

CHAPTER I

INTRODUCTION

1.1 Background Information

The prime concern of each and every nation of the world is to fulfill its responsibility towards its people. They want to improve its current status through proper utilization of resources and Nepal is no exception to this ever-continuing process for the betterment of her people. Responsibility may be either for security or for health, or education or other development activities. To solve national problem, government has only single source of fund i.e. government revenue. Government receipts may take a form to taxes, charges as internal sources and borrowing, grants and loans as external sources. Those collected huge amount of fund is spend in maintaining peace and security in the country and to operate developmental activities. Peace and Security includes the purchase of arms ammunition, maintenance of army and police administration etc. Government also spends its funds for fulfilling the basic needs of the people, such as health, education, communication, drinking water, and other public utilities and facilities etc. Similarly the Government has to spend on development of socio-economic infrastructure, which facilitates to promote the private sector. All round prosperity of the nation can be achieved through the equal participation of private sector in development activities, industry and commerce as well. The constitution of Nepal has clearly directed Nepalese Government for the self reliant economic system, Encouragement of national enterprises, prevention of economic exploitation as well as upgrading the standard of the people for self reliant economic system and sound infrastructure for the development, the Government should generate sufficient government revenue.

Government needs huge amount of fund, which can be mobilized through two sources i.e. internal sources and external sources, Developing countries like Nepal, have limited sources of internal fund so most of the development activities depends on the external sources. The external sources of financing are bilateral and multilateral aids, grants, and loan from foreign countries or donor agencies. These sources have been limited, inconvenient and not suitable to boost up our economy due to the vested interest of the donor agencies. The reality is that we have been implementing most of the policies and programs of the donor countries or agencies, paying high

interest accepting the inappropriate conditions on taking loan. Internal sources of the government revenue can be divided into two parts. They are tax and non tax revenue. Government receipts tax revenue as compulsory payment and non-tax revenue a conditional sources. Duty, fees, penalty, fines and forfeiture, receipts from sales and rent of government sources, dividends, interests, royalty and sales of Government property, principle repayment, donation and miscellaneous income etc are the sources of non-tax revenue. Income tax, sales tax, custom duties, hotel tax, revenue from land registration etc are the sources of tax revenue. The major sources of government's internal revenue are tax revenue.

Again tax revenue can be divided in to two parts. They are direct and indirect tax. A direct tax is really paid by the person on whom it is legally imposed. Direct taxes are levies on the income and property. The direct taxes have been used to bridge a gap of income and wealth inequality in the society. An indirect tax is imposed on one person but paid partly or wholly by another. The indirect taxes are imposed on the consumption of Goods and services. The taxes on such goods and services are integrated with their price. Selling those goods and services on higher price, the tax payers easily transfer the burden on general consumer (Kandel; 2003).

The role of direct and indirect taxes have the importance mostly in the developing countries. But the importance of these taxes varies from one country to another and from time to time. In the initial stage of economic development, indirect taxes have a significant role but after a certain stage of economic development is reached direct taxes have a significant role.

Tax revenue may change due to a variety of factors, such as changes in income, changes in tax rate and tax base, change in efficiency of tax assessment and collection, among others. The responsiveness of tax revenue to such changes can be explained with the help tax elasticity and buoyancy. "Tax Elasticity may be defined on the ratio of a percentage change in adjusted tax revenue to percentage change in income i.e. nominal GDP. On the other hand tax buoyancy refers to ration of percentage change in total revenue to a percentage changes in incomes as well as due to the changes in discretionary measures such as tax rates and tax bases" (Mukul, 1977). This distinction between the tax elasticity and buoyancy is very useful in analyzing and evaluating whiter future revenues will be sufficient to meet the resource needs without changing the rates or bases to the existing tax. To measure the tax elasticity historical tax series must be

adjusted so as to eliminate the effects of tax revenues from discretionary changes. Therefore, the terms 'Elasticity' is also called "Built-in-flexibility" or "stabilized-coefficient" and likewise, the term buoyancy may also called as "sensitivity" or "exploitation co--efficient". Musgrave called it "formula flexibility" ((Musgrave, 1959). To measure the buoyancy, historical text revenue series. Therefore, buoyancy is estimated without allowing for discretionary changes

Against this background, this study has attempted to utilize the time series approach to empirically measuring the responsiveness or productivity of tax in Nepal for the period (FY 1989/90-FY2008/09 AD). The major components of tax revenue such as import duties, value added tax (VAT), income tax and excise duties are scrutinized. For the period to the launch of the VAT, the sum of sels tax, contract tax, entertainment tax and hotel tax is used for the elasticity estimation. Alternatively, the responsiveness or productivity of tax in Nepal has been also measured by applying the partitioning approach. Under this approach, tax elasticity and buoyancy coefficients are partitioned into tax to bases and base to income components.

Taxes are emphasized in all countries developed as well as developing, because they have the potentiality for increasing the yield of tax system and achieving a system of taxation that satisfies the demand for equality and social justice (Singh;1991). Income tax more or less affects on production and development of various small and cottage industries, distribution of income, employment, inflation and deflation etc. Tax is the main sources of financing government activities in every country. The largest part of government revenue rose through taxation.

Nepal's income tax has features of both global and scheduler income tax system. Specially, after 1990's there is reemergence of the liberalization, globalization and privatization system that focuses on the minimum intervention of the estate on private economic matters. The 1950's concept of high incentives, high tax rate is changed to the concept of low rate, wide net. This trend in tax system is followed by most of the countries of the world. Nepal is also not an exception in this respect and Nepalese administrators and policy makers also have tried to change the tax policy of the country.

On which the tax is determined is called tax base or basis of tax. To implement each and every rules and regulation there arrive problems to implement effectively. Problems may be theoretical and practical. Both problems can be solving by practiced with theoretical knowledge. Questions can be pointed out most suitable alternatives in the prevailing circumstances tax base effectiveness to over coming the shortcoming of existing base and in achieving the intended purpose, its amenability to easy administration and system of incentives to be incorporated in such a system important issues, which had intense, exercise and details study.(Poudal;1998). We should give more attentions to select appropriate tax base that which tax base to consider and how to evaluate it. There are so many tax bases are considered by many exports for instance.

1.2 Statement of the Problem

Economic development is the prime concern of every nation of the world. Under developing countries are facing serious problem in the process of economic development. Nepal is also not an exemption to this condition. The majority of the people have not been able to get even basic facilities. The government wants to fulfill the basic needs of the people and accelerate to developmental activities one at a time. Thus, every nation of the world in accomplishing various activities to fulfill there objective. It needs huge amount of capital. Despite the various measures adapted by the government to boost up revenue collections, there is still a substantial recourse gap between expenditure and revenue. The rate of government expenditure in exceeding the rate of growth revenue almost every year. In other words, Nepal has been facing persistent budget deficit from being of her development plan. External deficit, currency depreciation, inflationary pressure, raising interest rate which may cause growing out effect and reduction in economic growth are the consequences of the budget deficits. The mobilization of revenue has not increased to the level in which the level and speed of our expenditure is rising. Raising the government revenue helps to overcome from the serious problems bottleneck of reserve gap in the process of economic development program. In this content, taxation can be taken as means for resolving this problem by mobilization additional resources from domestic sources.

Nepal, one of the least development countries in the world, has growth rate of percent in 2.3 real GDP (2004/05). Nepal's GDP per capita is \$240 (2005HDR), one of the lowest in the

world implying the scarcity of resources for the development process. Thus the role of taxation has promised to provide the social services to the poor people, whose volume is dominant in country demographic structure.

In Nepal even after the rise of democracy, deliberate planning process began only after 1956 and the huge amount of revenue was required for the process of economic development, a lot of capital was needed, where as first budget was brought in 2008 BS. To fulfill the planning expenditure and for the process of economic development a lot of capital was needed. In this process of generating more revenue. Nepal government introduced direct and indirect tax system in the country. Similarly to strengthen the existing revenue departments, various rules and regulations has been enforced.

Known and illustrated matter is that Nepal is a country falls in group of poorest country of the world, trade and commerce is defeating continuously. The balance of payment is not favorable. But in other way the government expenditure is rapidly increasing year by year for development and other operational plan and activities. It is true that government should invest high amount for socio - economic development of the country. The serious problem of Nepal is wide gap between government revenue and expenditure.

1.3 Objectives of The Study

The main objective of the study is to analyze Structure, productivity and Responsiveness of Major tax in Nepal. Other specific objectives of the study are listed below:

- a. To examine Nepal's overall tax structure for the period 1989/90 to 2008/09;
- b. To estimate and analyze Productivity and Responsiveness of Major taxes in Nepal and
- c. To recommend the appropriate policies based on the findings.

1.4 Significance of The Study

Nepal is an agro-based developing country with low speed in industrialization process. There are only a limited number of corporate bodies and their economic performances are very dismal. So, there is need to establish, growth and development of corporate sector in our nation.

The Government needs heavy amount of funds to spend on daily expenses as well as developmental activities. Every year, Nepalese government has been presenting deficit budget, this is increasing in resource gap. Most of the developmental activities depend on bilateral and multilateral grants and loans. The nation is hardly bearing the burden of the loan and the internal source of revenue is not sufficient even to meet the ordinary expenses. In this content, the easy and long lasting way to increase revenue to strengthen the internal source is through income tax in which corporate income tax is one of the major components. Thus the contribution of income tax on government revenue and its impacts on fulfilling resource gap has been chosen as a relevant topic for the study.

Government prepares the budget to operate the daily works, to develop the country and maintain security. Budget depends upon internal and external sources where internal sources is better than external sources because it is safe and sustainable in internal source tax play vital role. It means government can't go towards development without sound tax system and implementation of it.

1.5 Limitation of The Study

This study is based on following limitations: -

1. This study is mainly based on secondary data. The reliability depends on it.
2. The secondary data of 20 year from fiscal year 1989/90 –2008/09 are taken into considerations.
3. It is given to Major Tax in Nepal.
4. The study is based on Income Tax Act 2058, its rules and current Amendment 2002.
5. This study has been conducted to fulfill the partial requirement of the Master in Economic Studies program of T.U. not for generalization purpose and time, cost and data are contributed as per.

1.6 Organization of The Study

This study is divided into seven different chapters. The first chapter is "Introduction" which includes background information, statement of the problem, and objective of the study, significance of the study, limitation of the study and organization of study. The second chapter is

“Review of literature” which deals about theoretical concepts and empirical overviews. The third chapter explains the “Methodology” employed in the present study. In chapter four, “Nepalese Tax Structure” has been studied. In the chapter five “Measuring Responsiveness or productivity of Nepalese Taxation” has been analyzed. Finally, in chapter seven “Summary, Conclusion, and Recommendations” are presented.

CHAPTER - II

REVIEW OF LITERATURE

2.1 Introduction

Taxation is the primary funding source of most economics. Tax system varies greatly across countries depending on their stage of development. This should not be unexpected because both the tax goals and constraints of developing economies differ from those of developed economies.

A tax is a compulsory contribution to the government made without reference to a particular benefit received by the tax payer (Goode; 1984). The relation between taxation and economic development has long been a matter of concern to policy makers. The primary purpose of taxation is to divert control of economic resources from taxpayers to the state for its own use or transfer to others. Taxation not only restrains total spending by households and enterprises but influences the allocation of economic resources, recognizes social costs that are not reflected in market prices and affects the distribution of income and wealth (Bird and Oliver Oldman; 1990)

Review of literature deals about the theoretical concepts and empirical overviews of the related study topic in the past. Here, the theoretical concepts as well as the empirical overviews of the study topics ‘Contribution to Corporate tax of the Government Revenue in Nepal’ have been discussed into the different divided sub-headings.

2.2 General Theoretical Overview

A tax is a compulsory contribution made to the government without reference to a particular benefit Tax system varies greatly across countries depending on their stage of development .The relation between taxation and development has long been matter of concern to policy makers and students of public policy alike. Both the tax goals and constraints of developing economies differ from those of developed economies. The classical economists devoted substantial efforts to analyzing the effects of taxation on growth and the related questions of the distribution of factor incomes and witnessed the full title of principles of the political economy and taxation. With the rise in Keynesian economies in the post war era, the

efforts of taxation on the stability of the economy also become an important subject of analysis. These classical and Keynesian concerns constituted prominent themes in early analysis of taxation in UDCs (Kaldor; 1956, Higgins; 1959). Subsequently the range of concern widened to include the effects of taxation not just on the rate of growth of national income but also on the distribution of that income by income size, class and employment, and on their objectives of policy. For example, lists the objectives of fiscal policy as promotion of income disparities between households and regions the promotion of economic efficiency and the increase of host country returns from natural resource endowments. The primary purpose of taxation is diverting control of economic resources from tax payers to the state for its own use or transfer to others. Taxation not only restrains total spending by household and enterprise but influences the allocation of economic resources, recognizes social costs that are not reflected in the market prices and affects the distribution of income and wealth (Goode; 1984) .

2.2.1 Principle of Taxation

Equity, efficiency and administrative feasibility are the three major principles of tax design of any economy. For UDCs, the most important role of taxation is to mobilize the resources for development. As an instrument of resource mobilization, its principle function lies in raising the volume of public saving to be used for capital formation consistent with growth of saving in the economy as a whole. In the principle of equity, it is maintained that the tax must be levied according to the tax paying capacity of the individuals. The subject of every state ought to contribute towards the support of the government as nearly as possible, in proportion to their respective ability that is in proportion to the revenue which they respectively enjoy under the protection of state. In the other words, the principle of benefit states the burden of taxation should be subjected to higher taxation on comparison to the poor. The higher the income the higher the tax rate, the lower the income the lower the tax rate. Adam Smith further stated that every individual should contribute according to his abilities so that equality of sacrifice be achieved. Under the benefit principle of taxation, tax is compulsory contribution to pay the burden of taxation should be distributed equally to all the citizens with respect to their income and resources. Furthermore, principle of efficiency can be achieved only at this point when all the economic resources are allocated to their best uses. Prof. Samuelson tried to give a solution that amount of social good which society uses, will be same for A and B consumers. For this

purpose he has applied market principle to the pricing of social goods to determine optimum allocation of resources. In this case of a private goods marginal utility and marginal cost are equal for all consumers, since utility schedules of individual are different, such equality and hence, efficient level of outputs at the same price. It refers that the aggregate demand schedule will be the horizontal summation of individual demand schedule. In the case of public goods which are by definition consumed equally by all, different individuals will pay different price for the same quality of output. Here the sum of marginal utilities to consumer will be equal to the marginal cost. It means that the individuals demand schedule will be vertically added in this case. Moreover, taxes should be imposed to the consumers in accordance with their abilities to pay. Another must important principal for the tax policy design for an economy is “administrative feasibility to effectively implement the tax policy (Thapa:2008).

2.2.2 Horizontal vs. Vertical Equality

In simple words, horizontal equality calls for equal treatment of people in equal position. However, as cannon of equality, the concept requires that equals be treated equally .For instance, in case of income tax broad-based tax including income from all sources and independent of its use. This broad definition is mostly in line with efficiency and avoidance of excess burden. We also interpret the horizontal equity as follow: All citizens of the country should pay equal dose of taxes. The citizens who benefit equally from expenditures should pay equal amount of taxes. All tax payers with equal abilities should bear taxes. Among the three points, third one is the most relevant to the principal of horizontal equity. Vertical equity means that citizens with large income group pay more taxes than the citizens of smaller incomes group. It thus considers that as a citizen’s ability to pay increases, his taxes should be increased. In fact, nobody can question the equality the equity of proportion that a rich man should pay more taxes than a person. Incase, there is any controversy, it centers on the structure of the controversy, it centers on the structure of the effective of taxes. Therefore, the problem of vertical equity is how to implement a given, presumably progressive, distribution of tax bill with a minimum of excess burden (Thapa” 2008).

2.2.3 Interventionist vs. Reductionism Approach

In shaping developing tax policy, there are mainly two approaches: The interventionist and reductionism. The interventionist tradition was represented in early postwar period by such prominent analysts as Heller (1954), Kaldor (1965), achievement of a variety of policy objectives through the tax system, but it should do so. The reductionism tradition, harking of Bauer (1957) but was recently secured a wide consistency, for reasons noted above: government not only cannot achieve many of the policy goals earlier postulated but it should not or as the “Public choice” school would have it, will not try to do so (Bird and Old man;1990). A central concern of tax policy makers in UDCs is how best to produce adequate revenues to finance public sector activities without unduly discouraging the private sector’s essential contribution growth. In this respect, traditional interventionist approach to taxation is replaced by reductionism approach, which is generally termed as supply – side taxations shows clearly that in the context of UDCs the general direction and strategy of this approach is both widely acceptable and workable. This approach is mainly based on the idea that widespread tax evasion in UDCs can be controlled by broadening tax bases and lowering tax rates, where the marginal rate of personal income tax is excessive. Plausible though it may appear, however, it is well - established in principle that there is no reason to expect lower tax rates in themselves to reduce evasion. In this connection the following argument is important: If evasion is cost-less, that is, the probability of detection and penalization is infinitely small as is the case in all too many countries then the mere reduction of the nominal tax rate will have to effect at all on evasion” (Dahal;2006).

2.2.4 Direct vs. Indirect Taxation

Based on these indices of ability; taxes can most conveniently be divided into two categories: direct and indirect. Direct being those levied immediately on the persons, who are to bear the burden, and those which are not so levied (Hicks; 1959). In the traditional language, if impact and incidence are upon the same person, the tax is said to be direct; if not, the burden is shifted, and the real income of someone else is affected (i.e., impact and incidence are upon different people) then the tax is indirect (Walker; 1953). In developing countries like Nepal, taxes are used to mobilize substantial resources to desired fields, discourage unproductive

investments, stimulate productive investment, reduce conspicuous consumption and discourage investment in real state. They have also to do be used to transfer an increasing proportion of the addition made to the national income for development purposes. Prof. W. A. Lewis holds a view that ‘the central problem in theory of economic development is to understand the process by which a community which was previously saving or investing 4 or 5 percent of national income or less converts itself into an economy where voluntary saving is running at about 12 to 15 percent of national income or more’. This is the central problem because the central fact of economic development is rapid capital accumulation (Lewis; 1970). Role of direct taxes in developing economics are discourage speculative investment, control over inflation, inducement to agriculture sector, Restrictions on consumption, reduction in inequalities of income and element of equality. Direct taxes like taxes on land, capital gains tax etc. are imposed to prevent speculative investment. Direct taxes are also to be used to reduce to some extent, inequalities in the distribution of income and wealth. Such tax policy will check unproductive investment and release a grater amount of resources available for productivity investment. Direct taxes especially progressive taxes control inflation. Since the distinction effects of the progressive rates in the non-functional personal income are low, they would be more important for checking an inflationary pressure associated with the development expenditure. Besides the personal income taxes can be adopted to have a built –in- flexibility so as during inflationary period that a higher proportion of additional income will pass on to the government.

2.2.5 Appropriate Tax Policy for UDCs

What are the most important specific changes to be considered in the tax system of market oriented developing economy like Nepal? Some economists may want to base their policy advice on sophisticated calculations of optimal tariffs, tax and subsidies. The literature on optimum income taxation has, for example, given precision to the old idea that marginal tax rates should be higher the smaller the elasticity effort with respect to reward is, *ceteris paribus*. Equity, growth, efficiency, and stability are major objective of tax policy, which are conflicting each other. A tax system based solely on efficiency grounds is unrealistic, while that designed solely for equity purposes cannot be justified on allocate grounds. The degree of progressively will in practice continue to be dictated by political and social consensus rather than by the optimizing formulae of tax economists. However, it is accepted that high tax rates and narrow and selective

tax bases can create distortions, encourage unproductive activities, and erode the revenue base and the lower effective tax rates below the intended nominal tax rates. Tax cuts without reforms in the tax base can introduce more distortions of efficiency and equity than they correct, especially, if they result in inflationary finance (Gandhi; 1974). Moreover, the literature on optimum commodity taxation has formalized old views among economists about how to make a compromise between the allocative efficiency of consumption and concern for the distribution of income. While the interest of economy efficiency, tax rates should be relatively high on goods and services for which the demand and supply elasticity are small. For distributional reasons, the rates should be high on goods and services that play a relatively important part in the consumption pattern of high-income earners. Taxes should, *ceteris paribus*, also be high on goods and services, which are close complements, for the consumers of untaxed or indeed nontaxable goods and services like leisure. Quite complex formulae have in fact been derived to strike a balance between these different often-conflicting aspects, using a social welfare function as the criterion for the trade-off (Lindbeck; 1968). But these actual policy advices are based on different assumptions such as, individual preferences of all individuals, special forms of the production functions, such as Cobb-Douglas function which demand massive statistical information and administrative competence, but instead more ambitious with respect to basic insights about the functioning of the political process, for political behavior is important to implement and policies into action. According to Prest (1974), discussion of public financial policy can in principle take two different forms. At one end of the scale, one can attempt to draw up a blueprint for the overall reform of the revenue and expenditure system. Any such blueprint must consider the relative importance of the various ends served by the revenue-expenditure system, the way in which individual taxes and expenditures contribute to these ends and the co-ordination of these individual contributory elements. The other extreme is to discuss the reform of individual taxes or expenditures without reference to one another, without necessarily attempting to cover the whole field and without much consideration of the overall effect on the economic system (Dahal; 2006).

2.2.6 Superiority of Commodity Taxation in UDCs

Chelliah (1969) opines the raising the incremental saving ratio, S/Y , is one of the most difficult problems in UDCs. As most of the people are low income earner and their marginal

propensity to consume is near unity, their consumption will tend to rise almost as much as their incomes. If this is allowed to materialize; the increases in productivity will be almost fully absorbed by increased consumption. Thus, the justification of the commodity taxation lies in the fact that it had a tendency to restrain consumption whereby rises the incremental saving ratio. However, it should be used more for checking potential increase of consumption than for curtailing the actual consumption of the masses and it should be intended to curtail the consumption of luxuries; and their commodities not essential for health and efficiency. Indirect taxes are reflected in the form of higher prices for the taxed commodities relative to the factor income. Accordingly the reduction in real income necessitated by absorption of resource by government is distributed in relation to consumer expenditures on the taxed goods. In contrast, income tax, one of the premier components of direct taxes, is reflected by reducing disposable income, Y_d . Symbolically

$$Y_d = Y - T_X$$

Where,

Y_d = Disposable income

Y = Income received

T_X = Tax paid

Thus, it is argued that indirect taxes will reduce consumption more and savings less than income tax and will therefore allow a higher private sector, S/Y ratio than an income tax yielding return from saving by income tax does not necessarily reduce amount of saving. Both income and substitution effects operate, and persons may save more to retain previous income. Thus, consumption-related tax has no inherent advantages (Due and Friedlaender;1973).

Generally direct tax is considered as progressive and indirect tax regressive in structure. But no a priori conclusions are possible. The net difference between direct and indirect taxes will be influenced by a number of considerations: the effect of a net reduction in the returns from savings in the total volume of savings, the progressiveness of the two forms of tax, the importance of money illusion, the significance of various motives for savings and the importance of savings

by business firms. But general presumption is that indirect taxes will usually permit a somewhat higher S/Y ratio than income taxes yielding the same revenue (Due and Friedlaender; 1973).

In UDCs, the effective implementation of income tax, a premier component of direct tax, has not been successful. This is because, there is great difficulties in taxing professionals (doctors, lawyers, etc.), small businessmen, and of course the better off farmers who fall within the (legal) scope of income tax. But they are most unwilling to provide and information about their business operations. Moreover, the tax authorities usually have great difficulty in constructing any alternative basis upon which to bring the income of such notoriously “hard-to-tax” (Bird and Oldman; 1990) groups within the ambit of the income tax. The result is that wage earners in UDCs generally feel overtaxed in relation to their self-employed equals. In this connection Musgrave has proposed to divide the all tax payers including “hand – to – tax” group into three groups (Musgrave; 1959).

- a) Very small tax payers, who should be exempted;
- b) Small tax payers, who should be subjected to a presumptive tax in lieu of all other income and sales taxes;
- c) All other tax payers, who should be subjected to the regular category, however, a distinction should be drawn between
 - 1) The hard –to-tax groups
 - 2) All others

For hard–to-tax group, Musgrave proposes a system of review based on estimated income, in which taxpayers are required to file returns and to declare their incomes. This approach aims to redress them on the self-employed through the imposition of general “minimum taxes”.

Due to administrative difficulties contribution of direct tax is much lower than indirect taxes which provide two–third or more of tax revenue in many UDCs. On the contrary, indirect taxes were considered inferior to direct taxes in virtually every relevant way, particularly with respect to equity. On the ground of administrative ease, indirect tax scores high. Tax measures exert a powerful influence on the pattern of consumption. Saving ,investment, capital formation, production, technological change development of natural resources, international trade, price,

employment and distribution of income and wealth (Tripathy; 1978). They can ensure collective saving for purpose of public investment and at the same time provide incentives for promoting private investment. The sacrifice involved in capital formation can be distributed more equitably and can assure the poorer groups of the society that all classes are making sacrifices in potential consumption. "Taxation serves as the main method for transferring resource from the private to public sector."The broad objective of the tax policy in developing countries is the promotion of development process for meeting maximum needs of the masses and improving their living standards of life. To translate the broad objectives in operational terms, "The mobilization of additional financial resources has remained the predominant concern of the tax policy in developing countries have emerged to be as acceleration economic growth equal distribution of income and wealth, equitable allocation of resources, reduce the gap between poor and rich and higher degree of economic stability.

2.3 The Adjusted Procedure

Tax revenue usually changes due to discretionary measures, for example, change in tax rates, tax net expansion and so on. Therefore, a need to separate the change in revenue emanating through the discretionary measure from that due to automatic measures arises to estimate the elasticity. This is the way to distinguish tax elasticity from tax buoyancy. Tax revenues series can be adjusted in four ways:

1. Constant rate procedure
2. The proportional Adjustment Method
3. Dummy Variable procedure and
4. Divisia Index Method

The selection of the appropriate adjustment method depends upon the availability of the data on tax changes and the type and frequency of such changes (Timsina; 2005). The constant rate structure method requires disaggregated data on tax rates and tax bases, which isn't elasticity available in Nepal. Similarly, in case of Dummy variable technique and Division Index Approach there is no need to begin by first "purging" the revenue series of the effects of discretionary action before elasticity estimation are undertaken. Since the tax revenues change

frequently through the discretionary change, the dummy variable procedure and Divisia index aren't applicable. So, the proportional adjustment procedure, which requires calculation of the revenue implication of discretionary measures, the annual observed data are adjusted for discretionary change. The resulting series are converted to the first years rated to the actual tax.

2.4 Review of Acts

a) Business Profit and Remuneration Tax Act 1960

Income tax in Nepal was first introduced in the fiscal year 1959/60. It was then known as "Business profit administration tax" the imposition of the tax was governed by the business profit and remuneration tax act 1960 and rules made there under. This act consisted 22 sections. The silent features of this act were as follows.

- i. The basis for calculating the tax liability for remuneration was income of the current year and for business profit, it was the profit at the proceeding fiscal year.
- ii. Deductions were not specified for the purpose of calculating the taxable income.
- iii. Only remuneration and business profit were subjected to tax.
- iv. Tax on remuneration was to be deducted at source.
- v. Tax payers was given the right to appeal against tax assessment to local " Bada Hakim, therefore after; appeal could be lodged at revenue court. Every appeal was to be accompanied by security deposit or guarantee for the amount of tax payable.
- vi. The tax officer was empowered to assess tax on the basis of best judgment estimate were tax return was not filed or a false return was filed.
- vii. In case of default, fines up to 5000 were prescribed. The experience of three years indicated that the business profit and remuneration tax Act was rather narrow and vague. So, it was replaced by the Nepal income tax Act 1962.

b) Income Tax Act 1962

The main purpose of the imposition of this act was not only to raise Govt. revenue but also to reduce inequality of income of income and wealth distribution with social justice and to create tax paying habit of the tax payers. The income tax Act 1962 had 29 section compared to 22 section of the previous Act. It was amended in 1972.

The main features of this act were as follows:-

1. Income taxes defined up all kinds of income including derived from business, remuneration profession and occupation, house and land rent, investment in cash or kind, Agriculture, insurance, business, agency and any other sources.
2. Provision was made for payment of tax in installment as well as for advance payment of tax.
3. Carry forward of losses was allowed for a period of two years.
4. There were nine source of income for tax proposes.
5. The personal as well as residential status of the tax payers for tax purpose was defined.
6. The income tax assessment and collection procedures were specified along with the method of computing net income.
7. The basis was specified for assessing tax on the based judgment estimate of the tax officers.
8. Provision was made for reassessment of tax as well as rectification of arithmetic errors.
9. Provision was made for the exemption of income tax for new industries for certain period.
10. Agricultural income was brought under the scope of income tax for the first time. But the finance Act, 2023 B.S. exempted this income fully from income tax. The finance Act. 2030 B.S. again brought agriculture income under the scope of income tax. However, because of heavy political pressure, the finance act 2034 again exempted agricultural income under the scope of income tax.

The changing Socio-economic environment of the nation had forced to change the income tax Act. As a result income tax Act, 1974 came into operation.

C) Income Tax Act, 1974

Income tax Act, 1974 has been implemented in place of income tax Act. 1962. Its become from work had been derived from person act and it had 66 section, with clear cut provision of self assessment, company forward of losses for three years and precise definitions of related terms like tax, assessment of tax year of income. Income of non resident tax payers etc. Certain provision was amended from time to time. So the income tax Act, 1974 had become more scientific and better organized with the process of time.

Some of the much feature of this Act. 1974 are as follows:

1. It had clarified certain definitions specially relating to tax payers, tax, taxable income, gross income, net income, personal duty of the tax payers and nonresident tax payers, assessment of tax philanthropic work etc.
2. Five sources of income had been specified. They were;
 -) Agriculture,
 -) Industry, trade, profession or occupation,
 -) Remittance
 -) House and compound rack and
 -) Others.
3. Methods of computing net income from each source including the deductions allowable had been specified.
4. It had made provision for self-assessment from income tax for the first time in Nepal.
5. There were additional provisional of exemption from income tax than the former act such as income of Guthic, Compensation for life insurance or after the expiring of the life insurance policy.
6. The act had made its ability for tax payers to register these industry, business, profession or vacation in the tax office. Any changes had also to be notified.
7. Deduction was allowed for life insurance premium.
8. Taxpayer was requested to keep amount and records for their sources of income and preserve these records for a period of six years.
9. Procedure for assessment, collection, payment and refund of tax has been stream lined. Power for search and source has been specified. Penalty had been increased various form related to income tax had also been specified.
10. Provision had been made for tax exception either full or partial to the industrial enterprise as provided in the existing Nepal law relating to industrial enterprises,(in the tax act, 1974)

Although, income tax Act, 1974 (2031) was for ahead than the previous act, yet it had many deference and weakness. So this Act was amended in 1977, 1979, 1980, 1984, 1985, 1986, 1989 and 1992 to make it more practical and to eliminate confusing terms.

d) ITA 2002 (2058 B.S.)

ITA, 2002 (2058 B.S.) is the existing law relating to income tax administration. Which consist of 143 sections, along with 24 chapters, This ITA is made effective from 1st April 2002 (2058 Chaitra 19). The objective of introducing the new act is to enhance the revenue mobilization through effective revenue collection producers. The main motto of this Act is to promote the economic development of the nation. To broaden the tax net, it has clarified about the basis of tax. Imposition of system of tax, calculation of tax and tax rate applicable, taxable income and classification system. This new Act has imposed the tax an income realized from every resident person situated in Nepal and has who received a final withholding payment and has taxable income for the year. His majesty's government has enacted the income tax rule 2059 in 2059/02/27 in accordance with the authority given under suitor 138 of "ITA, 2002". The new Act has amended certain provision of the old Act and has added certain new prevision some of the important features of "Income tax act 2002" are as fallows:

1. Income tax Act 2058 has classified income into three headings:

(I) Business

(ii). Emplacement

(iii). Investment

2. The Governmental allowances to widow, elder citizens or disabled individuals; gift, bequest; inheritance; scholarship; income of foreign official, Government bodies and non-profit organizations have been exempted from the income tax net. Amount of a person privileged bilateral or multilateral treaty, an agricultural income; income of corporate societies based on agricultural products and divided of such society etc. also exempted from income tax.
3. This Act has defined the income as a person's income from any employment, business or accordance with this act. It includes all kinds of income received for the provision of labor a capital or bath in what ever from or nature in the taxable income.
4. When ITA 2031 was in practice, there were several exemption and deduction provided by the act and other related acts, but now, there are no more exemptions and deductions except the ones provided for by the act.
5. This Act has given the option for husband and wife as a separate natural individual until they don't accept as a couple.
6. This act follows on the self assignment system, and every assessment is treated as a self assessment. The tax officers can determine only the ascended tax assessment with in four year. The jeopardy assessment is essential when a person becomes bankrupt, is wound up, or

goes into liquidation; a person is about to leave Nepal forever to close down activity in any department or in Nepal.

7. Presumptive tax is limited to the small tax payers whose annual net income is up to Rs, 2, 00,000/- or annual turnover 20, 00,000/- net income is subject to flat annual taxes.
8. The Inland Revenue Department is repressible for the implementation and administration of this Act.
9. This act has introduced the concept of administrative review to correct the administrative The Inland Revenue Department should give its decision with in 90 days of the submission of objection and if the department does not give its decision with in the given time limit, the tax payers may appeal to the revenue tribunal.
10. This Act has introduced the concept of medical tax credit under which resident individuals may claim a medical tax credit of 15% of the amount of approved medical costs.
11. A resident person may claim a foreign tax credit for any income year for any foreign income tax paid by the person to the extent to which it is paid with respect to person's assessable income for that year.
12. There is a provision of functional decision of work among tax officers. The division is to be made under the direction of HMG and others tax officers are under the directions of HMG and Direction general.
13. This act has guaranteed the rights and secrecy are provided.
14. The penalties are divided into two parts. Tax officers can levy only fines and interest can levy and this court cans levy penalties and imprisonment.
15. This Act has determined the rate of income tax it self for the first time, which used to be determined by the finance Acts is the previous year.
16. For the purpose of calculating a person's income from any business or investment, there are provisions of deduction related to overhead costs.
17. This act has based on global income tax principle and has bought all sources of income into the tax net and has treated is an equal members. This act has abandoned the itemized system of deductions and emphases are taken into account on a global member not on a line by line basis.
18. Resident individual so domestic companies are taxed on their world wide income while non resident individuals and foreign companies are taxed only on their income sources in Nepal.
19. The income of an approved retirement fund in free from tax. But retirement payments in hand of employees are taxable.

20. Company is liable to pay tax separately from its shareholders. The bonus share, loans and advances to directors and share holders distributes made an liquidation etc are also bought the tax net, in order to plug loopholes for avoidances.
21. Investment insurances premium can be deducted at 7 percent policy amount or Rs. 1,00,000/- which ever is less.
22. Donation amount can be deducted at a 5 percent of adjusted income, or Rs 100,000/- which ever is less.
23. 7 percent depreciation base amount of end of the year can be deducted as a repair maintenance expenses and reduced amount can be capitalized or excess repair and maintenance expenses can be added to depreciation base amount of coming income year.
24. A pool system of deprecation has been adapted into five categories. The depreciation rates are 5%, 25%, 20%, 15% for group A, B, C and D pool, respectively which are based an diminishing balance method of depreciation and for class E the rate is based on straight line method.
25. Capital gains are taxed explicitly under this act after four decades of the introduction of income tax. Incase of business capital gains, gain on the disposition of business property are taxed as an ordinary income and incase of non business capital gains; only the gains from the causal sales of real property (land and buildings) and securities are subject to capital gains tax at a flat rate of 10% . There is also a clear-cut provision for adjusting net loss during the fiscal year.
26. A Person has been defined as a resident whose place of abode is in Nepal and who lives in Nepal at any time or who lives in Nepal for 183 conjugated days or more with in the income year or who is employee of HMG posted abroad during the income year.
27. The act has broadened the tax base. Tax rates are spilled out in the act itself and the tax rates and concession are harmonized on equity grounds.
28. A full-fledged self assessment system is implemented and the presumptive taxation and current year taxation system are strengthened.
29. The scope of discretionary interpretation of the tax administration is drastically reduced ensuring simplicity, uniformity and the transparency. The Act has also defined the power and authority of the tax administration.
30. The Act has separated administrative and judicial responsibilities by distinguishing civil liabilities of the tax payers from criminal liabilities.
31. The appeal system is further streamlined by making it mandatory for the tax payers to file an objection with the Inland revenue Department of administrative review before appealing to the revenue.

2.5 Review of some International Empirical Studies

Chaudhary (1975) has made a study on elasticity of west Malaysian income tax- system by taking the year burden from FY 1961-1970 A.D. This study has carried out separate exercise for personal and company income taxes. Since companies are subject to an independent flat rate tax in Malaysian and dividends are taxable in the hands of taxpayers. This study had applied the constant rate structure method involving the use of effective rates to income taxes in Malaysia in order to estimate the elasticity of these taxes in the period FY 1961-1970 A.D. In the study, section I explain the methodology employed in estimating the elasticity. Section II reviews estimates of buoyancies and elasticity of income taxes. In particular, since the personal income tax structure was considerably modified by the enactment of new income of tax ordinance in 1967, an attempt is made to compare the elasticity of the post 1967 A.D. structure with that of the earlier structure. And section III compares the elasticity and buoyancies derived through the constant rate structure method namely the proportional adjustment method employed by Prest and Sahota. Where the constant rate structure method was applied to assessed income tax series, and the proportional adjustment method was applied to actual series.

Tanzi (1976) has been studied the various aspect of United States. The basic purpose of his study was to measure the elasticity and built-in- flexibility of US individual income tax that had been affected by both the legal changes and inflation over the period FY 1963-1972 A.D. and to take an attempt to relate these changes in the sensitivity of the tax to the events of the period. We found that, the elasticity of tax revenue (T) with respect to taxable income (T) rose over the period from 1.1 to 1.2. This led to an increase in the elasticity of tax with respect to adjusted gross income (AGI) from about 1.4 (in 1963. A.D.) to about 1.5 (in 1972 A.D.). It implies that the erosion in the real value of the basic exemption and of the standard deduction associated with a continuation of the recent inflationary pressures, and the consequent possible decline of the elasticity at T with respect to AGI, shouldn't have much at an effect on the overall elasticity of the tax. In the absence of further tax reforms, the tax yield should continue to grow at a much faster than nominal income.

Dahal's (1991) in this study entitled "Tax structure and police framework in developing countries", seeks to analyze the tax structure, examine the relationship between tax changes and

economic development and a design a suitable tax policy to recommend for developing countries. In this second part of analysis, the writer come to know that the tax effort ratio (TER) in developing countries is very poor and so is taxable capacity and taxable capacity is positively related to the per capita income. In a study of thirty developing and developed countries, the tax ratios were found to be increasing with rise in per capita income. Further Dahal opines that the importance of elasticity or productivity of the tax yield in a particular tax system is of prime concern and an efficient tax system should always possess' elasticity greater than unity. It is desirable for developing countries to step up the level of incremental saving ratio for a given level of investment. In this conclusion, the writer said that an efficient and successful tax administration can improve the tax structure raising the productivity of tax yields. And further the writer suggest while proposing a tax reform in a developing economy like Nepal, the focus should be on raising the productivity or responsiveness of taxes to GDP without change in the rate and the legal base. Most importantly, an effort should be made to increase the contribution of progressive direct taxes in order to maintain equity in the tax structure. This needs efficient, dynamic and honest people in the tax administration.

V.G. Roa (1979) studied the responsiveness of the Indian tax system 1960to 1973-74. This studied seeks to examine responsiveness of the aggressive union and status' tax structures and of the selected individual taxes with respect to changes in national income and their closed bases. Writer tried to know whether Indian tax system is automatic responsive type or not? If it is so, to what extent? If it is not why it is not? And to what extent it is being corrected through distinctionary tax change? And two other additional objectives were there for this study. Rao had used the A.R. Prest's proportional adjusted method for achieving the required adjusted data needed for calculation of elasticity and buoyancy co-efficient. In his conclusion, it was found that a close examination of trend of revenue with relation to national income, discloses that the revenues' built-inflexibility had not improved at all. In his comparative analysis, it was found that built in flexibility was 0.833 for the period of 1951-52 to 1957-58 and 0.771 for the period of 1960-61 to 1973-74. Which signified that the latter years' changed composition of taxation in particular has not facilitated much to improve the automatic growth of tax receipt.

2.6 Review of Nepalese Empirical Studies

Agrawal, (1978), has published a report "Resource mobilization for development; the Reform of Income Tax in Nepal Through the elasticity and buoyancies for major this research report was published by CEDA, Kathmandu. It mainly deals with the necessity of resource mobilization of Nepal through the elasticity and buoyancies for major Nepalese taxes with base GDP, using the series of different tax revenue from FY 1967/68 to FY 1975/76 A.D. for measuring their productivities. The values of elasticity and buoyancy for income tax being highest 2.01 and 2.18 respectively and they recommend income tax for the objective concern. This report has projected the amount of income tax for 15 years from FY 1975/76 to FY 1990/91 A.D., under the assumption of the growth rate 21.6 percent will hold well in future years and amount of income reaches to Rs. 1638.27 in FY 1990/91 from Rs. 87.17 in FY 1975/76 A.D

Agrawal (1980) made an extensive study of Nepalese taxation covering the period of 16 years FY 1962/63 to F Y 1977/78 A.D. He found the elasticity and buoyancy coefficient of different tax heads with respect to GDP for the period FY 1967/68 and FY1975/76 A.D. excise tax has the highest value for buoyancy at (2.24) followed by sales tax (2.20), income tax (2.18) and land tax (0.17). Similarly , income tax has the highest elasticity of (2.01) followed by sales tax (1.74) , excise tax (1.287) , custom duties (0.086) and land tax (0.12). Since, both the elasticity and buoyancy coefficient of income tax are greater than unity which implies that the income tax of Nepal is positively responsive to change in GDP. The difference between the buoyancy and elasticity of income tax is only 0.17 which implies that the 1 percent change in GDP will bring about 0.17 percent change in total revenue due to discretionary measures.

Dahal (1984) has studied various aspect of Nepalese tax structure for the period FY 1964/65 to FY 1980/81 (whole period). In this period the overall elasticity of the total revenue equal, almost unity (1.01) for indirect taxes, it is marginally higher than unity (1.02) compare with the elasticity of tax revenue is 0.92 reflecting the tax system less responsive to change in income . However, the buoyancy coefficients for the same period are 1.54 for total revenue, 1.52 for the tax revenue, 1.63 for indirect taxes and 1.23 for the direct taxes. Among the individual taxes the elasticity of sales tax is the highest (1.96) followed by income tax (1.38), import duties (1.05), export duties (0.77), and land tax (-0.04). The buoyancy coefficient for sales tax is again

highest (2.56) followed by the excise duties (2.23), income tax (1.86), import duties (1.79), export duties (1.14) and land tax (0.31). These figures imply that Nepal is primarily concerned on the land tax, export duty, import duty, excise duty and to same extent on income tax.

Adhikari (1995), during the review period FY (1974 /75 to 1993/94), the elasticity of total revenue with respect national income (GDP) is less than unity (0.65) showing that a 10 percent change in national income result in a 6.5 percent change in total revenue in Nepal. The elasticity coefficient of consumption tax, import duties and income tax are respectively at 0.73, 0.51 and 0.39. And the buoyancy coefficients of the above components are 1.06,1.05 and 1.14 respectively and the buoyancy of total revenue is thus higher by 0.45 (1.10-0.650 over the elasticity, implies that one percent change in national income affects a 0.45 percent change in total revenue due to discretionary measures. The elasticity of consumption tax, import duties and income tax with respect to their proxy bases are 0.73, 0.40 and 0.59 respectively, in the same period. Here, base elasticity of consumption tax stands highest at 0.73 compared to other base elasticity; however, it is less than unity. It shows that this component has relatively better built-in – flexibility with respect to its proxy base. Similarly, base buoyancy of major taxes i.e. tax on consumption, import duties and income tax are 1.05, 0.80 and 1.78 respectively, in the same period. These results are significant at 1 percent level with satisfactorily high level or R^2 ranging from 0.81 to 0.99.

Nepal (1995) studied elasticity and buoyancy covering the Period of FY 1968/69 to FY 1992/93. He found that the overall elasticity of the total revenue in Nepal's tax structure for the study period was 0.64 and Nepalese revenue structure as a whole was regressive in nature. In this study the writer also found that elasticity of total revenue in Nepal's tax structure for the study period was 0.64 and Nepalese revenue structure as a whole was regressive in nature. In this study the writer also found that elasticity of tax revenue was 0.51, non tax revenue was 1.14, direct tax revenue was 0.14, indirect tax revenue was 0.61, custom duties was 0.44, income tax was 0.48 which shows only non tax revenue , had greater than unitary elastic. Income elasticity of Nepalese tax was rather inelastic and below unitary which implies the administrative incompetence and regressive tax policy. However, the buoyancy coefficient for total revenue was 1.21 during the study period. Similarly, buoyancy coefficient of total tax revenue was 1.16. The high buoyancy but low elasticity of total tax revenue showed the additional government effort to

raise the tax revenue. He found that the buoyancy coefficient of the selected groups of taxes were greater than unity expect that the custom duties (0.67).

Timsina (2007), during the review period of FY (1975 TO 2005 A.D.) elasticity of major taxes in Nepal, such as excise duties, import duties income tax, VAT are found: 0.49, 0.54, 0.41 and 0.55 respectively with the respect to national income (GDP) during that review period. Similarly, the buoyancy coefficient of these major taxes are found 0.98, 1.05, 1.37 and 1.15 respectively in the same period and elasticity's of total tax and total revenue are 0.51 and 0.59 respectively, the buoyancies of these components are 1.12 and 1.14 respectively, in that same period and elasticity coefficients of major taxes i.e. excise duties, import duties, income tax and VAT are found 0.49, 0.43, 0.38 and 0.58 respectively, during the review period (i.e. FY 1975-2005 A.D.). Similarly, the buoyancy coefficients of these major taxes are also 0.99, 0.83, 1.25 and 1.16 respectively in the same period. In case of 'Base to income', the coefficients of elasticity are found 0.99, 1.22, 1.14 and 0.99 of excise duties, income tax and VAT respectively and buoyancy coefficient are found: 0.99, 1.22, 1.14 and 1.12 of excise duties import duties, income tax and VAT respectively in the same review period.

Guru-Gharana in an article "Weakness of the tax policy and tax structure in Nepal" has found that the elasticity coefficient of total revenue is 0.495 for the period 1975/75 to 1983/84 and 0.581 for the period 1974/75 to 1988/89. For the same periods, buoyancy coefficients are 1.365 and 1.281 respectively. Expect for the contract tax (1.898) and sales tax (1.053) the elasticity of remaining taxes i.e. customs, excise, income, hotel entertainment, land revenue etc. are either extremely low (far below unity) or negative where as the buoyancy of all taxes except land revenue are as above unity. This high buoyancy but low elasticity of shows that the government is engaged in imposing high rates on few taxed commodities and regressive nature of the tax system. (Guru-Gharana, 1993).

Research Gap

The conclusion that can be derived from the review of Nepalese empirical studies is that various studies have found the heterogeneous responsiveness of the particular tax system to the GDP. This may be due of the changes made by tax authorities in the fiscal policy over study period. Moreover, the different value of elasticity and buoyancy coefficient estimate by above

studies might be due to the choice of the proxy bases. However, these reviews disclosed the fact that there has been no research of tax elasticity and buoyancy in Nepal after the restoration of democracy in 1990, up to the FY 2008/09 with the comparison between traditional and partitioning approaches. Hence, an attempt is made in the present study to address the contribution to corporate tax of the government revenue in Nepal using traditional approach as well as partitioning approach after the restoration of democracy in FY 1990 A.D until the period of FY 2008/09 A.D. in Nepal; this is quite different than other past studies.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

Contribution of tax to the government revenue is very significant in Nepal. The main objectives of this study are to find the Responsiveness and productivity of Nepalese Taxation. The research methodology has been designed to achieve the objectives of this study. This research methodology contains research design, nature and sources of data, procedures of data collection, processing and analysis.

3.1 Research Design:

This research study has attempted to compute the analysis of Structure, Productivity and Responsiveness of Major tax in Nepal for the period of FY (1989/90-2008/09). Therefore it can be regarded as historical research design. The study of income tax Act, rules and regulations, and other related acts are done to achieve the stated objective of the study for making the study descriptive. An opinion survey has been conducted for an empirical research. The opinion of the various respondents, associated with income tax i.e. tax administrators, tax experts and tax payers, collected through structured with reference to income tax system of Nepal. Thus, the research methodology followed in the study can be tamed as analytical as well as descriptive research design.

3.2 Nature and Sources of Data:

The study is based on the secondary data. The required data are collected from various secondary sources such as;

-)] Budget speech of various years (MOF, GON)
-)] Economic Survey on Various issues (MOF, GON)
-)] Various Issues of quarterly Economic Bulletin (NRB)
-)] Various MA Unpublished Thesis of Tribhuvan University

) Other sources of data are collected from various publications of CBS, NRB, IMF World Economic Outlook and WB

This study takes 20years time series data of the Nepalese Economy for the analysis. 20 years includes the time series data from 1989/90to 2008/09.

3.3 Data Adjustment:-

As we have already mentioned, to estimate the elasticity and buoyancy accurately we have to separate the discretionary changes from available tax revenue series data. For this, economists have used various methods like Constant structure method. Dummy variable method. Among these methods proportional Adjustment Method is very special in the context of UDCs because it doesn't required series of data. This method also comprises three different important methods like Chand and Chillah, Prest method and Sahota method. Sahota's Proportional Adjustment method is used to separate the discretionary changes from tax revenue series data due to its simplicity. Sahota method, if interpreted correctly, yields the same series as the prest method. Sahota's adjustment of actual tax receipts to a series, which he argues excludes discretionary effects, is accomplished by

$$IT_t \times \frac{fAT_t \{ RT_t A}{AT_t Z} IT_t Z1$$

Where,

IT= index of "net tax" receipt

AT= Actual tax receipt

RT= Receipt due to arbitrary legislative changes

t= Relevant year

In this method, the percentage contribution of new tax proposals to the total estimated revenue has been taken in the same proportion to calculate discretionary changes from actual collection of total revenue.

3.4 The model

In this study the following statistical tools are used to analyzed the result of the applied models, which are as,

3.4.1 Elasticity and Buoyancy

To estimate the elasticity and buoyancy of various group taxes are individual taxes the following regression equation are used:

$$\text{Log } T = \log + \log Y + U \dots\dots\dots \text{(I)}$$

$$\text{Log } T_n = \log + B_1 \log Y + V \dots\dots\dots \text{(ii)}$$

Where,

Log T = Adjusted tax revenue

Log T_n = Actual tax revenue

Y = Gross domestic product

U & V = Stochastic Variable

B = Elasticity coefficient

B₁ = Buoyancy coefficient

3.4.2 Statistical Tools

The coefficient of determination R² (in two variable case) or R² (in multiple variable case) is a summary measure that tells how well the regression line fits the data. In other words, R²

measure the proportion or percentage of total variation of dependent variable T in Y explained by regression model.

$$R^2 = \frac{\text{Explained variation(ESS)}}{\text{Total variation(TSS)}}$$

3.4.3 Standard Error (S.E)

The standard error of regression line (estimate) is a measure of precision in the prediction of value of dependent variable based on the regression equation, given the value of independent variable. Hence, the standard error of estimate is used to measure the dispersion about an average line, called the regression line. Hence, for the regression equation

$$= \hat{a} + bX,$$

3.4.4 t-test

The t- statistic, which is computed as the ratio of an estimated coefficient to its standard error, is used to test hypothesis that a coefficient is equal to zero. To interpret the t- statistic, it should examine the probability of the observing the t- statistic given the coefficient equal to zero. The small sample test will be performed in order to identify the statistical significance of an observed sample regression coefficient and the formula for calculating the value of t statistic is:

$$t = \frac{\hat{a}_i}{SE \hat{a}_i}$$

3.4.5 F- test

F- test is used to measure the overall significance of R^2 because the two vary directly. When $R^2 = 0$, F is zero and when $R^2 = 1$, F is infinite. That is to say, larger the R^2 , the greater the F value. Thus, large value of F-test implies that the overall significance of the estimated regression is good. The F- value can be computed as;

$$F = \frac{R^2 / (k-1)}{(1 - R^2) / (n-k)}$$

3.4.6 Durbin Watson (D.W.) Test

This test is used to detecting serial correlation. In the presence of auto correlation (serial correlation), the OLS estimators remain no larger coefficient. As a consequence, usual t and F tests cannot be legitimately applied, D.W test being a most celebrated test can be computed as:

$$D.W. = \frac{\sum_{i=1}^n (e_i - e_{i-1})^2}{\sum_{i=1}^n e_i^2}$$

3.5 Variable under Study

The following variables are used to get the result for the achievement of the objective study. These variables are used in the given model as we have specified.

Dependent Variables

TR	=	Total revenue
TXR	=	Total Tax Revenue
NTXR	=	Non Tax Revenue
DTR	=	Direct Tax Revenue
ITX	=	Income Tax Revenue
EXD	=	Export Duties
ICD	=	other income of customs Duties
VAT/ST	=	Value Added Tax/ Sales Tax
ED	=	Exercise Duties

Independent Variables

GDP	=	Gross domestic product
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CHAPTER – IV

STRUCTURE OF NEPALESE TAX SYSTEM

4.1 Background

The term 'tax structure' bears its meaning differently with its context and place. Tax structure of any country is somewhat affected by the social and political factors. This can clarify by the view of Richard Musgrave in his theory of tax structure change. In his view, tax structure development is shaped by economic as well as social and political factors. Economic factor influences in two ways. In the first place, nature of tax base changes with changes in the structure of the economy which goes with development. Secondly, economic objectives of the tax policy vary with the stage of economic development (Singh; 2004).

In the context of Nepalese tax structure, Bhavani Dhungana et.al. in their research work defined that tax structure refers to the level as well as relative importance of various taxes in the composition of total tax revenue of a country. A discussion of a tax structure deals with the balance between direct and indirect taxes (Dhungana et. al 1976).

As we have discussed earlier the base for levying taxes may be consumption, income and capital. Taxes on consumption are known as indirect taxes where as taxes on income and capitals are known as direct taxes. And tax structure of any country is composed of both direct and indirect taxes.

About the tax structure, Harley H. Hinrich (1966) has presented his view that a general theory of tax structure changes during economic development.

Add the importance of tax structure in economic development process is manifested by the probe "Economic development depends, far more than is commonly recognize on a carefully thought out well organized tax structure". This probe is assumed to be more important in the context of those countries in which government outlay is rising faster than tax revenue.

4.2 Historical Background

There are no reliable records about taxation in the ancient Nepal, era before the unification of Nepal. There are many petty in different parts of country. And, they used to collect levies and tools from the travelers and merchants. Another important source of their revenue is land irrigation tax and religious monuments preservation tax etc. Taxes were levied in the form of kind, cash and labor as well as certain portion of product. (Regmi; 1971).

After the unification of Nepal, Tax collection method, taxes bases and the entire tax system seems somehow more practical and development then ancient Nepal. It is seen that taxes were collected in three different levels.

1. Royal palace: to finance occasional and ceremonial needs. These taxes were broad based and progressive.
2. Government: To finance administrative, military and other purposes assessed on official functionaries, occupational groups and other people.
3. Local: Perquisites of local officials, functionaries and mendicants

So far as the system of the direct taxation was concern, it is much more limited to the special levies “darshan bhet”, “Salami”, “walak” and “land tax”. Taxes were imposed primarily on occupation and economic activities (Regmi; 1971).

During 104 years oligarchic rule of Rana family, Tax system also faced dark year. There was no Systematic budget, the income and expenditure were never publicized and no difference between income of state and of Rana family. So, they defined the system as their own interest. During the 19th century there were traditional system like “Birta”, “Jagir”, and “Jhara” under which the state is able to acquire goods and utilize manpower without using money a means of exchange.

Modern tax system starts with the manifestation of the first plan in 1956. And new tax bases, new tax policy and new tax administration uses introduced for the implication. In the year 1962/63, a comprehensive income tax as introduced. Sales tax, contract tax and house and land rent tax were levied in the year 1965/66. After the restoration of multiparty democracy, the interim government, 1990 introduced property tax. And, to reform the tax structure of Nepal, VAT was introduced on November, 16, 1997 in place of sales tax, hotel tax, contract tax and

entertainment tax. In this way, Nepal has introduced several kinds of taxes to increase the tax revenue.

4.3 Composition of Total Revenue:-

Total revenue of Nepal is composed of both taxes revenue and non-taxes revenue when the Government of Nepal presented first national budget in 1951/52.

Table: 4.1

Composition of Total Revenue, 1989/90- 2008/09

Rs. In million

Fiscal Year	Total revenue	Tax Revenue	% TR	Non Tax Revenue	% NTR
1989/90	9286.79	7283.90	78.44	2002.89	21.56
1990/91	10730.40	8175.80	76.19	2553.60	23.80
1991/92	13512.70	9875.60	73.08	3637.10	26.92
1992/93	15148.40	11662.50	76.99	3485.90	23.01
1993/94	19580.70	15371.50	78.50	4209.40	21.50
1994/95	24575.20	19660.00	80.00	4945.10	20.12
1995/96	27893.10	21668.00	77.68	6225.10	22.32
1996/97	30373.40	24424.30	80.41	5949.10	19.59
1997/98	32937.90	25939.80	78.75	6998.10	21.25
1998/99	37251.00	28752.90	77.19	8494.40	22.80
1999/00	42892.10	33152.10	77.29	9740.00	22.71
2000/01	48893.60	38865.00	79.48	10028.60	20.52
2001/02	50445.60	39330.60	77.96	11115.00	22.04
2002/03	54538.90	40896.00	74.98	13642.90	25.02
2003/04	62330.07	48173.00	77.28	14157.70	22.72
2004/05	70122.70	54104.70	77.15	16018.00	22.85
2005/06	72282.00	57430.40	79.45	14851.60	20.55
2006/07	87712.20	71126.70	81.09	16585.50	18.91
2007/08	107622.50	85155.50	79.12	22467.00	20.88
2008/09	143474.50	117051.90	81.58	26422.60	18.42

Sources: Various issues of Economic Survey, Ministry of Finance, Nepal

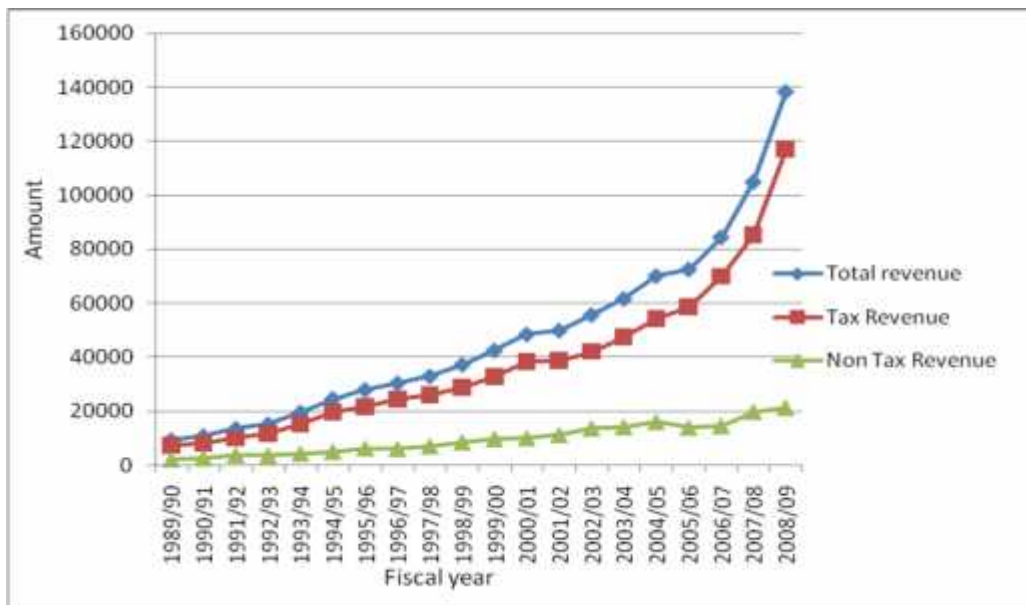
Table 4.1 shows the composition of total revenue of government of which includes tax and non tax revenue. It seems that the share of tax revenue has always greater than the share of

non-tax revenue. In financial year 2008/09, the share of tax revenue and non-tax revenue was 81.58percent and 18.42percent and in fiscal Year 1989/90 was 78.44 percent and 21.56 percent respectively. Its percentage contribution has been always fluctuating with in the lower limit of about 73.08 percent to the upper limit of about 81.58percent’ whereas the share of non tax revenue always fluctuating with in the lower limit of about 18.42percent to the upper limit of about 25.02percent of the total revenue in the same study period. The trend decline and increment of tax revenue and non tax revenue is given on table 4.1. Which shows the trend of decline of tax revenue is not continuous it is erratic in nature. So is the case in increment trend of non-tax revenue.

Composition of total revenue can be shown in the trend line below:

Figure 4.1

Composition of Total Revenue



In above figure, trend line of tax and non tax revenue is shown. On the figure tax revenue is increasing with total revenue and non tax revenue is slower than that i.e. increment of non-tax revenue is nominal in past study period and will same in near future too.

4.4 Composition of Tax Tevenue:

Tax revenue is composed of direct and indirect tax. The structure of Nepalese tax revenue can be presented in terms of consumption, income and capital based tax. Taxes on consumption are known as direct tax. Taxes related to custom duties excise duties, VAT, Entertainment tax, air flight tax, Road and bridge maintenance tax, vehicle tax, land contact tax are included in indirect taxes. Similarly, income tax, interest tax, property tax, and other taxes are included in direct tax. The composition of Nepalese tax revenue is presented in the table 4.2 in terms of direct tax and indirect tax revenue from financial year 1989/90 to 2008/09.

Table 4.2
Composition of Tax Revenue, 1989/90-2008/09

Rs. in million

Fiscal year	Total Tax revenue	Direct Tax	% DT	Indirect Tax	% IDT
1989/90	7283.90	1435.10	19.70	5848.80	80.30
1990/91	8175.80	1368.50	16.74	6806.60	83.25
1991/92	9875.60	1595.20	16.15	8280.40	83.85
1992/93	11662.50	2036.20	17.46	9626.30	82.54
1993/94	15371.50	2855.30	18.58	12516.20	81.42
1994/95	19660.00	3849.30	19.58	15810.70	80.42
1995/96	21668.00	4655.90	21.49	17012.10	78.51
1996/97	24424.30	5340.00	21.86	19084.30	78.14
1997/98	25939.80	6187.90	23.85	19751.90	76.1
1998/99	28752.90	7516.10	26.14	21236.80	73.86
1999/00	33152.10	8553.00	26.11	24200.60	73.89
2000/01	38,865.00	9730.10	25.32	28705.70	74.68
2001/02	39330.60	10039.42	25.89	28733.10	74.11
2002/03	40896.00	1635.21	22.54	32553.20	77.46
2003/04	48173.00	11212.57	23.62	36260.40	76.38
2004/05	54104.70	12251.64	22.64	41853.50	77.36
2005/06	57430.40	13961.48	23.83	43465.52	76.17
2006/07	71126.70	18980.30	26.67	52146.40	73.27
2007/08	85,155.50	23087.80	27.11	62067.70	72.89
2008/09	117051.90	34320.70	30.59	81209.18	69.41

Sources: Various issues of Economic Survey, ministry of Finance, Nepal.

Total tax revenue can be studied by dividing in two different categories i.e. direct tax and indirect tax. Table 4.2 shows the contribution of Direct tax on total revenue during the various fiscal year of study period. It shows the increment trend of Direct tax, as a percent contribution

to total tax, ranges from 9.70percent to 30.59 percent in the FY 1989/1990 to FY 2008/2009 and the decrement trend of indirect taxes from 80.30percent to 69.41 percent of total revenue in the same period of the time. Subsequently, the magnitude of direct tax and indirect tax both increased from Rs. 1435.10million to 34320.70 million and 5848.80million to 81209.18 million during the fiscal year 1989/90 to 2008/09 respectively. As a result total tax revenue also increases and reaches to Rs. 117051.90 million in the FY 2008/09.

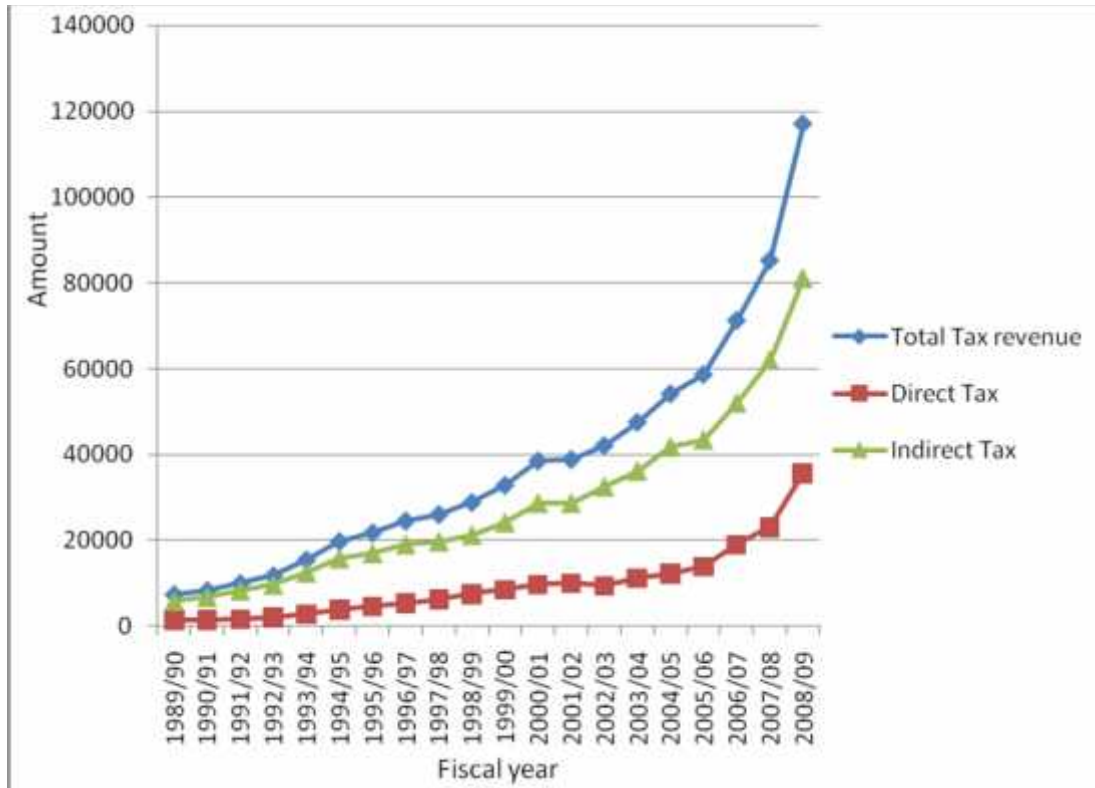
As it s said, in last development countries, direct taxes contributed between one sixth or one fifth of total revenue, while they were the source of about one half of the total revenue in the well development countries, Nepal as a least development country shows the contribution of direct tax (30.59%) on total tax revenue. This signifies that Nepal still have to do so much in revenue collection sector.

I the early stage of development in indirect tax signify the development in domestic products, internal trade and monetization of the economy. From the table we can analyze that the magnitude of indirect tax increases in amount from 5848.80million to 81209.18 million during the FY 1989/90 to 2008/09. But, the percent of indirect taxes on total taxes gradually seem to be declining.

Comparing direct tax and indirect tax, it reveals that the heavy reliance of economy of economic is on indirect taxation. The indirect tax is considered regressive in nature; the tax structure of Nepal is not justifiable on equity ground and progressiveness. So, to divert the economy in the channel of development, it is necessary to increase the share of direct tax, ultimately decreasing the share of indirect tax. There fore, the attention should be focused on the sufficient resource mobilization through internal resource.

Fig. no. 4.2

Composition of Tax Revenue:



In the above figure, it is shown that trend of direct and indirect tax with total tax revenue of Nepal. Increasing ratio of indirect tax is nearly equal to total tax revenue and direct tax is very slow increasing in the study period and in near future

4.5 Composition of Direct Tax:

The share of major components of direct tax is given in the following tables:-

Table 4.3**Composition of direct tax and their percent to direct tax****Rs. in millions**

Fiscal Year	Direct Tax	Tax on property, profit and Income	% of PPI	* House and Land reg. and rev. tax	%HLR
1989/90	1435.10	983.40	68.52	451.70	31.48
1990/91	1368.50	829.80	60.64	538.70	39.36
1991/92	1595.20	949.10	60.12	636.10	39.88
1992/93	2036.20	1281.30	62.93	754.90	37.07
1993/94	2855.30	2022.10	70.82	833.20	29.18
1994/95	3849.30	2911.60	75.64	937.70	24.36
1995/96	4655.90	3589.30	77.09	1066.60	22.91
1996/97	5340.00	4324.60	80.99	1015.40	19.01
1997/98	6187.90	5183.70	83.77	1004.20	16.23
1998/99	7516.10	6512.90	86.65	1003.20	13.35
1999/00	8553.00	7935.60	88.85	1015.90	11.37
2000/01	9730.10	9546.50	93.97	612.90	6.03
2001/02	10039.42	9465.70	89.32	1131.80	10.68
2002/03	1635.21	1027.41	62.83	607.80	37.17
2003/04	11212.57	10215.10	85.75	1697.50	14.25
2004/05	12251.64	11272.60	86.24	1799.20	13.76
2005/06	13961.48	11787.00	84.39	2181.10	15.61
2006/07	18980.30	16726.80	88.13	2253.50	11.87
2007/08	23087.80	20147.02	87.26	2940.74	12.74
2008/09	34320.70	29097.40	84.78	5223.30	15.21

Sources: Various Economic survey, ministry of Finance, Nepal

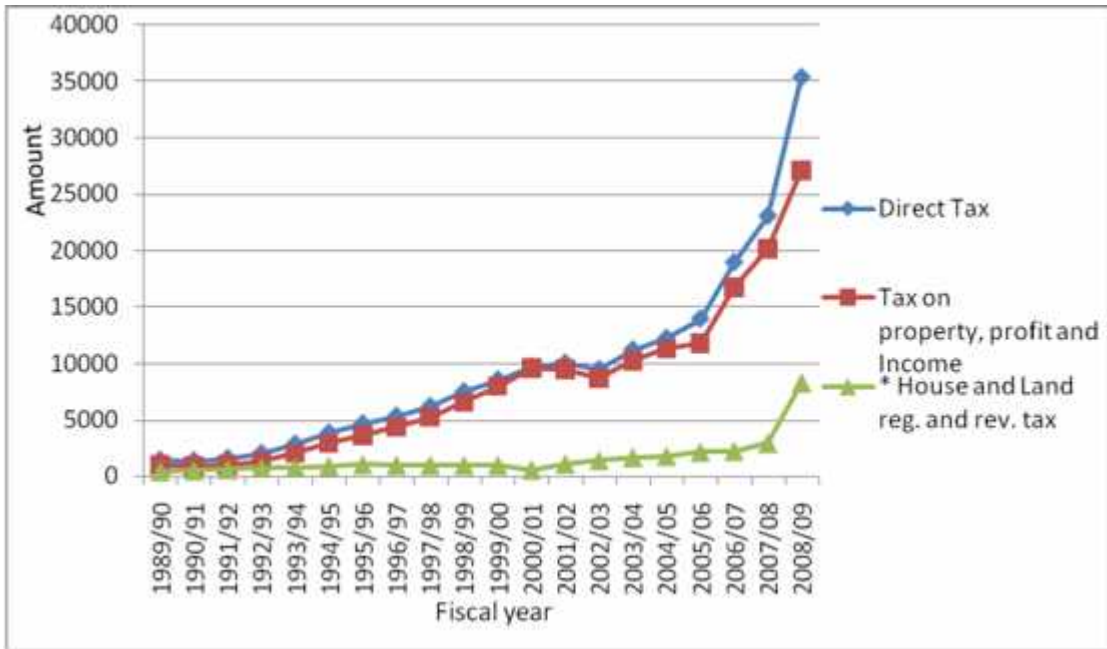
Here, composition of direct tax revenue can be analyzed by dividing in two different sub categories viz. Tax on Property, Profit and Income and Tax on House, Land Revenue and Registration. Large amount of direct tax on total tax revenue signify the maturity of the economy. As we have already explained large amount of direct taxes i.e. one half of tax revenue signify the tax structure of well development countries and one fifth or one sixth portion of total taxes signify the least development countries. Nepal, being a least developed countries country, its direct taxes contributed 30.59 percent on total tax revenue during the FY 2000/09

During the period before the democracy, most of the direct taxes were related to the Agriculture sector in limited tax bases. After democracy, modern tax system introduced with consolidated change in tax bases which brings results change in tax structure. And new tax system mainly focuses to the income tax and property tax by widening its tax bases.

Table 4.3 shows that the contribution of property, profit and income tax to the direct tax was higher than other tax and it occupied largest share in the direct tax. The minimum percent contribution of income tax to direct tax was 68.52 percent in F/Y. 1989/90 and maximum percentage contribution was 93.97 percent in 2000/01. But in F/Y.2004/05 and 2008/09, it was decreased to 86.24percent and 84.78 percent respectively. So, this regular fluctuating in contribution percentage of income tax to direct tax is not satisfactory. It needs to increase by widening the tax net.

Tax structure also changes with the changes in socio- economic structure of country, and results different scenario in the context of direct taxes. Now the same table the share of house and land registration tax in the F/Y.198/90 was 31.48percent which gradually decreased to 6.03 percent F/Y.2000/01. And than its contribution began to increase and reached to 15.61percent in F/Y.2005/06. In F/Y.2006/07, its contribution is decreased to 11.87 percent but in F/Y.2007/08 to 2008/09 it is again increased to 12.74 percent to 15.21percent.

Figure 4.3
Composition of Direct Taxes



By above figure, it is clear that only the nominal part of the direct tax is covered by house and land revenue & registration tax and rest most of the part covered by income tax. Ratio of trend of the increasing is also rapidly and most fluctuated and decreased in the period of fiscal year 2002/03.

4.6 Composition of Indirect Tax:

Table 4.4
Composition of Indirect tax

Rs. In Millions

Fiscal year	Indirect Tax	Custom Duties		Excise Duties		Value Added Tax	
		Amount	% CD	Amount	% ED	Amount	% VAT
1989/90	5848.80	2684.90	45.91	1097.00	18.76	1650.10	33.41
1990/91	6806.60	3044.30	44.72	1200.00	17.63	2026.01	34.59
1991/92	8280.40	3358.90	40.56	1414.30	17.08	2840.70	39.66
1992/93	9626.30	3945.00	40.98	1452.80	19.09	3438.20	41.63
1993/94	12516.20	5255.00	41.99	1592.50	12.72	4693.10	42.99
1994/95	15810.70	7018.10	44.39	1657.30	10.48	6031.70	43.37
1995/96	17012.10	7327.40	43.07	1944.30	11.43	7126.50	43.67
1996/97	19084.30	8309.10	43.54	2298.15	12.04	7126.50	37.34
1997/98	19751.90	8502.20	43.04	2885.80	14.61	7122.60	36.06
1998/99	21236.80	9517.70	44.82	2953.20	13.91	8765.90	37.12
1999/00	24,200.60	10813.30	44.68	3127.60	12.92	10259.70	40.72
2000/01	28,705.70	12552.10	43.73	3771.20	13.14	12382.40	41.97
2001/02	28,733.10	12650.00	44.06	3807.00	13.22	1226.73	41.64
2002/03	32,553.20	1283.20	43.83	3771.20	14.73	13459.70	41.44
2003/04	36,260.40	15554.80	42.90	6226.70	17.17	14478.90	39.93
2004/05	41,853.50	1570.16	39.50	6445.90	15.71	18885.40	46.03
2005/06	43,465.52	1534.40	35.30	6507.60	14.97	21610.70	49.73
2006/07	52146.40	16707.60	32.04	9343.20	17.92	26095.60	50.04
2007/08	62,067.70	21062.50	33.93	11189.60	18.03	29815.70	48.04
2008/09	81209.18	26792.90	32.99	16220.90	19.97	39700.90	48.99

Sources: Various Economic survey, ministry of Finance, Nepal

Taxes on consumption or the indirect taxes have very important contribution in the tax structure of the developing country like Nepal. In developing countries, it is their characteristics to recognize, most of the tax revenue is contributed by the indirect taxes. In Nepal 69.41 percent of total tax revenue is contributed by indirect taxes on FY 2008/09. In Nepalese context, structure of indirect taxes can be shown in the table 4.4 where it is divided in three categories viz Custom duties, Exercise Duties on industrial product and Value Added Taxes.

In the early year of our study period Custom Duties had domination share (45.91) in the total indirect taxes. Later, its portion on total indirect tax gradually falls down due to the various

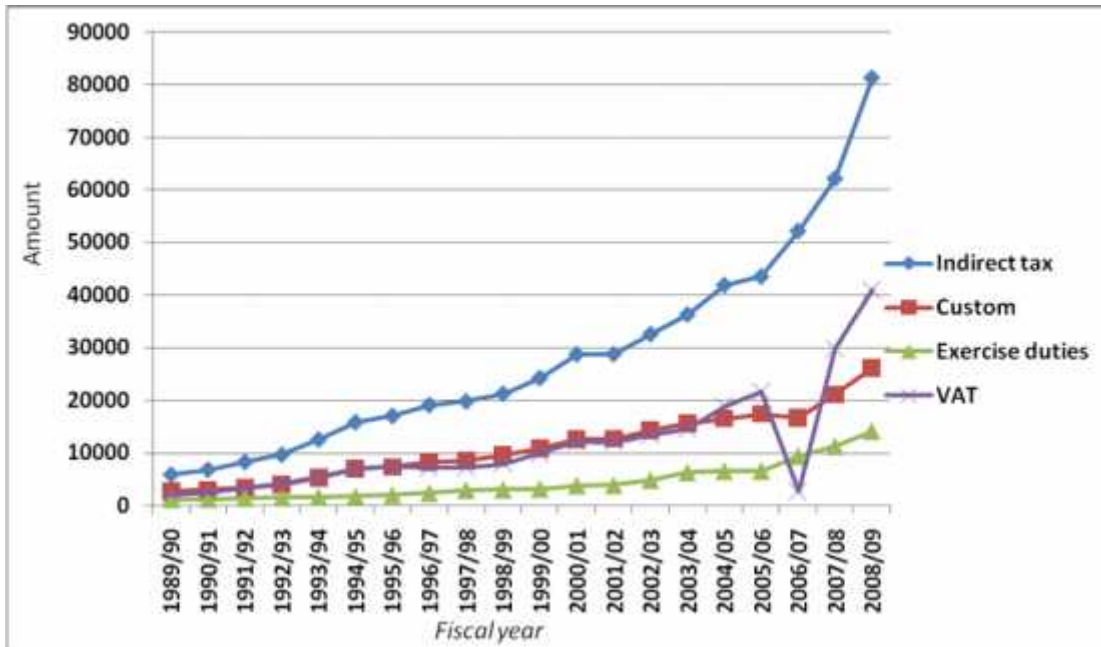
changes in tax bases and tax structure. It reaches 32.99 percent of the total indirect taxes in the FY 2008/09. So far as the magnitude of custom duties is concern it has not satisfactory increment. It reaches to Rs.26792.90 million in FY 2008/09 from Rs. 2684.90 million in FY 1989/90.

Other important contributor of indirect taxes is exercise duty on industrial product. Since, Nepal is not so industrialized; the size of exercise duty is also small in comparison to VAT and custom duty. In the early year of our study period it contributed 18.76 percent in total indirect tax and reaches 19.97percent in FY 2008/09. The total tax amount collected from excise duty was increased continuously during the study period but its contribution percent to total indirect tax revenue was fluctuated.

VAT has been introduced in Nepal in 1997 with a view to effectively mobilizing internal revenues by improving tax system. But it didn't work properly during the five or six years of preliminary stage. It is because of various technical, economic and socio- political reasons. The VAT (sales tax) has become on important source of overall tax revenue with an increasing tread, which contributed 48.99 percent to indirect tax in F/Y.2008/09 as compared with 33.41 percent in F/Y.1989/90.

Figure 4.4

Composition of Indirect tax



By figure it is clearly shown that all the components of income taxes are increasing trend but ratio of increasing is different. Increasing ratio of sales tax (VAT) and custom duties are the same till the 2002/03 and sales tax (VAT) increased than the custom duties.

4.7 Table of Overall Resource Gap Pattern of Nepal:

In overall resource gap, three types of gaps are measured and used in the analysis of resource gap. The overall resource gap pattern is shown in the following table.

Table 4.5**Resource gap pattern of Nepal (1989/90 to 2008/09)****(Rs. In million)**

Fiscal Year	Total exp	Total Rev.	Resource gap	Foreign grants	Resource gap	Foreign loan	Resource gap
	A	B	A-B	C	A-(B+C)II	D	A-(B+C+D)
1989/90	19669.3	9287.8	10381.5	1975.4	8406.1	5959.6	2446.5
1990/91	23549.8	10731.0	12818.8	2164.8	10654.0	6256.7	4397.3
1991/92	26418.2	13513.0	12905.2	1643.8	11261.4	6816.9	4444.5
1992/93	30897.7	15148.0	15749.7	3793.3	11956.4	6920.9	5035.5
1993/94	33587.4	95581.0	14006.4	2393.6	11612.8	9163.6	2449.2
1994/95	39060.0	24605.0	14455.0	3937.1	10517.9	7312.3	3205.6
1995/96	46542.4	27893.0	18649.4	4825.1	13824.3	9463.9	4360.4
1996/97	50723.7	30374.0	20349.7	5988.3	14361.4	9043.6	5317.8
1997/98	56118.3	32938.0	23180.3	5402.6	17777.7	11054.5	6723.2
1998/99	54936.3	37247.0	17689.3	4336.6	13352.7	11852.4	1500.3
1999/00	59,579.00	42,493.60	17085.4	5,711.70	11,373.70	11,812.20	438.50
2000/01	79,835.10	48,464.40	31370.70	6,753.40	24,617.30	12,044.00	12,573.30
2001/02	80,072.20	49,887.52	30184.68	6,686.10	23,498.58	7,698.70	15,799.88
2002/03	84,006.10	55,669.72	283364.4	11,339.10	16,997.28	4,546.40	12,450.88
2003/04	89,442.59	61,630.67	27811.92	11,283.40	16,528.52	7,629.00	8,899.52
2004/05	100,937.30	70,123.14	30814.16	14,391.20	16,422.96	9,266.10	7,156.86
2005/06	126,885.10	72,558.65	54326.45	13,808.00	40,518.45	9,417.00	31,101.45
2006/07	143912.3	85375.8	58536.5	23728.60	34808.70	17367.43	17441.27
2007/08	161349.89	107622.48	53727.41	20,320.73	33406.69	8,979.88	33,406.69
2008/09	236015.90	141722.10	94293.80	34570.42	59723.38	18700.6	41022.78

Resource Gap (A-B)

The gap between revenue and expenditure rose from Rs 10381.5million in FY.1989/90 to Rs 94293.80million in FY 2008/09 which was about two times more than the FY 1989/99. This figure shows the poor performance of domestic resource mobilization. The forecasted data also shows the increasing pattern of resource gap.

Resource Gap A-(B+C)

This is the gap after dedication of foreign grants to domestic gap. It was Rs. 8406.1million in FY 1989/99 was gradually increased to Rs. 17777.7million in FY 1997/98. In F/Y 1997/98, it was decreased to Rs. 13352.7 million because foreign grants were increased as compared to previous year. In FY 2000/01, it was again increased to Rs.24, 617.3 million due to the increment of government expenditure with compare to revenue. Because of the increment in foreign grants, resources gap were decreased to Rs.16, 526.6 million in fy2003/04. Again it was started to increase and reached to Rs.25, 708.3 million 2005/06 because foreign grants had decreased and government expenditure were increased as compared to previous year. The average revenue gap was Rs.19732.46 million. The forecasted data reflects that the revenue gap will increase from Rs.22, 482.8 million to Rs. 59723.38million from Rs.2008/09. This shows foreign grants should be increased to increase for minimizing the revenue gap.

Resource gap A-(B+C+D)

The revenue gap is taken as the different between total expenditure and total revenue after deducting foreign grant and foreign loan. In FY.1989/90 this resource gap was Rs. 2446.5million which was gradually increase to Rs. 5035.5million in FY 1992/93. Again, it was begun to decrease in financial year 1993/94 it was become to Rs. 2449.2million. This gap was fluctuated for the study period. And it was increased to Rs. 41022.78in FY 2008/09. The coverage resource gap was Rs.10, 296.57 million for the study period. It means small proportion of amount of foreign loan will decrease every year in the future.

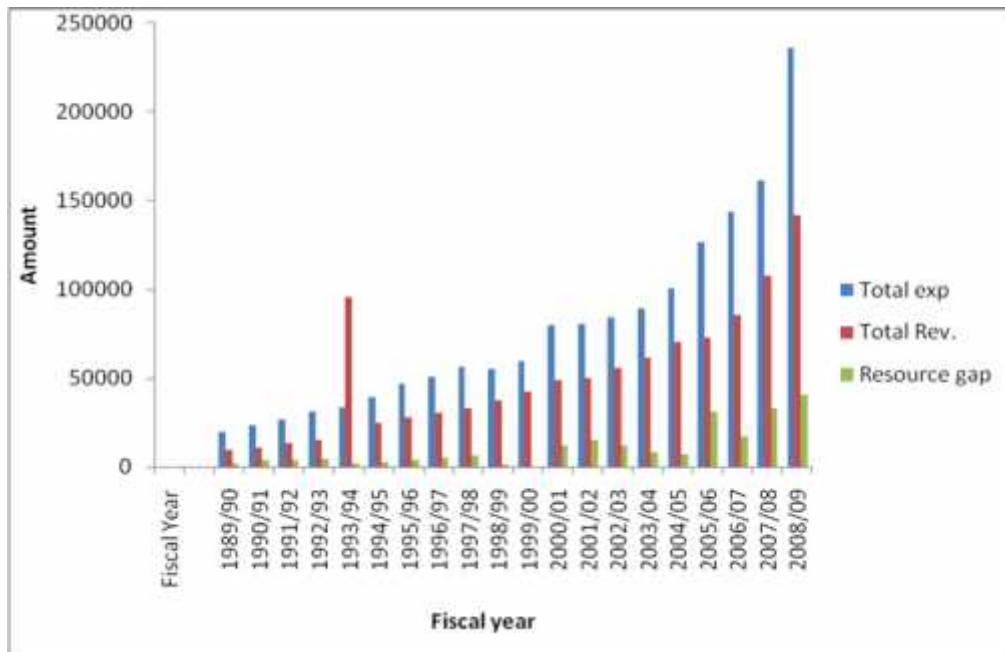
The above analysis shows a clear indication of the serious and growing foreign resource problem in Nepal. The increasing magnitude of resource gap clearly indicates that there is an

urgent need for mobilization additional resources. Income tax has appeared as one of the most effective fiscal policy instrument to mobilize additional resources and for achieving the desired developmental objectives of Nepal.

The overall resource gap pattern is also shown in the following figure.

Figure 4.5

Composition of resource gap



4.8 Tax_ GDP Ratio

Table 4.6
GDP, Total tax revenue, tax effort ratio, Marginal tax rate

Rs in Million

FY	GDP	Total Tax Revenue	Tax effort ratio	Change in TTR	Change in GDP	Marginal Rate
1989/90	99702.00	7283.90	7.31	-	-	-
1990/91	116127.00	8175.80	7.04	891.90	16425.00	5.43
1991/92	144933.00	9875.60	6.81	1699.80	28806.00	5.9
1992/93	165350.00	11662.50	7.05	1786.90	20417.00	8.75
1993/94	191596.00	15371.50	8.02	3709.00	26246.00	14.13
1994/95	209976.00	19660.00	9.36	4288.50	18380.00	23.33
1995/96	239388.00	21668.00	9.05	2008.00	29412.00	6.82
1996/97	269570.00	24424.30	9.06	2756.30	30182.00	9.13
1997/98	289798.00	25939.80	8.95	1515.50	20228.00	7.49
1998/99	330018.00	28752.90	8.71	2813.10	40220.00	6.99
1999/00	366251.00	33152.10	9.05	4000.70	36233.00	11.04
2000/01	413429.00	38,865.00	9.40	5712.90	47178.00	12.10
2001/02	430397.00	39330.60	9.13	465.00	16968.00	2.74
2002/03	460325.00	40896.00	9.60	1565.40	29928.00	5.23
2003/04	500699.00	48173.00	8.89	7277.00	40374.00	18.02
2004/05	548485.00	54104.70	9.87	5931.70	47786.00	12.41
2005/06	611118.00	57430.40	9.39	3325.70	62633.00	5.30
2006/07	675859.00	71126.70	10.52	13696.30	64741.00	21.15
2007/08	755262.00	85,155.50	11.27	14028.00	79403.00	17.66
2008/09	910160.00	117051.90	12.86	31902.40	154898.00	20.59

Sources: Various Economic survey, ministry of Finance, Nepal

Tax GDP ratio of Nepal ranges between 12.86 and 6.81 in 2008/09 and 1991/92 respectively. Which is also called the tax effort ratio of the country. Here, 12.86 tax effort ratios is highest rate and 6.81 is the lowest rate during the study sample period. Subsequently, the magnitude of total revenue increased from Rs.9875.60million to Rs 117051.90 million in the same period. Though there is increment in tax effort ratio from 7.31 to 12.86during the year period of 1989/90 to 2008/09, it is not so smooth growth. It does fluctuate after the year 1998/99 and reaches to 12.86 in the year 2008/09.

Marginal tax rate shows the ratio of change in tax revenue to change in GDP. Here, marginal tax rate for the study period shows fluctuating changes in the tax revenue as well as

GDP. It is seen that there is wide variation in marginal tax rate i.e. 2.74 in 2001/02 to 20.59 in 2008/09. That means, in FY 2001/02 marginal rate doesn't increase sufficiently as GDP increases. But, it is able to increase at high rate in 2008/09 than former year that is because of the betterment of tax administration, wide tax base and development in tax system of Nepal. Tax reform program also plays an important role in increment of marginal tax rate in FY 2008/09. The tax- GDP ratio can sometimes visualized as the simplest measure of tax burden or sacrifice of the tax- payer in national sense.

CHAPTER V

MESSURING RESPONSIVENESS OR PRODUCTIVITY OF MAJOR TEXES IN NEPAL

5.1 Estimation of Elasticity and Buoyancy Coefficient

Tax Revenue may change due to a variety of factors, such as change in income, change in tax rate and tax base, change in efficiency of tax assessment and collection, among others. The responsiveness of tax revenue to such change can be explained with the help of tax elasticity and buoyancy (Timsina; 2005). This study attempts to utilize the time series approach to empirically estimate the tax elasticity and buoyancy in Nepal for the period from FY 1989/90- FY 2008/09 A.D. Both elasticity and buoyancy coefficients are estimated by 'Traditional Method' as well as 'Partitioning approach' with help of statistical software packages.

When the given log linear models from equation (I) to (III) in the chapter three are run, all the estimated equations have been found that their d value is even lower than their R^2 value. This means that, there is strong positive autocorrelation presented in all estimated equations. If the assumption of the classical linear regression model that the error or disturbance u_t entering in the population regression function (PPF) are random or uncorrelated is violated, the problem of serial or autocorrelation arises (Basic Econometrics). As a result, the usual, t , F and R^2 tests may not be valid. There are formal and informal methods of detecting autocorrelation. Among the formal methods: Durbin – Watson d test, asymptotic normality test, Berenblutt- Webb test, and Breusch-godfrey test. Of these, the most popular and routinely used is the Durbin-Watson d test. In this study, Durbin – Watson d test is used to detect the presence of autocorrelation. The Durbin -Watson statistic used to detect the presence of autocorrelation in the residuals from a regression analysis. It is named after James Durbin and Geoffrey Watson. The test statistic d is approximately equal to the $2(1-r)$, where r is the sample autocorrelation of the residuals. The value of d always lies between 0 and 4. If value of d always lies between 0 and 4. If value of $d=2$, indicates no autocorrelation. If it is substantially less than 2, there is evidence of positive serial autocorrelation and the value of d greater than 2 indicates the negatively correlated.

To test for positive autocorrelation at significance α , the test statistics d is compared to lower and upper critical values ($d_{L,\alpha}$ and $d_{U,\alpha}$):

-) If $d < d_{L,\alpha}$, there is statistical evidence that the error terms are positively auto correlated.
-) If $d > d_{U,\alpha}$, there is statistical evidence that the error terms are not positively auto correlated.
-) If $d_{L,\alpha} < d < d_{U,\alpha}$, the test is inconclusive.

To test for negative autocorrelation at significance α , the test statistic $(4-d)$ is compared to lower and upper critical values ($d_{L,\alpha}$ and $d_{U,\alpha}$):

-) If $(4-d) < d_{L,\alpha}$, there is statistical evidence that the error terms are negatively correlated.
-) If $(4-d) > d_{U,\alpha}$, there is statistical evidence that the error terms are not negatively auto correlated.
-) If $d_{L,\alpha} < (4-d) < d_{U,\alpha}$, the test is inconclusive.

The critical values, $d_{L,\alpha}$ and $d_{U,\alpha}$ vary by level of significance (α), the number of observations, and the number of predictors in the regression equation. Their derivation is complex— statistics typically obtain them from the appendices of statistical texts (Wikipedia, the free encyclopedia).

5.2 Analysis of the Result

Table 5.1

Estimation of Elasticity Coefficients

Tax heads (in log)	Independent Variable (in log)	Elasticity Coefficient	R	R ²	S.E	F	T	D-W
TR	GDP	0.71	0.95	0.90	0.007	385.91	19.64	1.04
TxR	GDP	0.56	0.98	0.96	0.007	541.96	23.28	1.15
DT	GDP	0.57	0.95	0.90	0.003	177.07	13.30	0.92
IDT	GDP	0.54	0.98	0.96	0.004	565.44	23.77	1.06
IT	GDP	0.67	0.98	0.96	0.002	427.45	20.67	0.88
VAT	GDP	0.35	0.81	0.66	0.006	35.97	5.99	2.02
CD	GDP	0.48	0.98	0.98	0.001	479.78	21.90	1.48
ExD	GDP	0.45	0.97	0.97	0.001	284.74	16.87	0.45

Source: Calculation based on the data in appendix I

Table 5.2

Estimation of Buoyancy Coefficient

Tax heads(in log)	Independent Variable(in log)	Buoyancy Coefficient	R	R ²	S.E	F	T	D-W
TR	GDP	1.10	0.98	0.97	0.005	596.89	24.43	1.04
TxR	GDP	1.14	0.99	0.98	0.005	790.14	28.11	1.15
NTxR	GDP	1.02	0.99	0.98	0.001	914.37	30.23	1.21
DT	GDP	1.14	0.93	0.86	0.003	117.22	10.2	1.11
IDT	GDP	1.12	0.99	0.98	0.004	968.64	31.12	0.62
IT	GDP	1.42	0.93	0.87	0.002	127.22	11.27	1.39
VAT	GDP	1.14	0.94	0.89	0.006	153.08	12.37	1.28
CD	GDP	1.08	0.69	0.48	0.001	17.05	4.13	1.60
ExD	GDP	1.02	0.95	0.91	0.001	182.84	13.52	0.58

Source: Calculation based on the data in appendix III

5.2.1 Total tax and Total Revenue

Total tax revenue which occupies approximately 80 percent of the total revenue mobilization in Nepal has been assigned electricity coefficient (0.56) which is less than buoyancy (1.14) as illustrated in the Table 5.1 and 5.8 respectively. From these results, it can be easily observed that there is low automatic growth of the tax revenue reflecting an inelastic tax

structure in Nepal. Since elasticity measures the progress of the tax structure and administrative improvement. A low measure of elasticity points out the need of additional efforts to mobilize resources and for adoption of a proper strategy to make the tax system revenue buoyant (Monga; 1984). Requirement of additional efforts suggests, that even with the discretionary changes, it may not be possible to realize the planned target of revenue growth.

During the review period, total revenue has been assigned the elasticity coefficient of 0.71 (Table 5.1) implying that total revenue changes by 7.1 percent as a result of 10 percent change in the nominal GDP (Removing the revenue from discretionary changes). On the other hand, buoyancy of the total revenue is more than unity 1.10 (Table 5.2). The difference between the elasticity and buoyancy of the total revenue is 0.39 which indicates that 10 percent change in nominal GDP results in 3.9 percent change in the total revenue through discretionary changes. It denotes that even after many tax reforms in this period, revenue mobilization heavily depends upon the discretionary measures. During the period if FY 1975- 1994 A.D. such revenue elasticity and buoyancy was 1.10 (Adhikari; 1995). Similarly, such revenue elasticity and buoyancy coefficient were 0.59 and 1.14 respectively in the period of 1975- 2005 (Timsina; 2005). It clearly shows that in the review period, the automatic response of the revenue to the nominal GDP does not improved than the past study period. This shows that the responsiveness of the automatic growth of total revenue over the nominal GDP, further tax reform policy is required.

5.2.2 Direct tax and Indirect tax

In Nepal tax structure is heavily dominated by an indirect tax. It is covered around the amount 80 percent of the total revenue as shown in the table (4.2). But, the large amount of direct taxes on the total revenue signifies the maturity of the economy. For example, the amount of direct tax one half of the tax revenue signify the tax structure of well development countries and one fifth or sixth portion of total taxes signify the least development countries. Nepal, being the least development country, the tax revenue contributed by indirect tax had nearly 80 percent. The elasticity coefficient of direct tax has assigned 0.57 (Table 5.1). It is the less by 0.69 percent than the buoyancy coefficient 1.26 (Table 5.2). This tells that, the 10 percent changed in the nominal GDP brought the 6.9 percent changed in the direct tax by the discretionary measures.

Science the elasticity coefficient even less than half of the buoyancy, then the automatic growth of direct tax also less than half of the discretionary measures of it. These result are significant at 1 percent level with the satisfactory R^2 values 0.95 (Table 5.1) for the 0.99 (Table 5.2) for the buoyancy.

Similarly, the elasticity coefficient of the Indirect tax is 0.54 (Table 5.1). It is also an inelastic in nature. The result is significant at the 1 percent level with the satisfactory R^2 0.98. D-W statistics is 1.06 reflecting the a little auto correlation in the equation. Although, this value accept the null hypothesis of no present auto correlation (either positive auto correlation or negative) in the decision rule of the d test. On the other hand, the buoyancy coefficient of indirect tax is 1.12 (Table 5.2). This is the higher by 0.58 percent the elasticity coefficient, indicates that the 10 percent changed in the nominal GDP brought the 5.8 percent changed in the indirect tax by the discretionary measures. Buoyancy is highly satisfied with the higher satisfactory value of R^2 0.99. DW statistics is 0.61 also reflecting a little auto correlation the equation.

5.2.3 Income Tax

The buoyancy of income tax is (1.42) and the elasticity coefficient of its (0.67) as shown In the Table 5.2 and 5.1 I respectively. The results are significant at 1 percent level with the adjusted R^2 (0.93) for buoyancy and (0.98) for elasticity respectively. And the D-W statistics is 1.39 for the buoyancy and 0.88 for the elasticity coefficients. The results tell that there is also lower natural growth of income tax in the tax revenue than discretionary changes during the review period. The major portion of income tax is received through discretionary measures. Because, in the review period, the buoyancy coefficient of income tax has improved by several types of income are brought into tax net. Many private limited companies, foreign airlines, joint ventures banks and financial institutions were established and their incomes are brought into the tax net. Interest and dividend tax were introduced during the period. It can be observed that most of sources of income, which were exempted earlier, are brought into the tax net today. Moreover, the income tax rates are frequently changed through the annual budget. These developments in tax structure may lead the improvement in income tax buoyancy in the review period. However, the elasticity coefficient improved very slowly and even income tax is also an inelastic in Nepal.

5.3.4 Value Added Tax (VAT)

Prior to 1778 A.D. the VAT wasn't existent. However, sales tax, contract tax, entertainment tax, air flight tax and hotel tax were present. Therefore, the sum of their taxes is treated as VAT up to that time. From the empirical results, the elasticity and buoyancy coefficient of VAT are (0.35) and (1.14) respectively during the review period as illustrated in the appendixes I and II. These results are significant at 1 percent with adjusted R^2 is (0.89) and (0.98) respectively. Here, the elasticity coefficient is just half of the buoyancy coefficient. It implies that the tax revenue contributed by the VAT is more by discretionary measures than the automatic growth. In the period 1975 – 1996 (prior to the introduction of the (VAT), such coefficients (the sum of sale, contract tax, hotel tax and entertainment tax) were 0.82 and 1.04 respectively (Timsina; 2005).

5.5.5 Custom Duties

The elasticity coefficient of custom tax is (0.48) as illustrated and Table 5.1. This is less half of the buoyancy coefficient (1.08) as shown in the Table 5.2. On the other hand, buoyancy coefficient is higher by 0.60 (1.08-0.48) than the elasticity of custom duties. It means that, 6 percent change in custom tax through discretionary measures was due to 10 percent change in nominal GDP. This shows that, the custom tax in Nepal is inelastic. The elasticity result are significant at 1 percent level with adjusted R^2 (0.98) and DW statistics (1.48) reflecting no auto correlation or serial correlation between the disturbance and residuals terms of time series data custom duties and nominal GDP. And the buoyancy results at significant at 1 percent level with quite high adjusted R^2 (0.48) and DW statistics is (1.60) as illustrated in the Table 5.2, showing the optimum level of d test for no autocorrelation or serial correlation.

5.5.6 Exercise Duties

The elasticity coefficient of Exercise tax is (0.45) as illustrated an Table 5.1. This is less half of the buoyancy coefficient (1.02) as shown in the Table 5.2. On the other hand, buoyancy coefficient is higher by 0.57 (1.02-0.45) than the elasticity of Exercise duties. It means that, 5.7 percent change in exercise tax through discretionary measures was due to 10 percent change in nominal GDP. This shows that, the exercise tax in Nepal is inelastic. The elasticity result are

significant at 1 percent level with adjusted R^2 (0.94) and DW statistics (0.45) reflecting no auto correlation or serial correlation between the disturbance and residuals terms of time series data exercise duties and nominal GDP. And the buoyancy results at significant at 1 percent level with quite high adjusted R^2 (0.95) and DW statistics is (0.58) as illustrated in the Table 5.2, showing the optimum level of d test for no autocorrelation or serial correlation.

CHAPTER VI

PROBLEM AND PROSPECTS OF NEPALESE TAX SYSTEM

6.1 Problem and prospects of Nepalese Tax system

The history of taxation of in Nepal dates back to antiquity. Nevertheless, the modern tax system gained its momentum with the established of democracy, and implementation of the first consolidated budget took place in 1951.

Until the late 1950s, the two major sources of revenue were land tax and tariff on foreign trade. After 1959, however, sales and property taxes, as well as several other minor taxes, were introduced. An import –Export tax and various business taxes, such as a sales tax, were the principal sources of revenue. The land tax, which accounted for a considerable portion of revenue prior of 1960, no longer provided an important source of revenue. Income tax on individual incomes accounted for less than 7 percent of revenues. Most of the other taxes were progressive in nature. VAT was introduced in 1997, in the place of the sales tax, hotel tax, entertainment tax, Air flight tax and contact tax. Until now several new taxes were include in the Nepalese tax family after 1951, a few taxes were abolished and some of the abolished taxes were restarted over the year (J.B.R Shumsher; 2009).

The total tax revenue / GDP ratio or tax effort ratio in Nepal for period of FY 2009/10 is estimated to be 14.8 percent of GDP, which is the lowest in the world (economic survey, 2008). The marginal tax rate went up from 5.43 percent to 20.59 percent over a period of years between FY 1989/90 to FY 2008/09 (Table 4.6 In chapter four). During the period of FY 1989/90 to FY 2008/09, the tax revenue to GDP ratio increased steadily from 7.31 percent to 12.86 percent (Table 4.6). This shows that the revenue of Nepal increasing very slowly with comparison of growth rate GDP. It is difficult to run along the rapid growth of government expenditure in course of revenue collection. For the prosperous development of the nation , it is needed a huge amount of revenue for spending on various sector of the economy and good tax system only able to meet the running step of the government expenditure for achieving national objectives . Good tax system includes the good performance in various sector of the tax system. That means, it

should be administratively feasible, it should collect huge amount of revenue, it should spread its burden equitable and it should avoid misallocation of resources (Bhatta; 2009)

Nepal's tax structure is composed of three categories of revenues. These are (a) Direct taxes (b) Indirect taxes and (c) Non-taxes. The tax structure is heavily dominated by indirect taxes that still contribute around 80 percent of the total revenue (table, 4.2) and the remaining is covered by the direct taxes. The major components of direct taxes comprised of income tax, house and registration fees. The premium indirect taxes constitute custom duties, value added tax and excise duties.

The total revenue elasticity is found to be (0.71) as illustrated in the Table 5.1. This is less than the one for the period FY 1989/90. This is less than the one for the period FY 1989/90–FY2008/09 Indicating poor responsiveness with respect to GDP. Also, many past researchers found that the tax system of Nepal is an inelastic. Such as total revenue was found 0.59 for the FY1975to 1994(Adhikari; 1995), it was also remained 0.59 for the FY 1975 the low tax elasticity for total revenue signifies that the government has concentrated more in introducing discretionary measures rather than broadening the tax base which is not conducive to supplement growing development activities. This also suggests that the Nepalese tax system is regressive in nature, which does not lead the overall economy towards short run stability as well as in the long run development. This can be mainly attributed to the reasons, given the existing tax structure, automatic growth in total revenue is insignificant and heavy reliance on indirect taxes like customs, sales and excises which have low elasticity will lead to revenue reduction . An efficient tax system is the promotion of strong and self sustaining tax structure that obtained in the elastic system. Elasticity in the tax system is that it is a crucial determinant to siphon-off automatically an increasing portion of national income to the public exchequer without additional effort.

The governments in the past and present mobilized revenues through a series of tax reforms during the Tenth plan and Three year interim development plan. This reform comprised of: a, Streamlining and rationalization of the tax rates in conformity with provisions envisaged by WTO,SAFTA and BIMSTEC; (b)expanding the base through minimizing a number of tax shelters and introducing new tax imposts;(c) reforming tax laws and regulations; (d)and improving efficiency of tax administrations (J.B.R Shumsher; 2009). With these tax reform

programs , the tax elasticity of Nepali tax system is going on very slowly progressive , which is not sufficient for revenue collection to require the national develop expenditure and even not sufficient to meet the regular expenditure of the nation . This shows that the further valid reforms tax system of Nepal is essential to make elastic tax system.

The tax system in Nepal is circumscribed by serious structural constraints with tremendous administrative and procedural complexities envisaged in the existing Income Tax Act that it lacks simplicity and transparency. Tax payers are often unaware about the specific size of the tax they are not comply with , because tax is determined arbitrarily between tax payers and the tax officials resulting in enormous corruption.

The major issues and problems of taxation in Nepal include: a) marginally high tax rate (b) limited tax base (base eroded due to prevalence of a number of tax shelters e.g. no tax on income from agriculture, because this is a subsistence sector, relatively blanket exemptions, concessions and deductions provided to industrial sector), (c) leakages in the tax collection (d) rigid and complex Income Tax Act 2000. (e) inefficient, indifferent and corrupt tax administration (f) no consolidated record of property of land and building with the Internal Revenue Department (g) aphorism and arbitration in the tax settlement (h) low elasticity of taxation (I) limited potentialities of direct taxes (j) negative responsiveness of land tax with higher administrative costs (J.B.R Shumshere; 2009).

As a result, it is imperative to vehemently concentrate on these issues as soon as possible to rectify the modality of the tax structure and mobilize additional resources on a greater quantum by establishing an effective, dynamic and highly power driven Autonomous Revenue Board under the chairmanship of Finance Minister.

CHAPTER VII

SUMMARY, CONCLUSION AND RECOMMENDATIONS

7.1 Summary

In the developing countries like Nepal, Lack of sufficient financial resources is the main constraints for national economic development. A lot of fund is required to meet the additional financial requirements for the development activities of the country. Nepal has been suffering from shortage of capital to accelerate the economic growth. The expenditure of Nepalese government is increasing year by year. To meet the additional capital requirement Nepalese government has been using external and internal resources. Internal resources are preferable for sustainable economic development. Nepal has been unable for proper mobilization of internal resources. Thus, fiscal deficit and resource gap of Nepal have been increasing every year.

To solve this problem income tax is the most important source for internal resource generation in which taxation occupies the major portion. Regarding this fact, this study attempt to analyze the importance and contribution of tax to the Nepalese government revenue. After identify introduction about it, review of literature has been observed to address core elements like income tax and its development.

The study with help of secondary sources of data, such as- budget speech of various years, economics survey on various issues, Ministry of Finance (MOF), Nepal, various issues of quarterly economic bulletin and various publication of CBS, NRB and WB, has measured the responsiveness and productivity of Nepalese taxation for the period of FY 1989/90 to FY 2007/08 in Nepal. Also study showed the tax structure of Nepal for same period. Nepal, being process of economic development needs higher government expenditure to meet the purposed development programs. This ultimately creates the resource gap. On the other hand, foreign aid, loan and grant as well as domestic borrowing are not considered as the permanent solution to fulfilling the resource gap between expenditure and revenue. In this connection, the share of non-tax revenue is very low and to raise the revenue from these sources, one needs higher capital accumulation in comparison to its return and government equally thinks about the welfare view. These facts justify that the ultimate and permanent solution to bridge up this gap only by

taxation. The raise on tax rate is not only its solution. Therefore, the improvement in tax structure is required (Dahal Sunil; 2006).

The overall trend of revenue from taxation in Nepal has been shown that the contribution of tax revenue to GDP has been increasing from 7.31 percent in FY 1989/90 to 12.86 percent in FY 2008/09 with some steady rate (table 4.6). However, this ratio is seemed to be minimal as asserted by Sir Arthur Lewis that this less than 10 percent tax- GDP ratio in UDCs would have to be raised to at least 17 percent in order to satisfy the minimal requirement of a modern state (Dahal Sunil; 2006). In terms of tax revenue ratio the contribution of total tax revenue from direct tax has continuously declined and indirect taxes have continuously risen. In the total revenue, the share of tax revenue has been dominated role over the study period. The indirect tax has been exceeding the contribution to the total tax revenue over the period. Although indirect tax is considered regressive in nature, the structure in Nepal is not justifiable on equity ground and progressiveness. Regarding elasticity and buoyancy, the analysis of elasticity coefficient of overall taxes are less than unity means that is inelastic in nature. In fact, the inelastic nature of tax system in developing countries is an inherent characteristic resulting from heavy reliance on indirect taxes. The export and import duties are based on the pattern of Nepalese people are not so good because of more than 32 percent of the total population are below poverty line (NLSS, 2003/04). Without increase in consumption capacity, import revenue could not be maximized. If the base of export duties is expanded, perhaps the present level of negative elasticity could be reduced. Exercise duties would become more response to income only when industrialization of the country takes momentum. Therefore, inelasticity of exercise duties would be reduced with growth of industrialization. As the corporate income tax has been separated from individual income tax since 1989/90, corporate income tax collection has been increasing continuously except few year. Major finding of this study are summarized as follows:

- a. In Nepal, until the FY 2008/09, Tax- GDP ratio is 12.86 percent (table 4.6). This is less than one half of the tax effort –ratio of developing economies indicating that Nepal is one of the lower tax revenue countries.
- b. Around the 80 percent of tax revenue is contributed through the indirect taxes (table 4.2) implying that tax policy of Nepal is not from equity and welfare ground. However, it is also regressive in Nature.

- c. The share of direct taxes in the total tax revenue is declining. It is nothing due to lack of appropriate tax policies, lack of administrative competence to implement the policies, and the high exemption limits of the income to make it taxable.
- d. Major components of indirect taxes are Vat, exercise duties and customs duties. In which, share of VAT is increasing from beginning period of the study until last period with relatively higher elasticity, except some fiscal years. Instead of that, the share of custom duties and exercise duties are remain below the beginning period of the study with relatively lower elasticity coefficient
- e. There is wide difference between elasticity and buoyancy estimates of almost all taxes suggesting that increase in revenue productivity has come through new tax measures with upward revision of rates having narrow base.
- f. All the major taxes taken in study are inelastic, in Nepal. It means that, elasticity coefficients of major taxes are less unity.
- g. The buoyancy coefficients of major taxes taken in this study are greater than unity. It indicates that, the responsiveness and productivity of major taxes yield is highly dominated by the discretionary measures than the natural growth trend in Nepal.
- h. The highest elasticity coefficients in this study is 0.71 of total revenue , followed by 0.6 7of Income tax, 0.57 of the Direct tax, 0.56of the Total tax revenue, 0.54of the indirect tax, 0.48 of custom duties, 0.45of the exercise duties and 0.35of VAT respectively. It shows that, the natural growth rate of the Total tax is highest compared to the other taxes in the study.
- i. The highest coefficients is also1.42 of the income tax followed by 1.26 of direct tax, 1.14 of total tax revenue,1.14 of VAT, 1.12 of indirect tax,1.10 of total revenue,1.08 of custom duties and 1.02 of exercise duties respectively.
- j. All the results of the major taxes in the study are significant at one percent level with higher adjusted R² and D.W statistics showed on the serial correlation.
- k. The results obtained by the applied both traditional method and partitioning approaches are remained closer with each others.

7.2 Conclusion

Nepal is one of the least developed country surrounded by the two highly growing Asian economies, India and Republic of China. Nepalese economy is suffering from ineffective, effortless and over ambitious plans, programs and policies. Moreover, Nepal is even today fighting against whatever bottleneck identified before the starting of planned period. With the change in the time, challenges for Nepalese economy also increase. Apart from other economic problems, Nepal has to face the following problems: low responsiveness or productivity of tax

yields, indirect tax dominated tax structure, low tax effort ratio, narrow tax bases, weak tax administration, rigid and complex tax laws and procedures, lack of the strong commitment of policy maker and administrator to implement sound tax policy and most importantly lack of political instability (Bhhata; 2009)

A time series analysis of tax elasticity and buoyancy reveals an inelastic tax structure in Nepal for the period FY1989/90–2008/09 A.D. taxes aren't responsive to change in income with most elasticity coefficients reporting below unity. The tax system isn't progressive adequately also in the case of proxy bases. A progressive tax system needs to have at least greater than unitary value of the coefficients of elasticity, (Adhikari; 1995) and a higher degree of progressively in the tax structure would result in an elasticity greater than two (Dahal; 1984). The low built in flexibility (elasticity) observed in Nepalese tax system is explained through a variety of factors such as exemptions, tax incentives, duty Waivers, low compliance and the large sectors of the economy which aren't subject to taxation. Therefore, the automatic response of the tax to income is low (Timsina; 2005). Compared to the several previous studies the elasticity coefficients of major taxes during the review period didn't reveal significant differences. However, the higher coefficients obtained through the sensitivity (buoyancy) analysis focus on the role of discretionary measures in maintaining a steady source of tax revenue throughout the review period.

7.3 Recommendation

The targeted average revenue growth mentioned in the three year interim plan (TYIP) of FY2007/08-2009/10 A.D., the target revenue collection in the every fiscal year's Budget speech could be achieved only with the rigorous efforts of the fiscal authorities to improve the overall tax system as well as revenue administration. Similarly, Nepalese tax structure is highly dominated by a direct taxes as well as tax system also seemed to an elastic in nature. The major recommendations on these regard are as follows:

- a. The present Nepalese tax structure is heavily depends on the indirect taxes. Around the 80 percent share of indirect tax to the total tax revenue over the study period have mentioned in the results (table, 4.2). The inelastic nature of the tax revenue is due to the slanginess of the direct taxes as there are sample scope for the tax evasion and avoidance. So, the effective way for the more revenue generation from direct taxes is to make them progressive with supported by competent tax administration.

- b. Sound administration capacity is one of the major bottlenecks that are to be overcome for increasing the built-in flexibility (elastic) of Nepal's tax system. Thus, personnel concerning tax assessment and collection should be well-prepared, well-trained and well remunerated. Reward should be given for honesty and severe punishment for corruption without discriminating politically and without giving unnecessary political protection for the corrupt officials. At the same time tax evaders should be punished accordingly.
- c. The absence of progressive tax structure creates disparity in the distribution of income and wealth is widening. Therefore progressive direct taxes like income tax, property tax are considered as an effective measure to reduce the inequality in the distribution of income and wealth. So, prudent wealth tax should be imposed on unproductive accumulation of wealth giving tax free for productive investment.
- d. To understand in detail, how the present system really works, much publicity should be given about the tax laws, tax structure and implication of the tax revenue known to general people.
- e. As the study reveals that import tax isn't responsive to changes in the value of imports, the need for enhancing the efficiency of the customs administration to control the revenue leakage is highly felt. Improvement in the customs valuation, discouraging the over-invoicing and under invoicing, penalizing the wrong declaration of the imported goods and miss-utilization of pass books facility at customs points checking the use of duplicate documents minimizing LC related frauds, enhancing the ASYCYDA (automated system for custom's data), and enhancing the activities of customs patrolling group are some of the major mechanisms of enhancing the customs reforms. .

Last but not least, tax is the back bone of development in one side and life blood of nation in another. Knowing this genuine truth, political party should not interfere to the smooth operation and should change their culture.

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APPENDIX I

ACTUAL REVENUE SERIES

Fiscal year	GDP	Tax revenue	Total revenue	Non-revenue	tax	Direct tax	Indirect tax	Income tax	VAT	Custom	Exercise duties
1989/90	99702.00	19660.00	7283.90	2002.89		1435.10	5848.80	983.40	1650.10	2684.90	1452.80
1990/91	116127.00	21668.00	8175.80	2553.60		1368.50	6806.60	829.80	2026.01	3044.30	1592.50
1991/92	144933.00	24424.30	9875.60	3637.10		1595.20	8280.40	949.10	2840.70	3358.90	1657.30
1992/93	165350.00	25939.80	11662.50	3485.90		2036.20	9626.30	1281.30	3438.20	3945.00	1944.30
1993/94	191596.00	28752.90	15371.50	4209.40		2855.30	12516.20	2022.10	4693.10	5255.00	2298.15
1994/95	209976.00	33152.10	19660.00	4945.10		3849.30	15810.70	2911.60	6031.70	7018.10	2885.80
1995/96	239388.00	38865.00	21668.00	6225.10		4655.90	17012.10	3589.30	7126.50	7327.40	2953.20
1996/97	269570.00	39330.60	24424.30	5949.10		5340.00	19084.30	4324.60	7126.50	8309.10	3127.60
1997/98	289798.00	40896.00	25939.80	6998.10		6187.90	19751.90	5183.70	7122.60	8502.20	3771.20
1998/99	330018.00	48173.00	28752.90	8494.40		7516.10	21236.80	6512.90	8765.90	9517.70	3807.00
1999/00	366251.00	54104.70	33152.10	9740.00		8553.00	24200.60	7935.60	10259.70	10813.30	3771.20
2000/01	413429.00	57430.40	38,865.00	10028.60		1435.10	5848.80	9546.50	1650.10	12552.10	6226.70
2001/02	430397.00	19660.00	39330.60	11115.00		1368.50	6806.60	9465.70	2026.01	12650.00	6445.90
2002/03	460325.00	21668.00	40896.00	13642.90		1595.20	8280.40	1027.41	2840.70	1283.20	6507.60

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2003/04	500699.0 0	24424.30	48173.00	14157.70	2036.20	9626.30	10215.10	3438.20	15554.80	9343.20
2004/05	548485.0 0	25939.80	7283.90	16018.00	2855.30	12516.20	11272.60	4693.10	1570.16	11189.60
2005/06	611118.0 0	28752.90	8175.80	14851.60	3849.30	15810.70	11787.00	6031.70	1534.40	16220.90
2006/07	675859.0 0	33152.10	9875.60	16585.50	4655.90	17012.10	16726.80	7126.50	16707.60	1452.80
2007/08	755262.0 0	38865.00	11662.50	22467.00	5340.00	19084.30	20147.02	7126.50	21062.50	1592.50
2008/09	910160.0 0	39330.60	15371.50	26422.60	6187.90	19751.90	29097.40	7122.60	26792.90	1657.30

Sources: Economic Survey of MOF, Various Issues of Budget Speech of MOF,

APPENDIX II

DISCRETIONAY CHANGES IN THE ACTUAL REVENUE SERIES

Rs in Millions

FY	Tax revenue	Total revenue	Direct tax	Indirect tax	Income tax	VAT	Custom Duties	Exercise duties
1989/90	533.50	546.32	26.00	510.11	35.51	78.39	247.71	107.75
1990/91	495.40	526.02	0.00	509.28	-71.69	289.77	312.91	24.29
1991/92	330.70	538.05	20.21	311.49	0.00	142.01	40.91	4.50
1992/93	538.80	623.72	70.80	462.58	18.14	206.79	184.77	42.74
1993/94	1502.90	806.21	445.23	1077.81	85.71	0.00	165.11	73.15
1994/95	522.50	603.79	307.83	441.38	93.52	167.25	221.45	-15.36
1995/96	914.30	965.38	595.88	719.42	257.36	133.04	293.45	171.87
1996/97	2284.40	2769.49	350.54	1934.30	273.69	1151.36	307.06	346.12
1997/98	1533.90	195.70	391.90	1146.85	391.85	588.52	167.93	369.96
1998/99	4517.90	5060.21	1800.07	2815.73	1601.21	1660.28	460.11	352.60
1999/00	2229.00	2823.11	312.32	1888.34	304.61	1441.67	298.14	134.35
2000/01	3986.19	4666.42	968.57	3019.11	889.81	1811.63	891.77	193.59
2001/02	1646.85	3102.11	374.83	1270.03	271.75	565.27	142.33	556.47
2002/03	1966.26	2307.73	470.12	1496.1	420.51	686.2	209.51	435.49
2003/04	3134.16	5007.25	687.43	2432.55	601.66	280.17	688.07	142.20
2004/05	3276.63	4043.99	1461.99	1841.66	1403.57	1279.65	406.16	252.08
2005/06	2812.34	3583.95	778.26	2036.70	784.71	1096.64	276.92	618.51
2006/07	3697.21	4675.84	1147.31	2544.8	1182.42	1012.27	720.20	921.36
2007/08	3871.66	4216.25	1531.74	2360.37	1105.50	894.82	576.90	907.34
2008/09	4058.00	4425.32	1752.67	2631.54	2465.30	457.32	160.00	572.90

Article I. Sources: Various Issues of Budget Speech of MOF, Nepal, Various Issues of Unpublished M.A. Thesis of Economics, T.U. Kirtipur, Kathmandu, Nepal.

Appendix III

ADJUSTED REVENUE SERIES

Rs in millions

FY	Total Tax Revenue	Total revenue	Direct tax	Indirect tax	Income tax	VAT	Custom	Exercise duties
1989/90	7283.90	9287.50	1435.10	5848.80	983.40	1953.80	2684.90	1097.00
1990/91	7680.4	10203.98	1368.50	6297.32	901.49	2064.63	2731.39	1175.71
1991/92	8966.54	12338.13	1574.99	7372.66	1031.09	2754.93	2976.94	1381.26
1992/93	10099.75	13262.14	1940.49	8159.14	1372.28	3188.95	3332.63	1377.11
1993/94	12010.24	16436.71	2296.78	9695.04	2073.88	4281.53	4299.82	1440.19
1994/95	14952.74	20122.42	2848.72	11905.06	2890.25	4527.44	5561.25	1512.68
1995/96	15784.57	22048.68	3004.67	12267.97	3307.50	4817.39	5573.80	1617.76
1996/97	16128.34	21820.08	3219.93	12367.41	3732.86	3874.46	6086.98	1624.19
1997/98	16116.18	23521.81	3494.89	12056.83	4136.17	3552.37	6105.41	1778.03
1998/99	15057.02	22988.27	3228.38	11244.47	3919.12	3103.15	6504.23	1602.30
1999/00	15984.80	24481.38	3539.60	11813.90	4591.92	3112.21	7154.65	1624.02
2000/01	16812.50	25232.85	3625.89	12539.31	5009.17	3232.61	7715.08	1857.68
2001/02	16239.42	24358.68	3601.47	11996.50	4824.18	3058.45	7693.18	1601.19
2002/03	16778.90	26055.16	3229.85	12966.80	4215.29	3265.38	8524.61	1829.40
2003/04	17701.95	26501.52	3588.34	13474.53	4662.42	3444.67	8902.04	2326.17
2004/05	18953.17	28414.39	3452.99	14868.58	4504.55	4188.57	9217.95	2313.88
2005/06	19538.90	27949.03	3715.54	14717.72	4396.53	4550.30	9494.48	2115.68
2006/07	22088.32	30734.46	4758.85	16795.43	5798.02	336.29	8733.36	2736.04
2007/08	25674.01	36649.86	5404.65	19230.67	6600.37	3726.93	10707.79	3011.02
2008/09	34050.52	46780.76	7967.24	24230.26	8066.32	5031.35	1306.35	3613.22

Source: Computed values by using Sahota's Proportional Adjustment Method