the backing of which central bank issues paper currency by resorting to the printing press. It means that deficit financing results in the increase of total money supply in the country. Thus, deficit financing is expansionary in its effect on the economy. (Tyagi 455)

Thus, deficit financing can be used as an important tool of financing government expenditure. It means as filling the gap caused by the excess of government expenditure over its receipts through the creation of new currency. In this context, Lekhi states: "There are mainly three techniques of deficit financing as: borrowing from central bank, withdrawal of its cash balances from the central bank and issuing of new currency, i.e., printing of more notes and putting into circulation" (Lekhi 364).

1.2. Statement of the Problem

In Nepal, the first budget was announced in 1952 and the first fifth year periodic plan was started in 1956. During the early years of planned development process, the priority was given to build infrastructures such as transportation, education, health and communication. The concept of balanced growth was introduced in the third plan and the country was divided into four regions. The budget expenditure rose from 0.33 billion in the first plan to 3.54 billion in the fourth plan. In this context, the concept of deficit financing was introduced only in the third five-year plan for the first time and this enabled the government to obtain the necessary financial resources for the different plans.

There was not any serious problem of meeting the required expenditure over government revenue at the beginning of the development process. It was only after the second plan period that the increase in the expenditure exceeded the increase in the revenue. So there exists the situation of resource gap and it has been widening over years as shown in the following table.

There are some inherent problems in Nepalese economy, so the deficit financing has been widening continuously. The main problems regarding Nepalese economy are:

1. Decreasing saving investment ratio
2. Lack of proper domestic resource mobilization
3. Declining revenue surplus for development expenditure

The deficit financing may play crucial role in the development process to a certain extent, if it is utilized and managed properly. But it may carry some effects such as increase in money supply and increase in foreign loan, which is accompanied with the high rate of inflation and other macro economic imbalances.

Table 1.1

Resource Gap (1984/85 – 2003/04)

(Rs. in millions)

Fiscal Year	Total Expenditure	Total Revenue	Resource Gap Amount*	Resource Gap as % of Total Expenditure	Total GDP	Resource Gap as % of Total GDP
1984/85	8394.8	3916.6	4478.2	53	44441.0	10
1989/90	19669.3	9287.5	10381.8	53	99702.0	10
1994/95	39060.0	24575.2	14484.8	37	209976.0	7
1999/00	66272.5	42893.8	23378.7	35	366251.0	6
2003/04	92107.2	62227.0	29880.2	32	472424.0	6

*Resource Gap = Total Expenditure- Total Revenue (Tax and Non-tax)

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

There are some well-accepted problems due to the cause of the deficit financing which are as follows:

1. Rise in price level (Inflation)
2. Increase in money supply
3. Adequate speculative activities
4. Adverse effect on saving
5. Less investment
6. Unequal distribution of income and wealth

Considering the above problems, this study tries to analyze the positive and negative role played by deficit financing in Nepal. It is the main problem to be focused in this study.

1.3. Objectives of the Study

The main objectives of this research work are:

1. To study and analyze the trend of resource gap and deficit financing in Nepal for the period 1984/85 to 2003/04.
2. To identify the factors responsible for growing deficit financing.
3. To study the impact of deficit financing on money supply and price level.
4. To study the impact of government expenditure on deficit financing.
5. To recommend appropriate policy measures.

1.4. Significance of the Study

Deficit financing carries many problems in an economy as mentioned above. If managed well it can boost the economic development of a country. This study is an attempt to catch up whether deficit financing can be help or hindrance for economic development and how much it is responsible for raising money supply and price level. In this context, this study is very much significant. By this research work, the other research workers and concerned persons will be beneficial and planners and policy makers will get information about deficit financing of Nepal to adopt suitable policy.

1.5. Hypothesis

The hypothesis of this study is: "The deficit financing has significant impact on money supply and price level and the government expenditure has positive impact on it".

1.6. Limitations

The following are the limitations of this study:

1. Due to the time and resource constraints, this study covers only the period of 20 years (1984/85 to 2003/04).
2. Only the case of Nepal is studied.
3. Due to the unavailability of data, it is assured that the national urban consumer price index represents the overall consumer price index.
4. Only the impact of deficit financing on money supply and price level and the impact of expenditure on deficit financing is analysed neglecting the other variables.
5. The data used in this thesis are secondary and nominal.

1.7. Chapter Scheme

The research work is divided into 5 chapters. The first chapter is the main framework and basis of the research work. The second chapter provides theoretical concept and presents the review of literature. As the methodology is very important aspect of this research work, it is presented separately in third chapter.

In fourth chapter, presentation and analysis of data is done. It is done in two ways viz. the descriptive analysis is based on trend analysis with the help of tables and graphs and quantitative analysis is based on estimating regression equations using various econometric tools. After all, the findings of this research are presented in the form of summary, conclusions and suggestions in chapter five. The implementation plan for the major suggestions is also given in brief. Bibliography and appendices are at the end of the research work.

Chapter 2

THEORETICAL CONCEPT AND REVIEW OF LITERATURE

The first part of this chapter is related to the concept and theories in the topic deficit financing and the second part deals about the review of available literature.

2.1 Theoretical Concept

In this part, the meaning of deficit financing and deficit budgeting, difference between them, historical background of deficit concept, role, sources and types of deficit financing etc are discussed in brief.

2.1.1 Meaning of Deficit Financing

Deficit financing is an important tool of financing the government expenditure. In simple words, it means as filling the gap caused by the excess of government expenditure over its receipts through the creation of new money. The meaning of deficit financing as mentioned in Collins Dictionary of Economics is:

The excess of government expenditure over government receipts in any one fiscal year. Government receipts are primarily in the form of taxation of individuals and institutions but there are other miscellaneous receipts such as the sale of government holdings in private or public enterprises. The operation of a budget deficit (deficit financing) is a tool of fiscal policy to enable government to influence the level of aggregate demand and employment in the economy. Such a policy was advocated by Keynes in the 1930s to offset the depression which occurred at that time. (Collins Dictionary of Economics 47-48)

R. G. Kulkarni defines deficit financing as: "The financing of a deliberately created gap between public revenue and public expenditure, the method of financing

resorted to being borrowing of a type that results in a net addition of national outlay or aggregate expenditure" (Kulkarni 15).

The term however has been differently used in the advanced countries of the west. In this context R. K. Lekhi states: "Therefore, in the western sense the financing of all public expenditure in excess of public revenue in current account is called as deficit financing" (Lekhi 363).

Thus deficit financing denotes the financing of a gap that is created by public expenditure over public revenue in a year or plan period. Generally, there is a tendency of analyzing deficit financing for a fiscal year where the government presents its expenditure and revenue scheme. But occasionally there is also the tendency of analyzing deficit financing for specific plan period, such as five year plan.

2.1.2 Deficit Budgeting

Deficit budgeting is the deficit seen in the annual budget. It is the gap between the total receipts and total outlays. The term budget deficit is broadly defined in two ways. First, in the sense of advanced economies and secondly in the sense of developing countries. In the advanced industrial economies of the west, it is defined as loan financing of all excess governmental outlay over revenue receipts. In developing countries, it is defined as the net increase in the securities (bonds and treasury bills) and withdrawal from cash balances.

According to Tyagi: "In fact, in western countries, any expenditure of the government beyond its current income is called as deficit financing and loans from the public and commercial banks are not treated as the income of the government. Thus, there is no difference between budgetary deficit and deficit financing in western sense" (Tyagi 455).

Thus, budget deficit is the excess of government expenditure over total government receipts. It is also called fiscal deficit and needs to be financed by the internal and external sources.

2.1.3 Difference between Deficit Financing and Budget Deficit

The budget deficit does not represent deficit financing. Deficit financing is a wider concept than the budget deficit as mentioned below.

Deficit Financing	Budget Deficit
The method of financing budget deficit is known as deficit financing.	The deficit on capital and revenue account is combined and expressed as overall position which is known as budgetary deficit.
The expenditure incurred by the government in excess of its current revenue and do not treat borrowings as the revenue of the government.	The expenditure incurred by the government in excess of its current receipts in the form of taxation, revenue receipts and borrowings.
Deficit financing is the increase in public expenditure due to public borrowings.	Budget deficit is generally financed out of market borrowings (i. e. out of saving of the public).
The effects of deficit financing are measured by the increase in the volume of money.	The effects of budget deficit are measured by liquid assets held by the public.
More inflationary in nature.	Less inflationary in nature.
Broader concept than budget deficit.	Narrower concept than deficit financing.
In Nepalese context, it is the deficit before foreign grants. Deficit Financing = Total Expenditure - Total Revenue (Tax and Non-tax)	In Nepalese context, it is the deficit after foreign grants. Budget Deficit = Total Expenditure - Total Receipts (Tax and Non-tax Revenue + Foreign Grants)
The amount of deficit financing is always more than the amount of budget deficit.	The amount of budget deficit is always less than the amount of deficit financing.
It is also called overall deficit or revenue deficit.	It is also called fiscal deficit.

2.1.4 Historical Background of Deficit Financing

Deficit financing is an instrument of fiscal policy. Thus, to know the historical background of deficit financing, it is necessary to observe the fiscal system of the different era.

In classical system, market mechanism prevailed and the full employment, optimal allocation of resources and equitable distribution of income were considered to be attained automatically through the operation of free economic forces. The economic system was laissez-faire and the principle of sound public finance was that the budget should be balanced annually.

Neo-classical economists provide a theoretical explanation of the importance of deficit budgeting for the economic development. They only pointed out that there exists certain misdirection of resources in the economy which should be corrected so far as possible by fiscal measures.

It was Keynes in the period of great depression in 1930s, who published the book "General Theory of Employment, Interest and Money" in 1936 and advocated the policy of deficit financing. Keynes argued that government should intervene by deliberately unbalancing its budget in order to inject additional aggregate demand into a depressed economy and vice versa.

The Collins Dictionary of Economics mentions as:

Since the Second World War most western governments have tended to operate a budget deficit to keep employment high and to promote long-term economic growth. This has been financed by increasing the Public Sector Borrowing Requirement (PSBR) through the issue of treasury bills and long

term bonds...Government borrowing in excess of the amount required to promote long term growth. (Collins Dictionary of Economics 48)

In this way, the concept of deficit financing given by Keynes was to overcome from the situation of great depression in the economy. But after Keynes, it has been the usual practice to meet the government expenditure for economic growth and development.

2.1.5 Role of Deficit Financing in Different Stages

The role of deficit financing may be viewed as follows:

2.1.5.1 During War

Modern wars are not exclusively the affairs of armed forces but a matter of universal concern. Wars are attributed to be a costlier process. It is difficult for the government to finance war expenditures through its normal methods of resources. The cost of war in terms of money and material has been immensely increased due to the highly sophisticated advanced weapons and armaments. A huge amount of resources is mobilized to finance war which in one hand, rises the prices because of the increased purchasing power is injected into the economy through war purchases and on the other hand, the resources are transferred from the general public not for increasing the production but for the destructive war effort.

Deficit financing due to the war causes to expand the currency through printing of paper money or by borrowing from the central bank or by running down of its accumulated cash balances. In this scenario Harber states:

Due to the deficit financing in war period, all the different categories of inflation may be presented with more or less intensity. Price, money wage, cost and currency interact each other. The intermixture of these types of inflation during war springs mainly from the excess demand

generated through increasing resources to deficit financing, which is not counter balanced, in many cases, with the scarce supply available to the civilian sector. If such inflationary forces are not held under check through appropriate controls, war inflation assumes a serious open inflation form. And after then it may lead to 'hyper-inflation' and 'flight from cash'. Such a phenomenon is closely connected with a highly abnormal condition of expectations concerning the future of prices. (Herber 389-90)

The expenditure made to finance war is not useful for the betterment of the economy. This sort of expenditure gives rise to the purchasing power and raises the demand for goods but declines in the availability of goods. Hence, during war period deficit financing seems to be inflationary in nature.

2.1.5.2 During Depression

During depression deficit financing is considered as a powerful and major tool to pull the economy out of it. The fall in effective demand in depression leads to unemployment and decreases the purchasing power of the people. In this stage, the deficit financing by the government promotes recovery and reduces the intensity of business cycle.

About this, Tripathy states: "According to the Keynesian framework, deficit spending of borrowing money or credit creation helps the economy in the depression period by two way. First, it mobilizes the surplus resources which exist in the economy and which can not be mobilized due to the scarcity of financial resources. Second, deficit financing creates the new resources in the economy" (Tripathy 358).

The government needs to mobilize the resource available in any form to coup the condition of depression. The additional money created by deficit financing may increase

the total spendable funds which in turn push the aggregate demand and employment in the economy.

2.1.5.3 During the Period of Economic Development

A country needs a huge amount of capital to enhance the pace of economic development and to achieve high growth rate. In this scenario Lekhi states:

Capital formation is the key-factor in the economic development of a country. So, far as the underdeveloped countries are concerned, they are capital-deficit countries. Saving is the basic source of capital formation and underdeveloped countries have a very low voluntary saving-income ratio. Despite the fact that deficit financing leads to inflation, it can be a significant domestic source of capital formation in a low saving poor country. It may stimulate resources to mobilize for economic development. (Lekhi 368)

The underdeveloped countries (UDCs) are suffering from low level of income and investment. The ratio of saving and investment is very low. It means there is a vast gap between saving and investment. There is lack of resources for sufficient investment and the resource gap is going to be widened day by day. The economies of UDCs are predominantly agricultural sector is highly inelastic. The disguised and open unemployment exists in the economy. There exists vicious circle of poverty and a huge number of population lies under the poverty line.

Deficit financing to an extent, may be justified for stimulating rapid economic development but an unlimited deficit tends to create tremendous harms than good due to its inflationary impact. The dangers of deficit financing which lead to inflation is more in UDCs than DCs. Thus, it can be said that deficit financing is essential as a useful method

for financing development activities in backward countries but it should be use properly. Whether managed in proper manner, deficit financing proves worthwhile for making the best use of un-utilized and surplus resources which exist in the economy. It is helpful to create new resources and to accelerate the rate of economic development.

Deficit financing does not always lead to inflation. If the government expenditure is used in productive sector, its inflationary impact will be counteracted. But it takes a long time for investment to bear fruit. Therefore, sincere efforts should be made to assess to what extent the economy can absorb a certain amount of deficit financing.

2.1.6 Sources of Deficit Financing

To bridge the resource gap, there are mainly 3 sources of deficit financing expressed by many economists. They are public borrowing, external financing and inflationary financing.

2.1.6.1 Public Borrowing

Public Borrowing is the first method of financing public sector's deficit. The fiscal authority may mobilize the savings of the public sector through public borrowings. If the government becomes able to tape sufficient public savings through voluntary loans, it will partially solve the problem of financing public sector deficit by a non-inflationary method. If the buyers of government securities reduce their spending in order to buy them, then the voluntary savings may be considered as anti-inflationary. The diversion of saving from other liquid assets to government securities will not have anti-inflationary effects. Therefore, it is necessary to make lending to the government attractive to potential savers.

2.1.6.2 External Finance

It is another source to finance public sector deficit. External finance is to mean the financing from outside the country or from foreign savings. In this context, Kulkarni states:

The flow of foreign capital is advantageous many points of view. It provides the recipients country with means for acquiring local resources for domestic investment, it supplies foreign exchange for importing necessary material and equipment directly require for development projects and also makes it possible to import other commodities which will be demanded indirectly as development proceeds and national income increases. (Kulkarni 95-96)

The external resources may come from private or public sources. This may be in the form of loans and grants. Private foreign investment may be either in the form of direct investment or portfolio investment. Public foreign investment is in the form of public loans and grants from foreign government or international agencies for the past experience of other countries until the outbreak of the Second World War, private foreign investment flowed considerably but since then the trend is toward a substantial growth of inter-governmental or international loans or grants.

2.1.6.3 Inflationary Financing

Another source of deficit financing is inflationary financing. The process of inflationary financing such as activation of idle hoards and creation of new money give the government a command over real resources. It raises the price level which in turn compels the public sector to reduce its demand for these resources.

In this context, the deficit financing is considered as an inflationary method of financing investment expenditure. The voluntary savings are insufficient in these

economy for the requirements of capital formation and inflationary financing is considered as a method of forced saving.

2.1.7 Types of Deficit Financing

According to the impact of deficit financing on price, it is divided into two types as: non-inflationary and inflationary deficit financing.

2.1.7.1 Non-inflationary Deficit Financing

The argument which favors this viewpoint is of the opinion that deficit financing is not always inflationary. When deficit financing is on a scale not larger than the need to increase money supply, necessary in order to meet the liquidity for a growing economy, it is non inflationary. In this context Singh states: "Deficit financing is non- inflationary if it is nearly used to import goods. In this case, it is the utilization of government accumulation abroad or that of foreign borrowing. Similarly a deficit financing can be non-inflationary if government mobilizes the domestic financial resources in the form of individuals' savings or profit that comes from enterprises" (Singh 70-71).

2.1.7.2 Inflationary Deficit Financing

The school who argues deficit financing as inflationary says that its direct result is an increase in the total money supply with public. In this context, Lekhi states:

Credit policy of the central bank and other economical banks play vital role. Since, newly created money is utilized for investment expenditure, this raising purchasing power in the hands of public but the supply of consumer goods does not expand at the similar rate with the result that prices tend to rise. If this trend is kept unchecked inflationary pressure may spread over to other sectors of the economy. (Lekhi 370)

Taking the above two views in considerations, for UDCs the deficit financing might be needed to draw the countries productive resources into full use, but it is also

argued that when it results in higher price rise, it is rather like a drug. So it is not to be dangerous from a mild level of inflation because it promotes the economic activities in the developing countries which provide by borrowing rather than money creation.

2.2 Review of Literature

This research work is concerned with deficit financing, so, in this part, the theoretical developments and empirical readings in the related subject have been reviewed below.

2.2.1 Deficit Financing: Theoretical Developments

The theoretical developments in the field of deficit financing are summarized here. The views as given by different school of economists such as: traditional view, modern view etc. are discussed below in brief.

2.2.1.1 Traditional View

In traditional view, deficit financing has been defined as the financing of a deliberately created gap between public revenue and public expenditure.

$$\text{Public Deficit} = \text{Total Public Expenditure} - \text{Total Public Revenue}$$

There are three types of deficit usually defined by the economists having traditional view. They are budget deficit, revenue deficit and fiscal deficit. Budget deficit is the excess of total expenditure over total receipts. Total expenditure includes both revenue expenditure and capital disbursement. Likewise, total receipts include both revenue and capital receipts. Symbolically,

$$\text{Budget Deficit} = \text{Total Expenditure} - \text{Total Receipts}$$

Revenue deficit is the excess of expenditure over revenue. It reflects the failure of government to meet its current expenditure out of its current revenue. Symbolically,

$$\text{Revenue Deficit} = \text{Total Expenditure} - \text{Total Revenue}$$

Fiscal Deficit is defined as the difference between total revenue receipts and capital receipts but excluding borrowing and other liabilities. Symbolically,

$$\text{Fiscal Deficit} = \text{Total Expenditure} - [(\text{Revenue Receipts (tax and non-tax)} + \text{Capital Receipts (only recovery of loan and other receipts)})]$$

2.2.1.2 Modern View

The World Bank has given different alternative views to measure the public deficit. According to World Development Report 1988, correct way to measure the public deficit depends on the purpose. In this sense, WDR 1988 states: "The most obvious objective is to measure the net claim on resources by the public sector, this in turn influences the external deficit, inflation, domestic interest rates and employment" (World Bank, *WDR 1988* 56)

The Public Sector Borrowing Requirement (PSBR) can be a useful indicator to measure public deficit. The PSBR represents the total excess of expenditure over revenue for all government entities, all of which must be financed by new borrowing net of repayment of previous debt. It is also called the consolidated public sector deficit, where, expenditure includes wage of public employees, spending on goods and fixed capital formation, interest on debt, transfers and subsidies. Similarly, revenue includes taxes, user charges, interest on public assets, transfers, operating surpluses of public companies and sales of public assets. Symbolically,

$$\text{Consolidated Public Sector Deficit} = \text{Consolidated Expenditure} - \text{Consolidated Revenue}$$

Here, expenditure does not include amortization payments on government debt or accumulation of financial assets, while revenue does not include the draw down of cash reserve. The consolidated public sector deficit is the most comprehensive deficit measure. But it can be misleading in those countries where high rate of inflation exists

due to deficit financing. In this case, the World Bank has developed an alternative measurement of deficit which is called inflation-corrected deficit or operational deficit. It can be defined as the Public Sector Borrowing Requirement (PSBR) minus the inflation-correction part of payment.

Another concept given by World Bank is that interest paid on debt is a result of past deficits rather than current behaviour. A measure of the current policy stance might therefore exclude all interest payments yielding the primary deficit which is also called the non-interest deficit. The primary deficit measures how current actions improve or worsen the Public Sectors' indebtedness, and it is important for evaluating the sustainability of government deficits. Although fiscal deficits can be run indefinitely, the primary balance must eventually become positive to cover at least part of the interest on current debt. If public revenue and the economy as a whole grow faster than the real interest rate, then even the primary balance can remain in deficit.

The conventional deficit measures include only the central government and exclude provincial, municipal government, decentralized agencies and state owned enterprises. This can be a very misleading picture when other public entities are running large deficit or surpluses.

Let us see the relationship between different deficit concepts.

Operational Deficit = Primary Deficit + Real Interest Payment

PSBR = Operational Deficit + Inflation Correction

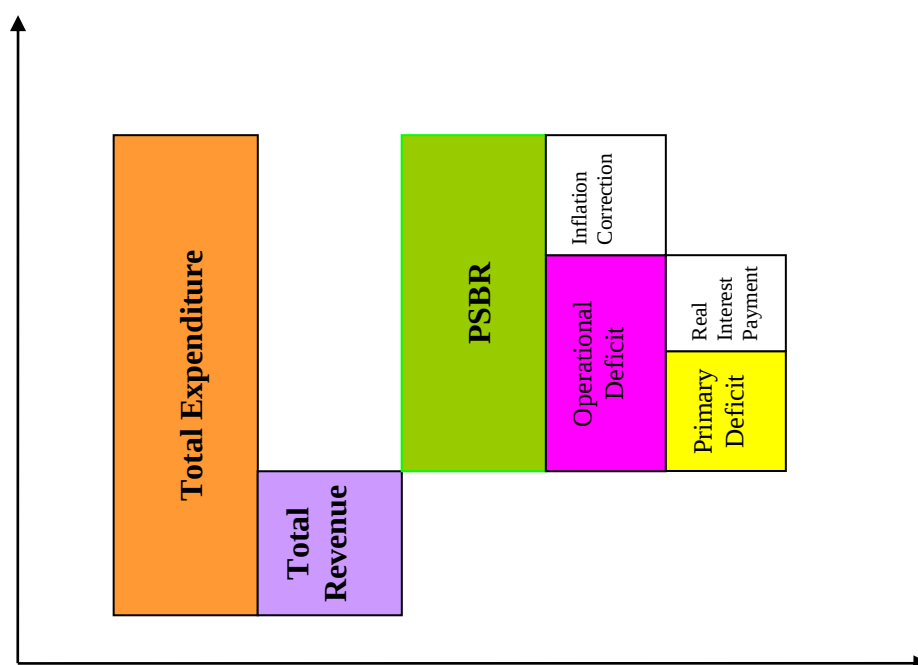
And

Fiscal Deficit = PSBR = Total Expenditure – Total Revenue

This ultimately shows that the amount of PSBR is greater than operational deficit and which both are greater than the amount of primary deficit as shown in the following figure.

Figure 2.1

Relationship between Different Deficit Concepts



Source: World Development Report, 1988, P 57

Tanzi and Blezer discuss what they call the conventional deficit in different way than mentioned previously, with reference to the definition set out in the IMF Draft Manual on Government Finance Statistics (Tanzi and Blezer 711-738). This measure arranges the payments and receipts of the government sector accounts as follows:

Fiscal Deficit = Revenue + Grants – (Expenditure on goods and services + Transfer Payments + Net Lending)

Or alternatively,

$$\text{Fiscal Deficit} = \text{Borrowing} + \text{Net Decrease in Cash Holding} - \text{Amortization}$$

This approach does have its shortcomings. First, the definition emphasizes cash flow concepts rather than accrual concepts of accounting. At time, the cash flow may not fully reflect underlining trends. For instance, if the government purchases goods and services and delays payment, the cash concept may not reveal in the current year that the level of spending has changed. Tanzi points out that while capturing the monetary impact of the budget, the cash concept may not capture the income creating (i.e. the Keynesian) impact. They note that in the heyday of Keynesian economics (the mid sixties), the accrual concept was generally preferred to the cash concept.

Finally the World Development Report 1988 discusses the structural deficit. This measure presents the deficit adjusted for up and down turns in the business and commodity cycle and the factors might cause temporary deviations from the trend level of expenditure and tax revenue. Such temporary deviations might be caused by any temporary expenditure or tax policy such as a tax amnesty or a decision to withhold government sector wages. While in theory, the structural deficit is clear cut in practice it is often difficult to calculate, particularly in UDCs.

2.2.2 Deficit Financing: Empirical Readings

In the concerned title, many articles and theses have been written. There are many controversies regarding the use of deficit financing for the growth of the economy. Those who advocated the use of deficit financing argue that in most of the developing countries, due to the inadequate government revenue, the major portion of the development programs has to be financed by inflationary finance. But at the same time, there are a group of people who oppose deficit financing in the ground that it will cause

for inflation and the society will have to bear substantial welfare cost which may be greater than the gain. In this regard, it is worthwhile to review some relevant literature both by the national and international researchers. So, the opinions given by the scholars have been presented below.

2.2.2.1 International Researchers' Findings

Recent research has emphasized the importance of obtaining a complete picture of the public sector claim on resources by including all levels of the public sector. Buiter concluded that the consolidated public sector deficit should include data not only on the central government accounts, but on general and local accounts as well as on decentralized public agencies and state owned enterprises (Buiter 307-349).

In this regard, V. Ramangkura and Nidhiprabha made an analysis of public sector deficits of Thailand. The research was made to capture the effect of public deficit on all relevant macroeconomic variables. The model consisted of 45 equations 28 of which were behavioral and 70 of which were identities. The simultaneous system of equations was important to burden the scope of the analysis to understand how the equilibrium is achieved in all markets simultaneously. For example, when the private spending is changed, national income, imports and other price level will be affected. Therefore, the net effect of the public deficit can be examined by utilizing small macroeconomic model (Ramangkura and Nidhiprabha 10-11).

They started the model from foreign trade then related it to the government budget deficit as:

$$D_g = C_g + I_g - T$$

Where, D_g = Government budget deficit

C_g = Public consumption expenditure

I_g = Public capital formation

T = Government tax revenue

And the government deficit will be financed by such a way:

$$D_g = \Delta BF + \Delta GB_p + \Delta GB_b + \Delta H_g + GSB - OG$$

Where, D_g = Government deficit

BF = Stock of government's external debt

GB_p = Government bond held by private sector

GB_b = Government bond held by commercial banks

H_g = Claims on government by banks of Thailand

GSB = Government's borrowing from government savings bank

OG = other financing of government deficits

Δ = Incremental change of corresponding variable

The more recent concept of measuring public sector deficit is the concept of sustainable fiscal deficit. It is widely used model by World Bank's experts and other international scholars, since early 1990s. The study of Morande and Hebbel was focused on obtaining bonds for sustainable deficits of the public sector. The sustainability concept applied here refers the feasibility of the dynamic path of public liabilities for given demands by the domestic private and foreign sectors for these liabilities. They further say: "A sustainable deficit is hence defined as a level consistent with maintaining unaltered holding of public liabilities, in proportion of GDP, by domestic private and foreign creditors" (Morande and Hebbel 32-33).

It follows work on fiscal sustainability developed by Buiter (1983) and Van Wijnbergen (1991) with the application of Turkey (1988) and Morocco (1990).

In Chile, the analysis of deficit financing was concentrated to make the public deficit sustainable by Marshall and Hebbel. It was addressed by public debt. Along the line of Buiter, they define a sustainable deficit level as one that avoids increasing debt/GDP ratio over time. To illustrate the implications of public debt for public finances they started with the public sector budget constraints (Marshall and Hebbel 1991). According to them, if the public deficit is financed through monetary creation and issuance of domestic and foreign public debt, financing of the primary deficit, as a fraction of GDP (d) can be expressed as:

$$d = m \cdot + m (\pi + n) + b \cdot + b^* - b (r - n) - b^* (r^* - n + \mu)$$

Where,

π = inflation rate

n = GDP growth rate

r = real interest rate paid on domestic debt

r^* = real interest paid on foreign debt

m = ratio of the outstanding stocks of base money to GDP

b = ratio of domestic public debt to GDP

b^* = ratio of external public debt to GDP

μ = rate of real deviation

$\cdot$ (dot over variables) denotes the rate of change per unit of time

These different concepts of measuring the public sector deficit show that the correct way to measure the public sector deficit depends on its purpose and the available information. But, recently, the fiscal economists are using the sustainable public sector deficit model which is considered as advanced model to measure primary deficit.

The IMF had conducted a research on "The Macroeconomics of the Public Sector Deficits" in selected developed and developing countries. The eight selected countries were: Argentina, Chile, Columbia, Cote d' Ivoire, Ghana, Morocco, Pakistan and Zimbabwe. The major findings were published in its staff paper (Various Issues) during the late eighties and early nineties (1989-1992).

William Easterly, in his analysis of Columbia, during the period of 1975-1987, concludes that there is a close relationship between the means of financing the fiscal deficit and macro economic outcomes. A debt financed deficit, being increased by about one percent of GDP, translates the real interest rate increase of one to five percent, a money financed deficit increased by about 1 percent translates into 15 percent points more inflation (Easterly 1991).

Finii Ricardo in his study about the deficit financing in Morocco covering the period 1971-1988, found that the growth rate of deficit financing remained relatively high. He has an opinion that Morocco has made great progress toward macroeconomics and fiscal stability but the need remains for an unshaken commitment of fiscal discipline, a determined effort to reform tax and public spending systems. He suggests that the rising deficit expenditure crowds-out investment. The short run benefits an output of such policy may then be out weighted by its long-run negative impact on growth. It is essential therefore that the commitment towards fiscal discipline remains unshaken (Ricardo 1991).

Morande and Hebbel, during the study of 1980/81-1988/89 in Zimbabwe, found that the public sector deficits had grown from less than 10 percent of GDP in initial period of the study (1980/81) but it raised up to 14 percent of GDP over 6 year span. From which the nominal interest rates on domestic debt and foreign debt/output ratios were continuously rising. But due to the starting of fiscal adjustment program in 1987/88 the budget deficit reduces by 3.5 percent in 1988/89 and continuously it is decreasing up to date. The study shows that among macro-economic variables and in decreasing order, real GDP growth, real import growth and real exchange devaluation have a negative impact on the public sector deficit. On the contrary, increase in the domestic real interest rate; domestic inflation and foreign nominal interest rate tend to boost the deficit in decreasing rate. The impact analysis showed that if real GDP has to be increased by 1 percent that translates the fiscal deficit should be increased by 16 percent. For this, the foreign real debt increased by 3 percent and domestic is by 5 percent where the domestic inflation increases by 31 percent. This whole story tells us that the fiscal deficit has to be reduced if sustainable development is the primary goal of the economy (Morande and Hebbel 1991).

Using simultaneous equations system, Marshall and Hebbel analyzed the public sector deficit of Chile during the period of 1974 – 1988; found that the public sector deficit was over 20 percent of GDP in initial year (1974/75). After then, by introducing VAT, due to the increased in tax revenue, the fiscal deficit was reducing continuously. They further discussed that the inflation was high in Chile (over 20 percent) in each year, and it was not only due to the deficit financing but also due to the other fiscal imbalances in the economy (Marshall and Hebbel 1991).

According to the study of Ramangkura and Nidhiprabha, there is well fiscal discipline in Thailand. According to the budgetary law of Thailand (1974), the size of the

deficit must not exceed 20 percent of the proposed level of public expenditure. During the study period 1974-1989, annual fiscal deficit were always less than 10 percent except in 1974, 1988 and 1989. To correct imbalances in the economy (such as inflation, balance of payments problem etc.) the government policies started to reduce fiscal deficits. More recently, there is surplus budget in Thailand (Ramangkura and Nidhiprabha 1991).

Wetzel and Islam argued that there was a close relationship between deficit financing, price and balance of payment. An increase in deficit budget creates more price rise and trade deficit than the growth of GDP in Ghana (during the study period 1969-1988). He concluded that the reduction of public sector deficit through fiscal policy had been a key element of stabilization and adjustment. The empirical analysis of fiscal deficits in Ghana revealed their significant effects on both the real and financial sides of the economy (Wetzel and Islam 1991). Similarly, inflation rate was very high in Latin America and Cote d' Ivoire due to the deficit financing concluded by IMF study on the same period (Carlos and Hebbel 1991).

But the case of Pakistan is found to be exceptional than the other seven countries in a research carried out by IMF. Haque and Montiel in their research paper during the period of 1972/73- 1987/88 found that inflationary financing was beneficial, in a macro economics sense with a high average rate of economic growth, low inflation and relatively absence of major imbalances (Haque and Montiel 1991).

In this way, in the research of IMF, the deficit financing is beneficial only in Pakistan but not in other countries. The experiences of other seven countries showed that the creation of deficit financing was a matter of fiscal imbalances (such as inflation, trade imbalance etc.) in most of the developing countries. But the results reported by IMF do

contain at least one major surprise that the link between inflation and budget deficits was weak, at least for the countries examined in the study.

In his study Swamy said that the inflationary impact of budget deficit depends upon the method used to finance the deficit. Using a static and dynamic macroeconomic model, he concluded that the proportion of budget deficit financed by money creation was a crucial determinant of the rate of price inflation. The price inflation will be greater, the higher the proportion of budget deficit financed by money creation (Swamy 1975).

Mundell concluded that the growth argument for inflationary finance was not apparently strong enough. For him, the argument for inflationary finance as a vehicle of economic development had never been convincingly validated in theory. He claimed that even rapid inflation is like to add less than 1.5 percent to the growth rate and that maximum figure does not take into account the resource misallocation which always accompanied inflation (Mundell 1967). Similarly, Morty (1967) and a new monetarist economist Milton Friedman (1971) also criticized inflationary financing on the ground of welfare cost created by inflation due to the use of such finance.

Using simultaneous equations, Aghevli and Khan examined the relationship between the increase in money supply and inflation due to fiscal deficits in four developing countries viz. Brazil, Columbia, The Dominican Republic and Thailand. The basis hypothesis of the study was that, while government expenditure rises accompanying with inflation, governments' revenue would tend to be full behind in real terms owing to collection lags. They found that the financing of the inflation include deficit would increase the money supply and generate inflation. Hence, the increase in the supply of money would both cause inflation and would be the result thereof (Aghevli and Khan 1978).

2.2.2.2 Nepali Researchers' Findings

Taking the study period 1974/75-1984/85, Integrated Development System (IDS) has reported that resource gap have been as high as 10.08 percent of GDP during the period under review. IDS pointed out that the resource gap had been widen because of the continued absence of norms about the government's fiscal behavior. Due to the widening of resource gap, IDS visualized the problem in both the short and long run. In short run, the inflationary pressure had been increasing rapidly due to the growing deficit financing. And in the long run, the annual growth rate of GDP (3.1 percent) was negligible as compared to the growth rate of deficit financing (10.08 percent), where the annual growth rate of population was about 2.6 percent under the period of review. So there was little change in the structure of output and employment. The balance of payment was under heavy pressure with the deficit in current account. At the same time debt servicing was also becoming an issue of serious concern. IDS concludes for a developing country like Nepal, the widening resource gap itself would not have been a matter of serious concern if it was related to growth in investment leading to a capacity expansion in the economy, but due to the fact of generally stagnant rate of governmental investment amidst growing resource gap in this sector through it in the economy as a whole, adverse effect had been growing show that the resource gap should not be widened (IDS 6-34).

By following monetarist's approach K.P. Upadhyay examined the relationship between the deficit finance, inflation and balance of payment in Nepal during the period of 1967/68-1981/82. He concluded that the effect of increase in the deficit spending through the borrowing from central bank (Nepal Rastra Bank) has positive effect in increase in the money supply from which the effect on the price level was positive but was quit small and in general the effect on the output (GDP) level was positive.

However, in the policy implication Mr. Upadhyay was against of using central bank's credit to the government as the tool for the long run growth of the economy. He strongly recommended that the government should involve only in infrastructure development which will initiate the private sector investment, it is because of the point of stability of the economy for which budget deficit financing should be increased (Upadhyay 1984).

Regarding the deficit financing in Nepal, four theses have been written under the Tribhuvan University for the completion of master's degree in economics by Arjun Raj Joshi (1976), Ruchila Pandey (1979), Yog Nath Sharma (1985) and Ram Saran Kharel (1996).

Mr. Joshi using the time series data from 1965/66-1975/76 found from his analysis that the growth rate of deficit financing was widening during the study period. He suggested that there was no casual relationship between deficit financing and price rise in Nepal (Joshi 1966). Ms. Pandey (1979), found the same conclusion in her study (1965/66-1978/79). But Mr. Sharma added one more point that the deficit financing was needed for the natural and financial resource mobilization in Nepal (Sharma 1985). Being the nature of descriptive study based on trend analysis, no mathematical tools, models and other statistical tests were used in all these three theses.

Mr. Kharel taking the time series data for the period 1974/75-1993/94 used some mathematical tools, models and statistical tests and attempted to analyze the deficit financing in Nepal on the basis of econometric study. He analyzed the trend growth and size of deficit financing during the study period and he also utilized the econometric tools to analyze the impact of deficit financing on price level. He finally concluded that the connection between budget deficit and inflation is evidently complicated. Inflation of triple and more digits is always associated with large deficit but large deficit do not necessarily lead to high inflation (Kharel 1996).

In conclusion, the findings of researchers are heterogeneous in nature. But it is generally argued that there is positive relation between deficit financing and price level in Nepal. Among the above review literature no one had studied the impact of government expenditure on deficit financing. Therefore, this study is very much significant which provides two things: first it analyzes the trend, growth and size of deficit financing during the period of 1984/85-2003/04 and second it analyzes the impact of government expenditure on deficit financing and also the impact of deficit financing on money supply and price level using the econometric tools.

Chapter 3

METHODOLOGY OF THE STUDY

The methodology used in this research work is inductive method. Descriptive as well as quantitative method of reasoning is used to analyze the data. The variables used in this study are specified and the models are fitted. The data source, method of data calculations and processing, the range of the data etc. are mentioned below in brief.

The methodology is divided into two parts. The first part presents the descriptive analysis of deficit financing in Nepal and the second part of the study is related to the quantitative analysis. It tries to analyze the impact of deficit financing on money supply and price level and also the impact of government revenue and expenditure on deficit financing by using econometric tools.

3.1 Descriptive Analysis

First of all, the trend of expenditure and revenue pattern of Nepal is presented. It helps to see the situation of resource gap in the budgetary system. Then after, this study aims to find the revenue deficit and budget deficit in Nepal during the period of review (1984/85-2003/04).

In Nepalese context, revenue deficit is defined as deliberately created gap between total public expenditure and total public revenue. Where, total expenditure is the sum of development and regular expenditure and total public revenue is the sum of tax and non-tax revenue of our own economy which excludes the foreign grants. This is also called overall deficit which needs to be financed and is the amount of deficit financing.

Symbolically,

Revenue Deficit = Total Expenditure – Total Revenue = Overall Deficit (Deficit Financing)

The other type of deficit is the budget deficit or fiscal deficit. To find the budget deficit, the component of foreign aid (i.e. grants) is also accounted to the total revenue which is known as total receipts. Therefore, budget deficit is the excess amount of expenditure over total receipts.

Symbolically,

$$\text{Budget Deficit} = \text{Total Expenditure} - \text{Total Receipts (Revenue + Grants)}$$

There are two sources of financing of government's deficit in Nepal. They are internal sources and external sources. Internal source consists of banking and non-banking sector and the government's cash balance of each year in the study period is also accounted under the heading of total internal loan. Similarly, external sources are classified into foreign grants and loan. Both foreign grants and loan are further classified into bilateral and multilateral sources. In this way the fiscal gap equals to its financing sources (The sum of internal and external financing).

Symbolically,

$$\begin{aligned} \text{Financing of Revenue Deficit (Deficit Financing)} &= \text{External Financing (Grants + Loans)} \\ &+ \text{Internal Borrowing (Banking + Non-banking + Cash Balance)} \end{aligned}$$

$$\begin{aligned} \text{Financing of Fiscal Deficit (Budget Deficit)} &= \text{External Borrowing (Loans)} + \text{Internal} \\ &\text{Borrowing (Banking + Non-banking + Cash Balance)} \end{aligned}$$

Based on the actual time series data, the trend of government's budgeting (Expenditure and Revenue), the size and trend of revenue and budget deficit are measured in terms of GDP and development expenditure. Similarly, the contribution for deficit financing from internal as well as external sources are discussed. For the analysis of trend, size and magnitude, the graphical presentation, percentage and growth rates are calculated.

3.2 Quantitative Analysis

The quantitative method is used to know the impact of deficit financing (Overall deficit) on money supply and price level of Nepal. Similarly the impact of government expenditure and revenue on deficit financing is also viewed with the help of quantitative method.

3.2.1 Basic Concept

The following statistical and econometric tools will be used for processing and analyzing the data to get empirical results:

- (1) The Simple correlation coefficient is computed between the concerned variables and if it exists our attempt further proceeds.
- (2) The regression analysis is used for analyzing the data. The ordinary least square (OLS) method of estimation is used throughout the study.
- (3) The significance of regression parameter is conformed to t-statistics, F-statistics etc.
- (4) The explanatory power of the explanatory variable is known with the help of the coefficient of determination (R^2) and adjusted coefficient of determination ($\bar{R}^2$).
- (5) To know the autocorrelation between the error and residual terms the Durbin-Watson (D-W) test is done.

3.2.2 Variables

In this study, the empirical relationships are tested with the help of statistical and econometric tools. The relationships are developed using many variables. The values of the variables are in time series data. Let us discuss about the variables used in this dissertation.

A) Dependent Variables

The variable whose value is influenced by other variable is called dependent variable. The dependent variable is also known as explained or predicted or regressed or response or endogenous or outcome or controlled variable. The following are the dependent variables used in the study.

I) Narrow Money Supply (M₁)

Narrow money supply is the sum total amount of currency held by the public(C) and demand deposits held at commercial banks (DD).

Symbolically,

$$M_1 = C + DD$$

In this thesis, M₁ is taken as dependent as well as independent variable. It is taken as dependent variable when it is used to know the impact of deficit financing on money supply in Nepal.

II) Price Level (P)

In Nepal the actual data of price is not found. So, the national urban consumer price index is assumed to represent the overall consumer price index. Price level is the indicator of inflation and the rise in the general price level is due to many reasons. Here, price level (P) is used as dependent variable when it is used to know the impact of deficit financing and money supply on price level of Nepal.

III) Deficit Financing (DF)

The overall revenue deficit is to be financed by external and internal sources which is known as deficit financing. DF is taken as dependent as well as independent variable. It is taken as dependent variable when it is used to identify the impact of government expenditure on deficit financing in Nepal.

B) Independent Variables

The variable which influences the other variable is called independent variable. The independent variable is also known as explanatory or predictor or regressor or stimulus or exogenous or covariate or control variable. The following are the independent variables used in the study.

I) Deficit Financing (DF)

It is taken as independent variable when it is used to know the impact of deficit financing on money supply and price level of Nepal.

II) Narrow Money Supply (M_1)

It is taken as independent variable when it is used to know the impact of deficit financing and money supply on price level of Nepal.

III) Total Government Expenditure (GE)

The government expenditure means the current spending and investment by central government and local authorities on the provision of social goods and services, marketed goods and services and transfer payments. In the circular flow of income model, transfer payments are excluded from government expenditure because these are not made in return for productive services. Government expenditure is financed by taxation and borrowings.

Government expenditure is an important component of aggregate demand in the circular flow of income/expenditure model and is used as an instrument of fiscal policy in regulating the level of spending in the economy. It is the sum total of the regular and development expenditures of the government announced in the annual budget speech. It is used as independent variable in the model while testing the impact of government expenditure on deficit financing in Nepal.

3.2.3 Correlation Coefficient between the Variables

The correlation is a statistical device, which measures the amount of similarity, i.e., the degree of association between the series of observations of two or more variables. The degree of relationship existing between two variables is called simple correlation whereas it is multiple correlations when it shows the relationship between three or more variables. In the present study, we use the simple correlation. The correlation between the variables is measured with the help of correlation coefficient.

The correlation coefficient between two variables X and Y, usually denoted by r_{xy} is a numerical measure of linear relationship between them and it is defined as:

$$r_{xy} = \frac{N \sum XY - \sum X \sum Y}{\sqrt{[N \sum X^2 - (\sum X)^2] [N \sum Y^2 - (\sum Y)^2]}}$$

(Where, $-1 < r_{xy} < +1$)

If $r = -1$, there exists perfect negative correlation between the variables.

If $r = 0$, there exists no correlation between the variables.

If $r = +1$, there exists perfect positive correlation between the variables.

If the value of correlation coefficient is nearer to unity, high degree of correlation exists and if it is nearer to zero, low degree of correlation exists.

3.2.4 Regression Analysis between the Variables

Regression analysis is a mathematical measure of the average relationship between two or more variables in terms of the original units of data. It is the estimation of unknown values or prediction of one variable from known values of other variables. Simple linear regression involves a relationship between two variables but multiple regression analysis consists of three or more variables. All of the economic concepts, policy issues and forecasting problems consider the relationship between two or more

economic variables. These relationships are not exact but attempt to measure the degree of relationship only.

In regression analysis, there are two types of variables. The variable whose value is influenced by other is called dependent variable and the variable which influences is called independent variable. The dependent variable is also known as regressed or explained variable while the independent variable is also known as regressor or explanatory variable.

The linear regression equation between the variables X and Y can be written in the usual form of a straight-line equation as:

$$Y = a + bX$$

Where, Y = Dependent variable
 X = Independent variable
 a = Constant term
 b = Elasticity coefficient of X

By using the principle of least square method, we can estimate the value of dependent variable when the value of independent variable is known.

3.2.5 Coefficient of Determination

The coefficient of determination is a statistical number and denoted by R^2 . It is computed with the help of sample data and represents the percentage of the total variation of the dependent variable being explained by the changes on the independent variables. The coefficient of determination is calculated to test the explanatory power of the model. If the value of R^2 is high, the explanatory power of the model will also be high and vice versa. The coefficient of determination is calculated by using the following formula.

$$R^2 = 1 - \frac{\sum e_t^2}{\sum (Y_t - \bar{Y})^2}$$

$$\text{Where, } e = Y_t - \hat{Y}_t$$

When the coefficient of determination is adjusted to the degrees of freedom, the adjusted coefficient of determination, R^2 is calculated as:

$$\bar{R}^2 = 1 - \frac{\sum e_t^2 / (N-K)}{\sum (Y_t - \bar{Y})^2 / N-1} = 1 - (1 - R^2) \frac{N-1}{N-K}$$

Where, N = number of observations

K = Number of parameters

3.2.6 Autocorrelation Test

Autocorrelation refers to the relationship between the successive values of the error terms. Error terms are not included in the model and they link to each other with certain functional relationship. Durbin and Watson have suggested a test for testing the first order autocorrelation. In this study, we use the first order autocorrelation, ie, DW-statistics.

The Durbin- Watson (DW) test statistics is defined by the following formula:

$$d = \frac{\sum_{t=2}^n (e_t - e_{t-1})^2}{\sum_{t=1}^n e_t^2}$$

$$(0 \leq d \leq 4)$$

Where,

$e_t = (Y_t - \hat{Y}_t)$ at time t

Y_t = Dependent variable at time t

$\hat{Y}_t$ = Estimated value of dependent variable at time t

Durbin and Watson have suggested examining a lower bound (d_L) and an upper bound (d_U) such that if the computed d lies outside these critical values, a decision can be made regarding the presence of positive or negative autocorrelation. The theoretical upper and lower limits are found in a certain level of significance depending upon the N

(Number of observations) and K' (Number of independent variables excluding the constant term) used in the study.

The decisions are made as follows:

$d = 0$	$\Rightarrow$ Perfect positive autocorrelation
$0 < d < d_L$	$\Rightarrow$ Positive autocorrelation
$d = 4$	$\Rightarrow$ Perfect negative autocorrelation
$4 - d_L < d < 4$	$\Rightarrow$ Negative autocorrelation
$d_U < d < 4 - d_U$	$\Rightarrow$ Neither positive nor negative autocorrelation
$d_L \leq d \leq d_U$ and $4 - d_U \leq d \leq 4 - d_L$	$\Rightarrow$ Indecisive Regions, i.e. no decision can be made when d statistics lies in the given ranges.

3.2.7 F-Test Statistics

The F-test is used to test the overall significance of the regression model at a given level of statistical significance. F-test shows whether the movement in the dependent variable is significantly explained or not with the change in independent variables.

The F-test statistics is computed by the following formula:

$$F = \frac{R^2 (K-1)}{(1-R^2) (N-K)}$$

Where, R^2 = Coefficient of determination

K = Number of estimated parameters (including constant)

N = Number of observations

$(K-1, N-K)$ = Degree of freedom

The following hypothesis is used to compute the F-test statistics.

Null hypothesis:- $H_0: a = 0$, i.e., there is no linear relationship between dependent and explanatory variables.

Alternative hypothesis:- $H_1: a \neq 0$, i.e., there exists linear relationship between dependent and explanatory variables.

When the calculated value of F is greater than tabulated value at (K-1, N-K) degree of freedom and the given level of significance, the null hypothesis is rejected and it is concluded that there is significant linear relationship between dependent and explanatory variables and vice versa.

3.2.8 t-Test Statistics

The t-test is used to examine the statistical significance of the individual parameters at the given level of significance. It shows the degree of confidence in the validity of estimates.

The t-test statistics is calculated by the following formula:

$$t = \frac{a}{SE(a)}$$

$$\text{Where, } SE(a) = \sqrt{\frac{\sigma_u^2}{\sum(X-X)^2}}$$

$$\sigma_u^2 = \frac{\sum e^2}{(N-K)}$$

σ_u^2 = an unbiased estimator of true σ_u^2

(N-K) = Degree of freedom

N = Number of observations

K = Number of estimated parameters (including constant)

The following hypothesis is used to compute the t-test statistics.

Null hypothesis:- $H_0: a = 0$, i.e., the regression parameter is not significant.

Alternative hypothesis:- $H_1: a \neq 0$, i.e., the regression parameter is significant.

When the calculated value of t is greater than tabulated value at $(N-K)$ degree of freedom and the given level of significance, the null hypothesis is rejected and it is concluded that the regression parameters are significant and vice versa.

3.2.9 The Models

To fulfill the objectives of this research work, the following models are used.

(I) Impact of deficit financing (DF_t) on narrow money supply (M_{1t})

$$M_{1t} = a_0 + a_1 DF_t + U \quad (3.1)$$

Where, M_{1t} = Narrow money supply at time t

DF_t = Deficit financing at time t

a_0 = Constant term

a_1 = Elasticity coefficient of DF_t

U = Error term

(II) Impact of Deficit financing (DF_t) and narrow money supply (M_{1t}) on price level (P_t)

$$P_t = a_0 + a_1 DF_t + a_2 M_{1t} + U \quad (3.2)$$

Where, P_t = Price level at time t

DF_t = Deficit financing at time t

M_{1t} = Money supply at time t

a_0 , = constant term

a_1 and a_2 are coefficient of Df_t and M_{1t}

U = error term

(III) Impact of government expenditure (GE_t) on deficit financing (DF_t)

$$DF_t = a_0 + a_1 GE_t + U \quad (3.3)$$

Where, DF_t = Deficit financing at time t

GE_t = Government expenditure at time t

a_0 = Constant term

a_1 = Elasticity coefficient of GE_t

U = Error term

The above equations (3.1), (3.2) and (3.3) are treated with log-linear versions to get the empirical results. The estimating equations in terms of log-linear form are as follows:

$$\ln M_{1t} = \ln a_0 + a_1 \ln DF_t + U \quad (3.4)$$

$$\ln P_t = \ln a_0 + a_1 \ln DF_t + a_2 \ln M_{1t} + U \quad (3.5)$$

$$\ln DF_t = \ln a_0 + a_1 \ln GE_t + U \quad (3.6)$$

Where, $\ln M_{1t}$ = Narrow money supply at time t in terms of natural logarithms

$\ln DF_t$ = Deficit financing at time t in terms of natural logarithms

$\ln P_t$ = Price level at time t in terms of natural logarithms

$\ln GE_t$ = Government expenditure at time t in terms of natural logarithms

a_0 s are constants

a_1 s and a_2 s are regression parameters

U s are error terms

With the help of the above mentioned regression equations we test the hypothesis and find the empirical results in the coming chapter.

3.3 Range of Study Period

The range of the study period is 1984/85 - 2003/04, which covers the period of 20 years.

3.4 Sources of Literature

The literatures available in Central Library, Nepal Rastra Bank Library, Public Administration Campus Library and Inland Revenue Department Library are the sources of literature for literature review and other purposes of this study.

3.5 Sources of Data

The main sources of data are secondary sources and they are the nominal values. The secondary data are taken from various bulletins, publications and official records. The major sources of the data used in this research are: - HMG/N, Ministry of Finance, *Economic Survey*, Various Issues, HMG/N, Ministry of Finance, *Public Statement on Income and Expenditure of the Fiscal Year 2004-2005* and Nepal Rastra Bank, *Quarterly Economic Bulletins*, Various Issues. The statistical formulae and econometric interpretation is based on the *Basic Econometrics*, fourth edition by Damodar N. Gujarati.

3.6 Methods of Data Processing

In this research work, the log-linear method is used for data processing. The log-linear method changes absolute level figures into log versions. The natural logarithms having a base of e (2.718) is chosen as appropriate method of data processing.

3.7 Device for Data Calculation

The calculations are done with the help of computer. The Microsoft Excel Worksheet is used to make the diagrams and graphs and calculate the data presented in the tabular form while computer software program *SPSS 10.0* is used to estimate the regression equations and to perform the various statistical and econometric tests as well.

Chapter 4

PRESENTATION AND ANALYSIS

Regarding the objectives of this study, the related hypotheses are tested and the empirical results are presented in the tabular form. Using the time series data, we perform quantitative as well as qualitative analysis. For the analysis purpose, we divide this chapter into two parts. The first part covers the trend analysis of various components related to deficit financing in Nepal. The second part covers the impact analysis of the related variables. In this part, the data are analyzed with the help of their actual figures, percentage change, percentage share, growth rate, difference, ratios, and graphs but in the second part, the analysis is done on the basis of estimated regression equations. The findings of both parts are presented at the end of the respective parts and finally they are presented as the conclusion in the next chapter.

4.1 Trend Analysis

In this part, the various trends are analyzed. The trend of GDP, public expenditure, public receipt etc. is viewed. Further the trend of related components such as: the surplus budget for development expenditure, the overall deficits and budget deficits, sources of deficit financing etc. are presented and the graphical methods are used where necessary.

4.1.1 Fiscal Aggregates

The GDP shows the productive capacity of the economy. It is the nominal GDP and the discretionary changes are not adjusted. In Nepal, the components of total expenditure are identified as regular and development expenditures and the components of total receipts are revenue and foreign grants. Table 4.1 represents the growth rate of fiscal aggregates such as: GDP, regular and development expenditures, total expenditure,

revenue and foreign grants, total receipts in Nepal during the study period. The annual average growth rate of GDP, regular expenditure, development expenditure, total expenditure, revenue, foreign grants and total receipts was observed as: 13.3%, 18.2%, 10.2%, 13.6%, 15.9%, 34.6% and 18.1 % respectively.

During the study period; GDP, regular expenditure, revenue and total receipts show growing tendency. Exception to those, development expenditure, total expenditure and grants although show growing trend but for some of the years of the whole period, they are declining.

According to table 4.1, there seems overall expansion in the fiscal variables except those for some years but the expansion is not uniform. GDP has the growth rate of 3.1% to 24.8 %. It is maximum in 1991/92 (24.8%) and minimum in 2001/02 (3.1%). The maximum growth rate of 55.2% was observed for regular expenditure in 1994/95 and minimum of 8.1% in 1993/94. Revenue has maximum growth of 28.6% in 1986/87 and minimum of 3.2 in 2001/02. Similarly, the highest growth rate for total receipts was observed in 1987/88 and 1994/95 (29.8%) and lowest in 1988/89 (0.3%).

The development expenditure, total expenditure and grants show contraction for some years. The maximum growth rate for development and total expenditure is observed in 1988/89 (30.8% and 27.6%) and minimum almost negative in 2001/02 (-15.1% and -2.2). While observing grants, it is found that in the years 1988/89, 1991/92, 1993/94, 1997/98 and 2001/02, the growth rate is negative. For it, the maximum growth rate is for 1992/93 (130.8%) and minimum for 1993/94 (-36.9%).

Table 4.1
Growth Rate of Fiscal Aggregates

F/Y	GDP	Regular Expenditure	Development Expenditure	Total Expenditure	Revenue	Grants	Total Receipts
1984/85	12.8	27.8	6.3	12.9	14.9	5.3	12.9
1985/86	19.7	23.3	13.2	16.7	18.6	27.0	20.2
1986/87	14.9	15.4	18.7	17.5	28.6	9.6	24.8
1987/88	19.7	13.1	27.8	22.5	23.0	61.6	29.8
1988/89	17.3	21.4	30.8	27.6	5.8	-19.1	0.3
1989/90	16.2	17.5	5.4	9.2	19.4	17.5	19.1
1990/91	16.5	13.5	22.9	19.7	15.5	9.6	14.5
1991/92	24.8	30.8	3.7	12.4	25.9	-24.1	17.5
1992/93	14.1	15.9	17.1	16.7	12.1	130.8	25.0
1993/94	15.9	8.1	9.1	8.7	29.3	-36.9	16.0
1994/95	9.6	55.2	-6.6	16.3	25.5	64.5	29.8
1995/96	14.0	11.9	26.2	19.2	13.5	22.6	14.8
1996/97	12.6	12.1	6.3	9.0	8.9	24.1	11.1
1997/98	7.5	12.4	9.0	10.6	8.4	-9.8	5.4
1998/99	13.9	14.3	-1.4	6.2	13.1	-19.7	8.5
1999/00	11.0	11.2	11.3	11.2	15.1	31.7	16.9
2000/01	7.5	23.9	16.7	20.5	14.0	18.2	14.5
2001/02	3.1	8.9	-15.1	-2.2	3.2	-1.0	2.7
2002/03	7.4	18.0	-7.8	7.6	11.5	69.6	18.3
2003/04	8.5	9.1	10.6	9.6	10.7	1.0	9.1

Note: The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

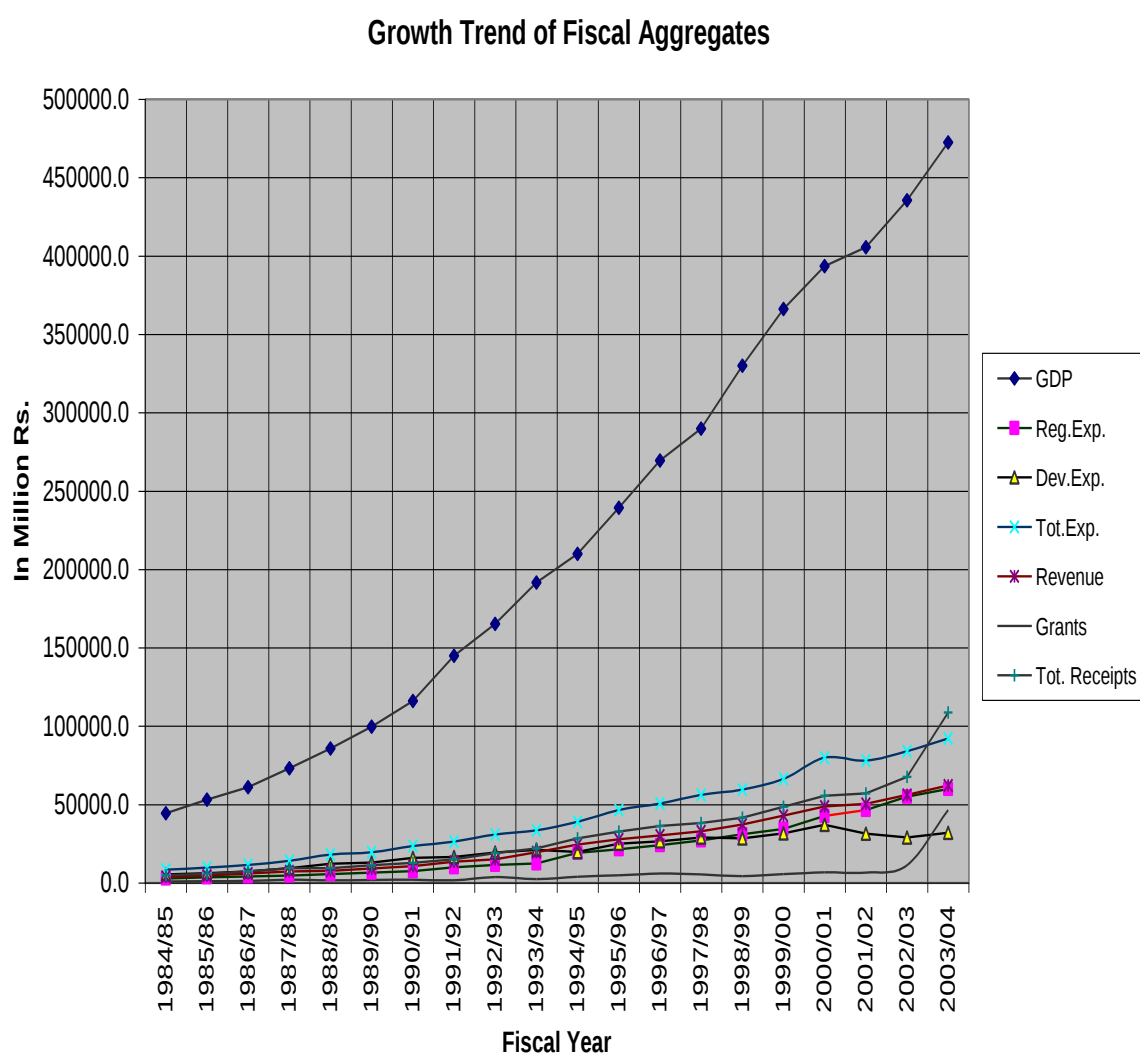
(b) Budget Speech, F/Y 2004-2005

For the first half (1984/85-1993/94), both the expenditures are increasing but for the second half (1994/95 -2003/04), the regular expenditure is showing the rapid expansion resulting contraction in development expenditure. For the year 1993/94, the growth rate of regular and development expenditure was 8.1% and 9.1% respectively but for 1994/95 it was 55.2% and -6.6% respectively. It can be concluded that the regular expenditure is increasing with the declination in development expenditure in the second half due to the rise of security expenses caused by the Maoists insurgency.

The figure 4.1 shows the growing trend of fiscal aggregates in Nepal for the period 1984/85 -2003/04. The GDP is increasing at faster rate, while the other variables are almost growing at the same rate and in the same direction.

Due to the growing demand of public goods and services, the public expenditure has been increasing successively in each year. The scope of public revenue in Nepal is limited by many problems and it has not been increasing as much as the growth rate of public expenditure, that's why the revenue surplus for development expenditure is decreasing continuously. While discussing the public expenditure, the public revenue also comes along with it. It is because, the process of government expenditure planning depends upon how much the government can afford expenditure from income receipts.

Figure 4.1



4.1.2 Components of Expenditures and Receipts

Table 4.2 represents the share of regular and development expenditures in Total expenditure and in GDP and the share of revenue and foreign grants in total receipts and in GDP in Nepal during the study period.

Table 4.2

Composition of Public Expenditure and Receipts

F/Y	Expenditure in Percentage Distribution					Receipts in Percentage Distribution				
	Regular		Development		Total	Revenue		Grants		Total
	% of TE	% of GDP	% of TE	% of GDP	% of GDP	% of TR	% of GDP	% of TR	% of GDP	% of GDP
1984/85	34.6	6.5	65.4	12.4	18.9	80.9	8.8	19.1	2.1	10.9
1985/86	36.6	6.7	63.4	11.7	18.4	79.8	8.7	20.2	2.2	10.9
1986/87	35.9	6.8	64.1	12.1	18.8	82.3	9.8	17.7	2.1	11.9
1987/88	33.2	6.4	66.8	12.9	19.3	78.0	10.0	22.0	2.8	12.9
1988/89	31.5	6.6	68.5	14.4	21.0	82.2	9.1	17.8	2.0	11.0
1989/90	33.9	6.7	66.1	13.0	19.7	82.5	9.3	17.5	2.0	11.3
1990/91	32.1	6.5	67.9	13.8	20.3	83.2	9.2	16.8	1.9	11.1
1991/92	37.4	6.8	62.6	11.4	18.3	89.2	9.3	10.8	1.1	10.5
1992/93	37.2	6.9	62.8	11.7	18.7	80.0	9.2	20.0	2.3	11.5
1993/94	36.9	6.5	63.1	11.1	17.5	89.1	10.2	10.9	1.2	11.5
1994/95	49.3	9.2	50.7	9.4	18.6	86.2	11.7	13.8	1.9	13.6
1995/96	46.3	9.0	53.7	10.4	19.4	85.3	11.7	14.7	2.0	13.7
1996/97	47.7	9.0	52.3	9.8	18.8	83.5	11.3	16.5	2.2	13.5
1997/98	48.4	9.4	51.6	10.0	19.4	85.9	11.4	14.1	1.9	13.2
1998/99	52.1	9.4	47.9	8.6	18.1	89.6	11.3	10.4	1.3	12.6
1999/00	52.1	9.4	47.9	8.7	18.1	88.2	11.7	11.8	1.6	13.3
2000/01	53.6	10.9	46.4	9.4	20.3	87.9	12.4	12.1	1.7	14.1
2001/02	59.7	11.5	40.3	7.8	19.2	88.3	12.4	11.7	1.6	14.1
2002/03	65.4	12.6	34.6	6.7	19.3	83.2	12.9	16.8	2.6	15.5
2003/04	65.1	12.7	34.9	6.8	19.5	84.5	13.2	15.5	2.4	15.6

Note: TE = Total Expenditure, TR = Total Receipts

The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

For the whole study period, the average annual share of regular and development expenditures in total expenditure is 44.5% and 55.5% and their average annual share in GDP is 8.5% and 10.6% respectively. The average annual share of total expenditure in

GDP is observed as 19.1%. Similarly, the average annual share of revenue and grants in total receipts is 84.5% and 15.5% and their average annual share in GDP is 10.7% and 1.9% respectively. The average annual share of total receipts in GDP is observed as 12.6%.

According to table 4.2, in 1984/85 the share of regular and development expenditure in total expenditure was 34.6% and 65.4% but it is completely opposite in 2003/04 exhibiting their respective share as 65.1% and 34.9%. The share of revenue in total receipts remains in the same ratio ranging from 78.0 – 89.6% and almost same condition for the grants also.

We observe from the data presented in table 4.2 is that for the second half of the study period, the regular expenditure is increasing rapidly resulting rapid contraction in development expenditure. It is due to the reason that the total sources (revenue and grants) are growing in the same ratio but the regular expenditure is rapidly increasing due to the increase in the security expense whose ultimate effect is decrease in the development expenditure.

The figures 4.2 and 4.3 give the clear picture about the trend of public expenditure and public revenue. The public receipts have been growing continuously but not as much of public expenditure which results the wider gap in the resources.

Figure 4.2

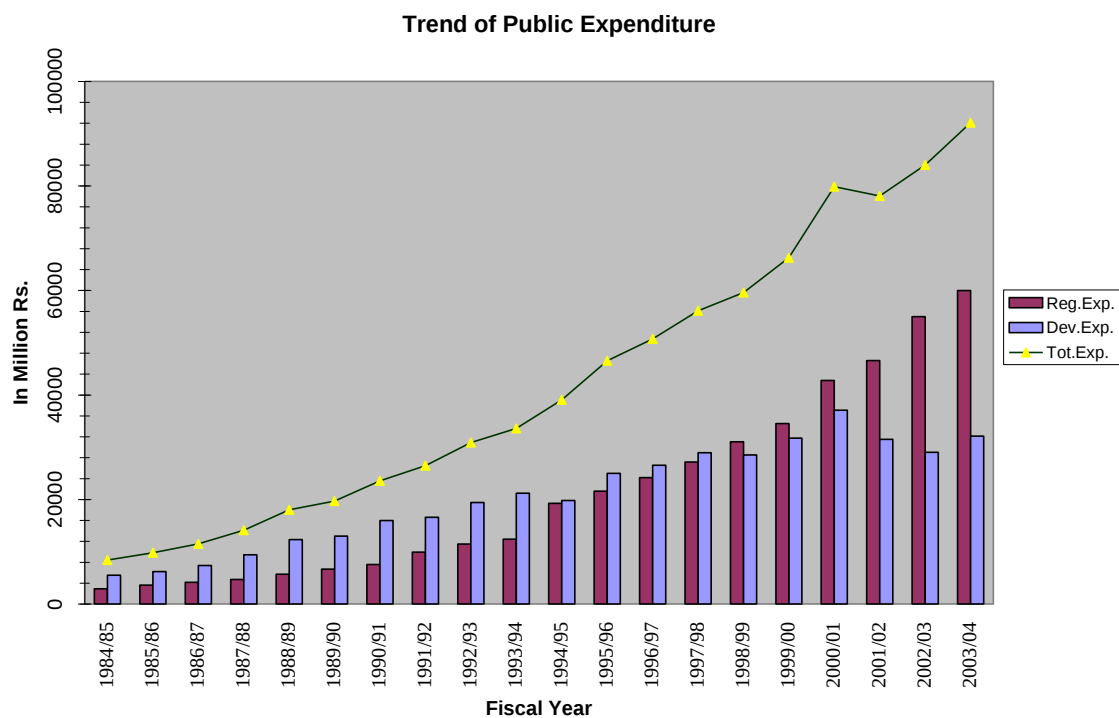
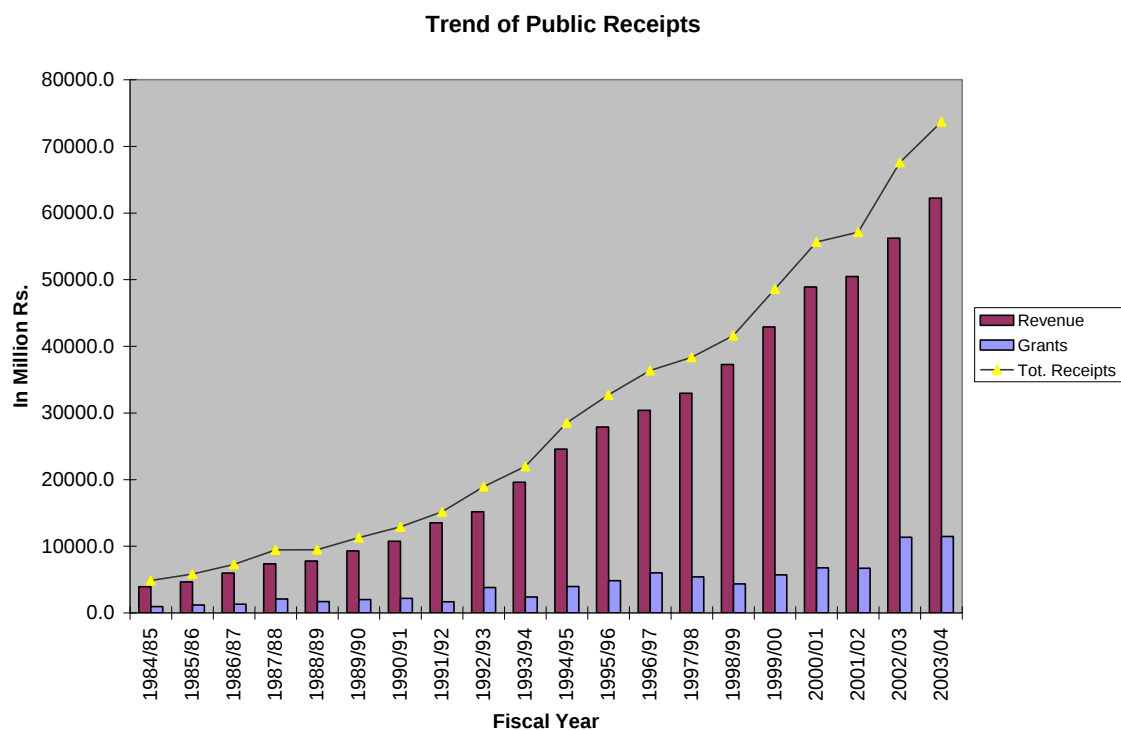


Figure 4.3



4.1.3 Surplus Budget for Development Expenditure

Table 4.3 shows revenue and receipts surplus remained for development expenditure. For the initial period of the study, the development expenditure was Rs. 5488.7 millions and only 18.4 % (Rs. 1010.5 millions) and 35.2 % (Rs. 1933.9 millions) of development expenditure were the revenue surplus and receipts surplus. It notifies us that 71.6% and 64.8 % was the deficit in revenue and receipts for development expenditure.

Table 4.3
Surplus Budget for Development Expenditure

F/Y	Development Expenditure	Revenue Surplus for Development Expenditure				Receipts Surplus for Development Expenditure			
		Amount	% of DE	% of TE	% of GDP	Amount	% of DE	% of TE	% of GDP
1984/85	5488.7	1010.5	18.4	12.0	2.3	1933.9	35.2	23.0	4.4
1985/86	6213.1	1060.5	17.1	10.8	2.0	2233.4	35.9	22.8	4.2
1986/87	7378.0	1839.9	24.9	16.0	3.0	3125.0	42.4	27.1	5.1
1987/88	9428.0	2673.4	28.4	19.0	3.7	4750.2	50.4	33.7	6.5
1988/89	12328.8	2100.7	17.0	11.7	2.4	3781.3	30.7	21.0	4.4
1989/90	12997.5	2615.7	20.1	13.3	2.6	4591.1	35.3	23.3	4.6
1990/91	15979.5	3159.6	19.8	13.4	2.7	5324.4	33.3	22.6	4.6
1991/92	16572.8	3607.3	21.8	13.6	2.5	5251.1	31.7	19.8	3.6
1992/93	19413.6	3664.3	18.9	11.9	2.2	7457.6	38.4	24.1	4.5
1993/94	21188.2	7171.6	33.8	21.3	3.7	9565.2	45.1	28.5	5.0
1994/95	19794.9	5310.1	26.8	13.6	2.5	9247.2	46.7	23.7	4.4
1995/96	24980.5	6331.2	25.3	13.6	2.6	11156.3	44.7	24.0	4.7
1996/97	26542.6	6192.4	23.3	12.2	2.3	12180.7	45.9	24.0	4.5
1997/98	28943.9	5763.5	19.9	10.3	2.0	11166.1	38.6	19.9	3.9
1998/99	28531.3	6203.3	21.7	10.4	1.9	10539.9	36.9	17.7	3.2
1999/00	31749.2	8370.5	26.4	12.6	2.3	14082.2	44.4	21.2	3.8
2000/01	37065.9	6124.4	16.5	7.7	1.6	12877.8	34.7	16.1	3.3
2001/02	31482.2	3855.5	12.2	4.9	1.0	10541.6	33.5	13.5	2.6
2002/03	29033.0	1256.7	4.3	1.5	0.3	12595.8	43.4	15.0	2.9
2003/04	32111.5	2231.3	6.9	2.4	0.5	13688.8	42.6	14.9	2.9

Note: DE = Development Expenditure, TE = Total Expenditure

Revenue Surplus for Development Expenditure = Total Revenue – Regular Expenditure

Receipts Surplus for Development Expenditure = Revenue Surplus for Development Expenditure + Foreign Grants

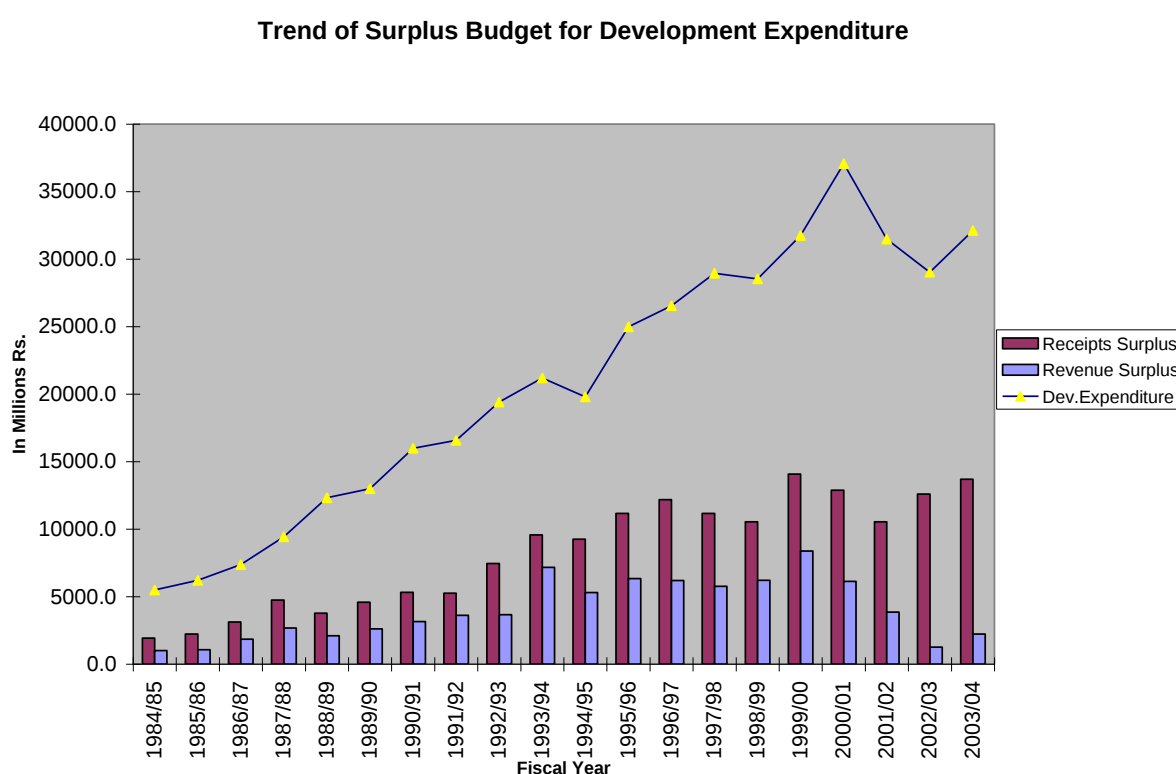
The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

The revenue surplus shows more variability than receipts surplus during the review period. The share of the former one in development expenditure ranges from 4.3% (in 2002/03) to 33.8% (in 1993/94) while the later one ranges from 30.7 % (in 1988/89) to 50.4% (in 1987/88). The revenue surplus for development is decreasing in greater speed in the second half of the review period but the receipts surplus is almost following the same trend.

Figure 4.4



The figure 4.4 shows the trend of revenue and receipts surpluses in development expenditure. The development expenditure reaches in the pick point for the fiscal year 2000/01 (Rs. 37065.9 millions) and then declines. Referring the figure and the presented data in the table, we can conclude that the surplus resources for development expenditure have not been adequate in Nepalese fiscal system. The revenue surplus fluctuates and shows decreasing rate over years. Thus surplus receipts is becoming the only permanent source of financing development expenditure whose share has been almost decreasing

implying the wider resource gap of public expenditure and revenue in Nepalese economy. This enables us to mean that there exists wide-ranging fiscal deficit in Nepal.

4.1.4 Revenue and Budget Deficits

There are two types of deficit in Nepal. They are revenue deficit and budget deficit. Revenue deficit is overall deficit and also known as deficit financing which is the broader concept than budget deficit. Before third five year plan, there was only short run slack and period deficit observed in the Nepalese economy and the concept of deficit budget was not emerged. It was the period of third five year plan, when the budgetary deficit concept was adopted with broader expectation of domestic resources mobilization.

As shown in table 4.4, the amount of revenue deficit has been growing continuously. Starting from Rs. 4478.2 millions in 1984/85, it reached up to Rs. 30941.5 millions in 2000/01 and decreased to Rs 29880.2 millions in 2003/04, which was 7 fold of initial period. Starting from 81.6% of development expenditure, it rapidly increased to 95.7 % in 2002/3 except some years. When we compare it with total expenditure and GDP, it has been fluctuating over the years.

Table 4.4
Revenue and Budget Deficits

F/Y	Revenue Deficit				Budget Deficit			
	Amount	% of DE	% of TE	% of GDP	Amount	% of DE	% of TE	% of GDP
1984/85	4478.2	81.6	53.3	10.1	3554.8	64.8	42.3	8.0
1985/86	5152.6	82.9	52.6	9.7	3979.7	64.1	40.6	7.5
1986/87	5538.1	75.1	48.1	9.1	4253.0	57.6	36.9	7.0
1987/88	6754.6	71.6	47.9	9.2	4677.8	49.6	33.2	6.4
1988/89	10228.1	83.0	56.8	11.9	8547.5	69.3	47.5	10.0
1989/90	10381.8	79.9	52.8	10.4	8406.4	64.7	42.7	8.4
1990/91	12819.9	80.2	54.4	11.0	10655.1	66.7	45.2	9.2
1991/92	12965.5	78.2	49.0	8.9	11321.7	68.3	42.8	7.8
1992/93	15749.3	81.1	51.0	9.5	11956.0	61.6	38.7	7.2
1993/94	14016.6	66.2	41.7	7.3	11623.0	54.9	34.6	6.1
1994/95	14484.8	73.2	37.1	6.9	10547.7	53.3	27.0	5.0
1995/96	18649.3	74.7	40.1	7.8	13824.2	55.3	29.7	5.8
1996/97	20350.2	76.7	40.1	7.5	14361.9	54.1	28.3	5.3
1997/98	23180.4	80.1	41.3	8.0	17777.8	61.4	31.7	6.1
1998/99	22328.0	78.3	37.5	6.8	17991.4	63.1	30.2	5.5
1999/00	23378.7	73.6	35.3	6.4	17667.0	55.6	26.7	4.8
2000/01	30941.5	83.5	38.8	7.9	24188.1	65.3	30.3	6.1
2001/02	27626.7	87.8	35.4	6.8	20940.6	66.5	26.8	5.2
2002/03	27776.3	95.7	33.1	6.4	16437.2	56.6	19.6	3.8
2003/04	29880.2	93.1	32.4	6.3	18422.7	57.4	20.0	3.9

Note: DE = Development Expenditure, TE = Total Expenditure

Revenue Deficit = Overall Deficit = Total Expenditure – Total Revenue (Tax and Non-tax)

Budget Deficit = Total Expenditure – Total Receipts (Revenue + Grants)

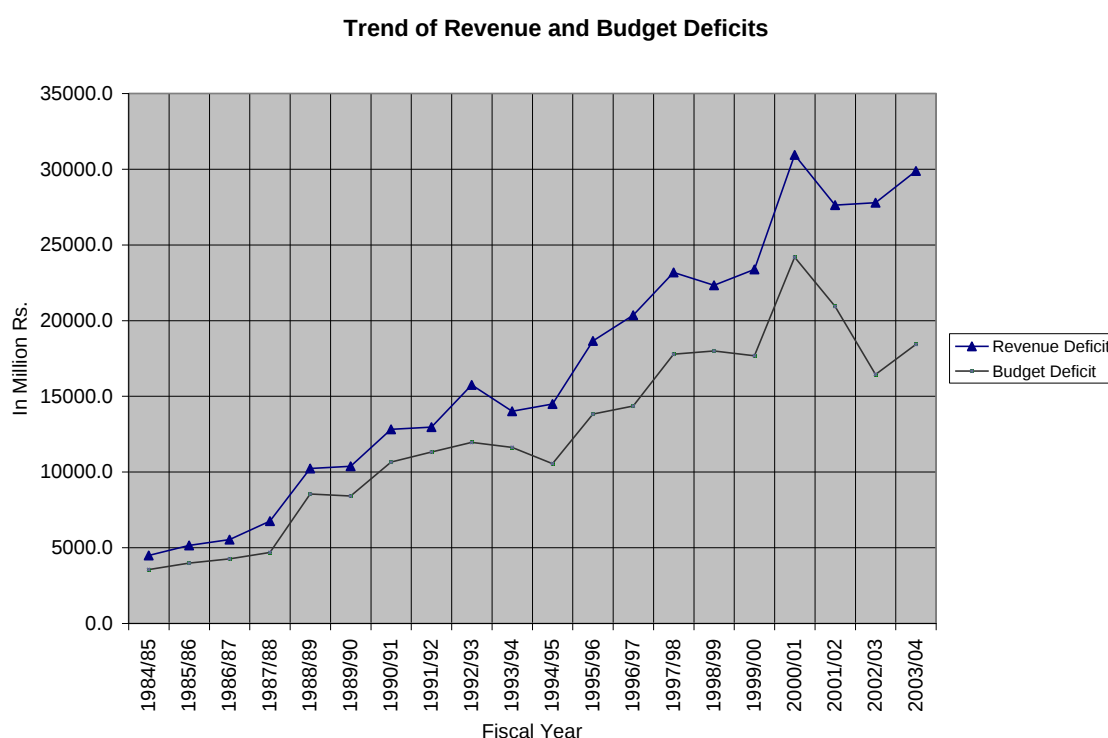
The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

Similarly the budgetary deficit has also been growing continuously. It ranges from 53.3% to 69.3% of the development expenditure during the review period. The figure 4.5 shows the trend of revenue and budget deficit in Nepal which tells us that revenue deficit is increasing at faster rate than the budget deficit.

Figure 4.5



4.1.5 Deficit Financing During Different Plan Periods

Table 4.5 shows the situation of deficit financing during different plan periods. For first five year plan it was Rs. 29.50 millions and rapidly increasing reached to Rs. 828540.00 millions in eighth five year plans and further decreased in ninth plan to Rs.130545.00 millions and then increased to Rs.184040.00 millions in tenth plan. There was no any amount to be financed in second three year plan.

In this regards Jha states:

After the political change of 1951 in Nepal, the responsibility of the government to lunch different development programs increased. But due to the lack of resources there was tremendous shortage of funds. As a result of this financial constraint, the government has no other option but to introduce deficit financing in the first national budget of the country in 1951/52, to meet the growing requirements of funds for development

works. Since then the government has been continuing deficit financing quite frequently. (Jha 158)

Table 4.5
Deficit Financing During Different Plans

S.N.	Plan Period	Name of Plan	Amount (In Millions Rs.)
1	1956/57-1960/61	First Five Year Plan	29.50
2	1962/63-1964/65	Second Three year Plan	-
3	1965/66-1969/70	Third Five Year Plan	206.40
4	1970/71-1974/75	Fourth Five Year Plan	162.30
5	1975/76-1979/80	Fifth Five Year Plan	336.40
6	1980/81-1984/85	Sixth Five Year Plan	819.80
7	1984/85-1988/89	Seventh Five Year Plan	1928.80
8	1992/93-1996/97	Eighth Five Year Plan	828540.00
9	1997/98-2001/02	Ninth Five Year Plan	130545.00
10	2002/03-2006/07*	Tenth Five Year Plan	184040.00

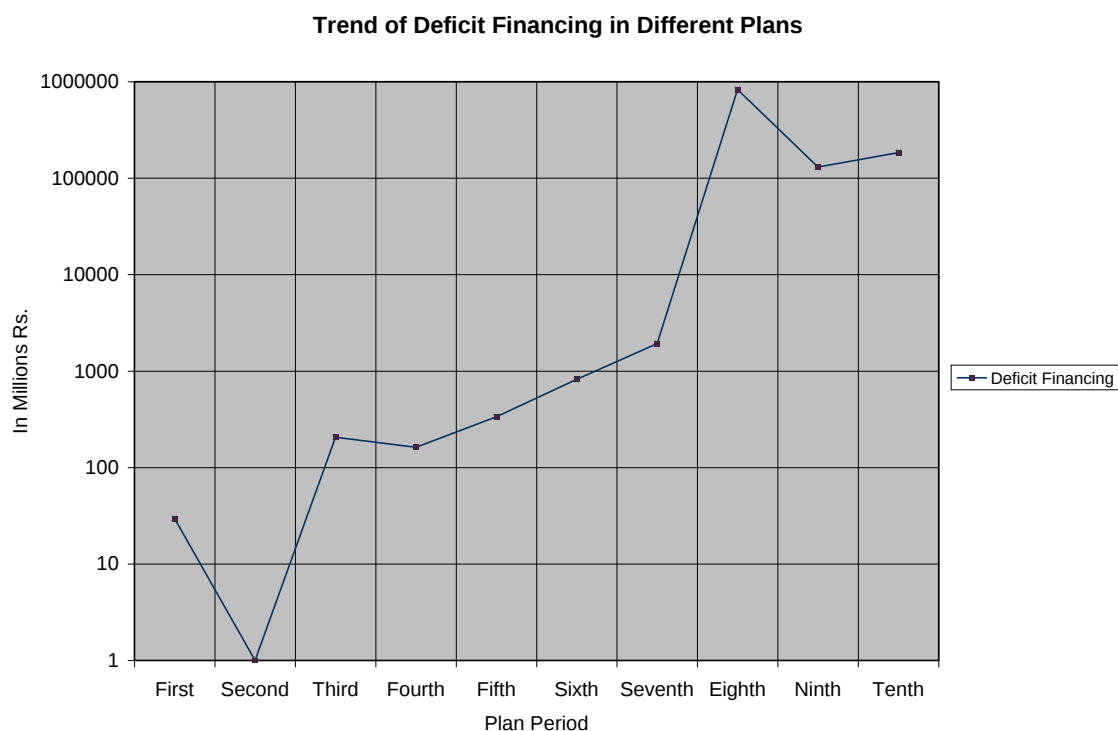
Sources: (a) Jha, H. B. *Resource Mobilization and Economic Development in Nepal during the Plan Period*, 1988, P. 158.

(b) National Planning Commission, *Seventh, Eighth, Ninth and Tenth Five Year Plan*, NPC.

* The figure for 2002/03-2006/07 is estimated figure

The figure 4.6 shows the trend of deficit financing in different plan periods. It is increasing at faster rate up to eighth plan but afterward it decreased. In second plan there was no any amount of deficit financing.

Figure 4.6



4.1.6 Sources of Deficit Financing

There are mainly two sources of deficit financing viz. external and internal sources. External source consists of grants and loans while internal source consists of internal borrowing (bank and non –bank) and cash surplus. Table 4.6 shows the position of sources of deficit financing in Nepal during the review period.

Figure 4.7 shows the trend of sources of deficit financing during the review years. The overall deficit is rapidly increasing with the increase in its sources of financing. The external sources are greater in growth rate than internal sources. This suggests that our economy is inclined to the foreign sources. The development expenditure has been depending on foreign loan and grants because it is covering more than 50% of the overall deficit for all the years and more than 75% in most of the years of the study period. In these context Khanal states: "Foreign aid is development and development is to a large extent foreign aid" (Khanal 32).

Table 4.6
Sources of Deficit Financing

F/Y	Revenue Deficit	External Sources (Grants + Loans)				Internal Sources (Internal Borrowing + Cash Surplus)			
		Amount	% of RD	% of TE	% of GDP	Amount	% of RD	% of TE	% of GDP
1984/85	4478.2	2678.3	59.8	31.9	6.0	1799.9	40.2	21.4	4.1
1985/86	5152.6	3674.0	71.3	37.5	6.9	1478.6	28.7	15.1	2.8
1986/87	5538.1	3990.9	72.1	34.7	6.5	1547.2	27.9	13.4	2.5
1987/88	6754.6	5892.6	87.2	41.8	8.1	869.1	12.9	6.2	1.2
1988/89	10228.1	7347.0	71.8	40.8	8.6	2881.1	28.2	16.0	3.4
1989/90	10381.8	7935.0	76.4	40.3	8.0	2446.8	23.6	12.4	2.5
1990/91	12819.9	8421.5	65.7	35.8	7.3	4398.4	34.3	18.7	3.8
1991/92	12965.5	8460.7	65.3	32.0	5.8	4444.8	34.3	16.8	3.1
1992/93	15749.3	10714.2	68.0	34.7	6.5	5035.13	32.0	16.3	3.0
1993/94	14016.6	11557.2	82.5	34.4	6.0	2459.4	17.5	7.3	1.3
1994/95	14484.8	11249.4	77.7	28.8	5.4	3235.4	22.3	8.3	1.5
1995/96	18649.3	14289.0	76.6	30.7	6.0	4360.7	23.4	9.4	1.8
1996/97	20350.2	15031.9	73.9	29.6	5.6	5318.3	26.1	10.5	2.0
1997/98	23180.4	16457.1	71.0	29.3	5.7	6723.3	29.0	12.0	2.3
1998/99	22328.0	16189.0	72.5	27.2	4.9	6139	27.5	10.3	1.9
1999/00	23378.7	17523.9	75.0	26.4	4.8	5854.8	25.0	8.8	1.6
2000/01	30941.5	18797.4	60.8	23.5	4.8	12144.1	39.2	15.2	3.1
2001/02	27626.7	14384.8	52.1	18.4	3.5	15241.9	55.2	19.5	3.8
2002/03	27776.3	15885.5	57.2	18.9	3.6	11890.7	42.8	14.2	2.7
2003/04	29880.2	22568.5	75.5	24.5	4.8	-	-	-	-

Note: RD= Revenue Deficit, TE = Total Expenditure

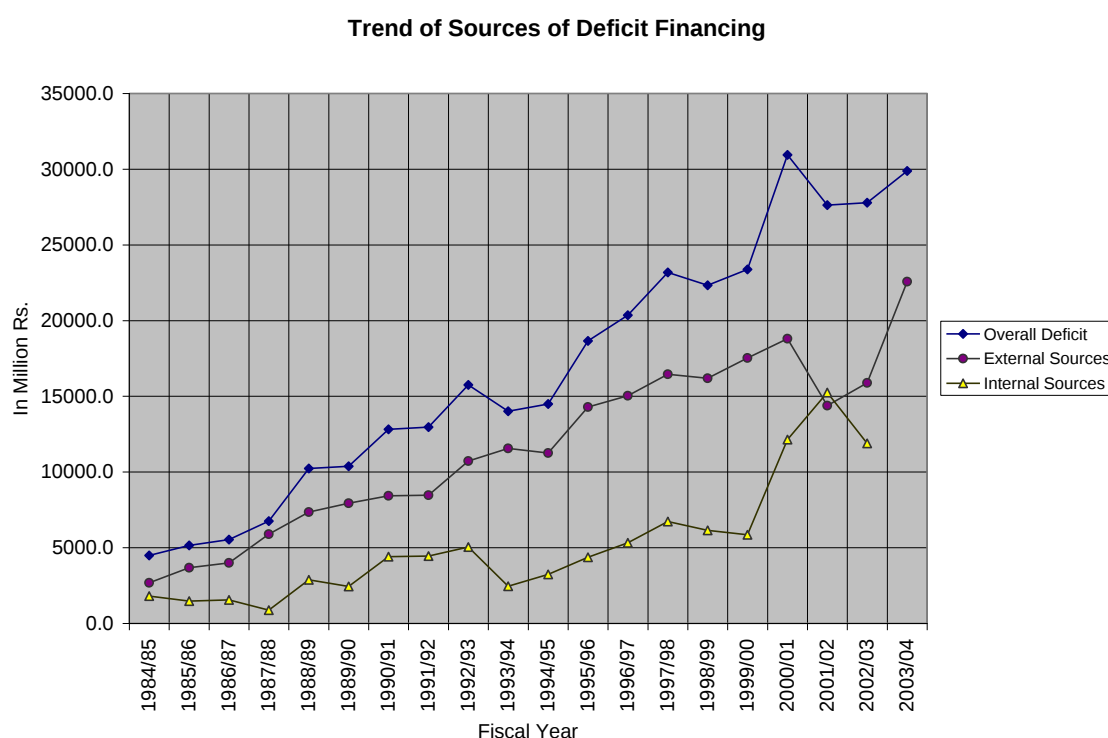
The figures for 2003/04 are revised estimate figures

(-): Denotes non-availability of data

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

Figure 4.7



4.1.7 Composition of External Sources of Deficit Financing

The external source of financing revenue deficit is further divided into foreign grants and foreign loans. The table 4.7 shows that the share of foreign loans is always greater in external sources than the share of foreign grants except 2002/03. In 2002/03, the share of grants was 71.4% in external source while the share of foreign loans was only 28.6%. For almost all the years of review period the share of foreign loans was more than 65% in external source while the share of foreign grants was less than 35%.

The figure 4.8 shows the trend of external sources. Foreign loan is growing at faster rate than foreign grants except the years 2002/03 and 2003/04. This represents that there is heavy pressure of foreign loan in the Nepalese economy and foreign debt has been increasing substantially over the years.

Table 4.7
Composition of External Sources of Deficit Financing

F/Y	External Sources (Grants + Loans)	Foreign Grants				Foreign Loans			
		Amount	% of ES	% of DE	% of GDP	Amount	% of ES	% of DE	% of GDP
1984/85	2678.3	923.4	34.5	16.8	2.1	1754.9	65.5	32.0	3.9
1985/86	3674.0	1172.9	31.9	18.9	2.2	2501.1	68.1	40.3	4.7
1986/87	3990.9	1285.1	32.2	17.4	2.1	2705.8	67.8	36.7	4.4
1987/88	5892.6	2076.8	35.2	22.0	2.8	3815.8	64.8	40.5	5.2
1988/89	7347.0	1680.6	22.9	13.6	2.0	5666.4	77.1	46.0	6.6
1989/90	7935.0	1975.4	24.9	15.2	2.0	5959.6	75.1	45.9	6.0
1990/91	8421.5	2164.8	25.7	13.5	1.9	6256.7	74.3	39.2	5.4
1991/92	8460.7	1643.8	19.4	9.9	1.1	6816.9	80.6	41.1	4.7
1992/93	10714.2	3793.3	35.4	19.5	2.3	6920.9	64.6	35.6	4.2
1993/94	11557.2	2393.6	20.7	11.3	1.2	9163.6	79.3	43.2	4.8
1994/95	11249.4	3937.1	35.0	19.9	1.9	7312.3	65.0	36.9	3.5
1995/96	14289.0	4825.1	33.8	19.3	2.0	9463.9	66.2	37.9	4.0
1996/97	15031.9	5988.3	39.8	22.6	2.2	9043.6	60.2	34.1	3.4
1997/98	16457.1	5402.6	32.8	18.7	1.9	11054.5	67.2	38.2	3.8
1998/99	16189.0	4336.6	26.8	15.2	1.3	11852.4	73.2	41.5	3.6
1999/00	17523.9	5711.7	32.6	18.0	1.6	11812.2	67.4	37.2	3.2
2000/01	18797.4	6753.4	35.9	18.2	1.7	12044.0	64.1	32.5	3.1
2001/02	14384.8	6686.1	46.5	21.2	1.6	7698.7	53.5	24.5	1.9
2002/03	15885.5	11339.1	71.4	39.1	2.6	4546.4	28.6	15.7	1.0
2003/04	22568.5	11457.5	50.8	35.7	2.4	11111.0	49.2	34.6	2.4

Note: The figures for 2003/04 are revised estimate figures

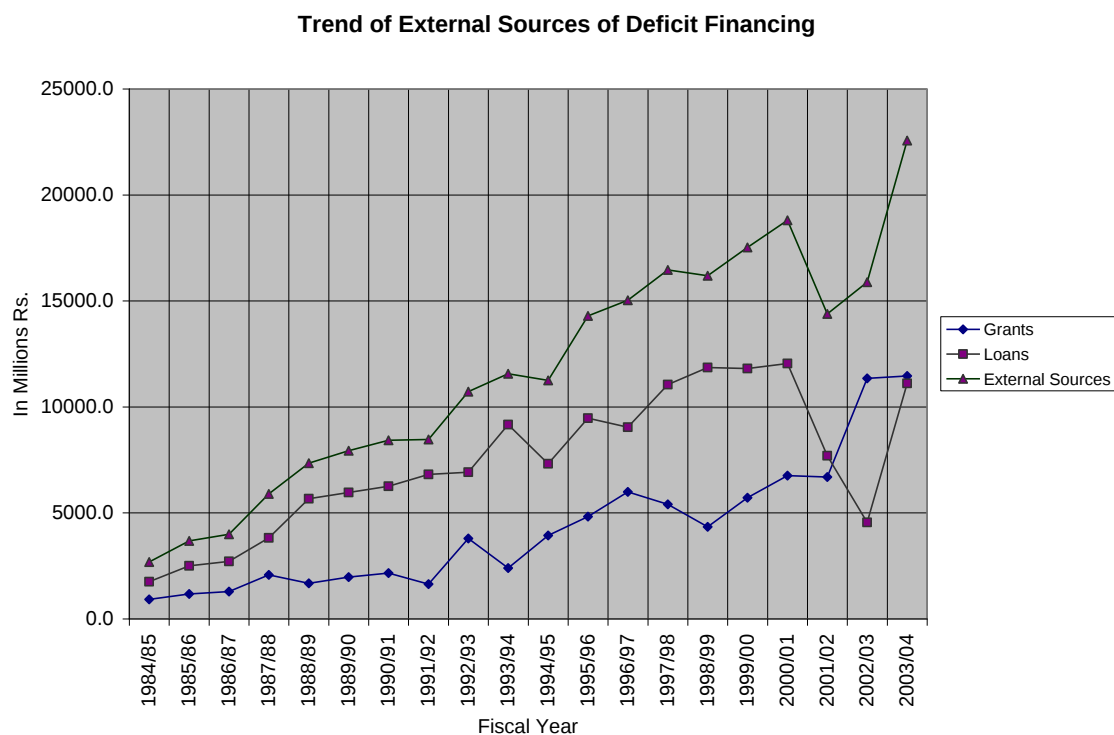
ES = External Source

DE = Development Expenditure

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

Figure 4.8



4.1.8 Contribution of Foreign Grants

Foreign grants mean the non interest bearing and non refundable transfer assistance of developed countries and international agencies to the developing countries. It has been playing the role as the potential source of government receipts to meet the revenue deficit in a developing country like Nepal. Foreign grants depend upon the political situation, foreign policy, relationships and development attitudes of donor as well as recipient country. Table 4.8 shows the composition of foreign grants.

Table 4.8
Composition of Foreign Grants

F/Y	Total Foreign Grants	Bilateral Sector				Multilateral Sector			
		Amount	% of TG	% of RD	% of GDP	Amount	% of TG	% of RD	% of GDP
1984/85	923.4	756.9	82.0	18.0	1.7	166.5	18.0	3.7	0.4
1985/86	1120.6	982.2	87.6	12.4	1.8	138.4	12.4	2.7	0.3
1986/87	952.6	778.7	81.7	18.3	1.3	173.9	18.3	3.1	0.3
1987/88	1984.2	1789.1	90.2	9.8	2.4	195.1	9.8	2.9	0.3
1988/89	1478.2	1199.9	81.2	18.8	1.4	278.3	18.8	2.7	0.3
1989/90	1798.8	1544.3	85.9	14.1	1.5	254.5	14.1	2.5	0.3
1990/91	1630.0	1337.1	82.0	18.0	1.2	292.9	18.0	2.3	0.3
1991/92	1531.0	1207.5	78.9	21.1	0.8	323.5	21.1	2.5	0.2
1992/93	3273.9	2330.9	71.2	28.8	1.4	943.0	28.8	6.0	0.6
1993/94	2393.6	2044.2	85.4	14.6	1.1	349.4	14.6	2.5	0.2
1994/95	3937.1	3271.4	83.1	16.9	1.6	665.7	16.9	4.6	0.3
1995/96	4825.1	3073.3	63.7	36.3	1.3	1751.8	36.3	9.4	0.7
1996/97	5988.3	5162.0	86.2	13.8	1.9	826.3	13.8	4.1	0.3
1997/98	5402.6	4983.2	92.2	7.8	1.7	419.4	7.8	1.8	0.1
1998/99	4336.6	3583.6	82.6	17.4	1.1	753.0	17.4	3.4	0.2
1999/00	5711.7	4171.2	73.0	27.0	1.1	1540.5	27.0	6.6	0.4
2000/01	6753.4	2184.5	32.3	67.7	0.6	4568.9	67.7	14.8	1.2
2001/02	6686.2	4588.3	68.6	31.4	1.1	2097.9	31.4	7.6	0.5
2002/03	11339.1	9387.2	82.8	17.2	2.2	1951.9	17.2	7.0	0.4
2003/04	-	-	-	-	-	-	-	-	-

Note: The figures for 2003/04 are revised estimate figures,

(-): Denotes non-availability of data

TG = Total Grants

RD = Revenue Deficit

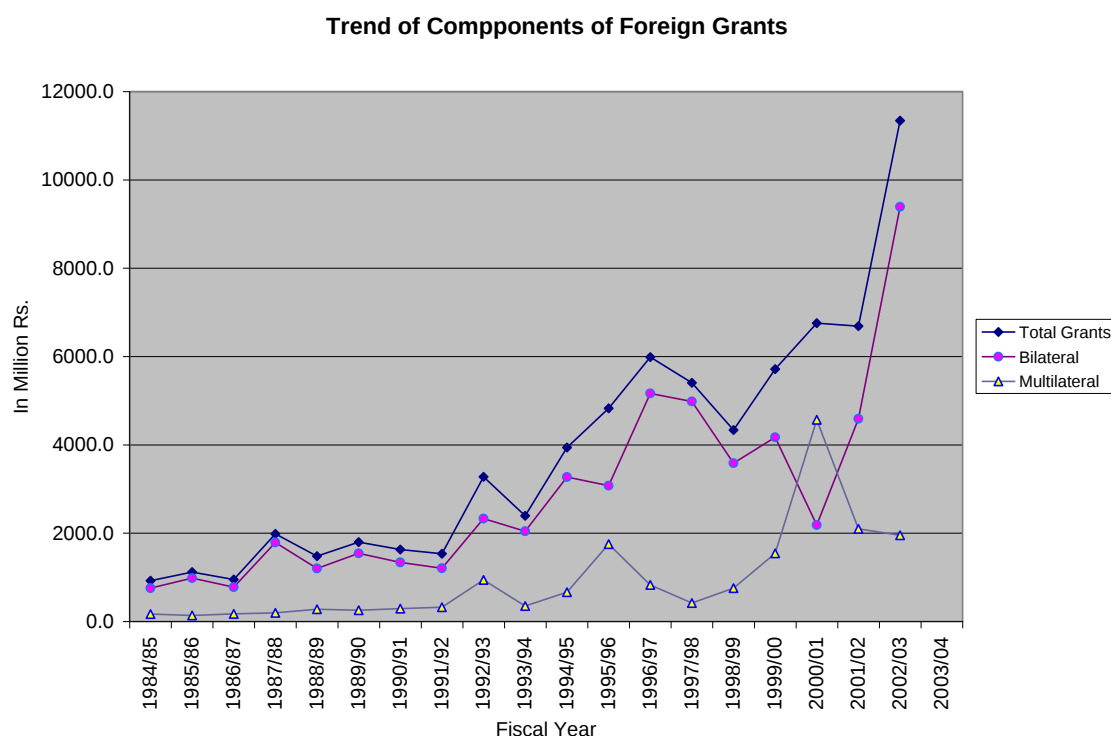
Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

The foreign grants are received by two ways: bilateral and multilateral sectors.

The bilateral grants are heavier than multilateral grants. In almost years of the study period bilateral grants are more than 80% of the total grants and multilateral grants are less than 20% but for 2000/01 the share of bilateral grants is only 32.3% of total grants while the share of multilateral grants is 67.7%. Similarly bilateral grants exhibit greater share than multilateral grants in revenue deficit and GDP. This is observed clearly from the table 4.8 and figure 4.9 respectively.

Figure 4.9



The contribution of foreign grants has been playing vital role for financing deficit in Nepalese economy and tracing its path zigzag but finally it seems to be increasing with the increase in bilateral grants.

4.1.9 Contribution of Foreign Loans

Foreign loan is the most important source to finance deficit in Nepal. It is interest bearing and it carries long term effect in the economy. The government should allocate some amount from annual budget to pay the principle and interest amount. Like grants, it also can be received from two ways: bilateral and multilateral sectors. According to table 4.9, more than 75% of the total foreign loans come from multilateral sectors and less than 25% comes from bilateral sector. As compared to the loans from bilateral sector, the loans from multilateral sector has greater share to revenue deficit and GDP also.

Table 4.9
Composition of Foreign Loans

F/Y	Total Foreign Loans	Bilateral Sector				Multilateral Sector			
		Amount	% of TL	% of RD	% of GDP	Amount	% of TL	% of RD	% of GDP
1984/85	1753.0	399.4	22.8	8.9	0.9	1353.6	77.2	30.2	3.0
1985/86	2370.9	498.9	21.0	9.7	0.9	1872.0	79.0	36.3	3.5
1986/87	2361.9	299.7	12.7	5.4	0.5	2062.2	87.3	37.2	3.4
1987/88	3094.3	462.5	14.9	6.8	0.6	2631.8	85.1	39.0	3.6
1988/89	4188.7	507.8	12.1	5.0	0.6	3680.9	87.9	36.0	4.3
1989/90	4627.8	1000.6	21.6	9.6	1.0	3627.2	78.4	34.9	3.6
1990/91	4360.0	1602.8	36.8	12.5	1.4	2757.2	63.2	21.5	2.4
1991/92	6269.4	2389.8	38.1	18.4	1.6	3879.6	61.9	29.9	2.7
1992/93	5961.7	1307.6	21.9	8.3	0.8	4654.1	78.1	29.6	2.8
1993/94	9163.6	582.9	6.4	4.2	0.3	8580.7	93.6	61.2	4.5
1994/95	7312.3	717.3	9.8	5.0	0.3	6595.0	90.2	45.5	3.1
1995/96	9463.9	460.0	4.9	2.5	0.2	9003.9	95.1	48.3	3.8
1996/97	9043.6	850.7	9.4	4.2	0.3	8192.9	90.6	40.3	3.0
1997/98	11054.5	1314.5	11.9	5.7	0.5	9740.0	88.1	42.0	3.4
1998/99	11852.4	584.0	4.9	2.6	0.2	11268.4	95.1	50.5	3.4
1999/00	11812.2	757.9	6.4	3.2	0.2	11054.3	93.6	47.3	3.0
2000/01	12044.0	586.7	4.9	1.9	0.1	11457.3	95.1	37.0	2.9
2001/02	7698.6	87.0	1.1	0.3	0.0	7611.6	98.9	27.6	1.9
2002/03	4546.4	657.2	14.5	2.4	0.2	3889.2	85.5	14.0	0.9
2003/04	-	-	-	-	-	-	-	-	-

Note: The figures for 2003/04 are revised estimate figures

(-): Denotes non-availability of data

TL = Total Foreign Loans

RD = Revenue Deficit

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

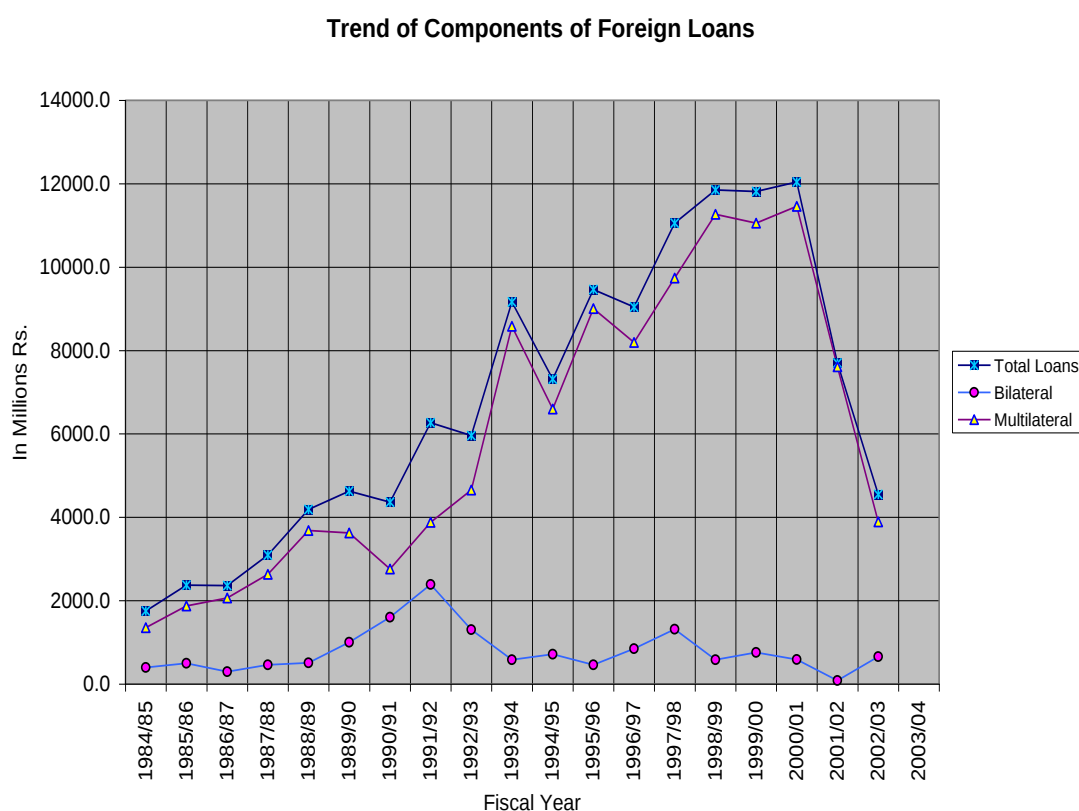
From the figure 4.10, we can observe that the trend line of total loans and the loans from multilateral sector are growing almost in the same ratio and same direction. It further denotes that the bilateral loans are negligible in amount as compared to multilateral.

The contribution of foreign loans has been increasing in Nepal and it can be said that the development expenditure of Nepal may be inadequate in absence of foreign loans. Foreign loan has been covering mostly two-third of budget deficit. Although the

foreign loan is important for resource mobilization in Nepal, it carries many inherent problems as a potential source of deficit financing in Nepal.

There is a problem of utilization of foreign grants because there is a wider gap between commitments and disbursement. On the contrary, the ratio of commitment and disbursement of foreign loan is higher than the ratio of foreign grants. Due to the lack of proper utilization of foreign grants its share on development expenditure has been decreasing but the tendency of acquiring foreign loan has been rising continuously for the financing of budget deficit. Therefore, foreign aid, especially foreign loan has been the main source of financing deficit in Nepal.

Figure 4.10



4.1.10 Composition of Internal Sources of Deficit Financing

The internal sources of deficit financing are banking and non-banking and cash surplus. In the internal source, banking and non sources are dominant. The table 4.10 shows the composition of internal source. More than 50% share of internal source is from banking and non banking sources and less than 50% share of internal source is from cash balance. For some years, the cash surplus is found to be negative. The negative amount of cash balance of government's current account implies the over draft, which has direct and proportional effect in money supply and thereby inflation.

Table 4.10
Composition of Internal Sources of Deficit Financing

F/Y	Total Internal Sources	Banking and Non-Banking				Cash Surplus			
		Amount	% of IS	% of DE	% of GDP	Amount	% of IS	% of DE	% of GDP
1984/85	1799.9	1799.9	100.0	32.8	4.1	0.0	0.0	0.0	0.0
1985/86	1478.6	1403.4	94.9	22.6	2.6	75.2	5.1	1.2	0.1
1986/87	1547.2	1644.7	106.3	22.3	2.7	-97.5	-6.3	-1.3	-0.2
1987/88	869.1	1137.1	130.8	12.1	1.6	-268.0	-30.8	-2.8	-0.4
1988/89	2881.1	1330.0	46.2	10.8	1.5	1551.1	53.8	12.6	1.8
1989/90	2446.8	2150.0	87.9	16.5	2.2	296.8	12.1	2.3	0.3
1990/91	4398.4	4552.7	103.5	28.5	3.9	-154.3	-3.5	-1.0	-0.1
1991/92	4444.8	2078.8	46.8	12.5	1.4	2366.0	53.2	14.3	1.6
1992/93	5035.1	1620.0	32.2	8.3	1.0	3415.1	67.8	17.6	2.1
1993/94	2459.4	1820.0	74.0	8.6	0.9	639.4	26.0	3.0	0.3
1994/95	3235.4	1900.0	58.7	9.6	0.9	1335.4	41.3	6.7	0.6
1995/96	4360.7	2200.0	50.5	8.8	0.9	2160.7	49.5	8.6	0.9
1996/97	5318.3	3000.0	56.4	11.3	1.1	2318.3	43.6	8.7	0.9
1997/98	6723.3	3400.0	50.6	11.7	1.2	3323.3	49.4	11.5	1.1
1998/99	6139.0	4710.0	76.7	16.5	1.4	1429.0	23.3	5.0	0.4
1999/00	5854.8	5500.0	93.9	17.3	1.5	354.8	6.1	1.1	0.1
2000/01	12144.1	7000.0	57.6	18.9	1.8	5144.1	42.4	13.9	1.3
2001/02	15241.9	8000.0	52.5	25.4	2.0	7241.9	47.5	23.0	1.8
2002/03	11890.7	8880.0	74.7	30.6	2.0	3010.7	25.3	10.4	0.7
2003/04	-	7311.7	-	22.8	1.5	-	-	0.0	0.0

Note: The figures for 2003/04 are revised estimate figures
(-): Denotes non-availability of data

IS = Internal Sources

DE = Development Expenditure

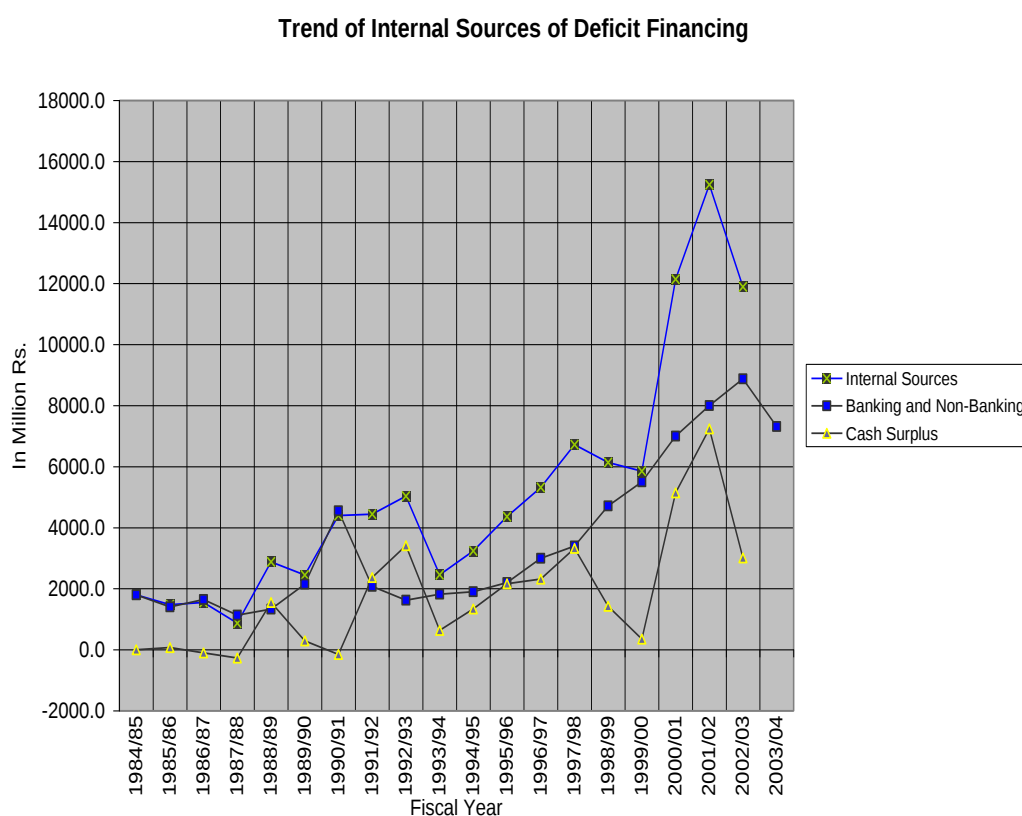
Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

Cash surplus is that type of financing which is made often directly by injecting money into the economy. By its very nature, it is the last resort of the financing deficit budget of any economy. The rising position of such large amount of overdraft implies the unhealthy and unplanned economic activities of the government which is often in practice in developing countries and Nepal is also not exception for such arrangement of financing deficit as shown in table 4.10.

The figure 4.11 shows the trend of internal sources to finance the deficit in Nepal. The trend line of total internal sources, banking and non -banking sources and cash surplus all are in the zigzag way of increasing. They exhibit the downswings and upswings as in the graph. The cash surplus for the year 1986/87 and 1990/91 in found to be negative due to the overdraft of the government's current account.

Figure 4.11



4.1.11 Contribution of Internal Borrowings

The internal borrowing is divided into banking and non-banking borrowing. Table 4.11 shows the contribution of banking and non-banking borrowing in total internal borrowing. Almost more than 60% share of the total internal borrowing is from banking sector and less than 40% share of the total internal borrowing is from non-banking sector. In comparison to non-banking sector, banking sector borrowing has also greater share in revenue deficit and GDP.

Table 4.11
Composition of Internal Borrowing

F/Y	Total Internal Borrowing	Banking				Non-Banking			
		Amount	% of IB	% of RD	% of GDP	Amount	% of IB	% of RD	% of GDP
1984/85	1799.9	1299.9	72.2	29.0	2.9	500.0	27.8	11.2	1.1
1985/86	1403.4	903.4	64.4	17.5	1.7	500.0	35.6	9.7	0.9
1986/87	1644.7	1116.3	67.9	20.2	1.8	528.4	32.1	9.5	0.9
1987/88	1137.1	797.7	70.2	11.8	1.1	339.4	29.8	5.0	0.5
1988/89	1330.0	1320.0	99.2	12.9	1.5	10.0	0.8	0.1	0.0
1989/90	2150.0	1450.0	67.4	14.0	1.5	700.0	32.6	6.7	0.7
1990/91	4552.7	3713.2	81.6	29.0	3.2	839.5	18.4	6.5	0.7
1991/92	2078.8	1178.8	56.7	9.1	0.8	900.0	43.3	6.9	0.6
1992/93	1620.0	920.0	56.8	5.8	0.6	700.0	43.2	4.4	0.4
1993/94	1820.0	1000.0	54.9	7.1	0.5	820.0	45.1	5.9	0.4
1994/95	1900.0	1300.0	68.4	9.0	0.6	600.0	31.6	4.1	0.3
1995/96	2200.0	750.0	34.1	4.0	0.3	1450.0	65.9	7.8	0.6
1996/97	3000.0	1500.0	50.0	7.4	0.6	1500.0	50.0	7.4	0.6
1997/98	3400.0	1600.0	47.1	6.9	0.6	1800.0	52.9	7.8	0.6
1998/99	4710.0	2850.0	60.5	12.8	0.9	1860.0	39.5	8.3	0.6
1999/00	5500.0	3300.0	60.0	14.1	0.9	2200.0	40.0	9.4	0.6
2000/01	7000.0	-	-	-	-	-	-	-	-
2001/02	8000.0	-	-	-	-	-	-	-	-
2002/03	8880.0	-	-	-	-	-	-	-	-
2003/04	7311.7	-	-	-	-	-	-	-	-

Note: The figures for 2003/04 are revised estimate figures
(-): Denotes non-availability of data

IB = Internal Borrowing
RD = Revenue Deficit

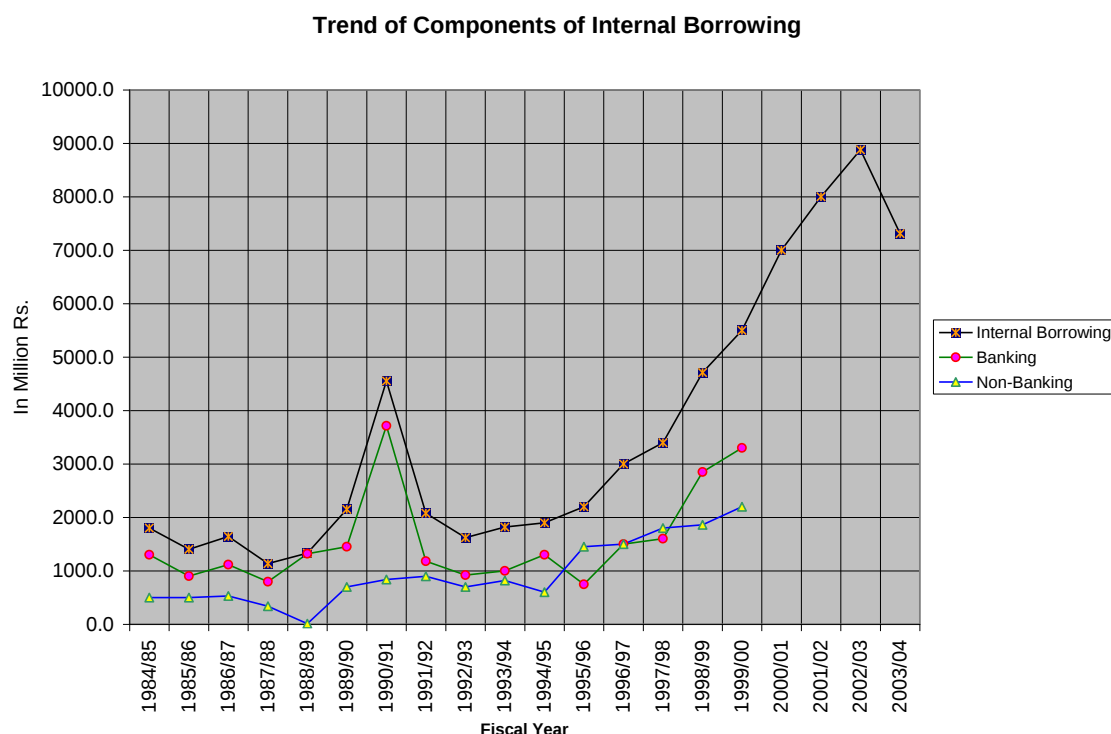
Sources: (a) Economic Survey, Various Issues
(b) Budget Speech, F/Y 2004-2005

The figure 4.12 shows the trend of banking and non- banking borrowings and the total internal borrowing in Nepal. The total internal borrowing is increasing in greater speed in the second half of the review period and decreasing in the final year. The banking sector borrowing is in the growing trend showing up and downswings but the non-banking borrowing is increasing smoothly except for 1988/89. In 1988/89 it is almost zero.

The banking sector borrowing includes the issue o different types of treasury bills, development bonds, national saving certificates and other special bonds. Among them the treasury bills and development bonds are more popular, creating and renewing frequently by the government of Nepal. Banking borrowing expands the money supply in the economy.

The non-banking borrowing includes the borrowing from public enterprises, borrowing from the reserve money of provident fund and so on which does not have the effect on money supply. Therefore, non-banking borrowing is considered less sensitive in terms of inflation than the banking borrowing. In this way, the deficit financing from internal sector is some how less effective as compared to the external finance. It covers only less than one third of deficit in most of the years.

Figure 4.12



4.1.12 Factors Responsible for Growing Deficit Financing in Nepal

There are many inherent problems and some burning issues in Nepalese economy which are ultimately responsible for the increase of public expenditure and thereby deficit financing. Deficit financing is a broader concept and many factors may be responsible for its growth in Nepal which are mentioned below.

1. The increasing demand for public services due to increased level of money income, population and its subsequent impact on the density of population and urbanization is a factor responsible in expanding public expenditure. As the population growth rate of Nepal is very high (2.24% as mentioned in the population census 2001), this again should be accompanied with the provision of providing education, health service and other basic minimum needs and services. At the same time, due to the existence of predominant subsistence agricultural sector, the government is compelled to make larger investment in infrastructure and other industrial activities in order to reduce

more pressure on the subsistence sector and provide more employment opportunities in the economy. Therefore, public expenditure has been increasing substantially and thereby deficit financing.

2. The government of our country is also involved in the supply of basic goods and services such as: electricity, drinking water, communication, transportation etc. by the means of public enterprises. Most of the public enterprises are operating in loss and a certain amount of annual budget is allocated to run their activities instead of getting interests, principle payment and dividends from them. It is also the cause of increasing government expenditure and in turn increasing deficit financing.
3. In the Nepalese economy, the private sector is not in well developed condition and it is unable to perform sustainable investment activities in the productive sector in long run. So the government has to play dual role. On the one side, it has to be directly involved in the production process and on the other side; it has to run such programs which can help to promote the private sector in the development activities. This raises the amount of government expenditure resulting increase in the deficit financing.
4. The present structure of Nepalese tax system is very inelastic which can not be increased with the increase in the ratio of public expenditure and does not meet the public desire of development expenditure. The domestic saving mobilization practice is weak and the revenue collection is very low as compared to the public investment and expenditure creating a huge resource gap which results high amount of deficit financing as a part of the economy.
5. The unplanned public expenditure is a cause of raising deficit financing in Nepal. the development expenditure in most of the fiscal years includes sub-headings which raises the expenditure. Similarly, under the heading of regular expenditure, the

budget for constitutional organs and general administration has been growing gradually reducing the surplus receipts for development expenditure and thereby rising deficit financing.

6. Beside the problem of internal resource mobilization, there exists the problem of external resource mobilization too. The ratio between foreign grants commitment and disbursement is very low which may be the cause of deficit financing.
7. Due to the deficit financing in previous year the amount of net outstanding of foreign as well as internal net outstanding has been increasing year by year. It implies that a huge amount of regular expenditure has been spending for debt management which successively reduces the surplus revenue for development expenditure enhancing further deficit financing.
8. In Nepal, there is the lack of proper practice of utilization of non-banking borrowing which is less inflationary in nature. Its share has not been increasing as much as other sources of deficit financing have been increasing. It invites the borrowing from external sector than the internal.
9. After F/Y 1994/95, the condition of the peace and security of Nepal is worsening day by day due to the Maoists insurgency. To coup it and to maintain the good situation of peace and security in the country a huge amount from the annual budget has been spending and it has been rapidly increasing for the recent years due to the cause of purchase of arms and war equipments. This forces the regular expenditure upward direction reducing surplus revenue for development expenditure and further increasing the amount of deficit financing.

These are some major factors responsible for raising public expenditure which in fact are the causes of growing deficit financing in Nepal.

4.2 Impact Analysis

For impact analysis the regression estimation method is used. Regarding the objectives of this study, the related hypotheses are tested with the help of regression estimation and the empirical results are presented in the tabular form.

4.2.1 Impact of Deficit Financing on Narrow Money Supply

Expecting the impact of deficit financing on narrow money supply, the following model has been set.

$$\ln M_{1t} = \ln a_0 + a_1 \ln DF_t + U \quad (4.1)$$

Where, M_{1t} = Narrow money supply at time t

DF_t = Deficit financing at time t

a_0 = Constant

a_1 = Magnitude of DF_t

U = Error term

The regression results are presented in table 4.12

Table 4.12

Regression Results in Impact of DF_t on M_{1t}
Dependent Variable: $\ln M_{1t}$

Study Period	Eq ⁿ No.		Constant	$\ln DF_t$	r	R^2	$\bar{R}^2$	D-W	F
1984/85 – 2003/04	1	SE t	-3.38 (0.65) (-5.16)*	1.42 (0.06) (20.74)*	0.98	0.96	0.96	1.07	430.12*

- * Significant at 1% level

Estimated regression equation is: $\ln M_{1t} = -3.38 + 1.42 \ln DF_t$

Tabulated Values

t at 1% significance level and degree of freedom 18 $[(N-K) = (20-2)]$ is: 2.552

F at 1% significance level and degree of freedom (1, 18) $[(K-1), (N-K)]$ is: 8.29

D-W for $N = 20$ and $K' = 1$ and 5% significance level is: $d_L = 1.201$, $d_U = 1.411$

Decision :

The decision is made as mentioned in the methodology chapter which is as follows:

- The calculated t (20.74) > the tabulated t (2.552) at 1% significance level and 18 D.F., the null hypothesis is rejected and alternative hypothesis is accepted. This means the regression parameter is significant.
- The calculated F (430.12) > the tabulated F (8.29) at 1% significance level and (1, 18) D.F., the null hypothesis is rejected and alternative hypothesis is accepted. This means there exists linear relationship between dependent and independent variables.
- As $0 < \text{The calculated D-W statistics for } N=20, K'=1 \text{ and } 5\% \text{ level of significance } (1.07) < d_L (1.201)$; there exists positive autocorrelation.

Explanation of the model

The various empirical results between the narrow money supply and deficit financing are presented in table 4.12. The empirical results as shown in the table 4.12 suggest that 1% change in deficit financing is associated with 1.42% direct change in narrow money supply. As the value of r is 0.98, there is strong positive correlation between narrow money supply and deficit financing. The $\bar{R}^2$ suggests that about 96% variations in M_{1t} are explained by DF_t in this model. The coefficient of DF_t is significant as prescribed by t-test at 1% significance level. The F-value shows the overall significance of the model at 1% level of significance. This means the goodness of fit of the regression equation is satisfactory but the DW-statistics suggest that there is positive

autocorrelation between the error terms which indicates that in this model there may be the influence of some other variables also. The estimated regression equation is efficient and someone may use the result for policy purpose. However, some other factors may have to be considered in using the results which is clear from the presence of autocorrelation.

The model shows that due to the increase in the amount of deficit financing the cash flow in the economy increases to fill the resource gap either by external or by internal sources which in turn increases the amount of money supply.

4.2.2 Impact of Deficit Financing and Narrow Money Supply on Price Level

Expecting the impact of deficit financing and narrow money supply on price level, the following model has been set.

$$\ln P_t = \ln a_0 + a_1 \ln DF_t + a_2 M_{1t} + U \quad (4.2)$$

Where, P_t = Price level at time t

DF_t = Deficit financing at time t

M_{1t} = Narrow money supply at time t

a_0 = Constant

a_1 and a_2 are coefficient of DF_t and M_{1t}

U = Error term

The regression results are presented in table 4.13

Table 4.13
Regression Results in Impact of DF_t and M_{1t} on P_t

Dependent Variable: $\ln P_t$									
Study Period	Eq ⁿ No.		Constant	$\ln DF_t$	$\ln M_{1t}$	R^2	$\bar{R}^2$	D-W	F
1984/85 – 2003/04	2	SE t	-1.69 (0.30) (-5.62)*	0.06 (0.09) (3.65)*	0.54 (0.07) (7.81)*	0.99	0.98	0.87	888.48*

- * Significant at 1% level

Estimated regression equation is: $\ln P_t = -1.69 + 0.06 \ln DF_t + 0.54 \ln M_{1t}$

Tabulated Values

t at 1% significance level and degree of freedom 17 [(N-K) = (20-3)] is: 2.898

F at 1% significance level and degree of freedom (2, 17) [(K-1), (N-K)] is: 6.11

D-W for N = 20 and K' = 2 and 5% significance level is: $d_L = 1.100$, $d_U = 1.537$

Decision :

The decision is made as mentioned in the methodology chapter which is as follows:

- The calculated t (3.65 and 7.81) > the tabulated t (2.898) at 1% significance level and 17 D.F., the null hypothesis is rejected and alternative hypothesis is accepted. This means the regression parameter is significant.
- The calculated F (888.48) > the tabulated F (6.11) at 1% significance level and (2, 17) D.F., the null hypothesis is rejected and alternative hypothesis is accepted. This means there exists linear relationship between dependent and independent variables.
- As $0 < \text{The calculated D-W statistics for } N=20, K'=1 \text{ and } 5\% \text{ level of significance } (0.87) < d_L (1.100)$; there exists positive autocorrelation.

Explanation of the model

The various empirical results calculated are presented in table 4.13. The empirical results as shown in the table 4.13 suggest that 1% change in deficit financing is associated with 0.06% direct change in price level while 1% change in narrow money supply is associated with 0.54% change in price level. The $\bar{R}^2$ suggests that about 98% variations in P_t are explained by DF_t and M_{1t} in this model. The coefficient of DF_t and M_{1t} are significant as prescribed by t-test at 1% significance level. The F-value shows the overall significance of the model at 1% level of significance. This means the goodness of fit of the regression equation is satisfactory but the DW-statistics suggest that there is positive autocorrelation between the error terms which indicates that in this model there may be the influence of some other variables also.

The fitted model reveals that the price is effected by deficit financing as well as money supply but due to the differ in level of data (deficit financing and money supply are measured in terms of millions Rs. and price index is based on 1995/96=100), the regression line did not show the strong effect of deficit financing and narrow money supply on price level. But the t and F are significant indicating that the Nepalese price level is influencing by deficit financing and narrow money supply in some extent.

Due to the presence of autocorrelation, the above equation has clearly indicated that the price level of Nepal may be largely influenced by Indian price level too which is not included in the model.

4.2.3 Impact of Government Expenditure on Deficit Financing

Expecting the impact of government expenditure on deficit financing, the following model has been set.

$$\ln DF_t = \ln a_0 + a_1 \ln GE_t + U \quad (4.3)$$

Where, DF_t = Deficit financing at time t

GE_t = Government expenditure at time t

a_0 = Constant

a_1 = Magnitude of GE_t

U = Error term

The regression results are presented in table 4.14

Table 4.14
Regression Results in Impact of GE_t on DF_t

Dependent Variable: $\ln DF_t$									
Study Period	Eq ⁿ No.		Constant	$\ln GE_t$	r	R^2	$\bar{R}^2$	D-W	F
1984/85 – 2003/04	3	SE t	1.33 (0.29) (4.56)*	0.79 (0.02) (28.47)*	0.99	0.98	0.97	1.11	810.32*

- * Significant at 1% level

Estimated regression equation is: $\ln DF_t = 1.33 + 0.79 \ln GE_t$

Tabulated Values

t at 1% significance level and degree of freedom 18 [(N-K) = (20-2)] is: 2.552

F at 1% significance level and degree of freedom (1, 18) [(K-1), (N-K)] is: 8.29

D-W for N = 20 and K' = 1 and 5% significance level is: $d_L = 1.201$, $d_U = 1.411$

Decision :

The decision is made as mentioned in the methodology chapter which is as follows:

- The calculated t (28.47) > the tabulated t (2.552) at 1% significance level and 18 D.F., the null hypothesis is rejected and alternative hypothesis is accepted.
This means the regression parameter is significant.

- The calculated $F (810.32) > \text{the tabulated } F (8.29)$ at 1% significance level and (1, 18) D.F., the null hypothesis is rejected and alternative hypothesis is accepted. This means there exists linear relationship between dependent and independent variables.
- As $0 < \text{The calculated D-W statistics for } N=20, K'=1 \text{ and } 5\% \text{ level of significance } (1.11) < d_L (1.201)$; there exists positive autocorrelation.

Explanation of the model

The various empirical results between the government expenditure and deficit financing are presented in table 4.14. The empirical results as shown in the table 4.14 suggest that 1% change in government expenditure is associated with 0.79% direct change in deficit financing. As the value of r is 0.99, there is almost perfect positive correlation between government expenditure and deficit financing. The $\bar{R}^2$ shows that about 97% variations in DF_t are explained by GE_t in this model. The coefficient of GE_t is significant as prescribed by t-test at 1% significance level. The F-value shows the overall significance of the model at 1% level of significance. This means the goodness of fit of the regression equation is satisfactory but the DW-statistics suggest that there is positive autocorrelation between the error terms which indicates that in this model there may be the influence of some other variables also.

The above fitted equation clearly indicates that higher the increase in the government expenditure, wider be the resource gap and it results in larger the amount of deficit financing. Nowadays deficit financing is increasing due to the increase in government expenditure. The government expenditure is increasing each year because of the demand of government's service to maintain peace and security, investment for the social welfare such as: health, education, sanitation and building the infrastructure is increasing at the greater speed.

Chapter 5

SUMMARY, CONCLUSIONS AND SUGGESTIONS

5.1 Summary

The first chapter of this thesis contains general introduction of the Nepalese economy, its characteristics, present situations of development, role of monetary and fiscal measures in Nepal and short explanation about the budgetary systems. The statement of the problems, objectives, hypothesis, significance, limitations and the chapter scheme of the study are mentioned in brief.

In the second chapter, theoretical concept such as meaning and difference between the two deficits viz. budget deficit and deficit financing, historical background, role, source and types of deficit financing are given. Further this chapter includes the review of previous research works done in the related field. The traditional and modern views about deficit financing are presented and the empirical readings done by international as well as Nepali researcher are reviewed on the basis of available literatures. All the reviewed literatures showed the need for further research in this topic which proves the relevancy of this thesis.

In the third chapter, the research methodology of the study is mentioned. The descriptive and quantitative methods are given. The variables are identified as dependent and independent, the models are specified and the relationship between the two and more economic variables is described with the help of correlation coefficient and regression equations. The t-statistics, F-statistics, the coefficient of determination (R^2) and adjusted coefficient of determination ($\bar{R}^2$), Durbin-Watson (D-W) test, range of the study period, sources of data, sources of literatures, methods of data processing and the device for data calculation are mentioned.

In the fourth chapter, the trend and impact of the related fiscal variables in the concerned topic are presented and analyzed. In the first part of this chapter, the related data are tabulated and explained. The growth rate of fiscal aggregates such as: GDP, regular, development and total expenditures, revenue, grants and total receipts are presented in tabular as well as graphical form. The surplus budget for development expenditure, public sector deficits, different sources of deficit financings and their components are presented in their percentage share.

The factors responsible for growing deficit financing in Nepal are identified as increase in public expenditure resulted by demand for public services, involvement of the government in production process to provide basic goods and services to the people, inelastic structure of Nepalese tax system, unplanned public expenditure, lack of skill for mobilization of internal as well as external resources, huge amount of external as well as internal debt to be managed, lack of proper practice of utilization of non-banking borrowing and increasing regular expenditure to improve the peace and security situation of the country resulted from the Maoists' insurgency in the second half of the study period.

In the second part of chapter four, the regression models are fitted as per the objectives and hypothesis of the study. The econometric tools are used to test the model and interpretation is done based on the values of the different tools.

The impact of deficit financing on narrow money supply is found to be significant. The deficit financing has shown strong direct effect towards narrow money supply and 1 unit change in former is accompanied with 1.42 unit change in later variable. It proved that narrow money supply is very sensitive towards deficit financing in Nepal. The impact of deficit financing and narrow money supply on price level is also found to be significant. It means deficit financing and narrow money supply are in some extent

responsible for price rise in Nepal. Deficit financing increases the money supply in the economy which further raises the price level. So, deficit financing is found to be inflationary in nature. There is strong impact of increasing government expenditure to increase the amount of deficit financing which is evidenced from the last fitted model.

Generally, the fitted models in this thesis show their goodness of fit and the overall significance but the presence of autocorrelation refers to include some other variables too for the purpose of making the models complete. So, there is the further possibility to improve the models.

5.2 Conclusions

The following conclusions can be drawn from the study of deficit financing in Nepal for the period 1984/85- 2003/04.

- 1) Public expenditure is increasing faster than revenue which creates wider resource gap during the study period and implies that the deficit financing variable is increasing each year in Nepal.
- 2) At the initial year of the study two third of the total expenditure was development expenditure but at the final year the case seemed just reverse i.e., two third of the total expenditure was regular expenditure. The total revenue is increasing almost in the same proportion but the regular expenditure is increasing rapidly due to the increase in security expenses. It means our investment is in unproductive sector and there is no return from regular expenditure which gives negative impact on GDP. Its link effect is that there will be low revenue collection which further widens the resource gap and in turn raising the amount of deficit financing in the economy.
- 3) The inelastic structure of Nepalese tax system, unplanned public expenditures, involvement of the government in production and supply process, increasing demand

for public services due to the increase in population, lack of proper mobilization and utilization of external as well as internal debt and increasing amount of regular expenditure are the main factors responsible for growing deficit financing in Nepal.

- 4) The government's policies such as unnecessary expenditure cut policy and tax revenue increasing policy could not be effective in practice due to the inability to implement them into action which is reflected by the extensively increased deficit financing.
- 5) Regarding the sources of deficit financing, the external source has been playing crucial role. It has been covering two third of the overall deficit in most of the years of the review period. Among the external sources, the grant assistance from bilateral sector and loan financing from multilateral sectors are more popular in Nepal and this trend has been rapidly increasing in the recent years.
- 6) Banking borrowing is the dominant source of internal borrowing. This shows that non banking borrowing is although less inflationary in nature, it has been less effective in budgetary management practice of Nepal.
- 7) As the regular expenditure is increasing each year, the present trend of deficit financing will continue to rise in the coming years with the present tax structure and the development expenditure can not be made even without foreign assistance. The net outstanding of foreign loan has been increasing and the debt servicing has been a serious matter of concern which provides our economy to suffer from debt-trap.
- 8) The regression results in impact of deficit financing on narrow money supply and price level shows that narrow money supply is highly influenced by deficit financing indicating positive relationship. Increase in deficit financing increases the money supply in the economy which further raises the price level. So, in some extent, deficit financing is responsible for general price rise in Nepal. The increase in government

expenditure is highly responsible to raise the amount of deficit financing which is evidenced by the results in impact of government expenditure on deficit financing.

- 9) The direct link of deficit financing to price level is found to be weak but the indirect link prevails very strong. It means deficit financing functions to raise the price level through money supply. In this way, ultimately deficit financing is found to be inflationary in nature.

5.3 Suggestions

This research study presents the following policy suggestions.

- 1) Due to the inelastic nature of Nepalese tax system the financial crisis seems to be burning issue in Nepalese economy. Therefore, a long term tax policy should be made with broad tax base and relatively low tax rates in order to sustain the public revenue and cope the rising public expenditure. The tax policy should be adjusted in such a way that the increasing demand of public expenditure can be financed by public revenue in long run.
- 2) The government should focus to raise the direct tax with broad base and low rate which will be sustainable in long run and provide sufficient revenue to the country.
- 3) The government should strongly implement the unnecessary expenditure cut policy and the budget should be properly planned to meet the expenditures in realistic way which helps to reduce unnecessary borrowings and over drafts. Proper utilization of development expenditure in productive sector is needed to increase GDP and in turn public revenue.
- 4) In case of external sources, the emphasis should be given to foreign grants rather than foreign loans. It is because of the non-refundability and non-interest bearing nature of grants. So the foreign loan amount should be replaced by domestic resource mobilization so that the burden of debt can be reduced in the manageable

form and the economy will not fall in the debt trap resulting less burden of foreign loan for the coming generations.

- 5) In case of internal borrowing, the priority should be given to non-banking borrowing than the banking borrowing. It is for the reason that the non-banking borrowing has no effect on money supply and it is non-inflationary in nature. For this, there is need of mobilization of profit of semi-government organizations such as provident fund, citizen investment fund etc.
- 6) The external borrowings should be approved only for productive programs and it must be utilized properly. The local expertise should be used as far as possible which restricts capital outflow.

5.4 Implementation Plan for the Major Suggestions

The following table shows the implementation plan for major suggestions.

Table 5.1

Implementation Plan for the Major Suggestions

Area	Main Objective	Issues	Suggestion	Responsible Authority	Method
Tax Revenue	-To improve tax system -To increase tax revenue	-Low contribution of direct tax - Low tax effort -Narrow tax base	-Expand the income tax net -Limit exemptions -Build administrative capabilities	-Ministry of Finance -Inland Revenue Department -Inland Revenue Offices -Large Taxpayers Office	-HMG Nepal decision -System Development
Government Expenditure	-To cut unnecessary expenses -To utilize properly in productive sector	-Lack of sufficient exercise on planning of budget and expenditure	- Classify and plan government expenditure in effective way -Emphasize quick, efficient and highly pay-off production oriented programs	-National Planning Commission -Ministry of Finance	-HMG Nepal decision
Internal Borrowing	- To mobilize idle resources	-Lack of utilization of non-banking savings - Underdeveloped securities and capital market	-Emphasize on non-banking borrowing -Cut off over drafts -Develop new security instruments	-HMG Nepal -Ministry of Finance -National Planning Commission -Nepal Rastra Bank	-HMG Nepal decision -Making new laws and policies
External Assistance	-To encourage grants - To reduce loans	-Lack of utilization of grants -Increasing reliance on loans - Growing amount to pay principle and interests of debt	-Strictly utilize foreign grants -Approve loans for highly productive programs only - Do not accept commercial loans in normal circumstances	-HMG Nepal -Ministry of Finance -National Planning Commission -Ministry of Foreign Affairs	-HMG Nepal decision -Amending policies

BIBLIOGRAPHY

- Abdi, Bader and Narayan Sinha. "Stochastic Simulations for the Economy of Republic of Yemen: An Application of Macro Modelling". *The Economic Journal of Nepal*. T. U., Kirtipur: A Quarterly Publication of the Central Department of Economics, Vol.20, No. 1, Jan-March 1997, 1-24.
- Aghevli, Bijan B. and Mohsin S. Khan. "Government Deficit and Inflationary Process in Developing Countries." *IMF Staff Paper 30 (2)*. USA: Washington D.C., Sept. 1978, 383-416.
- Agrawal, Govinda Ram. "Domestic Resource Mobilization in Nepal". *Current Issues in Nepalese Development*. Kathmandu: CEDA, 1982, 32-45.
- Buiter, William H. "Measurement of the Public Sector Deficit and its Implications for Policy Evaluation and Design." *IMF Staff Paper 30 (2)*. USA: Washington D.C., 1983, 282-345.
- Carlos, William and Klaus Schmidt Hebbel. "Public Sector Deficit and Macro Economic Performance." *IMF Working Papers, WPS 626*. USA: The World Bank, 1991, 64-102.
- Central Bureau of Statistics. *Population Census 2001*. Nepal: CBS, 2002.
- Chelliah, Raja J. *Fiscal Policy in Underdeveloped Countries*. India, 1969.
- Collins Dictionary of Economics*. 2nd ed., UK: Harper Collins Publishers, 1993.
- Easterly, William. "The Macro Economics of the Public Sector Deficit: the case study of Columbia." *World Bank Working Papers, WPS 626*. USA: The World Bank, 1991, 145-78.

- Fiedman, Milton. "Government Revenue from Inflation". *Journal of Political Economy*. Vol. 79, No. 4, July/August, 1971, 846-59.
- Gujarati, Damodar N. *Basic Econometrics*. 4th ed., New Delhi: Tata McGraw-Hill Publishing Company Limited, 2004.
- Haque, N.V. and Peter Montiel. "The Macro Economics of the Public Sector Deficit: the case of Pakistan." *IMF Working Papers*, WPS 673. USA: The World Bank, 1991.
- Herbar, Bernand P. *Modern Public Finance*. New Delhi: Richard D. Irwin Inc., 1994.
- HMG/N, Ministry of Finance. *Economic Survey*. Nepal: HMG/N, MOF, Various Issues.
- . *Budget Speech*. Nepal: HMG/N, MOF, Various Issues.
- HMG/N, National Planning Commission. *The Tenth Plan 2002-2007*. Nepal: HMG/N, NPC, 2003.
- Integrated Development System (IDS). *Financing Public Sector Expenditure in Nepal*. Kathmandu: IDS, May 1987.
- Jha, H.B. *Resource Mobilization and Economic Development in Nepal during the Plan Period*. India: Kitab Mahal, 1984.
- Joshi, Arjun Raj. *Deficit Financing in the Nepalese Economy*. Unpublished M.A. Thesis, TU, Kathmandu, Nepal, 1976.
- Khanal, Dilli Raj. *Public Expenditure in Nepal: Growth Pattern and Impact*. New Delhi: Sterling Publishing Company, 1988.
- Kharel, Ram Saran. *Deficit Financing in Nepal*. Unpublished M.A. Thesis, TU, Kathmandu, Nepal, 1996.
- Kulkarni, R.G. *Deficit Financing and Economic Development*. New Delhi: Asia Publishing House, 1996.

Lekhi, R. K. *Public Finance*. 5th ed, New Delhi: Kalyani Publishers, 1996.

Marshall, Jorge and Klaus Schmidt Hebbel. "The Macro Economics of the Public Sector Deficit: the case study of Chile." *World Bank Working Papers*, WPS 696, USA: The World Bank, 1991.

Morande, Felipe and Klaus Schmidt Hebbel. "The Macro Economics of the Public Sector Deficit: the case study of Thailand." *World Bank Working Papers* WPS 688, USA: World Bank, 1991, 32-33.

Morty, Alvin L. "Growth and Welfare Cost of Inflationary Finance." *Journal of Political Economy*. Vol. 75, No. 1, Feb. 1967.

Mundell, R. A. "Growth and Inflationary Cost of Inflationary Finance." *Journal of Political Economy*. Vol. 75, No. 1, Feb. 1967.

Nepal Rastra Bank. *40 years of The Nepal Rastra Bank 1956-1996*. Kathmandu: Nepal Rastra Bank, 1996.

---. *Quarterly Economic Bulletin*. Various Issues, Kathmandu: Nepal Rastra Bank, 1996.

Pandey, Ruchila. *Deficit Financing in the Nepalese Economy*. Unpublished M.A. Thesis, TU, Kathmandu, Nepal, 1979.

Ramangkura, Virabongse and Bhanupongse Nidhiprabha. "The Macro Economics of the Public Sector Deficit: the case study of the Thailand." *World Bank Working Papers*, WPS 631, USA: World Bank, March 1991.

Riccardo, Fini. "The Macro Economics of the Public Sector Deficit: the case of Morocco." *IMF Working papers*, WPS 63., USA: The World Bank, 1991.

Sharma, Yog Nath. *Deficit Financing in the Nepalese Economy*. Unpublished M.A. Thesis, TU, Kathmandu, Nepal, 1985.

- Singh, S. K. *Public Finance in Developed and Developing Countries*. New Delhi: S. Chand and Company, 1982.
- . *The Fiscal System of Nepal*. Kathmandu : Ratna Pustak Bhandar, 1977.
- Swamy, Dalip S. "On Deficit Financing". *Indian Economic Review*. Vol. X, No. 2, October 1975, 70-86.
- Tanzi, Vito, F. Blezer Mario and O. Mario. "Inflation and Measurement of Fiscal Deficits". *IMF Staff Paper 34*, USA: Washington D.C., Dec. 1987.
- Tripathy, Ram Narayan. *Public Finance in Under-developed Countries*. India: The World Press Pvt., 1978.
- Tyagi, B. P. *Public finance*. 13th ed, India: Jai Prakash Nath And Company, 1997.
- Upadhyay, Kamal Prasad. *Deficit Finance, Inflation and the Balance of Payments in Nepal*. M.A. Thesis, Faculty of Economics, Thammasat University, Thailand, 1984.
- Wetzel, Deborah L. and Roumeen Islam. "The Macro Economics of the Public Sector Deficit: the case study of Ghana." *IMF Working Papers, WPS 672*. USA: World Bank, 1991.
- Wijnbergen, Van S. "External Debt, Inflation and the Public Sector: Towards Fiscal Policy for Sustainable Growth." *Economic Review*. Vol. 3, USA: World Bank, Sept. 1991.
- World Bank. *World Development Report 1988*. USA: Oxford University Press, 1988.
- . *World Development Report 2005*. New York: Oxford University Press, 2005.

APPENDICES

APPENDIX I

Time Series Data Used in the Study

Public Expenditure, Receipt and Deficit (1984/85-2003/04)

(In Millions Rs.)

F/Y	GDP	Expenditure			Receipts			Deficit	
		Regular	Dev.	Total	Revenue	Grants	Total	Revenue	Budget
1984/85	44441.0	2906.1	5488.7	8394.8	3916.6	923.4	4840.0	4478.2	3554.8
1985/86	53215.0	3584.0	6213.1	9797.1	4644.5	1172.9	5817.4	5152.6	3979.7
1986/87	61140.0	4135.2	7378.0	11513.2	5975.1	1285.1	7260.2	5538.1	4253.0
1987/88	73170.0	4677.0	9428.0	14105.0	7350.4	2076.8	9427.2	6754.6	4677.8
1988/89	85831.0	5676.2	12328.8	18005.0	7776.9	1680.6	9457.5	10228.1	8547.5
1989/90	99702.0	6671.8	12997.5	19669.3	9287.5	1975.4	11262.9	10381.8	8406.4
1990/91	116127.0	7570.3	15979.5	23549.8	10729.9	2164.8	12894.7	12819.9	10655.1
1991/92	144933.0	9905.4	16572.8	26478.2	13512.7	1643.8	15156.5	12965.5	11321.7
1992/93	165350.0	11484.1	19413.6	30897.7	15148.4	3793.3	18941.7	15749.3	11956.0
1993/94	191596.0	12409.2	21188.2	33597.4	19580.8	2393.6	21974.4	14016.6	11623.0
1994/95	209976.0	19265.1	19794.9	39060.0	24575.2	3937.1	28512.3	14484.8	10547.7
1995/96	239388.0	21561.9	24980.5	46542.4	27893.1	4825.1	32718.2	18649.3	13824.2
1996/97	269570.0	24181.1	26542.6	50723.7	30373.5	5988.3	36361.8	20350.2	14361.9
1997/98	289798.0	27174.4	28943.9	56118.3	32937.9	5402.6	38340.5	23180.4	17777.8
1998/99	330018.0	31047.7	28531.3	59579.0	37251.0	4336.6	41587.6	22328.0	17991.4
1999/00	366251.0	34523.3	31749.2	66272.5	42893.8	5711.7	48605.5	23378.7	17667.0
2000/01	393566.0	42769.2	37065.9	79835.1	48893.6	6753.4	55647.0	30941.5	24188.1
2001/02	405632.0	46590.0	31482.2	78072.2	50445.5	6686.1	57131.6	27626.7	20940.6
2002/03	435531.0	54973.1	29033.0	84006.1	56229.8	11339.1	67568.9	27776.3	16437.2
2003/04	472424.0	59995.7	32111.5	92107.2	62227.0	11457.5	108684.5	29880.2	18422.7

Note: The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

APPENDIX II

Time Series Data Used in the Study

Sources of Deficit Financing by Sectors (1984/85-2003/04)

(In Millions Rs.)

F/Y	Internal Sources				External Sources					
	Banking	Non-Banking	Cash Surplus	Total	Foreign Grants			Foreign Loans		
					Bilateral	Multi – lateral	Total	Bilateral	Multi – lateral	Total
1984/85	1299.9	500.0	0.0	1799.9	756.9	166.5	923.4	399.4	1353.6	1753.0
1985/86	903.4	500.0	75.2	1478.6	982.2	138.4	1120.6	498.9	1872.0	2370.9
1986/87	1116.3	528.4	-97.5	1547.2	778.7	173.9	952.6	299.7	2062.2	2361.9
1987/88	797.7	339.4	-268.0	869.1	1789.1	195.1	1984.2	462.5	2631.8	3094.3
1988/89	1320.0	10.0	1551.1	2881.1	1199.9	278.3	1478.2	507.8	3680.9	4188.7
1989/90	1450.0	700.0	296.8	2446.8	1544.3	254.5	1798.8	1000.6	3627.2	4627.8
1990/91	3713.2	839.5	-154.3	4398.4	1337.1	292.9	1630.0	1602.8	2757.2	4360.0
1991/92	1178.8	900.0	2366.0	4444.8	1207.5	323.5	1531.0	2389.8	3879.6	6269.4
1992/93	920.0	700.0	3415.1	5035.1	2330.9	943.0	3273.9	1307.6	4654.1	5961.7
1993/94	1000.0	820.0	639.4	2459.4	2044.2	349.4	2393.6	582.9	8580.7	9163.6
1994/95	1300.0	600.0	1335.4	3235.4	3271.4	665.7	3937.1	717.3	6595.0	7312.3
1995/96	750.0	1450.0	2160.7	4360.7	3073.3	1751.8	4825.1	460.0	9003.9	9463.9
1996/97	1500.0	1500.0	2318.3	5318.3	5162.0	826.3	5988.3	850.7	8192.9	9043.6
1997/98	1600.0	1800.0	3323.3	6723.3	4983.2	419.4	5402.6	1314.5	9740.0	11054.5
1998/99	2850.0	1860.0	1429.0	6139.0	3583.6	753.0	4336.6	584.0	11268.4	11852.4
1999/00	3300.0	2200.0	354.8	5854.8	4171.2	1540.5	5711.7	757.9	11054.3	11812.2
2000/01	-	-	5144.1	12144.1	2184.5	4568.9	6753.4	586.7	11457.3	12044.0
2001/02	-	-	7241.9	15241.9	4588.3	2097.9	6686.2	87.0	7611.6	7698.6
2002/03	-	-	3010.7	11890.7	9387.2	1951.9	11339.1	657.2	3889.2	4546.4
2003/04	-	-	-	-	-	-	-	-	-	-

Note: The figures for 2003/04 are revised estimate figures
 (-): Denotes non-availability of data

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

APPENDIX III

Database for Impact Analysis (1984/85-2003/04)

(Figures other than price level are in millions Rs.)

F/Y	Narrow Money Supply(M_{1t})	Deficit Financing (DF_t)	Price Level (P_t) 1983/84=100	Price Level(P_t) 1995/96=100	Government Expenditure(GE_t)
1984/85	5480.0	4478.2	104.1	31.5	8394.8
1985/86	7029.3	5152.6	120.5	36.5	9797.1
1986/87	8120.2	5538.1	136.6	41.4	11513.2
1987/88	9596.6	6754.6	151.7	45.9	14105.0
1988/89	11775.4	10228.1	161.3	48.9	18005.0
1989/90	14223.0	10381.8	179.9	54.5	19669.3
1990/91	16283.6	12819.9	197.6	59.8	23549.8
1991/92	19457.7	12965.5	239.1	72.4	26478.2
1992/93	23833.0	15749.3	260.4	78.9	30897.7
1993/94	28510.4	14016.6	283.7	85.9	33597.4
1994/95	32995.4	14484.8	305.4	92.5	39060.0
1995/96	36498.0	18649.3	330.2	100.0	46542.4
1996/97	38460.3	20350.2	360.3	109.1	50723.7
1997/98	45163.8	23180.4	389.9	118.1	56118.3
1998/99	51062.5	22328.0	434.2	131.5	59579.0
1999/00	60979.8	23378.7	449.2	136.0	66272.5
2000/01	70576.9	30941.5	442.9	134.1	79835.1
2001/02	77156.2	27626.7	459.2	139.0	78072.2
2002/03	83754.1	27776.3	495.8	150.2	84006.1
2003/04	85835.2	29880.2	515.2	156.0	92107.2

Note: The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

(c) Quarterly Economic Bulletin, Various Issues, NRB

APPENDIX IV

Data for Impact Analysis (1984/85-2003/04)

(Log –Transformed)

F/Y	ln M _{1t}	ln DF _t	ln P _t 1983/84=100	ln P _t 1995/96=100	ln GE _t
1984/85	8.6089	8.4070	4.6454	3.4509	9.0354
1985/86	8.8578	8.5473	4.7916	3.5970	9.1898
1986/87	9.0021	8.6194	4.9171	3.7226	9.3512
1987/88	9.1692	8.8180	5.0219	3.8273	9.5543
1988/89	9.3738	9.2329	5.0833	3.8888	9.7984
1989/90	9.5626	9.2478	5.1924	3.9978	9.8868
1990/91	9.6979	9.4588	5.2862	4.0917	10.0669
1991/92	9.8760	9.4700	5.4769	4.2823	10.1841
1992/93	10.0788	9.6646	5.5622	4.3677	10.3384
1993/94	10.2580	9.5480	5.6479	4.4534	10.4222
1994/95	10.4041	9.5809	5.7216	4.5270	10.5729
1995/96	10.5050	9.8336	5.7997	4.6052	10.7481
1996/97	10.5574	9.9208	5.8870	4.6923	10.8341
1997/98	10.7181	10.0511	5.9660	4.7715	10.9352
1998/99	10.8408	10.0136	6.0736	4.8790	10.9951
1999/00	11.0183	10.0596	6.1075	4.9127	11.1015
2000/01	11.1645	10.3399	6.0933	4.8986	11.2877
2001/02	11.2536	10.2265	6.1295	4.9345	11.2654
2002/03	11.3356	10.2319	6.2063	5.0120	11.3386
2003/04	11.3602	10.3050	6.2445	5.0499	11.4307

Note: The figures for 2003/04 are revised estimate figures

Sources: (a) Economic Survey, Various Issues

(b) Budget Speech, F/Y 2004-2005

(c) Quarterly Economic Bulletin, Various Issues, NRB