AN ANALYSIS OF TAX STRUCTURE AND RESPONSIVENESS OF TAX YIELDS IN NEPAL

A Dissertation

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By

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LETTER OF RECOMMENDATION

We certify that this dissertation entitled *"An Analysis of Tax Structure and Responsiveness of Tax Yields in Nepal"* was prepared by Mr. **Ashok Shumshere JBR** under our guidance. We hereby recommend this dissertation for final examination by the Research Committee of the Faculty of Humanities and Social Sciences, Tribhuvan University, in fulfillment of the requirements for the Degree of DOCTOR OF PHILOSOPHY in ECONOMICS.

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ABSTRACT

After the great depression of 1930, the role of public expenditure came into lime light. It was Keynes who strongly favored the government intervention and need for expanding public expenditure. The present state is welfare state. Hence, the government has to be involved actively in overall development activities. In this context public expenditure plays a decisive role in development. It is obvious that the Government needs adequate revenue to undertake these functions. But developing economies are confronting with increasingly acute problem of resource gap. In a broad framework resource gap could be defined as the difference between total Government expenditure and Total Revenue This situation is likely to continue in future, for revenue potential is extremely limited due to diminutive tax base, low tax elasticity, poor voluntary compliance, and inefficient, indifferent and corrupt tax administration. Nepal's tax system lacks simplicity and transparency. With the changing functions of taxation in a developing economy like Nepal where ther are no discovered mineral resources, no direct access to the sea for the expansion and diversification of international trade, insignificant industrial development and where the agricultural sector is largely at the subsistence level, taxation has a significant role to play in the acceleration of economic development. Therefore there is a big challenge for developing appropriate strategy for taxation ensuring effective resource mobilization for reducing acute resource gap.

The major objectives of the study are to:

i. Examine the trends of Resource gap in Nepal;

ii. Analyze the structure of taxation in Nepal by assessing the performance of individual taxes for the period 1963/64-2001/02;

iii. Measure the productivity and responsiveness of tax yields by estimating elasticity and buoyancy coefficients and make comparison between pre and post-liberalization period;

iv. Examine critically the major crosscutting issues and options of taxation and recommend appropriate tax policies

The methodology is given as follows:

The study primarily deals with structural analysis of the tax system in Nepal from 1963-1964 to 2001- 2002 a period of thirty nine years. Several major sources of tax and Non-tax revenues have been considered and grouped into direct and indirect taxes on the basis of conventional tax classification. The sources of data are taken from various economic surveys.

In the study secondary sources have been used. Available data have been classified and made up-to-date. There is a master table comprising the composition and magnitude of total revenue, which covers the period 1963-64 to 2001-02. The share of important taxes in *GDP* has been calculated. A separate table, consisting of the contribution of individual taxes to the total revenue has been given separately. And adjusted revenue series have been prepared for total and the individual taxes. Calculation of Resource gap has been done. Similarly calculation of individual tax effort ratio has been done. Measured, Productivity and Responsiveness of taxes by estimating Elasticity and Buoyancy co-efficient.

Summary of the Findings is given below:

Nepal, being in the process of economic development needs higher government expenditure to meet the purposed development programs. This ultimately creates resource gap. On the other hand, foreign aid, loan and grant as well as domestic borrowing are not considered as the permanent solution in fulfilling the resource gap between expenditure and revenue. In this connection, the share of non tax revenue is very low. These facts justify that the ultimate solution to bridge up the gap is only by taxation. Raising the tax rate is not only its solution. Therefore, improvement in tax structure is required. The overall trends of revenue from taxation in Nepal shows that the contribution of tax revenue to GDP has been increasing from 6.41 pc in 1975/76 to 11.97 pc in 2001/02 with some steady rates. . At the same time, share of direct tax to GDP increased from 1.4 percent in 1972/73 to 2.5 percents in2001/02, but share of indirect tax heightened to 7.7 percent from 3.94 percent during the same period.

In terms of tax revenue ratio the contribution of direct tax to total tax revenue has

continuously declined and indirect taxes have continuously risen. The indirect tax has been exceeding the contribution to the total tax revenue over the period. In the total revenue, the share of total tax revenue has been playing a dominant role over the study period. Though indirect tax is considered regressive in nature, the structure of taxation in Nepal is not justifiable on equity ground and progressiveness. Regarding elasticity and buoyancy, the elasticity coefficient of overall taxes are les than unity which is inelastic in nature. Except land tax and excise duties have negative elasticity. In fact the inelastic nature of tax system in developing countries is an inherent characteristics resulting from heavy reliance on indirect taxes. The import and export duties are based on the pattern of Nepalese people which does not reflect good scenario because more than 38pc are below poverty line. 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. Excise duties would be more responsive to income only when industrialization of the country takes momentum. Therefore, inelasticity of excise duties would be reduced with the growth of industrialization.

This vulnerability of Nepal's tax system in its built-in-flexibility is due to the sluggishness of direct taxes in general and due to negative responsiveness of land tax in particular. The receding share of direct tax is due to exclusion of the agricultural income into the orbit of direct tax net. Land holdings in Nepal is considered as the social status and taxing the agriculture income is becoming political matter rather than economic. In this sense, none of the government was bold enough to take necessary measures in order to tax agricultural income. Besides these major findings are as follows:

(a) In Nepal tax-GDP ratio is 11.9 percent which is one half less than the tax effort ratio of developing economies indicating that Nepal is one of the low taxed countries.

(b) More than 60 percent of total tax revenue is contributed through indirect taxes implying regressive tax of the country.

(c) Share of direct taxes is declining 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 sales tax/vat, excise duties and custom duties in which the share of sales tax is increasing with relatively

higher elasticity but comparatively the share of customs and excise duties are declining with relatively low elasticity co-efficient.

(e) Share of non-tax revenue is increasing with high responsiveness implying the importance of user charges in under developed countries like Nepal.

(f) 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.

ACRONYMS

ASYCUDA	=	Automated system for custom data and accounts
ASEAN	=	Association of Southeast Asian Nations
ADB	=	Asian Development Bank
BOP	=	Balance of Payment
BIMSTEC	=	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
CIAA	=	Commission for Investigation of Abuse of Authority
CBS	=	Central Bureau of Statistics
DANIDA	=	Danish International Development Agency
FNCCI	=	Conference of the Federation of Nepalese Chamber Of Commerce and Industry
GATT	=	General Agreement on Tariff and Trade
GDP	=	Gross Domestic Product
GTZ	=	German Technical Co-operation
GNP	=	Gross National Product
GON	=	Government of Nepal
HMG	=	His Majesty's Government
IT	=	Information Technology
ITAC	=	Income Tax Administration Consolidation
IMF	=	International Monetary Fund
IDS	=	Integrated Development System
LAFC	=	Local Authority Fiscal Commission
LDC	=	Local Development Committee
LSGA	=	Local Self Governance Act
MLD	=	Ministry of Local Development
MOF	=	Ministry of Finance

NRB	=	Nepal Rastra Bank
NPC	=	Nepal Planning Commission
SAARC	=	South Asian Association for Regional Co-operation
SAFTA	=	South Asian For technical Co-operation
SAP	=	Structural Adjustment Programme
SMC	=	Social Marginal Cost
UDC	=	Under Developed Country
UNCTAD	=	United Nations Conference on Trade and Development
UNDP	=	United Nation Development Programme
VDC	=	Village Development Committee
VAT	=	Value Added Tax
WTO	=	World Trade Organization

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CHAPTER I
INTRODUCTION

1.1 Introduction

The subject of taxation has undergone an extensive metamorphosis since last several years. With the advent of supply side economics the role of taxation has become even more crucial. Taxation is not only an effective instrument for resource mobilization – a 'boot-strap' operation for financing economic development – but also a 'toolkit' for revenue collection to maintain growth, equity and stability. If blood circulation is desirable to keep the human body alive so is taxation to keep the economy alive. The laws of blood circulation and of taxes are tantamount to each other.

In developing economies resource gap is critical and widening resulting to huge fiscal and budgetary deficits. The growing resource gap is frequently off-set by mobilizing internal and external borrowings and consequently shifting the burden of debt to posterity. Therefore, revenue mobilization is challenging proposition in developing economies where a majority of the people live in abject poverty and the people engaged in economic activities have extremely limited taxable capacity. In addition, legal base of taxation is compressed with unlimited tax shelters and tax administration lacks innovative mechanism to identify new taxpayers and bring them into tax-net. In developing economies unsanctioned economic activities have greatly increased over the years resulting to poor voluntary compliance due to indifferent attitude of the taxpayers towards government spending. Thus, interface between diminishing efficiency of tax administration and delinquency on the part of taxpayers is becoming critical.

With the changing function taxation plays a critical role in the acceleration of economic development. According to 'theory of tax structure change during economic development' the share of direct taxes will increase with rise in per capita income, while the contribution of indirect taxes subsequently declines (Hinrichs, 1966). Excessive dependence on customs duties is manifestation of backward economy characterized by predominance of underemployment in informal sector. Direct taxes have strategic significance and its superiority is claimed over indirect taxes on the ground of neutrality, welfare and excess burden. The Hicks-Joseph proposition of excess burden established superiority of direct taxes over indirect taxes, for direct taxes do not cause a reorganization of consumer's choices which is not dictated by changes in the costs of production. A high level of sustainable economic development is always

coupled with increasing contribution of direct taxes to the tax structure. The role of indirect taxes became prominent after the dissolution of traditional society. Nevertheless, the debate on direct vs. indirect taxes is sterile, for both taxes have intrinsic values with tremendous potential to mobilize revenue in developing economies. This is tantamount to walking on two legs – a balancing factor.

Similarly, when a country passes through a level of comparative backwardness in economic development to one of self-sustained growth and economic maturity, the tax system will have to rely, in spite of severe political and administrative limitations, largely on its elasticity or built-in flexibility. The significance of elasticity in the tax system is that it is a crucial determinant to siphon-off automatically the increasing portion of national income into the public exchequer without additional tax effort (Dahal, 1983). An efficient tax system should always possess elasticity coefficient of taxation greater than unity. In other words, tax effort ratio (TER) must increase proportionately with rise in GDP. This is desirable for a developing economy like Nepal to increase the level of savings and investment for sustaining a higher growth. During the early stage the higher growth rate achieved by Japan and many other European countries is attributed to differences in the tax systems. The current disparity in growth rates in various countries may also be attributable to differences in tax systems.

The assumption of critical limit of taxation to the tune of 25 percent of GDP cautioned that revenue mobilization beyond critical limit would invite distortion in the economy. However, considering recent trends in taxation the assumption of critical limit of taxation propagated by Stanley please does not hold true in modern advanced economies. In many industrialized nations tax effort ratios have already surpassed the so-called critical limit. Therefore, “taxes must be designed for the economic, political and administrative conditions prevailing in a particular country, not for some average abstract hybrid of all countries” (Bird, 1992). The international comparison of taxation showed that average Tax/GDP ratio in OECD countries found to be 36.3 in percent 2004, while it was 50.7percent in Sweden, 50.6 percent in Denmark, 45.6 percent in Belgium, 35.1 percent in New Zealand, 29.6 percent in USA, 27.1 percent in Japan, 24.6 percent in S. Korea, 18.5 percent in Mexico, 16 percent in India, 12.9 percent in Pakistan (OECD, 2006) and around 12 percent in Nepal during the same period, and estimated to be 15.7 percent in FY 2008/09 (GON, 2008).

The major objectives of any tax policy are to: (a) increase the growth rate by curtailing luxurious consumption expenditure, encouraging investment in new capital goods, channelizing investment in productive sector, and increasing factor supply or factor unit efficiency, (b) have built-in flexibility into the tax structure and to provide maximum revenue productivity especially by

mobilizing direct taxes, (c) act as instruments for combating inflationary pressures in the initial stage of economic development, and (d) remove inequality of income and wealth in society. Unfortunately, all taxes have been directed toward maximizing revenue to achieve growth objective that undermined equity and stability considerations. Although it would be sheer accident to attain simultaneously the growth, equity and stability objectives of taxation, the governments in the SAARC region including Nepal gradually abandoned interventionist strategy and pursued reductionism approach to revenue mobilization in conformity with the spirit of liberalization envisaged by WTO and SAFTA provisions after 1990. In Sri Lanka, tax on remuneration is exempted; likewise tax is exempted to encourage investment in some Gulf countries, and import duties are fully exempted in a few other countries. In US, there is no VAT but sales tax, which is still in operation successfully.

In developing economies the tax system suffers from structural constraints with tremendous administrative and procedural complexities that it lacks simplicity and transparency. The tax system is said to be perfect and successful when additional revenue is mobilized without creating excess burden to the taxpayers with no change in the tax rates and legal base and with modest discretionary changes attributing to improving efficiency in tax administration. The interface between diminishing administrative efficiency and increasing delinquency is widening and becoming acute in recent years in developing economies. Moreover, successful implementation of any tax system depends on political will and determination of the government to implement the policy and ability to collect taxes. The existence of democratic, politically determined, and pro-active government is pre-condition to efficient tax administration to mobilize revenue on a greater scale by combating delinquency. Transparency, simplicity and moderately low rate of taxation are antidotes to corruption. The developing economies must work in tandem with private sector ensuring investment-friendly environment to attract FDI in joint ventures by providing relatively a competitive package of tax incentives for diversifying investment to developing regions from across the globe.

The classical economists were in favor of Laissez-faire market economy. They advocated a limited role for the government. For them, the government had to maintain only law and order and to work in the areas where the private sector did not invest. Hence, during that period, public expenditure was not a major concern of economics. Consequently, revenue mobilization was not an issue of great importance. However, after the Great Depression of 1930, the role of public expenditure came into the limelight. It was Keynes who strongly favored government intervention and pointed out the need for expanding public expenditure.

The present state is welfare state. Hence, the government has to be actively involved in overall development activities. In this context, public expenditure plays a decisive role in development. The World Bank states “Public spending plays a critical role in development. Through spending, the government preserves and promotes national identity, supplies infrastructure for development, influences both the course of economic growth and distribution of its benefits, and provides social services to meet the basic needs of the population” (cited in Joshi, 1998).

The role of taxation in economic development is succinctly explained in endogenous growth theory. The essence of the theory is that growth is a consequence of rational economic decisions. Firms expend resources on research and development to secure profitable innovations. Consumers invest in education to develop human capital and increase lifetime earnings. Governments increase growth by providing public inputs, encouraging foreign direct investment, and enhancing educational opportunities. Through the aggregation of these individual decisions the rate of growth becomes a variable of choice, and hence, a variable that can be affected by the tax policies of governments.

It is a unanimously accepted fact that an increase in investment is a necessary condition for development. The crucial question is: How can investment are financed? The basic answer is that if investment is to increase, there must be growing surplus above current consumption that can be tapped and directed into productive investment channels. It is, therefore, important to be clear about the various sources from which the necessary savings can be mobilized to provide the money for capital expenditure.

From internal sources, an increase in savings may be generated voluntarily through a reduction in consumption; involuntarily through additional taxation, compulsory lending to the government or inflation (Meier, 1995). An increase in voluntary savings through a self-imposed cut in current consumption is unlikely in a country like Nepal where the average income is very low. Instead of relying on voluntary savings, the government will normally have to resort to the instruments of forced savings like taxation.

Issues of taxation can be analyzed from two different perspectives (Meier, 1995) - that of incentives and that of resources. If lack of adequate incentives inhibits investment and growth, then the tax system should be improved through the granting of additional concessions of various kinds. If, however, insufficient investment and low growth are attributed to a lack of resources, then the tax system should be designed to increase the resources available for investment through additional taxation.

Shortage of resources is a more representative issue for a country like Nepal. Underdeveloped countries suffer from a shortage of revenue. The shortage of revenue is partly because they have a low "taxation potential"-which may be defined as the maximum proportion of the national income that can be diverted for public purposes by means of taxation (Kaldor, 1963). A country's tax potential depends on a variety of conditions: the level of per capita real income, degree of inequality in the distribution of income, importance of different sectors in the economy, the political leadership, and the administrative power of the government.

Endogenous growth theory welcomes the traditionally advocated role of government *that is* investment in public goods such as education, infrastructure, etc. It is obvious that the government needs adequate revenue to undertake these functions. But developing economies have to confront an increasingly acute problem of resource gap. In a broad framework, resource gap can be defined as the difference between government expenditure and revenue. Three methods can be applied to determine the resource gap. They are: (a) revenue minus expenditure, (b) revenue minus expenditure minus foreign grant, and (c) revenue minus expenditure minus foreign aid (grant and loan) minus internal borrowing.

1.2 Brief History of Taxation[1]

The history of taxation dates back to antiquity. A brief history of taxation under different periods is traced out below:

Ancient Time

In the ancient civilizations of Palestine, Egypt, Assyria, and Babylonia, individual property rights did not exist. The king was the sole owner of everything in his domain, including the bodies of his subjects. Thus, instead of taxing individuals to support the government, the king could simply force them to work for him. Ancient kings earned income in the form of food from their lands and precious metals from their mines. In case this income did not meet the king's demands, he might lead his armies into neighboring countries to confiscate their property. The conquered peoples might also be required to make payment (known as tribute) to the conqueror in acknowledgment of their submission to his power. If kings were not very wealthy or not very good at stealing from other countries, they would resort to taxing their own subjects. In societies that operated without money, the ruler taxed farmers by requiring that they turn over some

[1] This section is heavily based on Encylcopeida available at http://encarta.msn.com/encyclopedia_761573037_6/taxation.html

proportion of their crops to the state. Poll taxes were a major source of revenue in Egypt under the Ptolemaic dynasty (323 BC-30 BC).

The government of ancient Athens, Greece, relied on publicly owned silver mines, tribute from conquered countries, a few customs duties, and voluntary contributions from citizens for revenue. It levied poll taxes only on slaves and aliens (noncitizens) and made failure to pay a capital crime.

In the early years of the Roman republic, all Roman citizens paid a poll tax. However, Roman military victories brought in so much foreign tribute that the government exempted citizens from this tax in the 2nd century BC, after the Punic Wars between Rome and Carthage. More than a hundred years later, Emperor Augustus introduced land and inheritance taxes. Succeeding emperors raised rates and found an increasing number of goods to tax, including wheat and salt.

Medieval Time

During the Middle Ages, from about the 5th century AD to the 15th century, taxation varied from region to region. Europeans were subject to many forms of taxation, including land taxes, poll taxes, inheritance taxes, tolls (payments for the use of bridges, roads, or seaports), and miscellaneous fees and fines. Many people paid taxes in the form of money or crops directly to the local lord whose land they farmed.

Under the system of feudalism that was predominant in Western Europe beginning in about the 11th century, kings, nobles, and church rulers all collected taxes. Kings derived income from their lands, from import and export duties, and from the various feudal dues and services owed by their vassals. For the most part, church officials and nobles were granted exemption from royal taxes, so the burden of taxation fell heavily on the peasantry. When King John of England tried to increase his income by a series of heavy scutages (payments that knights made in lieu of military service), the feudal nobility refused to pay. In 1215 AD, they forced the king to sign the Magna Carta, a document in which he agreed to collect scutage only with the “common consent” of his barons - thus limiting the king’s power to tax.

The Roman Catholic Church was a major tax collector during the Middle Ages. One of the most important sources of church revenue was the tithe, a compulsory payment of one-tenth of a person’s harvest and livestock. The church also collected various fees, fines, and tolls, and required clergy members, such as bishops and archbishops, to make payments to the papacy in Rome.

An important development toward the end of the feudal period was the dramatic growth in the number and population of towns and cities. These urban centers collected revenue by means of property tax as well as sales tax on certain items.

Modern Time

Over a period of time, feudalism faded and strong centralized states emerged in Europe. During the 16th and 17th centuries, these states relied heavily on revenue generated by the king's own estates and by taxes on land. In England, the power of Parliament grew steadily because the kings and queens had to convene it frequently to obtain money. In 1689, the English Bill of Rights guaranteed that the king could not levy taxes without the Parliament's consent.

By the 18th century, England started imposing various taxes on transactions. Taxes on imported goods (tariffs) assumed great importance, as did taxes on a wide variety of commodities, including sugar, meat, chocolate, alcohol, coffee, candles, and soap. As time passed, people became dissatisfied with this system of public finance for several reasons. First, although the English government levied some taxes on commodities consumed only by the rich - window glass, for example, which was a great luxury at the time - in general, people perceived that the burden of taxes fell mostly on the poor. In addition, tax systems did not generate as much revenue as the governing classes wanted. Finally, economists and political leaders began realizing that by reducing trade, tariffs created economic losses for society.

In the late 19th and early 20th centuries, concerns about both fairness and the ability of tax systems to generate sufficient revenue led governments to impose income taxes. In 1799, Britain enacted the first national income tax in order to finance the Napoleonic War. The government discontinued the tax when the war ended in 1815, but revived it in 1842. The first progressive income tax, which imposed a greater tax burden on people with higher incomes, was introduced in Prussia in 1853. Other countries introduced progressive income taxation in subsequent decades, including Britain in 1907, the United States in 1913, and France in 1917. Although income taxes generated little revenue at first, today, they play a major role in all modern tax systems .

Taxation in the United States

During the 17th and early 18th centuries, local and provincial governments in the British colonies of North America levied taxes to finance schools, road building, military expenditure, law enforcement, and in some cases, churches. Cities and counties levied property taxes based on a

person's ownership of land and livestock and imposed poll taxes on adult men - who also paid the poll taxes of their slaves, servants, and hired workers. Some communities imposed an additional tax on doctors, lawyers, and other professionals and artisans whose special training gave them greater earning power. The colonies taxed imported goods from Europe and the West Indies (but not from Britain), and some colonies taxed certain exports, such as tobacco or fur. Many colonies collected excise tax on liquor from tavern owners.

Taxation of the American colonies by Great Britain was one of the major causes of the American Revolution. Before the French and Indian War (1754-1763), Britain imposed few taxes on the colonies. The war left Britain deeply in debt, however, and the British Parliament insisted that the prosperous colonies help pay for the cost of protecting them. In 1764, Parliament passed the Sugar Act, which taxed non-British imports of sugar and molasses, and, unlike the Molasses Act of 1733, was strictly enforced. A year later, Parliament passed the Stamp Act, which required colonists to buy and place tax stamps on all legal documents, licenses, newspapers, pamphlets, and playing cards. Both taxes caused widespread resentment among the colonists. They believed that the British government had no right to tax the colonies without allowing them representation in Parliament - the principle of "no taxation without representation." In response, colonists rioted and boycotted British goods, causing the British Parliament to repeal the Stamp Act in 1766.

In 1767, Parliament passed the Townshend Act, which imposed duties on a variety of imports to the colonies. Colonists responded with violent protests - one riot led to the Boston Massacre - and by again boycotting British goods. In 1770, Britain repealed all but the tea duty, leaving it as a symbol of its right to tax the colonies. The Tea Act, passed by Parliament in 1773, lifted tea import duties in England but retained them in the colonies. This measure incensed American patriots and resulted in the Boston Tea Party, in which patriots dumped shiploads of British tea into Boston Harbor. War broke out between the colonies and Britain in 1775.

A New Nation

The Articles of Confederation, adopted in 1781 as the first constitution of the United States, denied the federal government the power of taxation. The federal government relied on donations from individual states for its revenues, but sometimes states refused to make payments to the federal government. The inability of Congress to tax rendered it largely ineffectual. For example, Congress was unable to meet patriot officers' demands for back pay, and it could not pay interest on the war debt.

The federal government obtained the power to levy taxes with the ratification of the Constitution of the United States in 1789. The Revenue Act of 1791 established tariffs on select imported goods and imposed excise taxes on a variety of goods, including horse-drawn carriages, distilled liquor, snuff, and refined sugar. These taxes proved extremely unpopular. Discontent boiled over into the Whiskey Rebellion of 1794, in which farmers protested a tax on whiskey of 30 cents per gallon. The government repealed most of these sales taxes in 1801 but temporarily reinstated them to finance the War of 1812. During the Civil War (1861-1865), the Union government financed itself through an elaborate system of excise taxes, including taxes on alcohol, tobacco, manufactured goods, legal documents, and bowling alleys. Until the beginning of the 20th century, various excise taxes, along with tariffs, were the largest sources of revenue for the federal government.

Introduction of Income Taxes

The federal government first imposed individual income tax in 1862 as an emergency means of financing the Civil War. It also established the Bureau of Internal Revenue, predecessor of the Internal Revenue Service. Tax rates were 3 percent on income from $600 to $10,000 and 5 percent on income above $10,000. Later in the war, the maximum rate increased to 10 percent of income. In 1872, the government eliminated the tax because the extraordinary revenue needs of the war no longer existed.

As the 19th century came to a close, sentiment in favor of income taxation grew. Just as in other countries, the public believed that sales taxes and tariffs permitted wealthy people to avoid their fair share of the burden of financing government. Congress passed a progressive income tax in 1894, but the Supreme Court declared it unconstitutional a year later. The Court ruled that the Constitution required taxes on people to be collected in proportion to a state's population, and that income taxes violated this requirement. In 1909, the government imposed a tax on the income of corporations for the first time. At the same time, proponents of an individual income tax pressed for a constitutional amendment. The 16th Amendment, ratified in 1913, authorized individual income taxation. It gave Congress the power "to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States, and without regard to any census or enumeration."

In late 1913, Congress enacted a tax on annual income over $3,000, with marginal (bracket) rates ranging from 1 to 7 percent. At the time, few people earned more than $3,000 per year, so less than 1 percent of the population even filed tax returns. The costs of World War I (1914-1918) led Congress to raise income taxes and make more people eligible to pay them. In 1935, the

government imposed a tax on payrolls to finance the Social Security system. In 1943, it began mandatory withholding of individual income taxes from payrolls, which dramatically increased the ease of administering the income tax. By 1945, marginal rates ranged from 23 percent to 94 percent. The maximum marginal tax rate dropped to 70 percent in 1965.

In the 1980s, President Ronald Reagan made tax reform the centerpiece of his presidency. He embraced a policy of supply-side economics, which predicted that lower taxes would stimulate work effort and savings. The Economic Recovery and Tax Act of 1981 reduced business taxes and lowered the maximum marginal tax rate to 50 percent. The landmark Tax Reform Act of 1986 further lowered this rate to 28 percent. It also ended deductions for interest paid on consumer loans and student debt, raised the capital gains tax rate to that of ordinary income, and eliminated some special provisions and loopholes in tax laws.

In 1990, President George H. W. Bush and Congress agreed to raise taxes to trim the budget deficit, which had grown substantially in the 1980s. Their tax bill raised the highest marginal tax rate to 31 percent. President Bill Clinton's deficit-reduction bill, passed by Congress in 1993, sharply increased corporation taxes, increased tax credits for the poor, and raised taxes on upper-income individuals. The maximum marginal tax rate on individual income increased to 39.6 percent. In the 1990s, Congress also restored preferential tax rates for income from capital gains.

President George W. Bush, like Reagan, also focused on tax cuts in his administrative agenda. Bush’s Economic Growth and Tax Relief Reconciliation Act of 2001 gradually lowered tax brackets, with the top tax bracket dropping to 35 percent by 2006. The law also gradually increased exemptions for estate tax and eliminated the estate tax entirely in 2010. A second round of tax cuts in 2003 immediately lowered the top tax bracket to 35 percent, reduced the tax on capital gains for most investors from 20 percent to 15 percent, lowered the tax on dividends from a maximum rate of 38.6 percent to 15 percent, and increased the child tax credit for families in certain income brackets.

The 2003 tax cuts were particularly controversial and narrowly passed by the Congress. Critics, mostly Democrats, charged that the cuts would worsen the nation’s budget deficit, making it more likely that popular social programs such as Social Security and Medicare would have to be curtailed in the future. Some critics even charged that this was the intent of the tax cuts. The tax cuts were also criticized for favoring the wealthy and shifting the tax burden to middle-class taxpayers, creating a more regressive tax system in the United States. Some wealthy Americans, such as investor Warren Buffett, opposed the reduction of the tax on dividends and the elimination of the estate tax because they gave disproportionate tax benefits to the rich. The Bush

administration, however, argued that the cuts were necessary to stimulate the economy and create jobs. As with previous tax legislation, sunset provisions were incorporated into the new tax law. The new tax rates on dividends and capital gains were scheduled to expire in 2004 .

Taxation in Canada

The first known taxes in Canada were export taxes on furs imposed by the French regime in 1650. The French government soon replaced these with tariffs on imported goods. Tariffs continued to be of major importance during the period of British rule, which began in 1763. The British North America Act of 1867 stated that the provinces could levy income taxes, but could no longer levy tariffs. However, the levying of income taxes on individuals and businesses did not become widespread in the provinces until the end of the 19th century.

In 1917, the federal government, which had relied primarily on excise taxes, created both a personal income tax and a corporate income tax, both of which had previously been levied only by provinces. The federal government introduced a general sales tax in 1920. All the provinces created gasoline taxes in the 1920s and collected taxes on alcohol sales. During World War II, the provinces suspended their income taxes.

After World War II, the federal government took over the income tax from the provinces, paying them a fee for this right. In 1962, the provinces regained the right to levy income taxes. All provinces soon imposed individual income taxes. (Except in the province of Québec, provincial income taxes are collected by the federal government and then given over to provincial governments.) Also, from 1973 to 1990, all provinces adopted some form of corporate income tax.

In 1991, the federal government introduced a goods and services tax (GST). This broad-based tax applies to most goods and services, although certain commodities, such as basic groceries and medical supplies, are exempt from the tax. In 2000, Canada adopted one of the largest tax cuts in its history. It was designed to reduce personal taxes on an average of 15 percent over a five-year period 5 7.

Taxation in India

It is a matter of general belief that taxes on income and wealth are of recent origin but there is enough evidence to show that taxes on income in some form or the other were levied even in primitive and ancient communities. The origin of the word "Tax" is from

"Taxation" which means an estimate. These were levied either on the sale and purchase of merchandise or livestock and were collected in a haphazard manner from time to time. Nearly 2000 years ago, there went out a decree from Ceaser Augustus that all the world should be taxed. In Greece, Germany and Roman Empires, taxes were also levied sometime on the basis of turnover and sometimes on occupations. For many centuries, revenue from taxes went to the Monarch. In Northern England, taxes were levied on land and on moveable property such as the Saladin title in 1188. Later on, these were supplemented by introduction of poll taxes, and indirect taxes known as "Ancient Customs" which were duties on wool, leather and hides. These levies and taxes in various forms and on various commodities and professions were imposed to meet the needs of the Governments to meet their military and civil expenditure and not only to ensure safety to the subjects but also to meet the common needs of the citizens like maintenance of roads, administration of justice and such other functions of the State.

In India, the system of direct taxation as it is known today, has been in force in one form or another even from ancient times. There are references both in Manu Smriti and Arthasastra to a variety of tax measures. Manu, the ancient sage and law-giver stated that the king could levy taxes, according to Sastras. The wise sage advised that taxes should be related to the income and expenditure of the subject. He, however, cautioned the king against excessive taxation and stated that both extremes should be avoided namely either complete absence of taxes or exorbitant taxation. According to him, the king should arrange the collection of taxes in such a manner that the subjects did not feel the pinch of paying taxes. He laid down that traders and artisans should pay 1/5 th of their profits in silver and gold, while the agriculturists were to pay 1/6th, 1/8th and 1/10th of their produce depending upon their circumstances. The detailed analysis given by Manu on the subject clearly shows the existence of a well-planned taxation system, even in ancient times. Not only this, taxes were also levied on various classes of people like actors, dancers, singers and even dancing girls. Taxes were paid in the shape of gold-coins, cattle, grains, raw-materials and also by rendering personal service.

The learned author K.B.Sarkar commends the system of taxation in ancient India in his book "Public Finance in Ancient India", (1978 Edition) as follows:-

"Most of the taxes of Ancient India were highly productive. The admixture of direct taxes with indirect Taxes secured elasticity in the tax system, although more emphasis was laid on direct tax. The tax-structure was a broad based one and covered most people

within its fold. The taxes were varied and the large variety of taxes reflected the life of a large and composit population".

However, it is Kautilya's Arthasastra, which deals with the system of taxation in a real elaborate and planned manner. This well known treatise on state crafts written sometime in 300 B.C., when the Mauryan Empire was as its glorious upwards move, is truly amazing, for its deep study of the civilisation of that time and the suggestions given which should guide a king in running the State in a most efficient and fruitful manner. A major portion of Arthasastra is devoted by Kautilya to financial matters including financial administration. According to famous statesman, the Mauryan system, so far as it applied to agriculture, was a sort of state landlordism and the collection of land revenue formed an important source of revenue to the State. The State not only collected a part of the agricultural produce which was normally one sixth but also levied water rates, octroi duties, tolls and customs duties. Taxes were also collected on forest produce as well as from mining of metals etc. Salt tax was an important source of revenue and it was collected at the place of its extraction.

Kautilya described in detail, the trade and commerce carried on with foreign countries and the active interest of the Mauryan Empire to promote such trade. Goods were imported from China, Ceylon and other countries and levy known as a vartanam was collected on all foreign commodities imported in the country. There was another levy called Dvarodaya which was paid by the concerned businessman for the import of foreign goods. In addition, ferry fees of all kinds were levied to augment the tax collection.

Collection of Income-tax was well organised and it constituted a major part of the revenue of the State. A big portion was collected in the form of income-tax from dancers, musicians, actors and dancing girls, etc. This taxation was not progressive but proportional to the fluctuating income. An excess Profits Tax was also collected. General Sales-tax was also levied on sales and the sale and the purchase of buildings was also subject to tax. Even gambling operations were centralised and tax was collected on these operations. A tax called yatravetana was levied on pilgrims. Though revenues were collected from all possible sources, the underlying philosophy was not to exploit or over-tax people but to provide them as well as to the State and the King, immunity from external and internal danger. The revenues collected in this manner were spent on social

services such as laying of roads, setting up of educational institutions, setting up of new villages and such other activities beneficial to the community.

The reason why Kautilya gave so much importance to public finance and the taxation system in the Arthasastra is not far to seek. According to him, the power of the government depended upon the strength of its treasury. He states – "From the treasury, comes the power of the government, and the Earth whose ornament is the treasury, is acquired by means of the Treasury and Army". However, he regarded revenue and taxes as the earning of the sovereign for the services which were to be rendered by him to the people and to afford them protection and to maintain law and order. Kautilya emphasised that the King was only a trustee of the land and his duty was to protect it and to make it more and more productive so that land revenue could be collected as a principal source of income for the State. According to him, tax was not a compulsory contribution to be made by the subject to the State but the relationship was based on Dharma and it was the King's sacred duty to protect its citizens in view of the tax collected and if the King failed in his duty, the subject had a right to stop paying taxes, and even to demand refund of the taxes paid.

Kautilya has also described in great detail the system of tax administration in the Mauryan Empire. It is remarkable that the present day tax system is in many ways similar to the system of taxation in vogue about 2300 years ago. According to the Arthasastra, each tax was specific and there was no scope for arbitratiness. Precision determined the schedule of each payment, and its time, manner and quantity being all pre-determined. The land revenue was fixed at 1/6 share of the produce and import and export duties were determined on advalorem basis. The import duties on foreign goods were roughly 20 per cent of their value. Similarly, tolls, road cess, ferry charges and other levies were all fixed. Kautilya's concept of taxation is more or less akin to the modern system of taxation. His over all emphasis was on equity and justice in taxation. The affluent had to pay higher taxes as compared to the not so fortunate. People who were suffering from diseases or were minor and students were exempted from tax or given suitable remissions. The revenue collectors maintained up-to-date records of collection and exemptions. The total revenue of the State was collected from a large number of sources as enumerated above. There were also other sources like profits from Stand land (Sita) religious taxes (Bali) and taxes paid in cash (Kara). Vanikpath was the income from roads and traffic paid as tolls.

He placed land revenues and taxes on commerce under the head of tax revenues. These were fixed taxes and included half yearly taxes like Bhadra, Padika, and Vasantika. Custom duties and duties on sales, taxes on trade and professions and direct taxes comprised the taxes on commerce. The non-tax revenues consisted of produce of sown lands, profits accuring from the manufacture of oil, sugarcane and beverage by the State, and other transactions carried on by the State. Commodities utilised on marriage occasions, the articles needed for sacrificial ceremonies and special kinds of gifts were exempted from taxation. All kinds of liquor were subject to a toll of 5 precent. Tax evaders and other offenders were fined to the tune of 600 panas.

Kautilya also laid down that during war or emergencies like famine or floods, etc. the taxation system should be made more stringent and the king could also raise war loans. The land revenue could be raised from 1/6 th to 1/4th during the emergencies. The people engaged in commerce were to pay big donations to war efforts.

Taking an overall view, it can be said without fear of contradiction that Kautilya's Arthasastra was the first authoritative text on public finance, administration and the fiscal laws in this country. His concept of tax revenue and the on-tax revenue was a unique contribution in the field of tax administration. It was he, who gave the tax revenues its due importance in the running of the State and its far-reaching contribution to the prosperity and stability of the Empire. It is truly an unique treatise. It lays down in precise terms the art of state craft including economic and financial administration.

The rapid changes in administration of direct taxes, during the last decades, reflect the history of socio-economic thinking in India. From 1922 to the present day changes in direct tax laws have been so rapid that except in the bare outlines, the traces of the I.T. Act, 1922 can hardly be seen in the 1961 Act as it stands amended to date. It was but natural, in these circumstances, that the set up of the department should not only expand but undergo structural changes as well.

The organizational history of the Income-tax Department starts in the year 1922. The Income-tax Act, 1922, gave, for the first time, a specific nomenclature to various Income-tax authorities. The foundation of a proper system of administration was thus laid. In 1924, Central Board of Revenue Act constituted the Board as a statutory body with functional responsibilities for the administration of the Income-tax Act. Commissioners of Income- tax were appointed separately for each province and

Assistant Commissioners and Income-tax Officers were provided under their control. The amendments to the Income tax Act, in 1939, made two vital structural changes: (i) appellate functions were separated from administrative functions; a class of officers, known as Appellate Assistant Commissioners, thus came into existence, and (ii) a central charge was created in Bombay. In 1940, with a view to exercising effective control over the progress and inspection of the work of Income-tax Department throughout India, the very first attached office of the Board, called Directorate of Inspection (Income Tax) - was created. As a result of separation of executive and judicial functions, in 1941, the Appellate Tribunal came into existence. In the same year, a central charge was created in Calcutta also.

World War II brought unusual profits to businessmen. During 1940 to 1947, Excess Profits Tax and Business Profits Tax were introduced and their administration handed over to the Department (These were later repealed in 1946 and 1949 respectively). In 1951, the 1st Voluntary Disclosure Scheme was brought in. It was during this period, in 1946, that a few Group 'A' officers were directly recruited. Later on in 1953, the Group 'A' Service was formally constituted as the 'Indian Revenue Service'.

This era was characterized by considerable emphasis on development of investigation techniques. In 1947, Taxation on Income (Investigation) Commission was set up which was declared ultra vires by the Supreme Court in 1956 but the necessity of deep investigation had by then been realized. In 1952, the Directorate of Inspection (Investigation) was set up. It was in this year that a new cadre known as Inspectors of Income Tax was created. The increase in 'large income' cases necessitated checking of the work done by departmental officers. Thus in 1954, the Internal Audit Scheme was introduced in the Income-tax Department.

As indicated earlier, in 1946, for the first time a few Group A officers were recruited in the department. Training them was important. The new recruits were sent to Bombay and Calcutta where they were trained, though not in an organised manner. In 1957, I.R.S. (Direct Taxes) Staff College started functioning in Nagpur. Today this attached office of the Board functions under a Director-General. It is called the National Academy of Direct Taxes. By 1963, the I.T. department, burdened with the administration of several other Acts like W.T., G.T., E.D., etc., had expanded to such an extent that it was considered necessary to put it under a separate Board. Consequently, the Central Board

of Revenue Act, 1963 was passed. The Central Board of Direct Taxes was constituted, under this Act.

The developing nature of the economy of the country brought with it both steep rates of taxes and black incomes. In 1965, the Voluntary Disclosure Scheme was brought in followed by the 1975 Disclosure Scheme. Finally, the need for a permanent settlement mechanism resulted in the creation of the Settlement Commission.

A very important administrative change occurred during this period. The recovery of arrears of tax which till 1970 was the function of State authorities was passed on to the departmental officers. A whole new wing of Officers - Tax Recovery Officers was created and a new cadre of post of Tax Recovery Commissioners was introduced.

In order to improve the quality of work, in 1977, a new cadre known as IAC (Assessment) and in 1978 another cadre known as CIT (Appeals) were created. The Commissioners' cadre was further reorganised and five posts of Chief Commissioners (Administration) were created in 1981.

Certain important policy and administrative reforms carried out over the past few years are as follows :-

(a). The policy reforms include :-

- Lowering of rates;
- Withdrawls/reduction of major incentives;
- introduction of measures for presumptive taxation;
- simplification of tax laws, particularly relating to capital gains; and
- widening the tax base.

(b). The administrative reforms include :-

- Computerisation involving allotment of a unique identification number to tax payers which is emerging as a unique business identification number; and
- realignment of the available human resources with the changed business needs of the organisation.

Computerisation in the Income-tax Department started with the setting up of the Directorate of Income tax (Systems) in 1981. Initially computerisation of processing of challans was taken up. For this 3 computer centres were first set up in 1984-85 in metropolitan cities using SN-73 systems. This was later extended to 33 major cities by 1989. The computerized activities were subsequently extended to allotment of PAN under the old series, allotment of TAN, and pay roll accounting. These computer centres used batch process with dumb terminals for data entry.

In 1993 a Working Group was set up by the Government to recommend computerisation of the department. Based on the report of the Working Group a comprehensive computerisation plan was approved by the Government in October, 1993. In pursuance of this, Regional Computer Centres were set up in Delhi, Mumbai, and Chennai in 1994-95 with RS6000/59H Servers. PCs were first provided to officers in these cities in phases. The Plan involved networking of all users on LAN/WAN. Network with leased data circuits were accordingly set up in Delhi, Mumbai and Chennai in Phase-I during 1995-96. A National Computer Centre was set up at Delhi in 1996-97. Integrated application software were developed and deployed during 1997-99. Thereafter, RS6000 type mid range servers were provided in the other 33 Computer Centres in various major cities in 1996-97. These were connected to the National Computer Centre through leased lines. PCs were provided to officers of different level upto ITOs in stages between 1997 and 1999. In phase II offices in 57 cities were brought on the network and linked to RCCs and NCC.

The restructuring of the Income-tax Department was approved by the Cabinet in its meeting held on 31-8-2000 to achieve the following objectives :-

- Increase in effectiveness and productivity;
- Increase in revenue collection;
- Improvement in services to tax payers;
- Reduction in expenditure by downsizing the workforce;
- Improved career prospects at all levels;
- Induction of information technology; and
- Standardization of work norms

The aforementioned objectives have been sought to be achieved by the department through a multi-pronged strategy of :

a. redesigning business processes through fictionalization;

b. increasing the number of officers to rationalize the span of control for better supervision, control and management of workload and to improve tax-payer services and

c. re-orient, retrain and redeploy the workforce with appropriate incentives in the form of career advancement.

1.3 Statement of the Problem

In Nepal, after the induction of privatization and liberalization in the economy in 1990, the role of government has further increased, especially with reference to poverty alleviation. The government is bound to play a pro-active role in support of programs related to education, health, drinking water, agriculture, local development, and infrastructure. Private sector is still too weak to deal with these issues. These activities require huge expenditure in excess of the revenue available to the treasury. This has led to increasing revenue expenditure gap in Nepal, which calls for effective internal resource mobilization through taxation or, alternatively, more dependence on external resources. Although foreign aid is a critical component of development in poor economies, its effects will not only fall on the contemporary generation but also on posterity.

Tax potential in Nepal is extremely limited and tax effort ratio (TER) is 10 percent of GDP (NRB, May 30, 2003) for FY 2002/03 against the target of an average of 13.0 percent envisaged in the Tenth Plan (2002-07), which is fairly below the average of SAARC Countries (NPC, 2003) and the lowest in the world. Thus, resource mobilization through taxation is a challenging proposition in Nepal. An even more crucial problem is how to narrow down the increasingly critical resource gap faced by the Nepalese economy.

Tax evasion and leakages is another problem of the Nepalese tax system. The existing situation of tax leakages in Nepal is very alarming. The estimated evasion is more than 40 percent of taxable capacity (Ghimire, 2006). The annual average growth rate of income tax collection was about 20 percent before the enforcement of the new Income Tax Act. The annual average growth rate has declined to about 10 percent. Similarly, the trend of growth of average amount of tax paid by each taxpayer has reduced while the annual growth of tax registrants is around 25 percent. This scenario shows four types of non-compliance. First non-registration, second non-filing, third delayed filing and the fourth is under reporting of income/sales/production/import (ibid).

Poor tax administration is often pronounced as the major threat to a good tax system in Nepal. Poor tax administration imposes additional burdens and uncertainties. Uncertainty is heightened by increasing recourse to taxation through flat charges without direct regard to the profitability of investment. From a taxation standpoint, the foreign investor may not feel that there is a welcoming environment. There is tendency of providing tax rebate and exemption by reforming sectoral laws and cabinet decisions, tax personnel do not exhibit taxpayer-friendly behavior, and lack of advanced information technology that is compatible with international standards are some of the problems in tax administration. These problems are increasing tax collection expenditure and tendency of tax evasion as well.

For the last many years, Nepal is facing an acute shortage of resources resulting in increasing budgetary deficits. The overall budgetary deficit is estimated to be Rs. 24.4 billion, that is 5.1 percent, and fiscal deficit was Rs. 39 billion, which is 8.1 percent of GDP for FY 2002/03 (Budget Speech, 2002/03). As a result, dependence on external as well as internal borrowings has inordinately increased in the budgetary structure of Nepal. This situation is likely to continue in future, for revenue potential is extremely limited attributing to diminutive tax base, low tax elasticity, poor voluntary compliance, and inefficient, indifferent and corrupt tax administration. In reality, Nepal's tax system lacks simplicity and transparency. Therefore, it is a big challenge to develop an appropriate strategy for taxation ensuring effective resource mobilization in order to reduce the acute resource gap.

1.4 Objectives

The major objectives of the study are to:

- Examine the trends of resource gap in Nepal;
- Analyze the structure of taxation in Nepal by assessing the performance of individual taxes for the period 1963/64-2001/02;
- Measure the productivity and responsiveness of tax yields by estimating elasticity and buoyancy coefficients and make comparison between the pre and post-liberalization periods; and
- Examine critically the major crosscutting issues and options of taxation and recommend appropriate tax policies.

1.5 Significance of the Study

If resource mobilization is the function of economic development, it is essential to neutralize the vulnerabilities facing tax structure that would help narrow down the existing resource gap. A successful tax system is that in which resource mobilization is possible without creating additional tax burden to the taxpayers. Interventionist approach to resource mobilization suggests maximizing revenue through increasing tax rates and tax base, which has become obsolete in recent years. Currently, reductionist approach is under consideration for resource mobilization, an example of which is the lowering down of tax rates in many developing countries.

Thus, resource mobilization will be justified only when there will be no increase in the tax rates and tax base. Internal resources are mobilized by improving efficiency of tax administration. This requires identifying the potential range of taxation and expenditure that would be instrumental to reduce the resource gap. Trends in external and internal borrowings must be examined to understand the overall impact of resource mobilization on narrowing down the resource gap. In addition, what would be the levels and ratios of taxes? To what extent taxes are responsive to income and whether they are equitably distributed? What are the factors responsible in determining tax revenue shares? Unless these aspects are critically examined, a comprehensive understanding of resource mobilization would be extremely difficult in an economy like Nepal.

Since the early 50's, the higher growth rate achieved by Japan and many other European countries is attributed to differences in the tax system. The current disparity in growth rates in various countries may also be attributable to differences in tax system. A typical problem which always arises in a developing country like Nepal while framing a development strategy is how much tax revenue the country can reasonably expect to raise and from what sources and means. This is particularly significant in the context of critical resource gap that developing countries are facing. Here lies the importance of the study on resource mobilization through taxation in Nepal.

1.6 Scope of the Study

This study primarily deals with the structural analysis of the tax system in Nepal from 1963-64 to 2001-02, a period of thirty nine years. Several major sources of tax and non-tax revenues have been considered and grouped into direct and indirect taxes on the basis of conventional tax classification. The direct taxes include land tax, income tax and registration fees. Other taxes like entertainment tax, hotel tax, air flight tax, urban house and land tax and vehicle tax also come under the purview of direct taxes.

But these taxes have not been discussed in detail because their contribution to the total revenue is negligible. Likewise, indirect taxes consist of customs duties, excise duties and sales tax. The non-tax revenues have been classified under two headings: forest and miscellaneous items. In order to identify the tax levels and tax ratios, the pattern and composition of various taxes have been analyzed. The share of major taxes with respect to total revenue and GDP and the average annual growth rate of each major tax have been calculated. In this context, emphasis has been laid on a critical examination of the major trends of taxation. In the absence of GNP data, use has been made of GDP data. The elasticity coefficients of the above-mentioned taxes have been obtained by employing the traditional methodology. Standard statistical and mathematical tools have been used to measure the built-in elasticity and buoyancy of various taxes. Finally, an effort has been made to identify the responsible factors for determining government revenue shares in the tax-structure of Nepal.

At the very outset, an appraisal of different views on taxation has been made. Tax classification and the relationship between taxation and economic development have been elaborately discussed. A comparative study of the development of tax ratios and levels in selected developing and developed countries has been carried out thoroughly.

Summing up, the present study deals with the behavior of taxes in general and with the responsiveness and burden of taxation in particular in Nepal's tax system.

1.7 Hypothesis

Based on the objectives and relevant literature review, the following hypotheses will be tested:

Hypothesis 1

Resource gap increases trade deficit.

According to Keynesian proposition, budget deficit has a positive relationship with trade deficit. This proposition will be tested in the Nepalese context. To test this hypothesis, the following regression equation will be estimated.

$$\text{trade deficit} = \alpha + \beta(\text{budget deficit})$$

Significant β rejects null hypothesis.

Hypothesis 2

Resource mobilization has significant impact on reducing the resource gap.

To test this hypothesis, the following regression will be run.

$$\text{Resource gap} = \alpha + \beta(\text{total revenue})$$

Here, if β is significant, then the total revenue will have impact on the resource gap. The negative sign of β will indicate that increased revenue reduces resource gap.

Hypothesis 3

There is significant impact of discretionary changes on tax collection.

1.8 Limitations

This study covers a period of thirty nine years, comprising FY 1963/64-FY2001/02. However the time series data are not available for the period FY 1963/64- FY 1966/67.

1.9 Chapter Scheme

In chapter one there is introduction of the whole thesis. Chapter two reviews existing literatures in the methodology and both international and Nepalese context. Methodological framework is discussed in chapter three followed by trends and magnitude of resource gap in Nepal in chapter four and analysis of tax structure in Nepal in chapter five. Revenue productivity and responsiveness of tax has been calculated in chapter six. Issues and options of taxation system in Nepal have been discussed in chapter seven followed by findings, conclusion and recommendations in chapter eight. Then after this appendix and Reference follows serially.

CHAPTER II
REVIEW OF LITERATURE

2.1 Theoretical Context

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 and students of public policy alike. The classical economists devoted substantial efforts to analyzing the effects of taxation on growth and the related question of the distribution of factor incomes as witnessed by the full title of record's famous treatise; "Principles of Political Economy and Taxation". The stability of the economy also became an important subject of analysis. These classical and Keynesian concerns constituted prominent themes in early analysis of taxation in UDCs (Heller, 1954 *and* Kaldor, 1956). Subsequently, the range of concerns 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 on employment, and on other objectives of policy.

Colm (1955), for example, lists the objectives of fiscal policy as the promotion of economic growth, the reduction of income disparities, and use of transfer to others. Taxation not only restrains total spending between households and regions, but the promotion of economic stability and economic efficiency, and the increasing of host country returns from natural resource endowments. The primary purpose of taxation is to divert control of economic resources from taxpayers to the state for its own purposes by households and enterprises, but it influences the allocation of economic resources, recognizes social costs that are not reflected in market prices, and affects the distribution of income and wealth (Goode, 1984).

Taxation is used as the main policy instrument for transferring resources to the public sector. It can also assist in creating an atmosphere within which the private sector operates in conformity with national objectives. From the efficiency viewpoint, it can be

said that taxes provide the best means of financing the bulk of public expenditures (Shende, 2002).

In general, taxation of each economy follows certain principles in public finance. In government finance in developing countries, Goode (1984) describes three major principles of tax design: equity, efficiency, and administrative feasibility for fairness in the community, cost efficiency of administration and growth, stability and equitable distribution. Kelly (1999) has pointed out that the policy and administrative structure for individual revenue instruments is shaped by the following five considerations: namely, the revenue potential; economic efficiency; equity; administrative feasibility and political acceptability. Revenue potential is perhaps the single most important criterion when analyzing and redesigning a revenue instrument. Therefore, there are considerable five major principles of tax design, *that is.*, revenue potential, economic efficiency, equity, administrative feasibility and political acceptability.

It is critical in underdeveloped countries. In general, almost all underdeveloped countries have practiced the most important role of taxation to mobilize resources for regular expenditure finance, but still, it is recorded as unsatisfactory because of the limited tax bases. As an instrument of resource mobilization, its principal function lies in raising the volume of public savings to be used for capital formation consistent with the growth of savings in the economy as a whole. Taxation is considered a better and dependable source of revenue to bridge revenue and expenditure gap in the process of financing the development activities in Nepal. The role is observed quantitatively. The quantitative role of tax policy for the mobilization of development finance may be considered in two aspects: static and dynamic (Tripathy, 1978).

In the former case, the economy tends to stay at a stable level of underdevelopment equilibrium in which tax revenue is used mainly for consumption purpose. In the latter case, the role of tax policy consists in preventing the increment in output from being consumed by deliberately pouching back an increasing proportion of it into the pool of investable resources of the public sector.

In order to ensure the objective of ploughing back the increment in output, underdeveloped countries have to develop a tax structure which should have a large

element of built-in-flexibility. This means that the tax base must grow as income grows. Since the tax rates will only be a fraction of the base, the base must grow faster than the total income in order to recapture a substantial part of the increment. Such a tax structure will be one in which the marginal effective rate of taxation in terms of national income is high.

Although such a tax structure would be ideally suited to plough back an increasingly larger proportion of the increment in output, it may create an adverse economic effect on incentives to resources. The tax structure of the underdeveloped countries should be sufficiently diversified and should have a coverage that is both ‘deep and wide’. Such a tax system will be able to mobilize and tap the tax potentials of the different sectors created as a result of the accelerated process of economic development.

If political decisions are made by legislative majorities, a constitutional constraint requiring generality in the imposition of taxes will be economically efficient. In the absence of such a constraint, majorities will tend to impose differentially high taxes on members of political minorities, and such differentiation opens up several sources for resource waste. This argument lends support for a uniform proportional rate of tax on all incomes (Buchanan, 1965).

The government is constitutionally, politically and socio-economically responsible and accountable for equity and welfare for overall development. Therefore, the tax policy is used as a major effective instrument in this regard for horizontal and vertical equity among different social and economic classes in the country. Modern economists stand for it on the basis of the principle of equity. Equity generally means fairness or justice in the distribution of the burden of taxation (Prest, 1962). Therefore, to be fair, taxes should be reasonable and just (Goode, 1984). In the equity principle, there are two principles: principle of benefit and principle of ability to pay. *Under the benefit principle, an individual should be charged based on the benefits received (Kelly, 1999).* The ability to pay principle can be proportional, progressive or regressive with respect to income. In general, tax systems should either be proportional or progressive with respect to income. Equity is determined by the ultimate incidence of taxes and charges. By incidence, we mean the final distribution of the tax burden after the market has shifted the taxes either forward or backwards based on the economic behavior of the supplier and demander.

Although it is useful to evaluate the equity impacts of an individual tax instrument, it is more important to evaluate the equity of the entire tax system, and ultimately, the equity of the entire public finance system (including the expenditure and the revenue side).

Equity involves two aspects: the treatment of people in like and unlike circumstances. Like circumstances imply that those who are equally well off from the economic point of view should pay an equal amount as taxes. It is so called horizontal equity. Unlike circumstances imply that the people in dissimilar circumstances should be subjected to dissimilar treatment that is the persons who are better off should pay more as taxes than others. This is called vertical equity (Chelliah, 1969). Further, Goode (1984) has also discussed two major principles of equity for horizontal and vertical equity. A standard of equity that has been long discussed is the benefit principle. Taxes are justifiable because the state provides benefits. The benefit theory may underlie a widely accepted rule of tax jurisdiction. For allocation among individuals, the benefit theory has limited application to certain taxes.

Political leaders who undertook to tax people in accordance with the benefits they derive from the state would encounter an old conundrum: who benefits most, the rich and powerful whose possessions are protected, or the poor and weak, who would otherwise be the victims of the strong and their own poverty? Ability to pay has more appeal as a principle of tax equity. It implies that those with equal abilities to support government, should pay equal amounts and that those with unequal abilities, should pay different amounts bearing a reasonable relation to their abilities. The former aspect is often called horizontal equity, the latter, vertical equity. The equity aspect of taxation is directly concerned with ability–to–pay principle, which is primarily a matter of economic capacity, which can be measured by income, wealth or consumption. Thus, Goode has preferred to the ability to pay principle for vertical and horizontal equity because the rich and higher social and economic class should sacrifice more than the poor and lower social and economic class.

In favor of income as a sensible index of equity, it may be argued that a person's economic capacity, and hence his ability to contribute, depends upon his wealth and not upon the way he chooses and that income is the true index of that social philosophy may not change. Nor can it be argued that income is the appropriate index for those who

desire progressive taxation and wish to reduce inequality, and that consumption is the appropriate index for those who wish to impose regressive taxation, so as to increase inequality. As a matter of historical experience, we find that income tax has been the vehicle of progressive taxation, and that the major sources of sales and excise taxation have been regressive. At the same time, there is no logical necessity for this. Once the transaction is made from a tax on commodities to a personal tax on consumer expenditure, the spending tax may be applied with progressive rates, no less than the income tax.

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 indirect, those which are not so levied (Hicks, 1959). In the traditional language, if impact and incidence are upon the same person, then the tax is said to be direct; if not and 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).

Indirect taxes which are a major revenue source in developing countries tend to be regressive with respect to income for two reasons. First, total consumption expenditure of households are a declining fraction of income for successively higher income classes. Second, expenditure on some heavily taxed items such as tobacco and beer often are a declining fraction of total consumption as income rises. However, careful selection of objects of indirect taxation and tax rates can result in a distribution of indirect taxes that is broadly proportional or progressive with respect to income or total consumption (Goode, 1984).

In shaping the tax policy for developing countries, there are mainly two approaches: interventionism and reductionism. The interventionism tradition was represented in the early postwar period by such prominent analysts as Heller (1954), Kaldor (1965) to achieve of a variety of policy objectives through the tax system. The reductionism tradition has recently secured a wider consistency, for reasons noted above, the 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 have it, will not try to do so (Bird and Oldman, 1990).

A central concern of tax policy makers in underdeveloped countries 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 interventionism approach to taxation is replaced by reductionism approach, which is generally termed as supply-side taxation, clearly showing that in the context of underdeveloped countries, the general direction and strategy of this approach is both widely acceptable and basically workable. This approach is mainly based on the idea that widespread tax evasion in underdeveloped countries 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 no effect at all on evasion." (Asher,1999)*

What then 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 rewards is, ceteris paribus.

Equity, growth, efficiency and stability are major objectives of tax policy which are in conflict with each other. A tax system based solely on efficiency grounds is unrealistic, while that designed solely for equity purposes cannot be justified on allocation grounds. The degree of progressivism 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, erode the revenue base and lower the 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 (Hinrichs, 1966).

Literature on optimum commodity taxation has formalized old views among economists about how to make a compromise between the allocation efficiency of consumption and concern for the distribution of income. While in the interest of economic 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 and often conflicting aspects, using a social welfare function as the criterion for the trade-off (Lindbeck, 1990).

In addition, developing countries have resource constraints with low capital formation for economic development. Therefore, balance versus imbalance in economic policy and thought can be found in the taxation policy. In this regard, Herber (1967) explained that there is no other road to economic development than a compulsory rise in the share of the national income which is withheld from consumption that the volume of investment in a society can be increased. Thus, taxation can be a powerful engine of forced savings in these countries. *In this context Tripathy (1978) points out that in Underdeveloped Countries, the developmental role of taxation constitutes not only in maximizing the volume of resources for public sector but also in maximizing the growth of private investment and guiding it into the most useful and desirable channels.* Thus, taxation may be appropriate when it will not only mobilize resources but also contribute to capital formation for investment and growth-led development.

But these actual policy advices are based on different assumptions such as, identical 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, are more ambitious with respect to basic insights about the functioning of the political process, for political behavior is important to implement and put policies into action.

Chelliah (1969) in “Fiscal Policies in Underdeveloped Countries” opines that raising the incremental saving ratio, S/Y, is one of the most difficult problems in underdeveloped

countries. As most of the people are low-income earners 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 increase in productivity will be almost fully absorbed by increased consumption. Thus, the justification of commodity taxation lies in the fact that it has a tendency to restrain consumption, whereby a rise occurs in 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 other 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 resources 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 savings by income tax does not necessarily reduce amount of savings. 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 Friedlander, 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 progressivity 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 the general presumption is that indirect taxes will usually permit a somewhat higher S/Y ratio than income taxes yielding the same revenue (Due and Friedlander, 1973).

In underdeveloped countries, the effective implementation of income tax, a premier component of direct tax, has not been successful. This is, because, there is great difficulty in taxing professionals (doctors, lawyers), 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 any 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 underdeveloped countries generally feel overtaxed in relation to their self-employed equals. In this connection, Musgrave (1959) has proposed to divide all the tax payers, including "hard-to-tax" group, into three groups.

(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 group

    2) All others

For the 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 the wage earners vis-a-vis the self- employed through the imposition of general "minimum taxes".

Due to administrative difficulties, the contribution of direct taxes is much lower than indirect taxes which provide two–third or more of tax revenue in many underdeveloped countries. 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 - savings, investment, capital formation, production, technological changes, development of natural resources, international trade, prices, employment and distribution of income and wealth (Tripathy, 1978). They can ensure collective savings for the purpose of public investment, and at the same time, provide incentives for promoting private investment. The burden of sacrifice involved in capital formation can be distributed more equitably and the poorer groups in the society can be assured that all classes are making sacrifices in potential consumption. "Taxation serves as the main method for transferring resources from the private to public sectors."

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. 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; it has emerged to be as an accelerating factor for economic growth, equal distribution of income and wealth, equitable allocation of resources, reduction in the gap between poor and rich and attainment of a higher degree of economic stability.

According to Shende (2002), the effectiveness of the VAT system can be determined by computing the “VAT productivity,” a measure that focuses on VAT revenue as a percent of GDP divided by the VAT rate. It is also possible to estimate the amount of various types of income from national income accounts and other data sources. This information allows policymakers to estimate the potential tax revenue from different tax instruments assuming different tax compliance rates. In all these instances, the usefulness and reliability of these estimates are, of course, dependent on the quality of the underlying data. Part of the variation in aggregate tax revenues among countries can be explained by different demands and tastes for government services. The demand for government services tends to increase with per capita income. Countries, and presumably the residents of countries, may also have different views on such important questions as the public versus private provision of education, health, and retirement benefits, and the size and quality of government provisions of defense, transportation and other services. These are primarily political questions to which economic advisors may have little to

contribute. As taxes are the primary vehicle to fund government services, higher taxes are required to fund higher level of government services.

A study of VAT in developing countries was undertaken by the International Monetary Fund (IMF) staffs at the time when the introduction of VAT was gaining momentum in developed as well as in developing countries. The study examines the applicability of VAT in seven developing countries which have adopted VAT, considering the fact that many uncertainties arise in the introduction of any major new tax, especially regarding a system in which developing countries have very limited experience. According to the study, the most important feature of VAT in developing countries is its conceptual basis such as taxable base, exemptions, treatment of small traders. Problems of VAT implementation in developing countries are also great. In fact, the feasibility of VAT in developing countries depends largely upon the ability of those countries to administer it. The administrative efficiency is also influenced by the structure of VAT employed and the country's social and economic environment. The problems should also be viewed from the angle of taxpayers compliance, as the cost of doing business tends to increase with VAT because of the need to adopt new accounting procedures. The study shows that VAT produces between 10 to 30 percent of government revenues of the seven developing countries covered by the study and the VAT revenue in these countries is expected to increase at a faster rate than the rate of the growth of the economy.

Guerard (1973) describes, analyzes and evaluates the Brazilian VAT against the background provided by two broader issues: one as a case study of the VAT in a developing country and the other as an illustration of the problem posed by inter-state tax co-ordination in a special setting of a federation caused by huge regional disparities. The Brazilian States adopted a broad-based single-rated (i.e. 15%) VAT in 1976 in the place of existing heterogeneous turnover taxes aiming to secure a greater degree of tax co-ordination among the states of the federation. The VAT was based on modified origin principle, and it extended to retail level with minimum exemptions. The administration of the tax did not appear burdensome.

In the first year of its introduction, revenue increased by 54 percent, 30 percent of which was due to price increase and 17 percent was the real increase. The industrial sector bore a heavier tax impact than the rest of the economy in relation to its own value added

because of the non-deductibility of tax on inputs used by the industrial sector from the exempt sector. Manufacturing accounted for 60 percent of estimated VAT although it generated less than one fourth of the GDP. The Brazilian experience does suggest that the VAT techniques can be applied in accordance with the specific conditions prevailing in developing countries with no great difficulty. The administration of VAT could be expected to initially pose a more difficult problem in developing countries which previously have no experiences in operating a broad-based sales tax/VAT.

Ahmad and Stern (1987) analyze the Indian tax system by employing the advanced and sophisticated theoretical cruxes, models and analytical techniques and suggest reform. The findings of this work are very important and urge some necessary revisions of government policies. The calculation of "effective taxes" shows that there was a very considerable taxation of intermediate goods in India. Inputs of some goods were taxed more than 20 percent, and on the average, the taxation of inputs was 6-7 percent. It is important to note that the taxation of inputs arose mainly due to federal excises on domestic production. Many state sales taxes fell only on final consumption goods. Another important point to be noted is that the exports were also taxed at 6 percent through input taxation. The rebates to the exports as a remission of domestic taxation were clearly insufficient.

Supposing there was a considerable income inequality, the social marginal cost (SMC) of raising revenue was highest for federal excises followed by state sales and import taxes respectively. Similarly, the SMC of raising revenue from cereals, food items, fuel and light was the highest and SMC of raising revenue from milk and dairy, clothing and other non-food item was the lowest. It was also found that the use of income tax was preferable to raise an extra amount of revenue rather than the use of commodity taxes. In case of a high level of inequality, the argument for income tax is very strong, cereals become very unattractive as a source of revenue, and import duties represent the most desirable general source of extra indirect tax revenue. Among the source of extra indirect taxes, the central taxes (particularly excises) were least attractive from the standpoint of taxation of inputs. The work suggests that a move to value added tax at uniform rate would have adversely affected the poorer section of the Indian society. Given the non-distortion effects of VAT on production, however, there might have well be advantages

in considering a non-uniform VAT or uniform VAT supplemented by selective excises and tariffs.

Agha and Haugton (1996) have made an effort to assess the VAT in Taiwan, which was in effect since 1996. According to them, the VAT in Taiwan was implemented in order to increase the competitiveness of exports and improve the efficiency of business tax structure. VAT had replaced business receipt tax, stamp tax and commodity tax which constituted 28 percent of total tax revenue. The impact of VAT showed that the business tax revenue increased considerably although the reform was aimed to be revenue-neutral. Adoption of VAT did not cause price fluctuations. Another surprising impact of VAT was that the revenue from the business income tax increased significantly immediately after the adoption of VAT. This may be attributed to the cross-checking procedure provided by the VAT. As for exports, there did not seem to be a direct link between VAT and exports since exports are influenced by a number of factors. The tax fell heavily on the public sector businesses and they were more affected by VAT than the private sector businesses. Generally, it can be said that the VAT system tremendously improves the efficiency of tax collection. However, there are some rooms for improvements, especially in administration. The experience of Taiwan has attested to the superiority of the VAT system in taxing business activities.

Hossain (1994) investigates income distributional implications of different VAT schemes in Bangladesh applying the method developed by Ahmad and Stern (1984) and using the data of household consumption expenditure and input-output table. The results obtained indicate that a revenue-neutral uniform VAT is regressive (relative to pre-reform situation) in its impact on the income of different households. The paper also explores the income distributional impact of an alternative policy package, and the welfare consequences of the alternative package are found to be superior to those of uniform VAT. The findings of the study suggest that, among different possible VAT schemes, a selective VAT with exemptions and additional excises is clearly preferable than to a complete uniform VAT if the distributional issues are of dominant concern in tax reform.

Ahamed and Stern (1987) identify the alternative tax reform packages on VAT for Pakistan, keeping the distributional consequences in consideration. The authors have their own method for the tax reform analysis. In the first step, they describe the existing

taxes and then examine the consequences of tax changes (and thus price changes) on households, resulting government revenue and also implications for production. They analyze and compare the consequences of different options such as the single rate VAT with selective excises and some exemptions and multiple VAT rates. Reform with equal revenue and reform with additional revenue as well as the production implications of tax reform are also considered. The work shows that tax instruments can be designed to increase revenues and, at the same time, protect the poor. A VAT supplemented with selective excises would have made Pakistan's tax system more buoyant and reduced the production distortions inherent in Pakistan's then current tax system.

Yoo (2000) examines and evaluates VAT in Korea in his paper "Value-added Tax in the Republic of Korea". VAT in People's Republic of Korea was introduced in 1977 as a part of significant tax reform with the objectives of the simplification of tax structure and its administration, the promotion of exports and capital formation, and maintenance of neutrality in indirect tax system. Introduction of VAT was also guided by revenue consideration. The characteristics of Korean VAT were of general type as had been adopted by the European countries. The effects of VAT on the economy had been lesser than its supporters had claimed in its favor or its opponents had feared would result from its introduction. The VAT did not have a major impact on the price increase, it showed a good impact on the investment, and VAT supported exporters more than the previous tax system. One of the most controversial issues of VAT was its regressive ness. Studies found that the VAT in Korea was more or less regressive with respect to income. In its overall evaluation, VAT in Korea has worked relatively well, in some cases much better than its designers and taxpayers had anticipated. The VAT has broadened tax base, reduced evasion, increased revenue and solved many problems associated with previous taxes.

In an attempt to improve their performance on resource mobilization, the governments of many developing countries have tried to reform their tax structures. "In theory, non-distorting taxes make it possible simultaneously to achieve 'perfect' vertical and horizontal equity (however defined) with an efficiency loss induced by the tax system. In practice, these various objectives conflict with one another because perfectly non-distorting taxes do not exist" (Buchanan and Tullock, 1977).

Two recent studies from Asher (1999) and Wyatt et.al (2003) on tax reforms and their effects in some developing countries in South-East Asia and Australia illustrate the enormous difficulties in implementing tax reform. They show the incentives for the government to continue to add taxes rather than rationalize when they face a resource shortage, the administrative complexities of tax collection, the problems of vested interest groups and the difficulty of balancing equity and revenue generation considerations. However, it is interesting that in one country, tax collection has never been more than 15 per cent of the GDP, that income and profit taxes have always been less than a quarter of tax revenues, and that, after reform, only 2 per cent of the population actually file tax returns. In the other country, tax revenues have grown to around 20 per cent of the GDP and income and corporate taxes account for just over one third of the amount raised. In the first country, trade-related taxes still account for almost 40 per cent of revenues; in the other country, the figure is less than 5 per cent. Both have made efforts to widen VAT-type taxes to include the service sector. The taxing of the informal or unregistered sector has proved to be a daunting task, particularly in the first country, where the sector is quite large. The division of tax collection matters between the national government and state and local governments in both countries is a bone of contention; as in most countries, taxes on property are the main source of revenue generation at the sub-national level (Shende, 2002).

Performance of tax in an economy is viewed on the basis of elasticity and buoyancy coefficients. Tax elasticity and tax buoyancy are important tools in evaluating the effectiveness of a country's tax strategy. Tax elasticity measures the responsiveness of a tax system to changes in Gross Domestic Product (GDP), and is defined as the percentage change of tax revenue exclusive of discretionary changes (legal changes in tax structure and tax base, etc) resulting from a one percent change in GDP. If an expansionary fiscal policy is used to generate growth in GDP, then an elasticity coefficient less than one signifies an inelastic system incapable of automatically meeting growth in fiscal expenditure. An elasticity value that is greater than unity indicates an elastic tax system that is able to meet rising expenditures, ceteris paribus.

Tax buoyancy is the percentage change in tax revenue (discretionary changes included) caused by a one percent change in GDP. A value less than one suggests low tax elasticity

and ineffective discretionary changes, whereas a value greater than one implies that discretionary changes are improving the responsiveness of the tax system. Hence, knowledge of the degree of responsiveness of tax revenue to GDP would enable the Government to make more accurate forecasts of revenue in order to improve fiscal management.

In measuring the responsiveness of taxes 'elasticity' and 'buoyancy' are the two popular concepts widely used by the academics, researchers, policy makers and international fiscal authorities. Elasticity is a static concept while buoyancy is a dynamic notion (Rao, 1979). Elasticity would indicate what the size or magnitude of a tax would have been over a period of time when there would be no change in the tax rates and legal bases. Thus it provides real or stabilized value of taxes. In a way, this can be considered as a partial account of responsiveness to changes in the national income. Elasticity provides the basis for natural growth of revenue to GDP. On the contrary, buoyancy estimates what actually happens. Buoyancy provides a 'floating value or 'face value' of taxes, which includes both automatic growth and discretionary changes. It can be viewed as a total account of responsiveness to changes in the national income (Dahal, 1983) Elasticity and buoyancy of taxation can be calculated for the entire tax regime or for individual components such as income and consumption taxes. Generally, regressive and specific taxes contribute to low elasticity and buoyancies. Hence, deflated values for these indicators suggest to policy makers that there are currently too many of these types of taxes being implemented.

The first step in measuring responsiveness of tax yields requires separating automatic growth of revenue by eliminating discretionary changes and constructing hypothetical net revenue or 'cleaned' series. The discretionary changes are defined as additional revenues obtained by the government through changes in the tax rates and tax bases and also by improving efficiency of tax administration. The methods used in computing adjusted revenue index include: Constant structure method, Dummy variable technique, proportional adjustment method, and Divisia Index approach (Bahl, 1969). The elasticity coefficient of taxation would help in designing suitable tax policy in an economy.

2.2 Nepalese Context

Nepal's tax system suffers from structural constraints, which is heavily dominated by indirect taxes. The various studies show that elasticity and buoyancy coefficients are below unity. This is indicative of poor performance of tax system, which requires reform. Dahal (1983) examined Nepal's tax structure, estimated elasticity and buoyancy coefficients, and measured the burden of taxation for the priod FY 1965/66 – FY 1981/82. The elasticity and buoyancy coefficients for the period of 1965/66 to 1981/82 were found to be 0.92 and 1.51 respectively. R. D. Singh (1999) emphasized the importance of domestic resource mobilization for economic development in Nepal though various tax and non-tax sources. Similarly, Shrestha (2001) calculated the elasticity and buoyancy coefficients for the period of 1980/81 to 1993/94 and these coefficients were found to be 0.55 and 3.25 respectively.

Measurement of equity, efficiency and elasticity has been carried out by several Authors. Thapa (1990) in his Ph.D. thesis submitted to University of Baroda using data of the period 1974/75-1989/90 calculated efficiency, equity and elasticity. Agrawal (1998) found that the buoyancy of income tax for the period 1967/ 68 to 1975/76 was 2.18 and elasticity 2.0, implying that income tax has promising future prospects (Reejal, 1976). But elasticity of the land tax is the lowest (0.12) as the buoyancy coefficient (0.17), while sales (1.74) and excise duties (1.29) are fairly elastic. In terms of buoyancy coefficient, excise tax (2.20) secured the first position followed by sales tax (2.20) and income tax (2.18).

Reejal (1976) covered the period from 1964/65 to 1970/71. This study has indicated that Nepal's tax structure as a whole is fairly elastic, with elasticity coefficient 1.82 and buoyancy 2.18 for the total tax revenue. Gurugharana (1993) in an article "Weaknesses of the tax policy and tax structure in Nepal" has found that the elasticity coefficient of total revenue is 0.495 for the period from 1974/75 to 1983/84 and 0.587 for the period from 1974/75 to 1988/89, implying a marginal improvement in revenue elasticity. For the same period, buoyancy coefficients are 1.365 and 1.281 respectively.

Beside calculating elasticity and buoyancy, other aspects of taxation has also been studied in Nepalese context. Agrawal (1978) has analyzed various aspects of income tax

including the administrative aspects in Nepal. He has highlighted various reasons that have created problems in the tax administration. Author has identified undue delay in tax assessment, failure to maintain proper record by tax payers and tax efface failure to locate new tax payers, unfriendly behavior of tax officials to the tax payers in Nepal as the major administrative problem in tax administration.

Dhungana (1980) found that heavy rely on indirect taxes has prevented the tax system to be progressive. He also found that effective indirect tax rate is quite high in Nepal and he suggested for effort to rationalize and optimize the rate structure.

Jha (1982) has discussed extensively on the prospects for revenue mobilization and also suggested for mobilizing external resources through various tax and non tax sources in Nepal by analyzing the data for the period of 1956-1981.

Pant (1982) in his Ph.D. Thesis entitled " Excise Taxation in Nepal: Incidence and Effect" found that excise taxation is vital for Nepalese economy. It is shifted forward to the consumer. The price effect of the excise tax is inflationary in nature in the revenue system of Nepal. Excise tax contribution to the national exchequer is vital in the plan documentation. It is a reliable source to the economy.

Kandel (2000) using the data for the period of 1975-2000 found that high statutory tax rate is not the only cause of distortion of the investment environment. Inflation and other factors as well play significant role in this respect. However, the tax environment in Nepal in terms of burden has been favourable during these 25 years i.e., 1974/75 to 1998/99 although the investment trend has not improved.

Khadka (2001) in his book Income Taxation in Nepal: Retrospect and Prospect has traces out the evolution of income tax around the world. The book analyzes relative importance of income tax in the tax system of some selected countries. It also defines various concepts, which are widely used in the modern income tax literature. This book also reviews major changes introduced in the field of the Nepalese income tax system since its inception in 1959 and examines its existing structure and operation. It also analyzes the current problems and makes recommendations for the rationalization of the structure and modernization of operation of the income tax system. Finally, the book

includes income tax acts of 1960, 1962 and 1974, which are not easily available in the market.

A high level Task Force headed by Madan Kumar Dahal to review Nepal's tax system has given some recommendations for implementing VAT in Nepal. In this report, the Task Force recommends VAT in the place of the existing sales tax and small service-based taxes as a long-term tax reform measure. The report has emphasized the introduction of VAT in Nepal to:

(a) Broaden the tax base and increase the tax revenue,

(b) Make the tax system transparent and elastic,

(c) Prevent tax evasion,

(d) Make the tax system efficient, and

(e) Encourage exports.

The report has also emphasized that there are some other factors to be considered seriously before implementing VAT. They are: (a) price level, (b) equity, (c) nature of the taxpayers, (d) small taxpayers. The report recommends some necessary preparations to be undertaken before implementing VAT such as drafting necessary laws and developing an efficient and capable administration. A functional organizational pattern is recommended. The other recommendations of the Task Force are: development of an effective tax refund system, measures to increase self-compliance, taxpayers' services, computerization of the administration, research and development, a different type of personnel system, extensive taxpayers education program, etc.

The existing Nepalese tax system suffers from several limitations. The entire tax system for raising revenue is not working well. It lacks transparency, is inefficient and is widely and justifiably perceived to be unfair. Fixing the problems will require change in policies, laws, regulations and administrative procedures. Necessary policy changes should include the selection of appropriate taxes, while also addressing their structure and operation; administrative changes include the establishment of information and monitoring systems designed to reduce the possibility of arbitrary behavior by tax

officials; and legal and administrative changes should be designed to align the incentives facing taxpayers and tax collectors with the goals of the tax system (Kelly,1999).

A study made by the Nepal Chamber of Commerce in 1997 to analyze the possible effects of VAT on Nepalese economy makes some observations. The observations are as follows:

(a) Adverse effects on price level;

(b) Increase in the prices of imported goods would hit the import business and re-export of imported goods, leading to a decline in the revenue from import tax;

(c) The account keeping requirements of the VAT would increase the tax compliance cost and cost of doing business as well as adversely affect the small traders;

(d) Adverse effects on domestic production due to the abolition of protection policy under VAT;

(e) VAT would be unjustifiable on social grounds as it would aggravate the income distribution;

(f) Negative effects in revenue collection; and

(g) Chances of failure of VAT in Nepal are great because the present administration is incapable of handling VAT.

The study concludes that VAT in Nepal should not be implemented in haste. A partial VAT on some commodities should be implemented on experimental basis to know its pros and cons and only after that a full VAT may be considered.

Nepal Chamber of Commerce organized a nationwide discussion program on VAT. According to a report of the discussion program (Nepal Chamber of Commerce, 1997,) the various views expressed about VAT in Nepal may be summarized as follows.

(a) Government machinery is not capable of implementing VAT.

(b) The business community has no confidence in the administration because it has failed to implement many other taxes effectively and fulfill its own commitments even previously.

(c) VAT will hamper genuine trade and, as a consequence, illegal trade will prosper. Rise in the prices of domestic products will make them less competitive. Import and re-export of imported goods will be negatively impacted, leading to a decline in government revenue.

(d) VAT will inhibit the growth of newly developing trade and industrial activities in the country.

(e) The modern account keeping system required by the VAT is difficult to manage. This will raise the costs of doing business.

(f) There will be a sharp price rise if VAT is introduced; consumers will be badly affected due to price rise. Nepalese markets in border area will dry up due to VAT.

It is concluded that it is not possible to implement VAT in Nepal and, if implemented, it will have adverse effects on the economy.

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In developing countries, Gurugharana (1993) opines that tax revenue must be matched with the increasing need of the development expenditure. Taxation is considered a better and dependable source of revenue to bridge revenue and expenditure gap in the process of financing the development activities in Nepal.

CHAPTER III
METHODOLOGICAL FRAMEWORK

3.1 Conceptual Framework

Economic growth is the major objective of any nation. Growth requires production of goods and services, which in turn, requires investment. There are many areas where the private sector has shown little interest. Some of these areas include education, infrastructure. The private sector is not interested to invest in these areas due to the existence of externality. This gives rise scope for government investment in these sectors. There is ample evidence to prove that infrastructure and human capital are prerequisites for economic growth. The government requires resources for such investment. Majority of government resources are generated through tax. Hence, adequate amount of tax revenue and proper utilization of resources become the fundamentals of economic development. The following simple model explains the role of taxation for economic growth.

Let the growth rate of output, g_y be defined by

$$g_y = g_y(a_1(t_1), a_2(t_2))$$

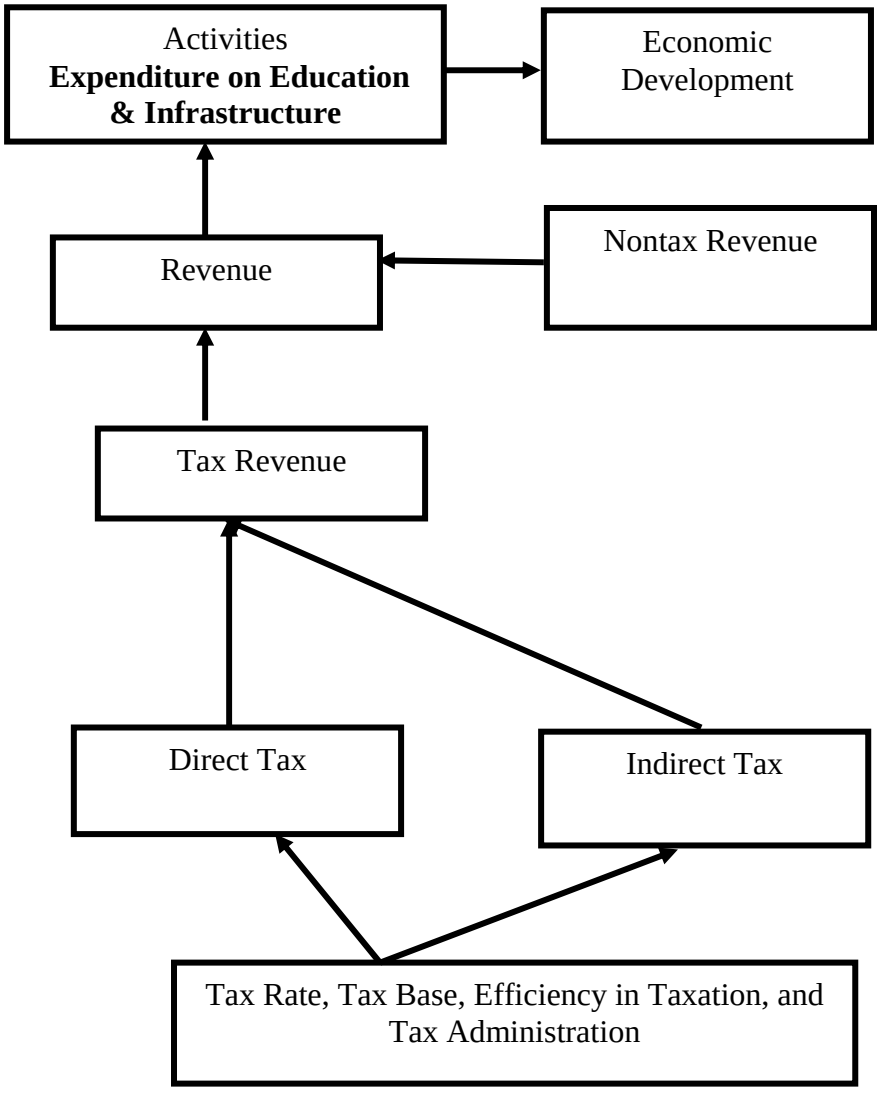
Where a_1 and a_2 are two actions (e.g. R&D expenditure and education) and the $t_i (i = 1,2,3.....)$ are two taxes. Then, the effect of tax is

$$\frac{dg_y}{dt_i} = \frac{\partial g_y}{\partial a_i}\frac{\partial a_i}{\partial t_i}$$

This equation says that growth rate over time depends on two components - change in activity due to change in tax and change in growth due to change in activity. In other words, tax is responsible for enhancing activities which ultimately leads to growth. But this equation says that a high level of tax revenue is not a sufficient condition for growth, but it is only a means of growth. The growth depends on how the activity transmits in the growth. In some countries, spending tax revenue on education may lead higher growth, while in another country on physical infrastructure and so on.

The consequence of this is that countries need not be alike in their responses to taxation. Even if the economic agents behave in the same way (that is all reduce their human capital investment in the same way) when income tax is raised, the effects on growth may not be the same. If countries are structurally different - perhaps some rely on human capital accumulation for growth whereas others focus on R&D - then the same tax policy may have very different growth consequences.

Hence, understanding the effects of taxation requires an understanding of both these components. Looking at the tax responses is not enough. The tax elasticity is only one part of the story. This is the reason why it is important to understand the channels through which growth originates and why it is not enough to just study components individually. The effect of tax on economic development is shown in the following diagram:



3.2 Sources of Data

One of the major hurdles to an economic study on Nepal is the paucity or inadequacy of data. Revisions of available data are made frequently. In some cases, it is extremely difficult to distinguish between provisional and actual data. The following is the list of sources of data for this study:

1. E. Himsworth: The Fiscal System of Nepal: A Report to GON of Nepal (United Nations: Technical Assistance Organization, 1965).
2. GON: Budget Speeches of Finance Ministers of various years (Kathmandu: Ministry of Finance).
3. HMG: Nepalko Artha Vyabastha (in Nepali) (Kathmandu: Ministry of Finance, 1965).
4. GON: Budget in Nepal (Kathmandu: Ministry of Finance).
5. GON: Economic Surveys of various years (Kathmandu: Ministry of Finance).
6. GON: Statistical Abstract: Figures and Facts About Taxation since 1959 A.D. (Kathmandu: Department of Taxation, Ministry of Finance, January, 1981).
7. CBS: Statistical Pocket Book of various years (Kathmandu: National Planning Commission Secretariat).
8. CBS: Statistical Pocket Book (Kathmandu: National Planning Commission Secretariat).
9. Nepal Rastra Bank: Quarterly Economic Bulletin of various years (Kathmandu: Nepal Rastra Bank).
10. NRB: Economic Report of various years (Kathmandu: Nepal Rastra Bank).
11. NPC: A Survey of Employment, Income Distribution and Consumption Patterns in Nepal – A Summary Report, Vol. IV (Kathmandu: National Planning Commission Secretariat).
12. World Bank: World Development Report of various years.

3.2.1 Preparation and Classification of Data

In the study, secondary sources have been used. Available data have been classified and made up-to-date. There is a master table comprising the composition and magnitude of total revenue, which covers the period 1963-64 to 2001-02. The share of important taxes in Gross Domestic Product has been calculated. A separate table, consisting of the contribution of individual taxes to the total revenue, has been given and adjusted revenue series have been prepared for total and individual taxes. Various ratios have been calculated to find tax structure of Nepal.

3.3 Calculation of Resource Gap

In this study, three types of resource gap, as defined below, have been explained:

RG1 = Total Expenditure – Total Revenue

RG2 = Total Expenditure – Total Revenue – Foreign Grant

RG3 = Total Expenditure – Total Revenue – Foreign Aid (Grant and Loan) – Internal Borrowing

3.4 Calculation of Tax Effort Ratio

The tax effort ratio is defined as the relationship between tax and Gross Domestic Product (*GDP*). The tax effort ratio shows the amount of *GDP* collected on the form of revenue. The tax effort ratio shows the burden of tax. In this study, the tax effort ratio has been calculated with respect to *GDP*.

(a) Total Revenue Effort Ratio (*TRER*)

The total revenue effort ratio is also known as total revenue effort ratio and it is the relationship between total revenue and *GDP* and defined as:

$$TER = \frac{TR}{Y}$$

where,

TER = Total Revenue Effort Ratio

TR = Total Revenue

Y = Gross Domestic Product [*GDP*]

(b) Total Tax Effort Ratio [*TTER*]

The total tax effort ratio is the relationship between total tax and *GDP* and defined as:

$$\boldsymbol{TTER} = \frac{TTR}{Y}$$

where,

TTER = Total Tax Effort Ratio

TTR = Total Tax

Y = Gross Domestic Product [*GDP*]

(c) Non- tax Effort Ratio [NTER]

The non-tax tax effort ratio is the relationship between non-tax and *GDP* and defined as:

$$NTER = \frac{NTR}{Y}$$

where,

NTER = Non – Tax Effort Ratio

NTR = Non – Tax Revenue

Y = Gross Domestic Product [*GDP*]

(d) Direct Tax Effort Ratio [*DTER*]

The direct tax effort ratio is the relationship between direct tax and *GDP* and defined as:

$$DTER = \frac{DT}{Y}$$

where,

DTER = Direct Tax Effort Ratio

DT = Direct Tax Revenue

Y = Gross Domestic Product [*GDP*]

(e) Indirect Tax Effort Ratio [*ITER*]

The indirect tax effort ratio is the relationship between indirect taxes and *GDP* and defined as:

$$ITER = \frac{IDT}{Y}$$

where,

ITER = Indirect Tax Effort Ratio.

IDT = Indirect Taxes

(f) Sales Tax Effort Ratio [*STER*]

The sales tax effort ratio is the relationship between sales taxes and *GDP* and defined as:

$$STER = \frac{ST}{Y}$$

where,

STER = Sales Tax Effort Ratio

ST = Sales tax

(g) Custom Duty Effort Ratio [*CDER*]

The custom duty effort ratio is the relationship between custom duty and *GDP* and defined as

$$CDER = \frac{CD}{Y}$$

where,

CDER = Customs Duties Effort Ratio

CD = Customs Duties

3.5 Measurement of Responsiveness of Taxes

To find responsiveness of taxes, we first have to separate discretionary effects from automatic growth. Though a complete adjustment of historical revenue series is not

possible, different methods used for tax revenue adjustments are important. These methods are:

a. Constant Rate Structure Method

b. Proportional Adjustment Method

c. Dummy Variable Technique and

d. Divisia Index Approach

In the case of the last two methods, there is no need of prior purging of the series to calculate the elasticity coefficient. Among the four methods, first method, that is Constant Rate Structure Method provides more approximate net tax revenues. But the limitation of this method is that it requires very good data arrangement which is not feasible in a country like Nepal. Dummy Variable Technique is inappropriate where discretionary changes frequently occur. Similarly Divisia Index approach is not suitable despite its sound theoretical base if discretionary changes produce very large revenue effects. Hence, due to lack of good data management system, which is the feature of an underdeveloped country, and regular practice of discretionary change in Nepal, Proportional Adjustment Technique has been used for tax revenue adjustment in this study.

Proportional adjustment method is relevant in underdeveloped countries where data arrangements are not good. Within this method, there exist several alternatives and the following are more important: Prest method; Sahota method; and Chelliah and Chaudhary method. However, due to the simplicity of its nature, the Sahota (1961) method has been used in this study.

The adjustment method given by Sahota assumes that the discretionary change in any given year may affect the overall automatic elasticity, but in respect of revenue yields, they would influence the yield of the year in which they have taken place. Accordingly, he opined that elimination is to be done in such a way that the changes in the yields to change in tax rate or the base, in a year, are accounted for only in that particular year. If interpreted in a correct manner, this method yields the same series as the Prest method.

The Sahota expression to determine the actual tax receipts, excluding discretionary effects, in the year i is written as:

$$I_i = \frac{T_i}{T_{i-1}} I_{i-1}$$

Where, T'i stands for i[th] year tax collection adjusted to rates in year i-1. Alternatively, this can be written as:

$$T_{ij} = \frac{(T_j - D_j)}{T_{j-1}} \mathrm{T}_{i,j-1}$$

Where, Tij = Adjusted series for the year j with reference to

i th period structure

Tj = Actual yield in year j

Dj = Effects of discretionary change for the year j

For i = 1, we will have

$$T_{11} = T_1$$
$$T_{12} = T_2 - D_2$$
$$T_{13} = \frac{T_3 - D_3}{T_2} T_{12}$$

And so on.

After separating the effects of discretionary change from normal growth, the specification of the functional relationship that can reasonably be justified on theoretical grounds is a necessary pre-requisite to calculate the elasticity coefficients. If there is a linear relationship between two variables, a straight line can be used to summarize the data. One of the most commonly used procedures for fitting a line to the observations is the method of least squares. This method results in a line that minimizes the sum of squared vertical distance from the observed points to the line. The equation for the straight line that relates predicated revenue (T_i) to national income (Y_i) is

$$T_i = a + bY_i + e_i \text{.....(1)}$$

The intercept, *a*, is the predicted revenue when there is no income (*Y*). The slope, *b*, is the change in predicted revenue for a unit change in income which may be referred as buoyancy or elasticity coefficients accordingly as *T* is actual or adjusted revenue series,

obtained from the methods discussed earlier. The term $e_i = T_i - T_i]$. The e_i are assumed to be normally distributed independent, random variables with a mean of 0 and variance of σ^2.

When evidence of violation of assumptions appears, one can pursue one of two strategies:

a. Either formulate an alternative model such as weighted least squares; or

b. Transform the variables so that the current model will be more adequate. For example, taking logs, square roots, or reciprocals can stabilize the variance, achieve normality or linearize the relationship.

To try to achieve linearity, one can transform either the dependent or independent variable or both. If one alters the scale of the independent variable, linearity can be achieved without any effect on the distribution of the dependent variable. When the dependent variable is transferred, its distribution is changed. The choice of transformations depends on several considerations. If the form of the true model governing the relationship is known, it should dictate the choice. For example, in our case,

$$T = aY^b e^{\mu} \text{.....(2)}$$

is an adequate model as referred to by various tax analysts. Taking logarithm of both sides gives:

$$\log(T) = \log(a) + b\log(Y) + \mu \text{.....(3)}$$

It gives the linear relation between variables log (T) and log (Y). The intercept term log (a), differs depending on the choice of base of the log, but that of 'b' will not.

The double logarithmic relationship has a very important characteristic. It is a constant elasticity function, and that elasticity is given by 'b', where b is the elasticity of T with respect to Y, which measures the percentage change in T produced by a one percent change in Y.

To get to elasticity coefficient, b, differentiating equation three with respect to Y, we get,

$$\frac{d[(\log(T))]}{dY} = \frac{d\ [\log(a)\ + b\ \log\ (Y) + \mu]}{dY}$$

$$\frac{1}{T} - \frac{dT}{dy} = 0 - b\ \frac{1}{Y}$$

Now, multiplying by *Y*, we get,

$$\frac{dT}{dY}\frac{Y}{\mathrm{T}} = b$$

It gives the elasticity coefficient, if we use the adjusted revenue series for *T*. Instead of adjusted revenue series, if we use actual yields, then *b* gives the buoyancy coefficient.

CHAPTER IV
TRENDS AND MAGNITUDE OF RESOURCE GAP IN NEPAL

4.1 Introduction

The objectives of this chapter are to estimate the trends and the magnitude of resource gap in Nepal for the last two decades, trace out the effects of resource gap, find the sources of meeting resource gap, as well as give suggestions and recommendations.

Today, least two thirds of the world's population is living in conditions of extreme poverty. Economic development of countries where such conditions prevail, without any doubt, is the most important and most pressing socioeconomic problem of the present generation. In other words, a major problem facing developing countries in the recent time is how to promote sustainable growth and development. Nepal, with a per capita income of $220 is one of the poorest, least developed and slowest growing countries in the world.

Nepal's per capita income is one of the lowest in the world. This is also the lowest among the SAARC countries. In fact, Nepal is the ninth poorest country in the world. During the 1970s, the GDP growth averaged 2.1 percent per annum. With the population growing by 2.6 percent per annum during the same time, real per capita income declined by 0.5 percentage point. During the 1980s, economic growth rate remained higher than the rate of population growth. As a result, per capita income grew by 2.5. In the 1990s, the growth in per capita income remained 2.9 percent on average. However, the growth rate was negative in 2001-2002 (Pant, 2003).

The economic growth of a country depends on the amount that is invested in development activities. If the budget of Nepal is analyzed, then it is found that the share of development expenditure is decreasing while the share of regular expenditure is increasing. The situation has reached a point where Nepal has become almost unable to meet even the regular expenditure through internal sources of revenue. This has led to a wide budget deficit. The

resource gap is increasing every year. The problem is how to reduce this resource gap so as to supplement development expenditure.

4.2 Concept of and Trends in Resource Gap

The pattern of economic development in Nepal is very significantly affected by the system of national planning. The direction and the development pattern of the various sectors and their relative priorities are determined by the development plans. The era of planned development started in Nepal with the launching of the first Five-Year Plan in 1956. The process of implementation of planned development was, however, interrupted twice thereafter. Still, the formulation and implementation of five-year plans has been a regular feature of the Nepalese economy.

The First Plan (1956-1961) was launched with the basic objective of social and economic development. The focus of the Second Plan (1963-1965) was on infrastructure development. The Third Plan (1965-1970) also aimed at creating necessary conditions for rapid economic growth. The Fourth Plan (1970-1975) gave emphasis on regional development. The advent of growth centers, growth axis and growth corridors, which were identified during the Fourth Plan, were carried over to the Fifth Plan (1975-1980). The Sixth Plan (1980-1985) gave priority to sectored growth with focus on human resource development and investment in the key sectors. The Seventh Plan (1985-1990) prioritized minimum quality of life for the people. The Basic Needs Approach to development planning was initiated in the eighties. The major emphasis of the Eighth Plan (1992-1997) was on economic policy reforms, foreign investment, and technology transfer. The main objective of the Ninth Plan (1997-2002) was poverty alleviation. As in the Ninth Plan, the Tenth Plan (2002-2007) also has given priority to poverty alleviation.

The objectives of the each plan were growth oriented. But the discrepancy was that the targeted growth rate was never achieved. For example, the Ninth Plan had targeted the achievement of an annual growth rate of 6 percent but only 3.6 percent was realized.

The growth of output in any economy depends on capital accumulation, and capital accumulation requires investment and an equivalent amount of savings to match it. Two of the most important issues in development economics, and for developing countries, are how to stimulate investment, and how to bring about an increase in the level of savings to fund increased investment.

Mathematically, the growth of output ($\Delta Y/Y$) can be expressed as the product of the ratio of investment to national output ($\Delta I/\Delta Y$) and the productivity of investment (Y/I), that is

$\Delta Y/Y = (\Delta I/\Delta Y)\ (Y/I)$ …….(1)

This is by definition true, and identical to Harrod's famous growth formula for the actual rate of growth (Nepal, 1999) of:

$g = s/c$ ……. (2)

Where g is the growth rate ($\Delta Y/Y$); s is the savings ratio (S/Y), and c is the incremental capital-output ratio (I/Y), that is the amount of investment or increase in the capital stock required to increase the flow of output by one unit (which is the reciprocal of the productivity of investment, Y/I). The Harrod formula for the actual rate of growth is by definition true since in the national accounts (ex-post), savings (S) and investment (I) are always equal.

The simple Harrod growth formula has proved to be remarkably useful for the purposes of planning and forecasting, and the development plans of developing countries invariably make reference to it. It is clear, for example, that given the capital-output ratio for a country, the ratio of saving and investment to national income can be calculated for any target rate of growth stipulated. Suppose a country wishes to grow at 5 percent per annum, and the capital-output ratio is 3, it can be seen from equation (2) that it must save and invest 15 percent of its national income. If it saves less, growth will be slower, unless the country can somehow reduce the incremental capital-output ratio or raise the productivity of investment.

If there is a difference between the actual savings ratio and that required to achieve a target rate of growth, there is said to exist a savings-investment (S-I) gap. In the example given above, if the required savings ratio is 15 percent and the actual ratio is 10 percent, the S-I gap is 5 percent. This needs to be filled if the target growth rate is to be achieved. This can be done by either attempting to raise the domestic savings ratio or by borrowing from abroad, that is, by foreign savings.

One of the major ways of increasing domestic savings is to increase the government revenue. However, due to various reasons, what the government estimates to spend is not covered by the government revenue. The difference between government revenue and expenditure is known as Resource Gap. There is another concept of resource gap, that is, savings minus investment. However, the present discussion has been concentrated, to meet the objective of the study, on the first type of resource gap, known also as budget deficit.

It is quite easy to say that a budgetary deficit is simply the excess of public expenditure over public revenue. However, in practice, the concept admits of many variations and yields widely divergent measures of budgetary deficit. There is also a good deal of confusion due to the fact that as yet there is no fixed correspondence between a selected measure and the name assigned to it. A given measure of deficit may be referred to by different names, and similarly, a given term may be used to represent different measures of budgetary deficit. The existence of such a large number of measures is explained by the fact that each measure has analytical and policy relevance, and there is no single measure which may be universally preferred over all others for all time to come. There is no single “correct” measure to opt for. As the World Development Report (1989) of the World Bank says, the choice of the “correct” measure would depend upon the purpose of analysis.

Before we take up alternative measures of deficit spending and illustrate them, it would be useful to present a break-up of the receipts and disbursements of HMG/N into relevant categories and sub-categories in an appropriate and usable form.

The different types of resource gap have been defined as follows:

A) Resource Gap (RG1): This is the difference between expenditure and revenue. It is also known as Fiscal Deficit.

RG1= Total Government Expenditure –Total Government Revenue

Here, Revenue includes total tax and non-tax revenue and Total expenditure includes both regular and development expenditure. The concept of RG helps us to know the government's capacity to finance the nation's expenditure.

B) Resource Gap (RG2): This is the difference between expenditure and revenue plus foreign grant. It is also known as Budget Deficit.

RG2= Total Expenditure – Total Revenue - Foreign Grant

Here, foreign grant includes both bilateral and multilateral grants.

C) Resource Gap (RG3): This is the difference between expenditure and revenue plus foreign aid (grant or loan) plus internal borrowing. It is also known as Overall Deficit.

RG3= Total Expenditure – Total Revenue - Foreign Aid (Grant or Loan) - Internal Borrowing

A conceptually right way of measuring deficits is to look at the change in the public sector's net worth (assets minus liabilities). In practice, however, such a measurement is quite difficult, if not impossible, in most countries. The difficulty lies in the valuation of public sector assets. Partly due to this problem, the conventional deficit measure captures the change in public sector liabilities. In the conventional way of measuring deficits, the inflation-corrected, consolidated public sector deficit is the most comprehensive and correct measure of public deficit. It represents the total excess of expenditure over revenue for all government entities (Bhatia, 1994).

Lack of sufficient resources is the major obstacle to realize the planned development programs in a developing country like Nepal. Nepal has been experiencing massive resource

gap in her finances. This has been primarily due to the lop-sided growth of government expenditure vis-à-vis revenue generation from domestic sources (Agrawal, 1998).

Table (4.1) provides a picture of the growing resource gap in Nepalese finances. RG1 has grown from Rs. 12905.5 million in FY 1991/92 to 29626.7 million in FY 2001/2002, that is, resource gap increased by more than two fold. The average growth rate of RG1 is 16.7 percent. This is a clear indication of the poor performance in resource mobilization on the domestic front. Fig (1) shows the resource gap (RG1) for the last eleven years.

If we take RG2 , the picture is still not promising- an increase from Rs. 11261.7 million in 1991/92 to Rs.22940.6 in 2001/02. The average growth rate of RG2 for the last 11 years (1991/92-2001/02) is 8.1 percent, which is less than the same measure of RG1. This clearly indicates that there is a need for mobilizing additional sources.

Although in absolute terms, the resource gap is increasing, RG1 as the percentage of total expenditure does not show a continuous path. From 1991/92 to 1992/93, it increased. From 1992/93 to 1994/95, it continuously decreased. After that, it started to increase up to 1997/1998. After 1997/1998, it is increasing and decreasing in alternative years. The following diagram shows this trend.

RG3 also increased from Rs. 4444.8 million in 1991/92 to Rs. 15242.0 million in 2001/02. The average growth rate of RG3 for the last 11 years (1991/92-2001/02) is 14.41 percent, which is less than the same measure of RG1 and more than that of RG2. While domestic revenue generation has improved since the early 1990s, receipts are still much too low. In FY2001, domestic revenue collection recorded a strong 16 percent growth due to the Government's enhanced revenue measures, reaching 11.5 percent of GDP, up from the previous year's less than 11 percent of GDP.

Table 4.1

Resource Gap in Nepal: (1966/67-2001/02)

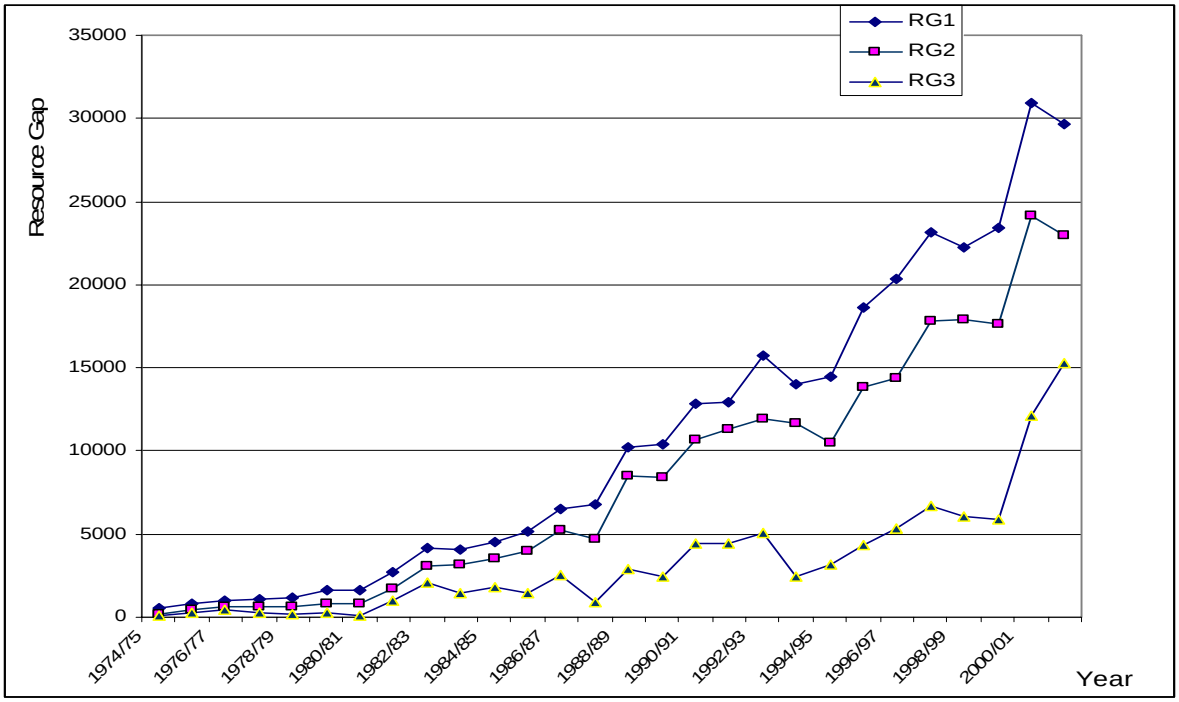
(Rs. in million)

Year	National Expenditure (1)	Grant (2)	Loan (3)	Revenue (4)	RG1 (5) (=1-4)	RG2 (6) (=5-2)	RG3 (7) (=6-3)
1966/67	438.84	142.23	3.70	286.66	152.18	9.95	6.25
1967/68	481.10	167.60	0.00	325.98	155.12	-12.48	-12.48
1968/69	537.21	185.90	0.00	413.03	124.18	-61.72	-61.72
1969/70	683.83	243.74	7.55	464.03	219.80	-23.94	-31.49
1970/71	769.50	270.69	32.46	459.70	309.80	39.11	6.65
1971/72	889.60	242.04	38.89	553.43	336.17	94.13	55.24
1972/73	982.80	180.26	47.38	615.83	366.97	186.71	139.33
1973/74	1226.31	222.62	87.87	766.43	459.88	237.26	149.39
1974/75	1513.70	282.79	103.97	1008.40	505.30	222.51	118.54
1975/76	1913.30	359.72	145.94	1115.60	797.70	437.98	292.04
1976/77	2330.40	392.66	164.32	1322.90	1007.50	614.84	450.52
1977/78	2674.90	466.60	381.80	1582.00	1092.90	626.30	244.50
1978/79	3020.50	599.30	390.10	1811.90	1208.60	609.30	219.20
1979/80	3470.70	805.60	534.90	1880.00	1590.70	785.10	250.20
1980/81	4092.30	868.90	693.30	2419.20	1673.10	804.20	110.90
1981/82	5361.30	993.30	729.90	2679.50	2681.80	1688.50	958.60
1982/83	6979.20	1090.10	985.80	2841.60	4137.60	3047.50	2061.70
1983/84	7437.30	876.60	1670.90	3409.30	4028.00	3151.40	1480.50
1984/85	8394.80	923.40	1753.00	3916.60	4478.20	3554.80	1801.80
1985/86	9797.10	1172.90	2501.10	4644.50	5152.60	3979.70	1478.60
1986/87	11513.20	1285.10	2705.80	5975.10	5538.10	4253.00	1547.20
1987/88	14105.00	2076.80	3815.80	7350.40	6754.60	4677.80	862.00
1988/89	18005.00	1680.60	5666.40	7776.90	10228.10	8547.50	2881.10
1989/90	19669.30	1975.40	5959.60	9287.50	10381.80	8406.40	2446.80
1990/91	23549.80	2164.80	6256.70	10729.90	12819.90	10655.10	4398.40
1991/92	26418.20	1643.80	6816.90	13512.70	12905.50	11261.70	4444.80
1992/93	30897.70	3793.30	6920.90	15148.40	15749.30	11956.00	5035.10
1993/94	33597.40	2393.60	9163.60	19580.80	14016.60	11623.00	2459.40
1994/95	39060.00	3937.10	7312.34	24575.20	14484.80	10547.70	3235.36
1995/96	46542.40	4825.10	9463.90	27893.10	18649.30	13824.20	4360.30
1996/97	50723.70	5988.30	9043.60	30373.50	20350.20	14361.90	5318.30
1997/98	56118.30	5402.61	11054.51	32937.90	23180.40	17777.79	6723.28
1998/99	59579.00	4336.60	11852.40	37251.00	22328.00	17991.40	6139.00
1999/00	66272.50	5711.70	11812.20	42893.80	23378.70	17667.00	5854.80
2000/01	79835.10	6753.40	12044.00	48893.60	30941.50	24188.10	12144.10
2001/02	80072.30	6686.20	7698.60	50445.50	29626.80	22940.60	15242.00

Source: Various Economic Surveys, MOF

Figure 4.1

Trends on Different Types of Resource Gap in Nepal



Source: Various Economic Surveys, MOF

However, domestic revenue of Rs47 billion was still lower than the budgeted Rs50 billion. In comparison, domestic revenue generation in other South Asian countries is much higher than in Nepal: 15.3 percent of GDP in India, 16.1 percent in Pakistan, and 18.5 percent in Sri Lanka. Only Bangladesh has a lower revenue generation rate than Nepal (9.4 percent of GDP) (*ADB,2003*). However, the figures for domestic revenue generation are understated as some earmarked taxes and fees, such as the airport tax, are off-budget items. Tax collection in FY2001 was 9.5 percent of the GDP, a 16 percent improvement from the previous year (ADB,2003). Indirect taxes make up about 75 percent of the tax revenue, mainly from customs duties (33 percent of the total) and value-added tax (30 percent).

Table 4.2

Resource Gap in Nepal*(1974/75-2001/02)*

(*Percentage of Nominal GDP*)

Year	TR	TE	FG	FL	RG1*	RG2*	RG3*
1974/75	1.81	17.58	2.10	4.49	15.77	13.67	9.18
1975/76	1.75	18.03	2.01	4.24	16.28	14.27	10.03
1976/77	1.72	18.34	2.70	4.96	16.62	13.92	8.96
1977/78	1.77	20.17	1.88	6.35	18.4	16.52	10.17
1978/79	1.75	19.02	1.91	5.76	17.27	15.36	9.6
1979/80	1.56	19.54	1.80	5.19	17.98	16.18	10.99
1980/81	1.62	17.67	1.10	4.56	16.05	14.95	10.39
1981/82	1.58	18.18	2.23	4.07	16.6	14.37	10.3
1982/83	1.43	16.86	1.20	4.60	15.43	14.23	9.63
1983/84	1.56	17.82	1.80	3.34	16.26	14.46	11.12
1984/85	1.57	18.70	1.94	3.80	17.13	15.19	11.39
1985/86	1.66	18.08	2.13	3.22	16.42	14.29	11.07
1986/87	1.65	18.65	1.80	3.67	17	15.2	11.53
1987/88	2.15	17.42	1.27	3.47	15.27	14	10.53
1988/89	2.05	17.46	1.51	3.11	15.41	13.9	10.79
1989/90	2.27	19.46	1.65	2.94	17.19	15.54	12.6
1990/91	2.55	19.00	1.59	1.83	16.45	14.86	13.03
1991/92	9.04	17.67	1.10	4.56	8.63	7.53	2.97
1992/93	8.91	18.18	2.23	4.07	9.27	7.04	2.97
1993/94	9.83	16.86	1.20	4.60	7.03	5.83	1.23
1994/95	11.23	17.82	1.80	3.34	6.59	4.79	1.45
1995/96	11.21	18.70	1.94	3.80	7.49	5.55	1.75
1996/97	10.83	18.08	2.13	3.22	7.25	5.12	1.9
1997/98	10.95	18.65	1.80	3.67	7.7	5.9	2.23
1998/99	10.92	17.42	1.27	3.47	6.5	5.23	1.76
1999/00	11.30	17.46	1.51	3.11	6.16	4.65	1.54
2000/01	11.92	19.46	1.65	2.94	7.54	5.89	2.95
2001/02	11.97	19.00	1.59	1.83	7.03	5.44	3.61

Source: Various Economic Surveys, MOF

**** For the meaning of RG1, RG2 and RG3, refer to previous table.***

With the Government's strong measures, significant progress on tax administration has recently been made. The introduction of VAT in November 1997 was meant to be the centerpiece of overall tax reform. Though the rate for VAT was reduced to 10 percent from the 15 percent originally envisaged, the minimum size of businesses subject to VAT decreased from Rs4.5 million in revenue to Rs2.0 million, while registrations doubled from 9,082 in FY1999 to about 18,000 in FY2000. Issuing invoices at the retail level and refunding VAT are still problems. Customs duties are collected according to official valuation rather than purchase price, while income tax is levied on a negotiated amount rather than on account, both of which lead to under invoicing. Measures to strengthen VAT system are being implemented, which include levying customs duties on transaction values to avoid under invoicing at the border. For income tax, a uniform taxpayer identification system, to link the VAT with income tax administration, has been introduced. A new income tax bill was approved by Parliament in October 2001. The new income tax act aims to encompass all income-accumulating sectors under the tax net, and to resolve inconsistencies with other acts. The main features of the new income tax bill include (i) reclassification of income categories to incorporate all sources of income under the tax net, (ii) introduction of a new appeals procedure requiring mandatory appeal at the Inland Revenue Office before going to court, and (iii) taxing capital gains and retirement income.

As a step towards building up a strong tax administration, a single Inland Revenue Department has been formed after merging the Income Tax and VAT departments, while expansion of the Automated System for Customs Data and Accounts (ASYCUDA) which was introduced with Asian Development Bank (ADB) assistance, is under way. However, the merging of the Income Tax and VAT departments may have had a negative impact on revenue collection initially in FY 2002, until the new department is well established.

While regular expenditures appear to have risen significantly over time - with a concurrent fall in development expenditures - this is due in part to a reclassification of expenditure items. In FY1995, some recurrent expenses previously included with development

expenditures were reclassified as regular expenditures. In more recent years, though, regular expenditures have been increasing as a share of GDP. In FY2001, total expenditure increased by 26 percent which was mainly driven by the salary increase for civil servants and the implementation of a voluntary early retirement scheme. Actual regular expenditures in FY2001 of Rs37 billion were nearly equal to the budgeted amount, registering a 26 percent increase. In contrast, while the Rs40 billion in development expenditures represented a 25 percent increase from the previous year, this was a long way from the budgeted growth rate of 52 percent.

Table 4.3

Government Finance, FY1986-2001

(Percent of GDP at market prices)

Item	Average FY1986-90	Average FY1991-96	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Revenues and Grants	11.1	10.8	12.7	12.3	11.5	12.2	13.9
Domestic Revenues	8.9	9.2	10.5	10.5	10.2	10.7	11.5
Of which: Tax Revenue	7.1	7.4	8.7	8.6	8.4	8.7	9.5
Grants	2.1	1.6	2.1	1.8	1.3	1.5	2.4
Expenditures and Net Lending	18.1	16.7	16.5	16.9	15.4	15.5	18.1
Regular Expenditures	5.7	6.0	7.4	7.7	7.7	7.7	9.0
Development Expenditures	12.5	11.1	9.5	9.6	8.3	8.4	9.7
Lending - Repayments	(0.2)	(0.4)	(0.3)	(0.4)	(0.6)	(0.6)	(0.6)
Overall Balance	(7.0)	(5.9)	(3.9)	(4.6)	(3.9)	(3.3)	(4.2)
Foreign Financing	4.9	3.7	2.5	2.8	2.9	2.1	3.2
Domestic Financing	2.1	2.2	1.4	1.9	1.4	1.1	1.0
Of which: Bank Financing	1.6	1.7	1.1	1.2	0.6	1.0	0.7
							Memorandum Item:
Foreign Funds/Dev. Exp. (%)	55.6	47.8	48.7	47.3	45.5	43.6	57.6

a. Preliminary figures.
b. Includes changes in currency holdings.
c. Includes grants and net foreign borrowing.

Sources: Calculated on the basis of the data obtained from Economic Survey, 2003.

The main regular expenditure item in FY2001, based on the budgeted figures, was salaries and allowances, which made up 26 percent of total regular expenditures. Grants and subsidies, the next largest item, made up 21 percent of the total, while interest payments accounted for 14 percent. On a sector basis, the social sector -education and health sub-sectors in particular - accounted for the largest share (25 percent) due to the large wage component of this sector's expenditures. The main sectors absorbing development expenditures in FY2001 were power (22 percent), transportation (14 percent), local development (11 percent), and irrigation (10 percent).

After a decline in the late 1980s, social sector spending increased in the 1990s, including education, health, and drinking water. In FY1990, social sector spending was less than 15 percent of total Government expenditures. By FY2001, the share had risen to nearly 26 percent, and this trend is expected to continue under the FY2002 budget. In the social sector, education is the largest sub-sector with an expenditure of 2.8 percent of the GDP, mainly on recurrent expenditure. While higher spending in these areas can improve social and human development in the country, the spending needs to be translated into sustainable results. Greater efforts to improve the quality, efficiency, and sustainability of the provision of social services are the immediate needs of the sector.

The FY2001 budget deficit widened to 4.2 percent of GDP from 3.3 percent in the previous year, but still remained manageable. The deficit of Rs17.3 billion was considerably less than the budgeted Rs26.7 billion, as the budgeted level of development spending could not be achieved due to the escalated insurgency and the poor revenue performance, particularly in the fourth quarter of FY 2001. As in previous years, the deficit was financed mainly by foreign borrowing from various bilateral and multilateral development agencies. In FY2001, foreign lending covered 77 percent of the deficit, with domestic banks covering 16 percent and domestic non-bank sources covering the remaining 7 percent of the deficit. The dependence on foreign aid further increased in FY2001, with foreign grants and loans financing 58 percent of development expenditures, a sharp increase from the level of 47 percent in the previous five years, the situation being unlikely to be reversed in the near future.

The difference between private finance and public finance is that public finance first estimates expenditure while private finance first estimates revenue. However, preliminary estimates of revenue can be expected in public finance as well. Hence, increased revenue mobilization should reduce the resource gap. To test this, the following equation for the period of 1966/67-2001/02 has been estimated[1]. In the equation, as defined previously, RG1 is the difference between total expenditure and internal revenue.

$$\Delta RG1 = 1424.4 + 0.6\Delta revenue$$
$$(t = 3.18) \qquad (t = 25.26)$$
$$R^2 = 94.94\, percent$$

The equation shows that increased total revenue increases resource gap. The possible reason is that the Nepalese development budget is heavily dependent on foreign aid. Internal revenue is mainly used for recurrent expenditure. Internal revenue is also used for matching fund. Hence, increased internal revenue permits the authorities to accept more development projects financed by foreign aid as they have more matching fund. This leads to a climb in RG1 with increased revenue.

4.3 Effects of Resource Gap

Both theory and evidence suggest that a persistently large fiscal (budget) deficit poses real threats to the stability and growth of the economy. An excessive budget deficit could lead to a combination of inflation, exchange rate crisis, external debt crisis, and high real interest rates.

One of the major effects of resource gap is explained by Twin Deficit hypothesis (*Acharya, 2003*). Twin Deficit hypothesis describes the casual relationship between government budget deficit and trade (external) deficit, that is, the government budget deficit will force a movement in the trade deficit either way, depending upon the direction of its change.

[1] For estimation procedure see Annex 4

In fact, this is not only the single hypothesis between these two variables. There are four possibilities that would appear along the empirical investigation. These are (*Acharya, 2003*):

a. Budget deficit has a positive relationship and significant impact on trade deficit (Keynesian Proposition).

b. Even though not very well defined theoretically, there is possibility of the cause of fiscal deficit because of the trade deficit. (Reverse proposition of proposition a).

c. By natural deduction from (a) and (b), both of them might be mutually dependent or bi-directional relation may hold (Feed-back effect).

d. By the same token, no relation may prevail between the trade deficit and budget deficit (Ricardian Equivalence Hypothesis).

Table (4.4) shows the budget deficit and trade deficit. Budget deficit (RG2) has increased by two fold from 1991/92 to 2001/02, and in the same period, trade deficit has increased by more than three fold.

Table 4.4

Resource Gap (RG2) and Trade Deficit for Different Years(*1974/75-2001/02*)

(Rs. In million)

Year	RG2	Trade Deficit
1974/75	788.09	925
1975/76	1157.42	812.9
1976/77	1400.16	856.4
1977/78	1559.5	1450.6
1978/79	1807.9	1608.8
1979/80	2396.3	2403
1980/81	2542	2830.2
1981/82	3675.1	3452
1982/83	5227.7	5197
1983/84	4904.6	4823
1984/85	5401.6	50222
1985/86	6325.5	6286.3
1986/87	6823.2	7924.1
1987/88	8831.4	9765.5
1988/89	11908.7	12085.7
1989/90	12357.2	13186.6
1990/91	14984.7	15852.4
1991/92	14549.3	18361.4
1992/93	19542.6	21973.5
1993/94	16410.2	32312.7
1994/95	18421.9	46060.1
1995/96	23474.4	54658.1
1996/97	26338.5	70998.8
1997/98	28583.01	61613.6
1998/99	26664.6	52002.3
1999/00	29090.4	58779.7
2000/01	37694.9	60120.5
2001/02	36313	59313.6

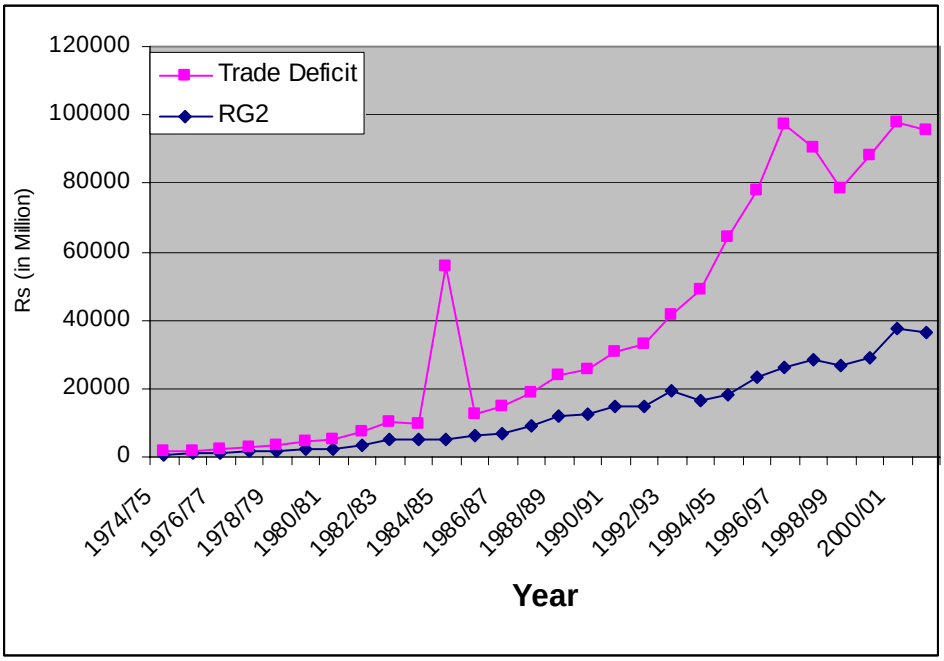
Source: Economic Survey, 1997/98 and 2002/2003

A mounting trend of the budget deficit and trade deficit has been confirmed in the following figure (4.2) also. This continuous cycle of budget deficit and trade deficit has many adverse consequences to the economy in various aspects, for example, pressure on the level of capital formation, resource mobilization, and balance of payment.

Uncontrolled fiscal deficit and the resulting financial requirements of the public sector has often been the root of the macroeconomic imbalances. The fiscal deficit would be a source of instability if it represents a large and growing percentage of GDP and if it is financed through external borrowing or through money creation.

Figure 4.2

Budget Deficit and Trade Deficit



Source: Economic Survey, 1997/98 and 2002/2003

The savings-investment identity and the financing arrangement of a fiscal deficit shows that the excess of domestic investment not met through domestic savings is financed through foreign savings, which is equivalent to the current account deficit. If savings exceed investment, the excess would be reflected in the current account surplus. With increased

fiscal expansion or fiscal deficit, the current account deficit would widen and the public debt/ GDP ratio increase. If the real tax collection lags behind inflation, the fiscal problem gets intensified and the public savings are reduced. The deficits, mostly financed through the banking system, expand the money supply and breed inflation. BOP crisis and foreign debt problems are often caused and get aggravated by an imprudent fiscal policy. Regression between trade deficit and RG2 shows that increase in RG2 by one unit leads to an increase in trade deficit by 1.91 units. The result of regression for the period of 1974/75-2001/02 is shown below[2]:

$$\Delta \text{trade deficit} = -1058.945 + 1.91(\Delta RG2)$$
$$(t = -0.32) \quad (t = 9.87)$$
$$R^2 = 78.93\%$$

The t value indicates that constant term is not significant. However, significance of coefficient of RG2 indicates that Keynesian proposition, that is, budget deficit has a positive impact on trade deficit, is true for the Nepalese case.

When excessive domestic borrowing finances budget deficits, it would lead to less competitive real interest rate which crowds out the private sector. The expectation of large inflation, exchange rate devaluation, and increased government borrowing would create greater uncertainty and risk, besides making the real interest rate uncompetitive, thereby further reducing investment level and increasing macroeconomic instability. If the real interest rate in the debt exceeds the rate of growth of exports, the debt service ratio tends to rise. Conversely, even higher external debt in terms of GDP could be sustained if the growth levels of exports and GDP are high, implying that returns on borrowed capital are more than sufficient to pay the interest.

The accompanying tables portray a clear message that the government has a very severely strained resource position, resulting in wide fiscal deficits and increasing outstanding debt stock, with adverse debt-servicing implications. The government outstanding debt, in

[2] For estimation procedure see Annex 4

relation to the levels of total exports, government revenue, and the economic growth/employment levels, looks very high. The outstanding foreign debt as a percentage of GDP has been around 52 percent. It is also frequently observed that Nepal's debt profile is mostly concessional. However, the level of currency depreciation that has remained at around 9percent over the last decade shows that, from the debt-servicing and public resource allocation perspective, the public sector vulnerability is quite high. Unless the government, in a sustainable manner, improves its capability to mobilize both domestic revenue as well as grants, including debt relief from abroad, the fiscal structure is bound to weaken, thereby generating macroeconomic imbalances and other vulnerabilities in the economy. A weak fiscal structure means that the economy would be deprived of the aforesaid benefits of prudence in the fiscal policy and would suffer from the dangers associated with fiscal irresponsibility. In an economy wherein expenditure exceeds revenue by threefold in the public sector, a weak fiscal structure and other vulnerabilities would be adversely affecting the private sector consumption and investment as well as the economic growth.

4.4 Sources of Meeting the Resource Gap

According to Fischer and Easterly (1990), public sector deficit can be financed in four basic ways: printing money; running down foreign exchange reserves; borrowing abroad; and borrowing domestically. Each of these mechanisms could lead to at least one potential problem: printing money acts like a tax, but the associated inflation exacts a heavy toll on social cohesion; drawing foreign exchange reserves could lead to a balance-of-payment crisis; borrowing abroad could precipitate a foreign debt crisis; and domestic borrowing might crowd-out private investment by raising interest rates. There is, however, no optimal composition of deficit financing. The latter is a complex issue which requires detailed assessment and careful tailoring on a case by case basis.

Table 4.5

Government Expenditure and Sources of Financing (1974/75-2001/02)

(Rs in Million)

Year	Expenditure	Resource			Deficit	Source of Deficit Financing		
		Revenue	Foreign Grant	Total		Foreign Loan	Internal Loan	Cash Balance
1974/75	1513.70	1008.40	282.80	1291.20	222.50	104.00	100.00	18.50
1975/76	1913.20	1115.60	359.70	1475.30	437.90	145.90	200.00	92.00
1976/77	2330.50	1322.90	392.80	1715.70	614.80	164.30	300.00	150.50
1977/78	2674.80	1582.00	466.60	2048.60	626.20	381.80	240.00	4.40
1978/79	3020.50	1811.90	599.40	2411.30	609.20	390.10	200.00	19.10
1979/80	3470.70	1880.00	805.60	2685.60	785.10	534.90	180.00	70.20
1980/81	4092.30	2419.20	868.80	3288.00	804.30	693.40	250.00	-139.10
1981/82	5361.20	2679.50	993.30	3672.80	1688.40	729.90	500.00	458.50
1982/83	6979.20	2841.60	1090.10	3931.70	3047.50	985.70	1000.00	1061.80
1983/84	7436.60	3409.30	876.60	4285.90	3150.70	1670.90	1576.80	-97.00
1984/85	8394.80	3916.60	923.50	4840.10	3554.70	1753.00	1799.90	1.80
1985/86	9797.20	4644.50	1120.50	5765.00	4032.20	2371.10	1403.40	257.70
1986/87	11501.60	5975.10	952.50	6927.60	4574.00	2361.90	1644.70	567.40
1987/88	14050.12	7350.40	1984.20	9334.60	4715.52	3094.34	1130.00	491.17
1988/89	18005.16	7776.90	1478.24	9255.14	8750.02	4188.69	1330.00	3231.32
1989/90	19669.30	9287.50	1975.40	11262.90	8406.40	5959.60	2150.00	296.80
1990/91	23549.80	10729.90	2164.80	12894.70	10655.10	6256.70	4552.70	-154.30
1991/92	26418.20	13512.70	1643.80	15156.50	11261.70	6816.90	2078.80	2366.00
1992/93	30897.70	15148.40	3793.30	18941.70	11956.00	6920.90	1620.00	3415.10
1993/94	33597.40	19580.80	2393.60	21974.40	11623.00	9163.60	1820.00	639.40
1994/95	39060.00	24575.20	3937.10	28512.30	10547.70	7312.30	1900.00	1335.40
1995/96	46542.40	27893.10	4825.10	32718.20	13824.20	9463.90	2200.00	2160.30
1996/97	50723.70	30373.50	5988.30	36361.80	14361.90	9043.60	3000.00	2318.30
1997/98	56118.30	32937.90	5402.60	38340.50	17777.80	11054.50	3400.00	3323.30
1998/99	59579.00	37251.00	4336.60	41587.60	17991.40	11852.40	4710.00	1429.00
1999/00	66272.50	42893.80	5711.70	48605.50	17667.00	11812.20	5500.00	354.80
2000/01	79835.10	48893.60	6753.40	55647.00	24188.10	12044.00	7000.00	5144.10
2001/02	80072.20	50445.50	6686.10	57131.60	22940.60	7698.70	8000.00	7241.90

Source: Economic Survey, MOF, 1997/98 and 2004/05

Table 4.5 shows that in the early 90's, External Borrowing (EL) was the major source of meeting resource gap. Its total share was about 60 percent in 1991/92. After 1991/92, the proportion of External Borrowing (EL) is decreasing and that of Internal Borrowing (IL) is increasing. Proportion of internal borrowing increased from 19.7 percent to 35.7 percent while external borrowing decreased from 64.6 percent to 34.3 percent. Except in 1991/1992 and 1993/1994, there is no greater fluctuation in the percentage of foreign grant (FG).

To sum up, the economics of budget deficits tells us that the amount of deficit that can be sustained (without exacerbating the macro indicators) depends, among other things, on the future course of the debt to GDP ratio, and on the relationship between the real growth rate of the economy and the real interest rate. The concept is a bit technical and involves a formula to determine the level of sustainable fiscal deficit.

Fiscal and foreign borrowing prudence, that is, fiscal deficits consistent with low and stable inflation and a manageable level of domestic and foreign debt, as well as a favorable climate for foreign investment are indispensable to stability and sustainable growth. Pursuing pragmatic fiscal policy would not only generate smaller stocks of public debt in relation to the capacity to service it, but would also prevent the real exchange rate from rising excessively.

The Government should first try to minimize deficit by increasing the internal resources, that is, direct and indirect taxes. For this, it should both increase the tax base and make tax administration efficient. On the other hand, it is the necessity of an underdeveloped nation to increase public expenditure and it is the suggestion of Keynes as well. This definitely increases the budget deficit. To meet the deficit,

a. The Government should give emphasis to unconditional grants. The grant should not be accepted if it is not in accordance with the needs of the nation.

b. If the Government is taking a loan, then the loan should be strictly to meet national priorities. The loan should never be used for regular expenditure.

c. The Government should not be extravagant, that is, it should curtail unnecessary expenditure.

d. The policy should be designed in such a way that foreign loans and grants can be used only in the productive sector. This helps to minimize the rate of inflation.

So, a prudent fiscal policy is the foundation of a stable macro-economy as it guards against the risks of excessive debt, higher inflation and interest rates, and overvalued currency (Basyal, 2003). An irresponsible fiscal policy would wreck the potentials of tapping the investment, production, growth and employment-enhancing initiatives in the private sector, ultimately making the economy weaker and further impoverished. Hence, the art and practice of consuming at the cost of future generations should be avoided. The lesson to heed is to stick to the discipline of fiscal prudence and responsibility.

CHAPTER V
ANALYSIS OF THE TAX STRUCTURE IN NEPAL

In this chapter, the contribution of different taxes to the total revenue for the periods from 1963/64 to 2001/02 has been analyzed. The overall tax ratios and tax levels have also been examined. Separate treatment has been given to direct and indirect taxes. The average tax rates or tax effort ratios, and the marginal tax rates or flexibility coefficients have been estimated.

5.1 International Comparison

It is argued that the heavy dependence on indirect taxes in underdeveloped countries was only a passing phase in their development. According to Hinrichs (1966), countries tend to move in course of development from an early period in which the ratio of direct to indirect tax revenue is highest through stages in which indirect taxation become more important, and finally, to a stage in which direct taxes are again dominant. Musgrave sees, in the early stage of development, revenue tends to be obtained from land taxes, import and export duties, and few excises. Income taxes apply mainly to civil servants and employees of larger enterprises. Later, general income taxes become feasible and attract support because of egalitarian sentiment, democratic politics and government centralization (Goode, 1984).

The generalizations of Hinrichs and Musgrave gained some support from the available statistics. The following table brings together data on the composition of central government revenues in more that a hundred countries for fiscal years around 1980, which support the idea.

Table 5.1

Composition of Central Government Revenue (Around 1980s)

(Figures are in %)

Country group (number)	Income & profits tax	Domestic goods & services tax	International trade contribution	Social security contribution	Non –tax Revenues
Industrial countries (10)	33.3	26.0	3.7	25.0	9.0
Semi – industrial countries (15)	25.3	30.6	14.5	13.0	11.1
Middle – industrial countries (55)	23.7	23.1	28.	4.1	14.9
Least – developed countries (14)	17.0	21.7	41.6	1.6	13.0

Source: Richard Goode (1984).

This *table (5.1)* shows that industrialization and contribution of direct taxes is directly related and that the contribution of taxes on international trade and transactions is inversely related to the level of income and the degree of industrialization.

The tax policy must reflect the development goals and aspirations of a nation. They must aid and complement the accomplishment of such goals. Tax policies are not only being looked upon as effective tools for raising revenue, but also are increasingly being used for regulating the economy and for providing a new direction to it.

Despite various attempts to mobilize tax revenue, Nepal is the lowest taxed economy in the world. It can be observed from Table (5.2). It also shows that the tax-effort ratio in Nepal is the lowest among selected SAARC countries.

Table 5.2

Tax-GDP Ratio: International Comparison, (1995-2004)

Countries/Year	1995	1996	1997	1998	1999	200	2001	2003	2004	Average
Bangladesh	N.A.	N.A.	N.A.	N.A.	N.A.	7.60	7.10	8.10	8.10	7.73
Nepal	9.10	10.40	8.90	8.80	8.50	8.70	9.50	9.40	9.80	9.23
Pakistan	15.30	15.30	12.90	12.60	13.10	10.20	12.40	10.50	10.90	12.58
India	9.10	10.50	10.80	8.60	9.10	9.00	10.00	9.10	10.20	9.60
Sri Lanka	18.00	16.90	16.20	14.50	14.90	14.50	14.60	14.00	14.00	15.29
Thailand	17.10	16.90	16.10	14.50	13.70	N.A.	14.50	15.40	15.90	15.51
Philippines	16.00	16.70	17.00	17.00	14.40	13.70	13.40	12.30	12.60	14.79
Malaysia	20.60	20.10	19.30	18.90	18.90	14.30	N.A.	17.60	17.60	18.41
UK	33.50	33.60	33.40	36.40	34.60	29.10	34.30	27.20	27.40	32.17
USA	19.00	19.40	19.80	20.50	19.50	N.A.	19.40	19.90	19.80	19.66

Source: Various Issues of WDIC; N.A.= Not Available

Table (5.2) depicts that the ratio of total revenue to the GDP of Nepal decreased from 9.1 percent in FY 1995 to 8.9 percent in FY 1997. Similarly, its ratio to GDP further decreased from 8.9 in FY 1997 to 8.5 percent in FY 1999. However, it slightly increased to 9.5 percent in FY 2001. A slight improvement can be seen on this trend in the following years. This implies that tax revenue has grown nominally in comparison to that of GDP.

Nepal's tax performance in terms of tax-GDP ratio has been compared with that of some selected counties of SAARC region (Bangladesh, India and Pakistan), ASEAN countries (Thailand, Philippines and Malaysia) and developed economies (UK, USA) of the world. The tax-GDP ratio in UK has been 32.17 percent on average, which is the highest among the selected countries. While among least developed and developing countries, Malaysia has maintained an average of 18.41 percent of taxation as a ratio of GDP.

This clearly indicates that Nepal's tax performance in terms of tax-GDP ratio among selected countries is miserable. Nepal's average tax-GDP ratio during the period under consideration is just 9.2 percent, which is approximately three times less than developed countries like UK and still half than that of a developing country like Malaysia. Thus, it is clear that this component of revenue needs the highest boosting to raise tax effort ratio at par with other countries of the region.

5.2 Major Trends in Taxation: Composition and Magnitude of Tax and Non-Tax Revenues, (1963/64 to 2001/02)

The study of tax structures of Nepal covers a period of thirty-nine years from the Fiscal Year 1963/64 to 2001/02.

During this period, the total revenue of the government increased from Rs. 157.93 million in FY 1963/64 to Rs. 50445.6 million in FY 2001/02 with an average annual growth rate of 17.31 percent. The magnitude of total tax revenue increased from Rs. 118.14 million to Rs. 39330.6 million during the same period with an average of 16.51 percent per annum. Similarly, the total non-tax revenue rose from Rs. 39.79 million to Rs. 11115 million during the same period with an average annual growth rate of 15.97 percent. This clearly shows that the average annual growth rate of total non-tax revenue is marginally smaller than total tax revenue during the period of thirty-nine years (Table 5.3).

The annual average contribution of total tax revenue to total revenue during the period of thirty-nine years from 1963/64 to 2001/02 was 78.44 percent while that of the total non-tax revenue was 21.55 percent. In between the period of thirty-nine years, the contribution of total tax revenue to total revenue was highest during FY 1966/67, which was accounted as 89.23 percent and the contribution of tax revenue to total revenue was lowest 73.1 percent during FY 1991/92 *(Table 5.4).* The overall trend shows that the contribution of total tax revenue to total revenue declined slightly during the period. On the contrary, the contribution of total non-tax revenue to total revenue increased slightly during the same period.

The amount of direct tax increased from Rs.48.64 million in FY 1963/64 to Rs. 10597.5 million in FY 2001/02 with an average growth rate of 15.22 percent per annum.

Similarly, the amount of indirect tax increased from Rs. 69.5 million in FY 1963/64 to Rs. 28733.1 million in FY 2001/02 with an annual average growth rate of 17.17 percent. In other words, the indirect tax revenue grew faster than the direct tax revenue during the period (Table 5.3).

Out of the total revenue, direct taxes contributed 18.17 percent on an average during the period from 1963/64 to 2001/02. Indirect taxes, on the contrary, contributed 60.26 percent during the same period, which is very high in comparison to the contribution of direct taxes (Table 5.3). The contribution of direct taxes to the total revenue fell from a record height of 30.80 percent in FY 1963/64 percent to 11.8 percent in FY 1991/92 and then increased to 21.0 percent in FY 2001/02. On the contrary, the contribution of indirect taxes increased substantially from 41.7 percent in FY 1963/64 to 62.9 percent in FY 1968/69 and then remained fluctuating slightly just above 60.0 percent up to FY 2001/02 (Table 5.4). However, during the periods from 1975/76 to 1977/78 and from 1998/99 to 2001/02, the fraction of indirect tax out of total revenue remained slightly below 60.0 percent (Table 5.4).

Among the various taxes considered in this study, the size of the revenue from customs rose considerably from Rs.58.83 million in FY 1963/64 to Rs.12, 658.8 million in FY 2001/02 with an annual growth rate of 15.18 percent (Table 5.3). However, during the period of study, the contribution of custom duties to the total revenue decreased from a peak of 44.4 percent in FY 1968/69 to 25.1 percent in FY 2001/02 with some fluctuations (Table 5.4). The annual contribution of custom duties to total revenue during the period from FY 1963/64 to 2001/02 averaged 26.53 percent (Table 5.3).

The sales tax/VAT, another important component of indirect taxes, also increased substantially during the period of study. The sales tax was only Rs.6.26 million in FY 1965/66, but the Value-Added Tax (VAT) was Rs.11, 964 million in FY 2001/02. The sales tax/VAT rose at an annual average of 24.09 percent during the period from 1965/66 to 2001/02 (Table 5.3). The annual average contribution of sales tax/VAT to the total revenue during the same period was 22.33 percent (Table 5.3). However, the contribution of VAT to total revenue increased substantially from 2.9 percent in FY 1965/66 to 23.7 percent in FY 2001/02 (Table 5.4). The revenue from excise duties, on the other hand, increased from Rs.10.67 million in FY 1963/64 to Rs.3807 million in FY

2001/02 with 16.72 percent annual average growth rate (Table 5.3). On an average, the excise duty has contributed 8.45 percent to the total revenue annually during the period from 1963/64 to 2001/02 (Table 5.3).

As far as the different components of indirect taxes are concerned, the contribution of custom duties declined substantially while that of the sales tax/VAT increased considerably during the analysis period. Around the trends, the contributions of both these components fluctuated during the period. Nevertheless, the contribution of excise duties remained more or less stable during the same period (Table 5.3).

Under the category of direct taxes, income tax rose from the small amount of Rs.2.79 million in FY 1963/64 to Rs.8436 million in FY 2001/02 with an annual average growth rate of 23.47 percent (Table 5.3). In the Nepalese tax structure, income tax was introduced in FY 1963/64 when its contribution to total revenue was very low at 1.77 percent. Nevertheless, the contribution increased from a minimum of 1.77 percent in that fiscal year to a record high 16.7 percent in FY 2001/02 (Table 5.4). During the period from 1963/64 to 2001/02, the average annual contribution of income tax to total revenue was recorded at 12.96 percent (Table 5.3). In fact, the amount of income tax increased significantly during the 1990s. Land tax, on the other hand, increased from Rs.40 million in FY 1963/64 to a maximum of Rs.100.7 in FY 1980/81 and then declined sharply to Rs.0.8 million in FY 2001/02 with an annual average growth rate of 0.56 percent (Table 5.3). Regarding the contribution to the total revenue, land tax plummeted from a peak of 25.33 percent in FY 1963/64to almost none in FY 2001/02 (Table 5.4).

Registration duty is another important source of government revenue in Nepal's direct tax structure. However, its contribution to total revenue averaged at 2.99 percent on an annual basis during the period from 1963/64 to 2001/02 (Table 5.3). The total collection from registration increased from Rs.3.16 million in FY 1963/64 to Rs.1131 million in FY 2001/02 (Table 5.3).

Table 5.3 (A)

Composition and Magnitude of Tax and Non-Tax Revenues,(1963/64–2001/02)

(Rs. in million)

Tax Heads	Fiscal Year								
	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72
1. Indirect Taxes	69.5	97.19	119.84	153.86	178.13	259.64	282.73	275.41	331.27
1.1Customs Duties	58.83	83.31	93.52	121.75	129.73	183.56	193.51	156.51	198.6
1.2 Excise Duties	10.67	13.88	20.06	19.96	21.48	28.04	38.12	56.57	63.59
1.3 Sales Tax/Vat	-	-	6.26	12.15	26.92	48.04	51.1	62.33	69.08
2. Direct Taxes	48.64	53.66	57.18	71.92	105.73	108.61	128.56	120.21	135.4
2.1 Land Tax	40	43.16	44.52	56.64	83.29	79.35	87.72	76.4	83.17
2.2 Income Tax	2.79	5.26	7.08	7.73	11.41	16.73	19.63	21.17	22.05
2.3 Registration	3.16	3.09	2.55	2.59	5.11	6.42	15.58	15.77	18.85
2.4 Miscellaneous	2.69	2.15	3.03	4.96	5.92	6.11	5.63	6.87	11.33
3. Total Tax Revenue	118.14	150.85	177.02	255.78	283.86	368.25	411.29	395.62	466.67
4. Total Non Tax Revenue	39.79	41.49	39.48	30.88	42.12	44.78	52.74	64.08	86.76
5. Total Revenue	157.93	192.34	216.5	286.66	325.98	413.03	464.03	459.7	553.43

Table 5.3 (B)

Composition and Magnitude of Tax and Non-Tax Revenues, (1963/64–2001/02)

(contd.)

(Rs. in million)

Tax Heads	Fiscal Year									
	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82
1. Indirect Taxes	385.78	462.19	638.72	652.41	774.24	896.23	1176.1	1224.38	1595.68	1843.2
1.1Customs Duties	238.2	286.21	328.52	358.5	386.19	458.78	626.71	608.01	815.84	825.1
1.2 Excise Duties	67.76	77.43	119.68	132.03	166.07	164.34	192.62	215.18	242.18	305.7
1.3 Sales Tax/VAT	79.82	98.55	190.52	161.88	221.98	273.09	356.77	401.19	537.66	597.4
2. Direct Taxes	135.33	180.3	205	259.55	327.58	351.27	304.06	308.68	446.23	514.84
2.1 Land Tax	74.45	96.93	90.9	94.76	97.94	87	54.6	56.2	100.7	81.7
2.2 Income Tax	23.38	32.64	47	87.17	113.3	136.84	103.02	101.2	144	189.7
2.3 Registration	19.93	28.82	37.96	39.6	42.7	54.1	55.7	65	77.8	88.3
2.4 Miscellaneous	17.57	21.91	29.14	36.89	51.89	68.03	39.8	31.4	30.7	20.2
3. Total Tax Revenue	521.11	642.49	843.72	911.96	1101.82	1247.5	1480.16	1533.06	2041.91	2358.04
4. Total Non Tax Revenue	94.72	123.94	164.68	203.66	221.1	334.52	334.9	351.2	383.5	468.2
5. Total Revenue	615.83	766.43	1008.4	1115.62	1322.92	1582.02	1815.06	1884.26	2425.41	2826.24

Table 5.3(C)

Composition and Magnitude of Tax and Non-Tax Revenues,(1963/64–2001/02)

(contd.)

(Rs. in million)

Tax Heads	Fiscal Year									
	1982/83	**1983/84**	**1984/85**	**1985/86**	**1986/87**	**1987/88**	**1988/89**	**1989/90**	**1990/91**	**1991/92**
1. Indirect Taxes	1986.3	2201.6	2596.4	3000.8	3606.3	4745.5	4962.6	5850.9	6807.9	8280.6
1.1Customs Duties	760.9	825.9	1064.5	1231	1505.1	2214.6	2289.9	2684.9	3044.3	3358.9
1.2 Excise Duties	365.8	432.2	483.9	558.7	678.7	825.3	877.7	1097	1200.2	1414.3
1.3 Sales Tax/VAT	709.3	770.7	845.8	985.9	1143.8	1300.5	1379.7	1650.1	2026.1	2840.7
2. Direct Taxes	771	541.8	559.7	661.8	768.7	1010.2	1331.4	1435.1	1368.5	1595.2
2.1 Land Tax	66.7	77.2	76.9	74.2	72.4	80.7	80.4	74.6	82.1	64.8
2.2 Income Tax	240.1	290.9	307.3	364.4	437.5	579	861.2	919	746	855.5
2.3 Registration	104.8	135.2	141.7	170.1	211.6	286.2	320.6	377.1	456.6	571.3
2.4 Miscellaneous	38.5	38.5	33.8	53.1	47.2	64.3	69.2	64.4	83.8	103.6
3. Total Tax Revenue	2757.3	2743.4	3156.1	3662.6	4375	5755.7	6294	7286	8176.4	9875.8
4. Total Non Tax Revenue	420.5	672.3	765.6	985.2	1602.7	1597.6	1493.5	2028.9	2553.2	3637.1
5. Total Revenue	3177.8	3415.7	3921.7	4647.8	5977.7	7353.3	7787.5	9314.9	10729.6	13512.9

Table 5.3(D)

Composition and Magnitude of Tax and Non-Tax Revenues, (1963/64–2001/02)

(contd.)

(Rs. in million)

Tax Heads	Fiscal Year										Growth Rate[1]	Percentage of total revenue[2]
	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02		
1. Indirect Taxes	9626.7	12516.7	15810.7	17012.1	19084.3	19751.9	21236.8	24200.6	28705.7	28733.1	17.17975	60.26359
1.1Customs Duties	3945	5255	7018.1	7327.4	8309.1	8502.2	9517.7	10813.3	12552.1	12658.8	15.18324	26.53776
1.2 Excise Duties	1452.8	1592.5	1657.3	1944.3	2298.1	2885.8	2953.2	3127.6	3771.2	3807	16.72635	8.456072
1.3 Sales Tax/VAT	3438.2	4693.3	6031.7	6431.3	7126.5	7122.6	7882.2	9854.9	12047.8	11964	24.0942	22.33344
2. Direct Taxes	2036.2	2855.3	3849.3	4655.9	5340	6187.9	7516.1	8951.5	10159.4	10597.5	15.22105	18.17828
2.1 Land Tax	69.4	61	34.9	18.2	5.9	3.6	1.4	4.6	5.1	0.8	-9.78261	0.569889
2.2 Income Tax	1124.8	1824.5	2711.8	3311.6	3969	4685.9	5850.7	7006.2	8650.1	8436	23.47896	12.96977
2.3 Registration	685.5	772.2	902.8	1048.4	1009.5	1000.6	1001.8	1011.3	607.8	1131	16.73595	2.994639
2.4 Miscellaneous	156.5	197.6	199.8	277.7	355.6	497.8	662.2	929.4	896.4	1029.7	16.94256	1.480769
3. Total Tax Revenue	11662.9	15372	19660	21668	24424.3	25939.8	28752.9	33152.1	38865.1	39330.6	16.51376	78.44904
4. Total Non Tax Revenue	3485.9	4209.4	4945.1	6225.1	5949.2	6998.1	8588.7	9741.6	10028.8	11115	15.97703	21.55096
5. Total Revenue	15148.8	19581.4	24605.1	27893.1	30373.5	32937.9	37341.6	42893.7	48893.9	50445.6	16.38692	100

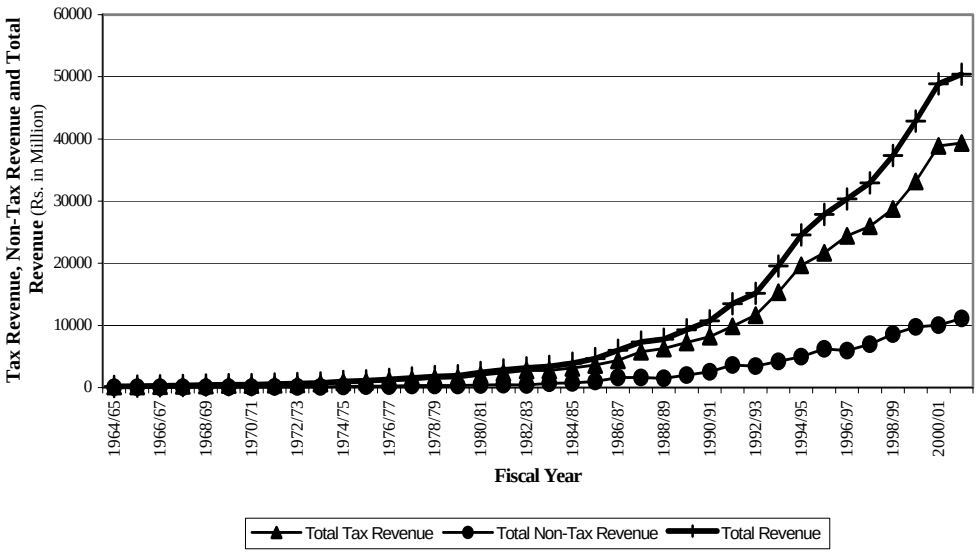
Source: Various Economic Surveys

[1] Growth rate= $GR = \left[\left\{(\text{End value}/\text{Start value})^{1/(\text{periods}-1)}\right\} - 1\right] * 100$

[2] Calculated using formula (Total tax revenue for whole period/Total revenue for same period)*100

Fig. 5.1

Revenue Structure



Source: Table 5.3

5.3 The Contribution of Different Taxes to the Total Revenue, (1963/64 to 2001/02)

In this part, the period of thirty-nine years from 1963/64 to 2001/02 has been divided into two periods from 1963/64to 1983/84 and from 1984/85 to 2001/02 and the analysis refers to the table (5.4) and (table 5.4 A). The notion of separation of the period is that Nepal had started to liberalize the financial sector during 1985. So it provides the result of more effective comparison of the trend and the composition of various components of tax structure of Nepal.

During the period from 1963/64 to 2001/02, the contribution of total tax revenue to the total revenue of Nepal's government was 78.45 percent while the remaining 21.55 percent was contributed by non-tax revenue (Table 5.3). More precisely, the contribution of total tax revenue to total revenue increased slightly from 74.81 percent in 1963/64 to 80.3 percent in 1983/84 with the average contribution being 80.3 percent (Table 5.4). On the other hand, the contribution of tax revenue remained relatively stable during the period from 1984/85 to 2001/02 with the average contribution being computed at 78.15

percent (Table 5.4 A). Similarly, the contribution of non-tax revenue to total revenue during the period from 1963/64 to 1983/84 averaged 16.84 percent (Table 5.4 A) on an annual basis with gradual increment from 10.8 percent in FY 1968/69 to 19.7 percent in FY 1983/84 (Table 5.4). Nevertheless, the contribution of non-tax remained stable to some extent during the period from 1984/85 to 2001/02 (Table 5.4).

Under the category of total tax revenue, the contribution of direct tax to total revenue increased from 30.80 percent in FY 1963/64 to 32.4 percent in FY 1967/68 and declined considerably to 15.9 percent in FY 1983/84 (Table 5.4). The average annual contribution of direct tax to total revenue during the period from 1963/64 to 1983/84 was 20.68 percent (Table 5.4A). On the contrary, the contribution of direct tax to total revenue decreased from 14.3 percent in FY 1984/85 to 11.8 percent in FY 2001/02 (Table 5.4). The average contribution of direct tax to total revenue during the same period was decreased to 18.01 percent (Table 5.4A). The contribution of indirect tax to total revenue, on the other hand, decreased from the period 1 (from 1966/67 to 1983/84) to period 2 (from 1984/85 to 2001/02). During the period from 1966/67 to 1983/84, the contribution of indirect tax averaged 62.3 percent per annum, which decreased to 60.1 percent in FY 1966/67 to 64.5 percent in FY 1983/84. Conversely, the contribution of indirect tax decreased gradually from 66.2 percent in FY 1984/85 and declined sharply to 57 percent in FY 2001/02 with an annual average of 61.7 percent (Table 5.4).

Among individual taxes under direct and indirect taxes, the contribution of custom duties was highest with an annual average of 26.5 percent during the period from 1963/64 to 2001/02. The sales tax/VAT, excise duties and income tax contributed an annual average of 22.3 percent, 8.45 percent and 12.9 percent to the total revenue respectively during the same period (Table 5.4A).

Among the components of indirect taxes, the contribution of custom duties to total revenue remained highest throughout the period from 1963/64 to 2001/02. However, the contribution declined considerably from 42.5 percent in FY 1963/64 to 24.2 percent in FY 1983/84 with some fluctuations (Table 5.4). The annual average contribution of custom duties during the period from 1963/64 to 1983/84 was 30.92 percent while during the period from 1984/85 to 2001/02, the contribution of custom duties decreased only gradually with an annual average of 26.25 percent (Table 5.4A).

The contribution of sales tax/VAT to total revenue, on the other hand, increased from the marginal 4.2 percent in FY 1963/64 to 22.6 percent in FY 1983/84 and then gradually from 21.6 percent in FY 1984/85 to 23.7 percent in FY 2001/02(Table 5.4). The average annual contributions of sales tax/VAT to total revenue during the period from 1963/64 to 1983/84 and from 1984/85 to 2001/02 were 18.6 and 22.5 percent respectively (Table 5.4A). Similarly, the contribution of excise duties increased gradually from 7 percent in FY 1963/64 to 12.7 percent in FY 1983/84 with an annual average of 11 percent. Contrarily, the contribution decreased steadily from 12.3 percent in FY 1984/85 to 7.5 percent in FY 2001/02 with an annual average of 8.29 percent (Table 5.4).

Among the components of direct taxes, land tax contributed the most to the total revenue up to FY 1975/76. However, from FY 1976/77, the contribution of income tax has remained highest among the various components (Table 5.4). The contribution of income tax increased gradually from 1.7 percent in FY 1963/64 to 8.5 percent in FY 1983/84(Table 5.4). However, the contribution of income tax grew rapidly during the period from 1984/85 to 2001/02 with an annual average of 11 percent as compared to an annual average of 5.6 percent during the period from 1963/64 to 1983/84. More specifically, the contribution of income tax accelerated rapidly from 6.3 percent in FY 1991/92 to its highest ever ,17.7 percent, in FY 2000/01 (Table 5.4). The contribution of land tax was highest at 25.6 percent in FY 1967/68, which declined sharply throughout the period till 2001/02. The contribution of land tax has become negligible since the late 1990s. Out of the total revenue, the income of government from registration increased from 0.9 percent in FY 1963/64 to 4.5 percent in FY 1992/93, and then, declined to 2.2 percent in FY 2001/02 (Table 5.4).

Table 5.4 (A)

Percentage Distribution of Tax and Non-Tax Revenues, (1963/64 – 2001/02)

Tax Heads	1963/64	1964/65	1965/66	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72
1. Indirect Taxes	44.01	50.53	55.35	53.7	54.6	62.9	60.9	59.9	59.9
1.1Customs Duties	37.25	43.31	43.20	42.5	39.8	44.4	41.7	34.0	35.9
1.2 Excise Duties	6.76	7.22	9.27	7.0	6.6	6.8	8.2	12.3	11.5
1.3 Sales Tax/VAT	N.A.	N.A.	2.89	4.2	8.3	11.6	11.0	13.6	12.5
2. Direct Taxes	30.80	27.90	26.41	25.1	32.4	26.3	27.7	26.1	24.5
2.1 Land Tax	25.33	22.44	20.56	19.8	25.6	19.2	18.9	16.6	15.0
2.2 Income Tax	1.77	2.73	3.27	2.7	3.5	4.1	4.2	4.6	4.0
2.3 Registration	2.00	1.61	1.18	0.9	1.6	1.6	3.4	3.4	3.4
2.4 Miscellaneous	1.70	1.12	1.40	1.7	1.8	1.5	1.2	1.5	2.0
3. Total Tax Revenue	74.81	78.43	81.76	89.2	87.1	89.2	88.6	86.1	84.3
4. Total Non Tax Revenue	25.19	21.57	18.24	10.8	12.9	10.8	11.4	13.9	15.7
5. Total Revenue	100.00	100.00	100.00	100.0	100.0	100.0	100.0	100.0	100.0

Table 5.4 (B)

Percentage Distribution of Tax and Non-Tax Revenues, (1963/64–2001/02)

(contd.)

Tax Heads	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82
1. Indirect Taxes	62.6	60.3	63.3	58.5	58.5	56.7	64.8	65.0	65.8	65.2
1.1Customs Duties	38.7	37.3	32.6	32.1	29.2	29.0	34.5	32.3	33.6	29.2
1.2 Excise Duties	11.0	10.1	11.9	11.8	12.6	10.4	10.6	11.4	10.0	10.8
1.3 Sales Tax/VAT	13.0	12.9	18.9	14.5	16.8	17.3	19.7	21.3	22.2	21.1
2. Direct Taxes	22.0	23.5	20.3	23.3	24.8	22.2	16.8	16.4	18.4	18.2
2.1 Land Tax	12.1	12.6	9.0	8.5	7.4	5.5	3.0	3.0	4.2	2.9
2.2 Income Tax	3.8	4.3	4.7	7.8	8.6	8.6	5.7	5.4	5.9	6.7
2.3 Registration	3.2	3.8	3.8	3.5	3.2	3.4	3.1	3.4	3.2	3.1
2.4 Miscellaneous	2.9	2.9	2.9	3.3	3.9	4.3	2.2	1.7	1.3	0.7
3. Total Tax Revenue	84.6	83.8	83.7	81.7	83.3	78.9	81.5	81.4	84.2	83.4
4. Total Non Tax Revenue	15.4	16.2	16.3	18.3	16.7	21.1	18.5	18.6	15.8	16.6
5. Total Revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 5.4 (C)

Percentage Distribution of Tax and Non-Tax Revenues, (1963/64–2001/02)

(contd.)

Tax Heads	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92
1. Indirect Taxes	62.5	64.5	66.2	64.6	60.3	64.5	63.7	62.8	63.4	61.3
1.1Customs Duties	23.9	24.2	27.1	26.5	25.2	30.1	29.4	28.8	28.4	24.9
1.2 Excise Duties	11.5	12.7	12.3	12.0	11.4	11.2	11.3	11.8	11.2	10.5
1.3 Sales Tax/VAT	22.3	22.6	21.6	21.2	19.1	17.7	17.7	17.7	18.9	21.0
2. Direct Taxes	24.3	15.9	14.3	14.2	12.9	13.7	17.1	15.4	12.8	11.8
2.1 Land Tax	2.1	2.3	2.0	1.6	1.2	1.1	1.0	0.8	0.8	0.5
2.2 Income Tax	7.6	8.5	7.8	7.8	7.3	7.9	11.1	9.9	7.0	6.3
2.3 Registration	3.3	4.0	3.6	3.7	3.5	3.9	4.1	4.0	4.3	4.2
2.4 Miscellaneous	1.2	1.1	0.9	1.1	0.8	0.9	0.9	0.7	0.8	0.8
3. Total Tax Revenue	86.8	80.3	80.5	78.8	73.2	78.3	80.8	78.2	76.2	73.1
4. Total Non Tax Revenue	13.2	19.7	19.5	21.2	26.8	21.7	19.2	21.8	23.8	26.9
5. Total Revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 5.4 (D)

Percentage Distribution of Tax and Non-Tax Revenues, (1963/64–2001/02)

(contd.)

Tax Heads	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
1. Indirect Taxes	63.5	63.9	64.3	61.0	62.8	60.0	56.9	56.4	58.7	57.0
1.1 Customs Duties	26.0	26.8	28.5	26.3	27.4	25.8	25.5	25.2	25.7	25.1
1.2 Excise Duties	9.6	8.1	6.7	7.0	7.6	8.8	7.9	7.3	7.7	7.5
1.3 Sales Tax/VAT	22.7	24.0	24.5	23.1	23.5	21.6	21.1	23.0	24.6	23.7
2. Direct Taxes	13.4	14.6	15.6	16.7	17.6	18.8	20.1	20.9	20.8	21.0
2.1 Land Tax	0.5	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
2.2 Income Tax	7.4	9.3	11.0	11.9	13.1	14.2	15.7	16.3	17.7	16.7
2.3 Registration	4.5	3.9	3.7	3.8	3.3	3.0	2.7	2.4	1.2	2.2
2.4 Miscellaneous	1.0	1.0	0.8	1.0	1.2	1.5	1.8	2.2	1.8	2.0
3. Total Tax Revenue	77.0	78.5	79.9	77.7	80.4	78.8	77.0	77.3	79.5	78.0
4. Total Non Tax Revenue	23.0	21.5	20.1	22.3	19.6	21.2	23.0	22.7	20.5	22.0
5. Total Revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Calculated from Various Economic Surveys

Contribution of various taxes and their share to total revenue for the two periods, Period 1 (1963/64-1983/84) and Period 2 (1983/84-2001/02) is shown in the Table 5.4 (A)

Table 5.4 (A)

Contribution of Various Taxes and Their Contribution to Total Revenue

Tax Heads	Growth Rate		Share to Total Revenue	
	Period 1 (1963/64-1983/84)	Period 2 (1983/84-2001/02)	Period 1 (1963/64-1983/84)	Period 2 (1984/85-2001/02)
1. Indirect Taxes	3.75	15.18	62.35	61.70
1.1Customs Duties	8.12	15.67	30.92	26.25
1.2 Excise Duties	2.97	12.90	11.00	8.29
1.3 Sales Tax/Vat	1.06	16.86	18.68	22.56
2. Direct Taxes	10.12	18.88	20.68	18.01
2.1 Land Tax	53.54	-23.55	6.28	0.20
2.2 Income Tax	1.20	21.51	5.60	11.00
2.3 Registration	2.82	12.99	3.28	2.97
2.4 Miscellaneous	7.98	22.25	1.89	1.45
3. Total Tax Revenue	5.03	15.99	80.30	78.14
4. Total Non Tax Revenue	6.81	17.04	16.84	21.85
5. Total Revenue	5.39	16.21	100	100

Source: Calculated from the data of Table 5.3

5.4 Overall Tax Ratios or Tax Levels (1966/67 to 2001/02)

Tax rates or ratios are best known as determinants of tax levels. The tax performance of any country can be partially evaluated by employing these ratios. Tax ratios are also referred to as “tax-effort” or “tax-burden”. However, it is a very comprehensive device to measure the level of taxes and provides an opportunity to study the composition and direction of individual taxes. Tax ratios give firsthand knowledge of the tax level and facilitate a basis for international comparison.

The international comparison of taxes and their levels has been a fascinating area for researchers. In this connection, the work of the International Monetary Fund (IMF) and World Bank (WB) is appreciable. According to their findings, the tax ratios in poor countries are very low compared to the richer ones. The fundamental reason for the difficulty the poorer countries have in raising public revenue is their reluctance to levy adequate sums through income tax (WB,1989).

Taxes on foreign trade are more popular because of administrative ease, although it may have serious long-run effects on the economy if higher taxes are imposed on some commodities. In a country with a small volume of foreign trade, tax ratios could be increased by introducing multi-point sales tax. In other cases, the result will be high inflation. Nevertheless, in most of the developing countries, the foreign trade sector has contributed significantly to the tax structure. This has been entirely a post-war phenomenon.

The foreign trade sector defined by Hinrichs (1966) as $\frac{M}{Y}$, where M is merchandise imports and *Y* is *GNP*, is alternatively formulated by Lotz and Morss as $\frac{(M+X)}{Y}$, where *X* is volume of exports. In most cases, it is observed that a relatively large foreign trade sector tends to be associated with a high level of taxes. The foreign trade variable can also be treated as an index for the degree of monetization.

In measuring the tax effort ratios, most of the countries have used GNP instead of GDP. However, in this study, GDP data has been used. In the tax structure of Nepal, the ratio of total revenue with respect to GDP is very low as compared with other developing countries. Table (5.5) and fig (5.3) clearly show that the level of taxes and its ratios during the period from 1966/67 to 2001/02 increased slowly.

The tax effort ratio in Nepal during the period from 1966/67 to 2001/02 was 8.42 percent per annum on an average. The tax effort ratio increased from 4.47 percent in FY 1966/67 to its utmost level of 11.97 percent in FY 2001/02 (Table 5.5). Looking more closely at the trend in Nepal, change in the tax effort ratio was more pronounced during the period from 1966/67 to 1983/84 in comparison to that of the period from 1984/85 to 2001/02. This is simply because the annual average growth rates of total revenue were around 16.5 percent during both the periods, but the annual average growth rate of GDP during the period from 1966/67 to 1983/84 was 10.5 percent, while the same figure during the period from 1984/85 to 2001/02 was 14.2 percent. Nevertheless, during both the periods, the annual average growth rate of total revenue has been greater than that of the GDP growth rate, as a result of which, there is an increasing trend in the tax effort ratio.

Table 5.5

Tax Effort (Average Tax) Ratio (1966/67 to 2001/02)

Fiscal Year	GDP (Y) million	Total Revenue (R) million	R/Y (Percent)
1966/67	6411	286.66	4.47
1967/68	7173	325.98	4.54
1968/69	7985	413.03	5.17
1969/70	8768	464.03	5.29
1970/71	8938	459.7	5.14
1971/72	10369	553.43	5.34
1972/73	9969	615.83	6.18
1973/74	12808	766.43	5.98
1974/75	16571	1008.4	6.09
1975/76	17394	1115.62	6.41
1976/77	17280	1322.92	7.66
1977/78	19732	1582.02	8.02
1978/79	22215	1815.06	8.17
1979/80	23351	1884.26	8.07
1980/81	27307	2425.41	8.88
1981/82	30988	2826.24	9.12
1982/83	33761	3177.8	9.41
1983/84	39390	3415.7	8.67
1984/85	46587	3921.7	8.42
1985/86	55734	4647.8	8.34
1986/87	63864	5977.7	9.36
1987/88	76906	7353.3	9.56
1988/89	89269	7787.5	8.72
1989/90	103416	9314.9	9.01
1990/91	120501	10729.6	8.90
1991/92	149485	13512.9	9.04
1992/93	170001	15148.8	8.91
1993/94	199272	19581.4	9.83
1994/95	219175	24605.1	11.23

1995/96	248913	27893.1	11.21
1996/97	280513	30373.5	10.83
1997/98	300845	32937.9	10.95
1998/99	342036	37341.6	10.92
1999/00	379488	42893.7	11.30
2000/01	410287	48893.9	11.92
2001/02	421333	50445.6	11.97

Source: 1. HMG/Nepal, Central Bureau of Statistics, National Income Division

2. Various Budget Speeches, Ministry of Finance, Kathmandu, Nepal

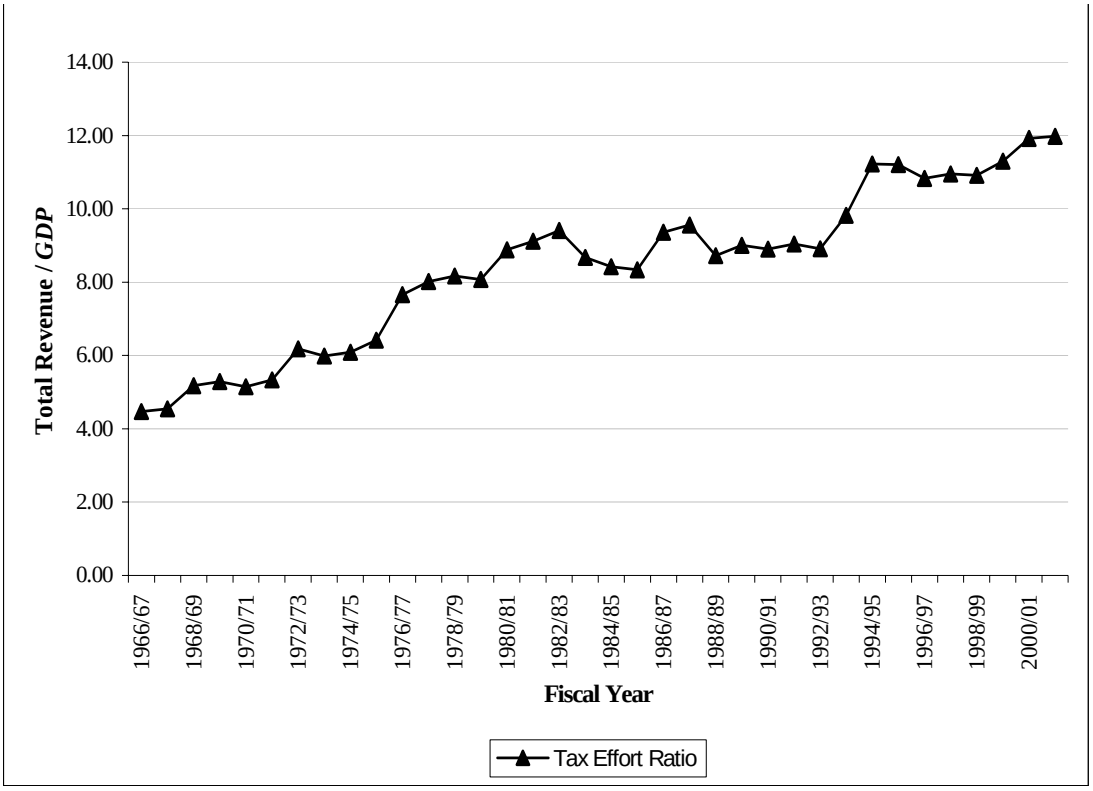
Column four of table (5.5) depicts the ratio of tax with respect to GDP in Nepal during the period from FY 1966/67 to 2001/02.

During the period from 1966/67 to 2001/02, both the average rates of tax and non-tax revenues increased, but the average rate of tax revenue increased at a greater rate and with greater variation than that of non-tax revenue. The tax effort ratio for total tax revenue rose from 4 percent in FY 1966/67 to 9.33 percent in FY 2001/02, whereas the average rate from non-tax revenue rose from 0.45 percent in FY 1966/67 to 2.64 percent in FY 2001/02 (Table 5.6).

Under the category of total tax revenue, the average rate of indirect tax was only 2.4 percent in FY 1966/67, which increased to its maximum 7.21 percent in FY 1994/95 and remained fairly stable between 6 and 7 percent up to 2001/02 (Table 5.6). Looking more closely, the data reveals that the average indirect tax ratio soared significantly from 2.4 percent in FY1966/67 to nearly 6 percent in FY 1981/82, and then increased gradually (Table 5.6). The average rate of direct tax, however, was very low in comparison with that of indirect tax. Up to the period 1996/97, the average rate of direct tax was below 2 percent with an exception of 2.28 percent in FY 1982/83 (Table 5.6). Not only that the average direct tax effort ratio was low, but also it did not vary much and remained fairly stable between 1 and 2.5 percent during the same period (Table 5.6). Nevertheless, the average direct tax ratio increased steadily from 1.07 percent in FY 1991/92 to 2.52 percent in FY 2001/02 (Table 5.6).

Fig. 5.2

Tax Effort Ratio



Source: Table 5.6

Under the category of indirect taxes, the average tax rate from custom duties has always been highest in comparison with the other components. The tax effort ratio of custom duties increased from 1.9 percent in FY 1966/67 to 3 percent in FY 2001/02. The average rate of sales tax/VAT, however, increased considerably from 0.19 percent in FY 1966/67 to 2.84 percent in FY 2001/02. The average rate of excise duties remained fairly stable with only slight variation between 0.3 percent and 1.1 percent during the period from 1966/67 to 2001/02.

Under the category of direct taxes, the average rate of land tax decreased substantially from 0.9 percent in FY 1966/67 to 0.0002 percent in FY 2001/02. Looking at the declining trend of land tax, serious thought should be given urgently to reform land taxation. This is because land taxation has a critical role to play in the acceleration of economic development by transferring the excessive population from agriculture to the non-agricultural sector, and thus, creating

"agricultural surplus" (Kaldor, 1965). Taxes should be levied on surplus and not on subsistence. Thus, in developing countries, taxation from agriculture cannot be realized automatically.

The ratio of income tax as percent of GDP was its minimum, *0.1* percent, in FY 1966/67, which increased to 1 percent in FY 1988/89 and to 2.0 percent in FY 2001/02. Even though the income tax effort ratio is increasing, it is very small, which is mainly due to the reason that most of the people do not fall within the category of taxable persons. Moreover, many taxable persons are easily ignored because of several difficulties. The rural economy is not much monetized. Barter system still exists in remote areas. This is due to the absence of a national market. Even the plain Terai region is not well connected by road. Difficulties of transportation in the hills and Himalayas further raise the problems.

The share of registration duties as percent of GDP is also very low in Nepal. The average rate of registration duties increased from 0.04 percent in FY1966/67 to 0.42 in FY 1995/96, and then, declined to 0.27 in FY 2001/02.

Table 5.6 (A)

Average Tax Rates

(Share of Various Individual and Categories of Taxes in GDP, (1966/67 to 2001/02)

(in percentage)

Tax Heads	1966/67	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75
IDt/Y	2.4	2.5	3.3	3.2	3.1	3.2	3.9	3.6	3.9
CD/Y	1.9	1.8	2.3	2.2	1.8	1.9	2.4	2.2	2.0
ED/Y	0.3	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.7
ST,VAT/Y	0.2	0.4	0.6	0.6	0.7	0.7	0.8	0.8	1.1
Dt/Y	1.1	1.5	1.4	1.5	1.3	1.3	1.4	1.4	1.2
LT/Y	0.9	1.2	1.0	1.0	0.9	0.8	0.7	0.8	0.5
IT/Y	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
REG/Y	0.04	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2
MIS/Y	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2
TTR/Y	4.0	4.0	4.6	4.7	4.4	4.5	5.2	5.0	5.1
TNTR/Y	0.5	0.6	0.6	0.6	0.7	0.8	1.0	1.0	1.0
TR/Y	4.5	4.5	5.2	5.3	5.1	5.3	6.2	6.0	6.1

Table 5.6 (B)

Average Tax Rates

(Share of Various Individual and Categories of Taxes in GDP, (1966/67 to 2001/02)

(contd.)

Tax Heads	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81	1981/82	1982/83	1983/84
IDt/Y	3.8	4.5	4.5	5.3	5.2	5.8	5.9	5.9	5.6
CD/Y	2.1	2.2	2.3	2.8	2.6	3.0	2.7	2.3	2.1
ED/Y	0.8	1.0	0.8	0.9	0.9	0.9	1.0	1.1	1.1
ST,VAT/Y	0.9	1.3	1.4	1.6	1.7	2.0	1.9	2.1	2.0
Dt/Y	1.5	1.9	1.8	1.4	1.3	1.6	1.7	2.3	1.4
LT/Y	0.5	0.6	0.4	0.2	0.2	0.4	0.3	0.2	0.2
IT/Y	0.5	0.7	0.7	0.5	0.4	0.5	0.6	0.7	0.7
REG/ Y	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3
MIS/ Y	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.1
TTR/ Y	5.2	6.4	6.3	6.7	6.6	7.5	7.6	8.2	7.0
TNTR/ Y	1.2	1.3	1.7	1.5	1.5	1.4	1.5	1.2	1.7
TR/ Y	6.4	7.7	8.0	8.2	8.1	8.9	9.1	9.4	8.7

Table 5.6 (C)
Average Tax Rates

(Share of Various Individual and Categories of Taxes in GDP(1966/67 to 2001/02)

(contd.)

Tax Heads	1984/85	1985/86	1986/87	1987/88	1988/89	1989/90	1990/91	1991/92	1992/93
IDt/Y	5.6	5.4	5.6	6.2	5.6	5.7	5.6	5.5	5.7
CD/Y	2.3	2.2	2.4	2.9	2.6	2.6	2.5	2.2	2.3
ED/Y	1.0	1.0	1.1	1.1	1.0	1.1	1.0	0.9	0.9
ST,VAT/Y	1.8	1.8	1.8	1.7	1.5	1.6	1.7	1.9	2.0
Dt/Y	1.2	1.2	1.2	1.3	1.5	1.4	1.1	1.1	1.2
LT/Y	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
IT/Y	0.7	0.7	0.7	0.8	1.0	0.9	0.6	0.6	0.7
REG/ Y	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
MIS/ Y	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
TTR/ Y	6.8	6.6	6.9	7.5	7.1	7.0	6.8	6.6	6.9
TNTR/ Y	1.6	1.8	2.5	2.1	1.7	2.0	2.1	2.4	2.1
TR/ Y	8.4	8.3	9.4	9.6	8.7	9.0	8.9	9.0	8.9

Table 5.6 (D)

Average Tax Rates

(Share of Various Individual and Categories of Taxes in GDP,(1966/67 to 2001/02)

(contd.)

Tax Heads	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02
IDt/Y	6.3	7.2	6.8	6.8	6.6	6.2	6.4	7.0	6.8
CD/Y	2.6	3.2	2.9	3.0	2.8	2.8	2.8	3.1	3.0
ED/Y	0.8	0.8	0.8	0.8	1.0	0.9	0.8	0.9	0.9
ST,VAT/Y	2.4	2.8	2.6	2.5	2.4	2.3	2.6	2.9	2.8
Dt/Y	1.4	1.8	1.9	1.9	2.1	2.2	2.4	2.5	2.5
LT/Y	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
IT/Y	0.9	1.2	1.3	1.4	1.6	1.7	1.8	2.1	2.0
REG/ Y	0.4	0.4	0.42	0.4	0.3	0.3	0.3	0.1	0.3
MIS/ Y	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2
TTR/ Y	7.7	9.0	8.7	8.7	8.6	8.4	8.7	9.5	9.3
TNTR/ Y	2.1	2.3	2.5	2.1	2.3	2.5	2.6	2.4	2.6
TR/ Y	9.8	11.2	11.2	10.8	10.9	10.9	11.3	11.9	12.0

Source: Calculated from the data available in economic survey of various years

Identifications:

IDt = Indirect Taxes; CD = Custom Duties; ED = Excise Duties; ST,VAT = Sales Tax, Value Added Tax; Dt = Direct Taxes; LT = Land Tax; IT = Income Tax; REG = Registration Duties; MIS = Miscellaneous Items; TTR = Total Tax Revenue; TNTR = Total Non-Tax Revenue; TR = Total Revenue; and Y = GDP (Gross Domestic Product)

5.5 Direct and Indirect Taxes

Indirect taxes are more important and popular in developing countries. In a developing country like Nepal, indirect taxes play a prominent role in the revenue collection. Customs duties, excise duties and sales taxes have played a dominant role in the tax structure of developing countries (Due, 1970). There are several advantages of indirect taxes in the economic development of a country.

1. Maximization of Government revenue for financing infrastructure and capital investment;
2. Redistribution of luxury consumption more effectively permitting a higher rate of savings and investment;
3. Restriction on the import of luxury goods, thus, securing a good deal of foreign exchange;
4. Administrative use; and
5. Less harmful to incentives than direct taxes.

However, indirect taxes have weaknesses also. The main weakness of indirect taxes is that they are unable to reach the depth of income and wealth as effectively as direct taxes. Due (1970) asserted that “the attainment of an ‘optimal’ indirect tax structure is impossible, except by sheer accident”. Indirect taxes are regressive in nature, and therefore, not suitable on the grounds of equity. Further, the ratio of indirect taxes to total taxes is inversely related to the per capita income (Musgrave, 1969).

The theoretical framework suggests that the ratio between direct and indirect taxes should change according to the stage of economic development. In the case of a developing economy, the share of direct taxes is bound to rise comparatively with the stage of development forcing

down significantly the contribution of indirect taxes. To what extent there would be rise and fall in the share of direct and indirect taxes depends on the degree of development in an economy (Musgrave, 1969). However, in the context of Nepalese economy, the change in the tax structure together with the economic development is exactly opposite to the theory in terms of the change in direct and indirect taxes from the period 1964/65 to 1991/92 (Hinrichs, 1966 and Table 4.5). "As the system advances into that of a highly developed, pecuniary economy, a much wider range of tax base becomes available, the great bulk of income and output now moves through the market and transactions are valued in money terms. The income expenditure flows may be tapped at almost any point and revenue may be diverted to the treasury" (Musgrave, 1969). Goode (1964) asserted that the historical association between income and progressive taxation as against consumption and regressive taxation, has been a basic factor in tax structure development, but it is not inevitable in principle.

In the course of history, the tax structure development, in fact, began with direct taxes rather than with indirect taxes. Sufficient examples of this could be traced in the ancient and medieval history of the world. The use of indirect taxation came into existence with the dissolution of traditional society (Hinrichs, 1966). In contrast to the theoretical support for direct taxes, its condition seems to be vulnerable in developing countries. The share of different taxes in the total revenue does indicate practically the importance of indirect taxes.

In Nepal, indirect taxes have played a very effective role, especially with reference to resource mobilization, since the contributions of indirect taxes to both total revenue and GDP are significantly higher in comparison to the contribution of direct taxes and non-tax revenue. Nevertheless, the annual average growth rate of indirect taxes is marginally greater than that of direct taxes, where the collection from direct taxes grew at an annual average growth rate of 16.62 percent, while the annual average growth rate of collection from indirect taxes was 17.09 percent during the period from 1963/64 to 2001/02.

Table (5.7) shows the magnitude and contribution of direct and indirect taxes in Nepal from 1964/65 to 2001/02. In FY 1964/65, the collection amount in the form of indirect taxes was only Rs. 97.19 million, which was 50.53 percent of the total revenue. However, the collection from indirect taxes increased to Rs.28733.10 million in the period 2001/02, contributing 56.96

percent of the total revenue and 6.82 percent of GDP. Except in 1970/71 when revenue declined marginally with respect to the previous year, the revenue from indirect taxes has increased steadily. Though the contribution of indirect taxes to total revenue has increased slightly, its contribution to GDP has increased considerably from 2.4 percent in the period 1966/67 to 6.82 percent in the period 2001/02.

Looking at the economic structure and assessing the performance of the major components of indirect taxes, it is bound to dominate the overall tax structure of Nepal. In the long run, heavy reliance on indirect taxes is harmful, and thus, emphasis on indirect taxes should be based in conformity with the objectives of the economy. Nonetheless, to meet the challenge of growing public spending, the growing contribution of indirect taxes cannot be overlooked.

If we go back in Nepal's history to 1952/53, we find that the pattern of indirect taxes and its contribution to total revenue was small (12.37 percent) as compared with direct taxes (15.51 percent). But in 2001/02, its contribution was 56.96 percent of total revenue against 21.01 percent of direct taxes.

Direct taxes have a stronghold in developed countries while indirect taxes are much more popular in developing countries. The change in the pattern of taxes from indirect to direct depends on the level of the economy. The faster the economy changes its base from agriculture to industrial sector, the faster will be the growth of taxes in an economy. The importance which progressive direct taxes should play in the tax system necessarily varies with the stage of economic and social development (Kaldor, 1965). From the experiences of several countries, it has been proved that direct taxes have not been successful in many developing countries. Its implications are also unpredictable. The strong objection to this tax is that it does not cover the entire population and falls outside the boundary of being a universal tax in poor countries.

In the tax structure of Nepal, the contribution of direct tax to total revenue was 27.9 percent as compared to 50.53 percent of indirect tax in FY 1964/65. Even though the collection of direct tax grew at an annual average growth rate of 16.62 percent from the period 1964/65 to 2001/02, its contributions to total revenue and GDP were not encouraging up to the period 1991/92. The contribution of direct tax to total revenue declined from 27.9 percent in FY 1964/65 to 11.81 percent in FY 1991/92. Similarly, the contribution of direct tax to GDP remained fairly stable

and decreased marginally from 1.12 percent in FY 1966/67 to 1.07 percent in FY 1991/92. However, the contribution of direct tax to total revenue and GDP increased thereafter to 21.01 percent and 2.52 percent respectively in FY 2001/02. Therefore, in comparison to indirect taxes, the contribution and performance of direct taxes is poor and vulnerable in the tax structure of Nepal.

Table 5.7

Magnitude and Contribution of Direct and Indirect Taxes (1964/65- 2001/02)

Fiscal Year	Total Direct Tax (Rs. in Millions)	As percent of Total Revenue	As percent of GDP	Total Indirect Taxes (Rs. in Million)	As percent of Total Revenue	As Percent of GDP	Direct / Indirect Ratio
1964/65	53.66	27.90	0.96	97.19	50.53	17.30	1:1.81
1965/66	57.18	26.41	-	119.84	55.35	-	1:2.10
1966/67	71.92	25.09	1.12	153.86	53.67	2.40	1:2.14
1967/68	105.73	32.43	1.47	178.13	54.64	2.48	1:1.68
1968/69	108.61	26.30	1.36	259.64	62.86	3.25	1:2.39
1969/70	128.56	27.71	1.47	282.73	60.93	3.22	1:2.20
1970/71	120.21	26.15	1.34	275.41	59.91	3.08	1:2.29
1971/72	135.40	24.47	1.31	331.27	59.86	3.19	1:2.45
1972/73	135.33	21.98	1.36	385.78	62.64	3.87	1:2.85
1973/74	180.30	23.52	1.41	462.19	60.30	3.61	1:2.56
1974/75	205.00	20.33	1.24	638.72	63.34	3.85	1:3.12
1975/76	259.55	23.27	1.49	652.41	58.48	3.75	1:2.51
1976/77	327.58	24.76	1.90	774.24	58.53	4.48	1:2.36
1977/78	351.27	22.20	1.78	896.23	56.65	4.54	1:2.55
1978/79	304.06	16.75	1.37	1176.10	64.80	5.29	1:3.87
1979/80	308.68	16.38	1.32	1224.38	64.98	5.24	1:3.97
1980/81	446.23	18.40	1.63	1595.68	65.79	5.84	1:3.58

1981/82	514.84	18.22	1.66	1843.20	65.22	5.95	1:3.58
1982/83	771.00	24.26	2.28	1986.30	62.51	5.88	1:2.58
1983/84	541.80	15.86	1.38	2201.60	64.46	5.59	1:4.06
1984/85	559.70	14.27	1.20	2596.40	66.21	5.57	1:4.64
1985/86	661.80	14.24	1.19	3000.80	64.56	5.38	1:4.53
1986/87	768.70	12.86	1.20	3606.30	60.33	5.65	1:4.69
1987/88	1010.20	13.74	1.31	4745.50	64.54	6.17	1:4.70
1988/89	1331.40	17.10	1.49	4962.60	63.73	5.56	1:3.73
1989/90	1435.10	15.41	1.39	5850.90	62.81	5.66	1:4.08
1990/91	1368.50	12.75	1.14	6807.90	63.45	5.65	1:4.97
1991/92	1595.20	11.81	1.07	8280.60	61.28	5.54	1:5.19
1992/93	2036.20	13.44	1.20	9626.70	63.55	5.66	1:4.73
1993/94	2855.30	14.58	1.43	12516.70	63.92	6.28	1:.38
1994/95	3849.30	15.64	1.76	15810.70	64.26	7.21	1:4.11
1995/96	4655.90	16.69	1.87	17012.10	60.99	6.83	1:3.65
1996/97	5340.00	17.58	1.90	19084.30	62.83	6.80	1:3.57
1997/98	6187.90	18.79	2.06	19751.90	59.97	6.57	1:3.19
1998/99	7516.10	20.13	2.20	21236.80	56.87	6.21	1:2.83
1999/00	8951.50	20.87	2.36	24200.60	56.42	6.38	1:2.70
2000/01	10159.40	20.78	2.48	28705.70	58.71	7.00	1:2.83
2001/02	10597.50	21.01	2.52	28733.10	56.96	6.82	1:2.71

Source: Calculated from Data available at Economic Survey, various issues

Note: GDP data is available from 1965/66

5.6 The Behavior of Individual Taxes

5.6.1 Custom Duties

In the present tax structure of Nepal, the revenue from custom duties contributes more than 50 percent of indirect taxes, 32 percent of total revenue and 3.6 percent of GDP. Among indirect taxes, custom duties have been occupying a prominent place in the total tax structure. “Custom duties now constitute a major revenue source for developing economies, yielding on the average about half of indirect taxes revenues and a third of total tax revenues” (Due,1970).

In developing countries, custom duties are levied not only to raise the volume of revenue, but also to attain certain specific objectives such as the protection of domestic industry, so that import substituting industries could be set up within the country. The other important objective is to restrict the import of luxury consumption goods whereby foreign exchange reserves could be maximized and used for productive purposes (Dhungana, 1980).

Customs Act and Financial Act are the legal basis for the operation of custom activities. One of the major features of this act is that it has incorporated World Trade Organization (WTO) valuation principle in determining customs value. Customs Act and Financial Act are the legal basis for the operation of custom activities. The Seventh amendment made in 1997 in the Customs Act 1962, includes new customs valuation system. However, this Act does not cover the entire principle of WTO valuation aggregation.

The key features of the Customs Act 1962 (2019) are:

- The freight of import by air route will be determined as the cost of surface route transportation up to the customs point in Nepal border and custom duties shall be realized on it.
- Custom duties of any imported goods shall be determined on the basis of transaction value of the goods concerned.
- The value of goods imported under Baggage Rules will be as determined by the customs officer. Value shall be determined by adding the expenses of insurance, freight and other, if any, in whichever value is greater between the values as determined by the Government of India for the purpose of assessing excise duty and ex-factory or ex-depot price.

- In case the customs agent causes any loss to the owner of the goods by performing any activity against the customs regulation, the agent has to compensate the owner for the loss.
- In case a consignee does not appoint a customs agent for clearance of a consignment, the proprietor, a partner or a director, as the case may be, is only allowed to represent the entity for clearance of the goods at the customs office.
- The Customs Act provides the facility to a bonded warehouse that in case it exports its products, it could import raw materials and subsidiary raw materials, otherwise than packing materials, required for production of the goods for export only on submission of a bank guarantee for the value of the customs chargeable on the goods, plus 25 percent of the amount for six months to one year.

The contribution of custom duties in Nepal has declined substantially during the period from 1966/67 to 2001/02. As is clearly seen from Table (5.8), the contribution of custom duties to indirect taxes has declined from nearly 79.13 percent in FY 1966/67 to 37.51 percent in FY 1983/84. Nevertheless, the contribution remained fairly stable between 41 to 44 percent beyond FY 1983/84 up to 2001/02. The custom duties in Nepal as percent of total revenue and GDP, however, have declined throughout during the period from 1966/67 to 2001/02. The share of custom duties in the total revenue declined from 37.25 percent in FY 1966/67 to 25.1 percent in FY 2001/02 (Table 5.4). Similarly, the contribution of custom duties to GDP increased from 1.9 percent in FY 1966/67 to 3 percent in FY 2001/02 (Table 5.6).

Table 5.8

Size and Share of Customs Duties (1966/67 to 2001/02)

(As Percent of Indirect Taxes, Total Revenue and GDP)

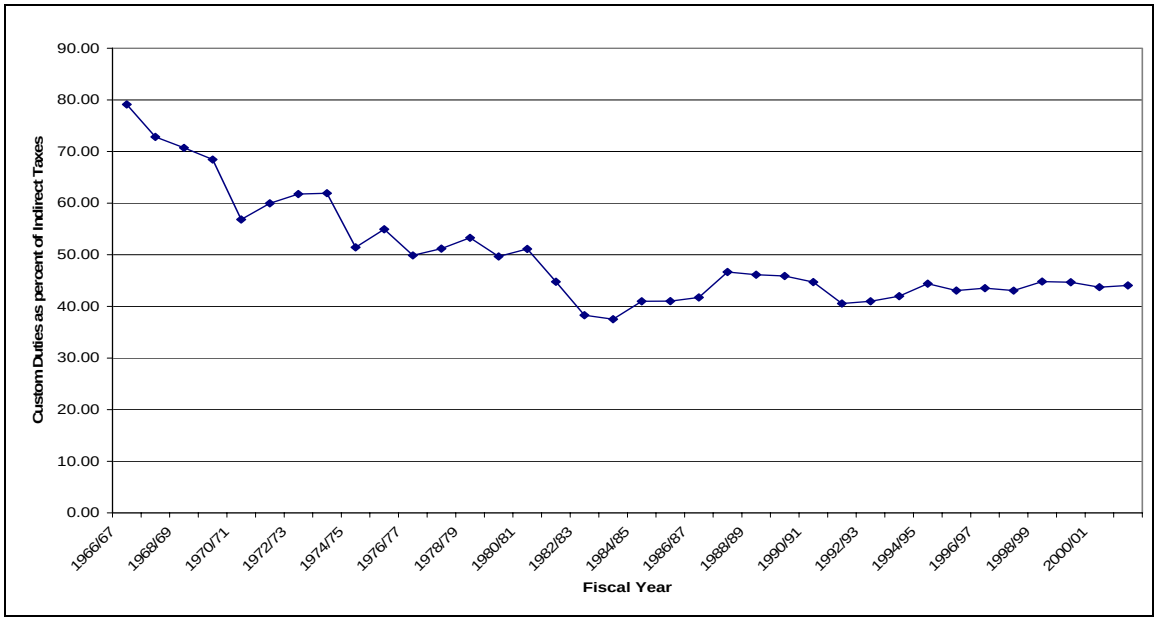
Fiscal Year	Revenue from Custom Duties (Rs. in million)	As Percent of Indirect Taxes	As Percent of Total Revenue	As Percent of GDP
1966/67	121.75	79.13	42.5	1.9
1967/68	129.73	72.83	39.8	1.8
1968/69	183.56	70.70	44.4	2.3
1969/70	193.51	68.44	41.7	2.2
1970/71	156.51	56.83	34.0	1.8
1971/72	198.60	59.95	35.9	1.9
1972/73	238.20	61.75	38.7	2.4
1973/74	286.21	61.92	37.3	2.2
1974/75	328.52	51.43	32.6	2.0
1975/76	358.50	54.95	32.1	2.1
1976/77	386.19	49.88	29.2	2.2
1977/78	458.78	51.19	29.0	2.3
1978/79	626.71	53.29	34.5	2.8
1979/80	608.01	49.66	32.3	2.6
1980/81	815.84	51.13	33.6	3.0
1981/82	825.10	44.76	29.2	2.7
1982/83	760.90	38.31	23.9	2.3
1983/84	825.90	37.51	24.2	2.1
1984/85	1064.50	41.00	27.1	2.3
1985/86	1231.00	41.02	26.5	2.2
1986/87	1505.10	41.74	25.2	2.4
1987/88	2214.60	46.67	30.1	2.9
1988/89	2289.90	46.14	29.4	2.6
1989/90	2684.90	45.89	28.8	2.6
1990/91	3044.30	44.72	28.4	2.5
1991/92	3358.90	40.56	24.9	2.2
1992/93	3945.00	40.98	26.0	2.3
1993/94	5255.00	41.98	26.8	2.6
1994/95	7018.10	44.39	28.5	3.2
1995/96	7327.40	43.07	26.3	2.9
1996/97	8309.10	43.54	27.4	3.0
1997/98	8502.20	43.04	25.8	2.8
1998/99	9517.70	44.82	25.5	2.8
1999/00	10813.30	44.68	25.2	2.8
2000/01	12552.10	43.73	25.7	3.1
2001/02	12658.80	44.06	25.1	3.0

Source: Calculated from Data available at Economic Survey, various issues

Note: Data Available from 1966/67 only

Fig. 5.3

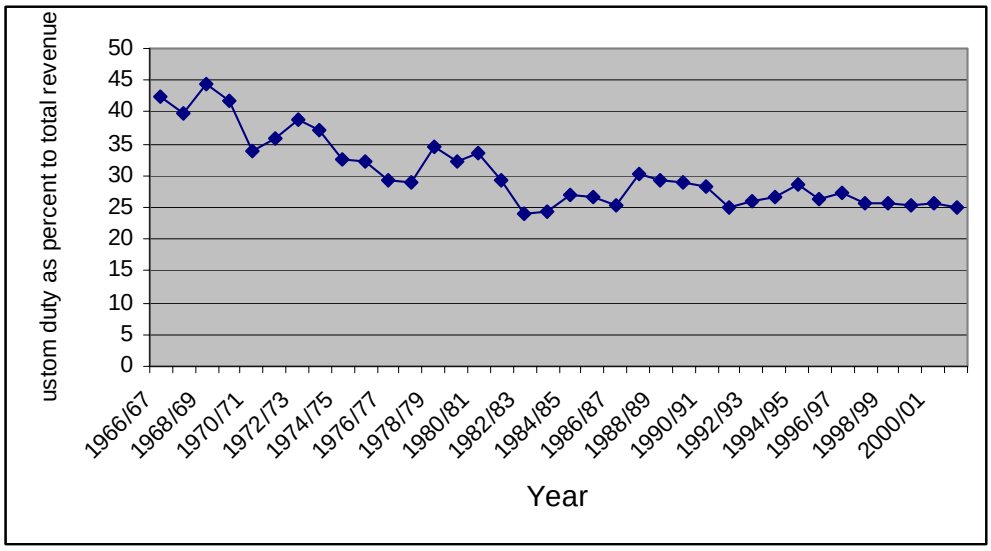
Contribution of Custom Duties to Indirect Taxes



Source: Calculated and Drawn from the Data Available in Economic Survey, Various Issues

Fig. 5.4

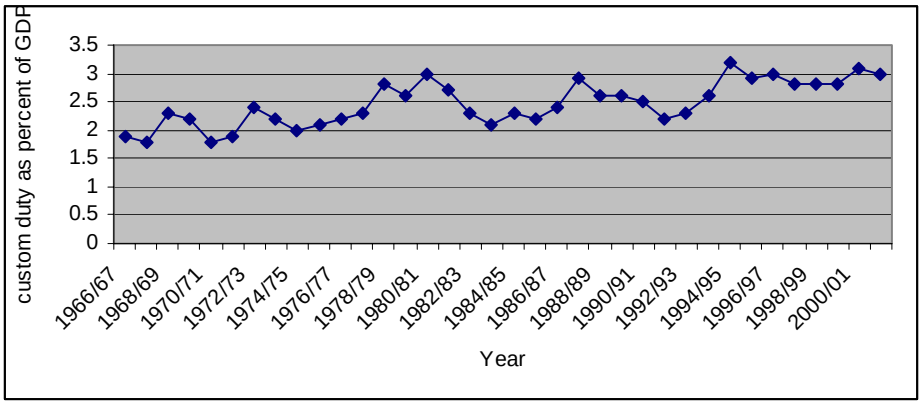
Contribution of Custom Duties to Total Revenue



Source: Calculated and Drawn from the Data Available in Economic Survey, Various Issues

Fig. 5.5

Contribution of Custom Duties to GDP



Source: Calculated and Drawn from the Data Available in Economic Survey, Various Issues

5.6.2 Excise Duties

As industrial development begins in a country, experience suggests that it centers in the production of commodities that previously yielded considerable customs revenue, for the obvious reason that these commodities offer relatively large and stable domestic markets (Due, 1970). Thus, the contribution of excise revenue to the total tax structure depends on the scale of industrialization.

In Nepal, prior to 1958, an important source of excise revenue was the contract tax on the production of country liquor and also on the production of ganja and opium. In 1955, a customs and excise department was established. In 1966, a separate excise department came into existence. Presently, there are three sources of excise revenue: (a) excise from contract tax, (b) excise from agricultural production and (c) excise from industrial production. The significant position of excise revenue in both developed and developing countries is of vital interest.

In a study of 82 developing and industrial countries, the contribution of excise duties was found to be nearly 25 percent of the total revenue (Cnosser, 1974).

There are different forms of excise systems:

1. Limited Excise System

This form of excise system consists of traditional excise goods like tobacco products, alcoholic beverages and petroleum products as well as motor vehicles and various forms of entertainment; some food products such as sugar, salt, soft drinks, matches and cement may be included but not exceeding 10 to 15 commodity groups.

2. Intermediate Excise System

Intermediate excise system includes between 15 and 30 commodity groups. In addition to the items mentioned in limited excise system, it includes more food products. Other items of widespread consumption such as textiles, footwear and pharmaceuticals may be included. Similarly, some luxury items like cosmetics and perfumes can be added. The producer goods that may be a part of the intermediate system are cement, building materials, paints and varnishes.

3. Extended Excise System

This is another form of excise system, which comprises more than 30 commodity groups covering almost a whole range of production activities. Apart from items mentioned under the intermediate excise system, many luxury and producer goods are excisable like electrical and gas-operated appliances, radios, television sets, musical and photographic equipment, steel and aluminum products, plastic and resin, rubber products, wood products, and sometimes machinery.

Excise duty is also one of the traditional taxes in Nepal. In the past, these duties were levied on agriculture as well as industrial products. Now these are levied only on a few industrial products such as liquors, beers, cigarettes, tobaccos. They are levied on the domestically manufactured goods only and most of the imports are kept out of the excises net.

Excise duty is the fourth largest source of tax revenue in Nepal. Due to the exclusion of imported goods from the excise net, and exclusion of most of the domestically produced goods from the excise net, after the implementation of VAT in1997, the contribution is relatively small now.

The key features of the Excise Act 2002 are:

- Individuals, firm, companies, or organizations that have obtained the license to producer excisable goods or services.
- Production and sale and distribution of excisable goods and the profits of an academy without adding the excise duty or other taxes.
- If on an annual basis or for a particular year, provision has been made in any act to levy excise duty on certain goods or services, that duty will be recovered as per this Act or rule.
- If the excise duty of any goods is levied on its price, then the excise duty is levied based on production and imports.
- If any government official or police find evidence and present the accused along with the recovered goods, then those persons will be rewarded with 25 percent of the amount.
- As per this Act, if there is any valid reason to believe that the offence committed requires confiscation of the assets of any person, then he/she can freeze the transfer of rights or ownership of such property.

In Nepal, up to the period of 1992/93, excise duties contributed more than all the individual taxes, except custom duties and sales tax. The amount collected from excise duties in FY 1966/67 was only Rs. 19.96 million which increased to Rs. 3807 million in FY 2001/02. The actual revenue from excise duties and its contribution as percentages of indirect taxes, total revenue and GDP are illustrated in Table (5.9) and the following figures below.

Table 5.9

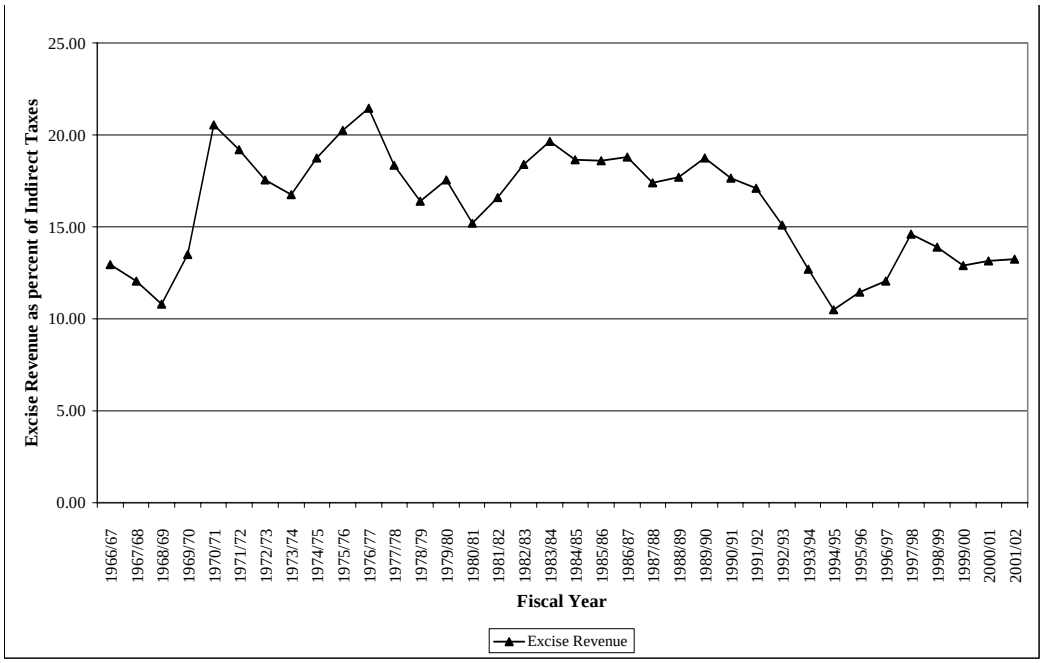
Size and Share of Excise Duties (1966/67 to 2001/02)

(As Percent of Indirect Taxes, Total Revenue and GDP)

Fiscal Year	Revenue from Excise Duties (Rs. in million)	As Percent of Indirect Taxes	As Percent of Total Revenue	As Percent of *GDP*
1966/67	19.96	12.97	6.96	0.31
1967/68	21.48	12.06	6.59	0.30
1968/69	28.04	10.80	6.79	0.35
1969/70	38.12	13.48	8.21	0.43
1970/71	56.57	20.54	12.31	0.63
1971/72	63.59	19.20	11.49	0.61
1972/73	67.76	17.56	11.00	0.68
1973/74	77.43	16.75	10.10	0.60
1974/75	119.68	18.74	11.87	0.72
1975/76	132.03	20.24	11.83	0.76
1976/77	166.07	21.45	12.55	0.96
1977/78	164.34	18.34	10.39	0.83
1978/79	192.62	16.38	10.61	0.87
1979/80	215.18	17.57	11.42	0.92
1980/81	242.18	15.18	9.99	0.89
1981/82	305.70	16.59	10.82	0.99
1982/83	365.80	18.42	11.51	1.08
1983/84	432.20	19.63	12.65	1.10
1984/85	483.90	18.64	12.34	1.04
1985/86	558.70	18.62	12.02	1.00
1986/87	678.70	18.82	11.35	1.06
1987/88	825.30	17.39	11.22	1.07
1988/89	877.70	17.69	11.27	0.98
1989/90	1097.00	18.75	11.78	1.06
1990/91	1200.20	17.63	11.19	1.00
1991/92	1414.30	17.08	10.47	0.95
1992/93	1452.80	15.09	9.59	0.85
1993/94	1592.50	12.72	8.13	0.80
1994/95	1657.30	10.48	6.74	0.76
1995/96	1944.30	11.43	6.97	0.78
1996/97	2298.10	12.04	7.57	0.82
1997/98	2885.80	14.61	8.76	0.96
1998/99	2953.20	13.91	7.91	0.86
1999/00	3127.60	12.92	7.29	0.82
2000/01	3771.20	13.14	7.71	0.92
2001/02	3807.00	13.25	7.55	0.90

Source: Calculated from Various Economic Surveys

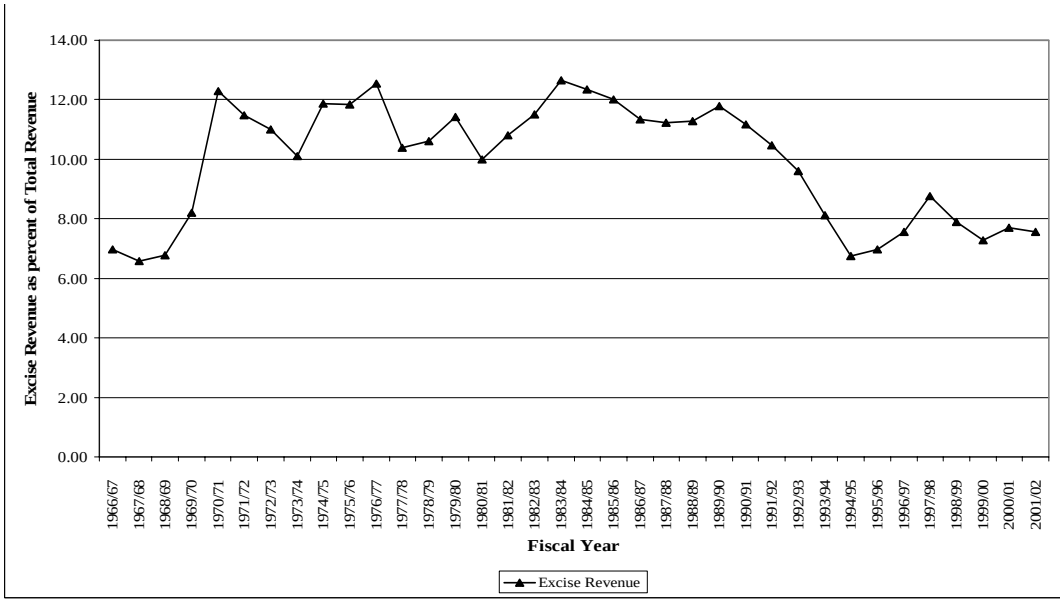
Fig. 5.6
Contribution of Excise Revenue to Indirect Tax



Source: Calculated and Drawn from the Data Available in Economic Survey, Various Issues

Fig. 5.7

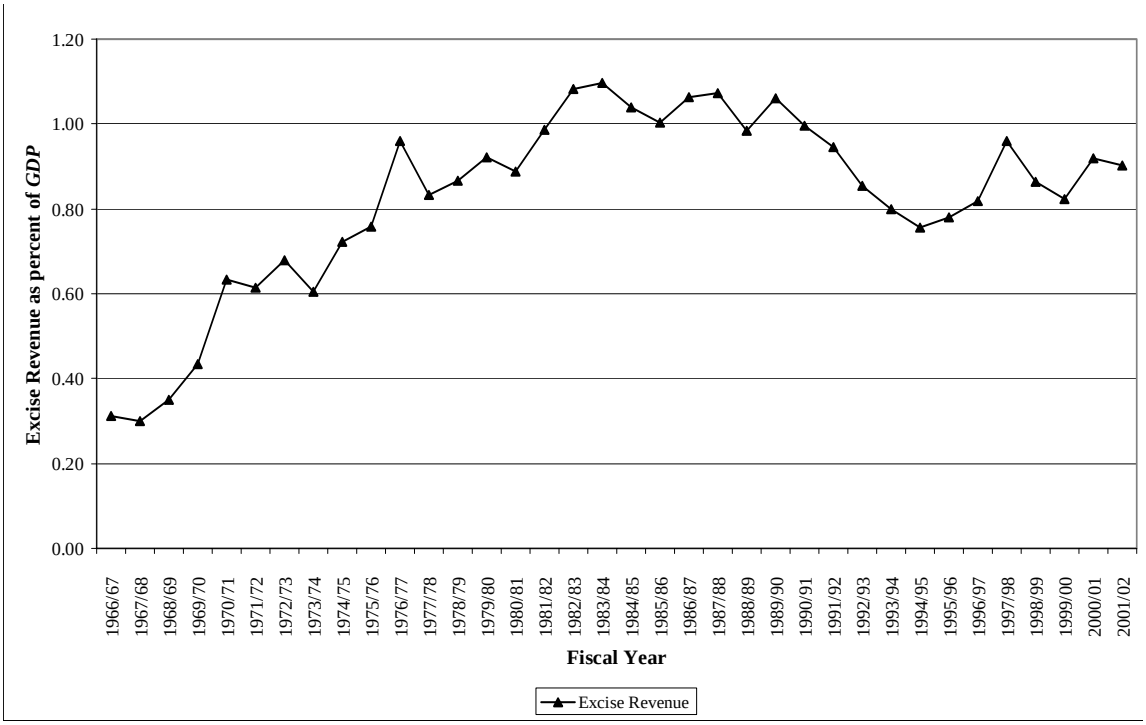
Contribution of Excise Revenue to Total Revenue



Source: Calculated and Drawn from the Data Available in Economic Survey, Various Issues

Fig. 5.8

Contribution of Excise Revenue to GDP



Source: Calculated and Drawn from the Data Available in Economic Survey, Various Issues

The contribution of excise duties as percent of indirect taxes remained at an average of 16.11 percent during the fiscal years from 1966/67 to 2001/02. The contribution of excise duties to indirect taxes remained below 15 percent up to FY 1969/70, which increased to above 15 percent during the 1970s and 1980s, and remained in between 15 to 22 percent during the period. However, since the mid-1990s till now, the contribution of excise duties remained below 15 percent again.

The structure of the contribution of excise duties to total revenue also shows a similar pattern. The contribution increased from as low as 6.59 percent in FY 1967/68 to as high as 12.65 percent in FY 1983/84. However, the contribution declined monotonically from 11.78 percent in FY 1989/90 to 6.74 percent in FY 1994/95.

The ratio of excise duties to GDP was 0.82 percent on an average during the period from 1966/67 to 2001/02. The contribution of excise duties to GDP, nonetheless, increased during

the 1970s and 1980s. The excise revenue as percent of GDP increased from 0.31 percent in FY 1966/67 to 1.10 percent in FY 1983/84, which remained around 1 percent up to FY 1990/91. But during the early 1990s, the fraction of excise revenue to GDP declined, which was 0.76 percent in the year 1994/95.

5.6.3 Sales Tax /VAT (Value-Added Tax)

Sales tax was the second largest source of revenue for the Government of Nepal during the 1960s. The contribution of sales tax /VAT to the total revenue during the period from 1966/67 to 2001/02 remained at 18.6 percent, which is higher than all other individual taxes except custom duties. In fact, the contribution of sales tax rose from 4.2 percent in the year 1966/67 to 23.7 percent in the year 2001/02 (Table 5.10). This increase in the contribution of sales tax /VAT is mainly attributed to the government policies regarding (*i*) the frequent upward revision of tax rates, and (*ii*) the expansion in coverage.

Sales tax at the retail level is a recent innovation in the financing of developing economies, although it has been perfectly practiced in highly developed economies and is widely used in the countries in the intermediate years of their development. Its use in least developed countries is almost certain to increase with experience as economy grows with economic development (Due, 1970). Sales tax in developing as well as in developed countries has been firmly established as a major revenue share. All industrial countries use a sales or purchase tax and the use has been expanding every year. The only problem is how to select a better form of tax since no single form has ever attained universal endorsement. Alternative forms of sales taxation for developing countries have been promoted by authorities on taxation (Due, 1990). The alternative forms that are most widely used are: (*i*) Universal Retail Sales Tax, and (*ii*) General Value Added Tax (VAT). Nepal has been using VAT as an alternative to Sales Tax since 1995.

VAT was introduced in 16 November, 1997 in place of sales, contract, entertainment, and hotel taxes. It is the most modern form of indirect tax for Nepal.

There were mainly four reasons to introduce VAT in Nepal. The first reason was to develop VAT as the main and stable source of government revenue by broadening the tax base. The second was to address the issue of smuggling or understating the taxable value, since the former sales tax was collected only at source and value added below this point was not

included. The third was to reduce the dependence on custom duties, since Nepal needed a gradual reduction in import tariff as its commitment to WTO, BIMSTEC, and SAFTA. Finally, it was argued that VAT would modernize the tax system by enhancing accounting practices and transparency in business.

VAT, in Nepal, is legally bound under the Value Added Tax Act 1995 and Value Added Tax Rules 1997. The act and rules were amended eight times, including the recent amendments in 2005, under various successive Finance ordinances.

The basic features of the VAT Act of Nepal are as follows:

- VAT is levied at a single rate of 13 percent (10 percent until January 2005) and collected at every stage of production and distribution of goods and services. In certain cases, however, the rate may be zero or exempted.
- VAT is levied at the rate of zero percent on certain taxable goods and services such as export; goods purchased, or imported by accredited diplomats, etc.
- Certain products such as primary agricultural products, primary food stuffs, like animals and products, agricultural inputs, health services, education, books and newspapers, artistic/cultural goods and services, etc. are exempted from VAT.
- A firm with an annual turnover of less than Rs.2 million does not need to register with the VAT office but can register voluntarily. On the other hand, a firm whose annual turnover exceeds Rs.1 million must issue a serially numbered invoice with the firm's name, address and permanent account number.
- All firms conducting business in municipalities related to hardware, sanitation, furniture, fixture, furnishing, electric, electronic, and marvels must be compulsorily registered with the VAT office.

Sales tax, although designed primarily as a tax on retail sales, was also imposed at the wholesale level on non-registered vendors and on manufacturers of specified goods. Registered wholesalers were required to collect tax from all non-registered purchasers based on the cost of goods plus transportation charges and an uplift of 30 percent in Nepal.

In order to reduce the level of regressiveness, most countries have adopted a differentiated rate structure, and for improvement, progressively higher rates of taxes are levied on luxury items. The most favored form of sales tax is the variant imposed at the manufacturing stage. The value added tax (VAT), which replaced the sales tax in Nepal, is also increasingly being used in Latin America. The retail sales tax is suitable for those countries where local tax jurisdictions are broad and clear. In developing countries, this tax would face administrative problems.

The structure of sales tax/VAT in Nepal is represented in Table (5.10.) The sales tax/VAT in Nepal was only Rs. 12.15 million in FY 1966/67, which rose to Rs.11964 million in FY 2001/02.

Table(5.10)

Size and Share of Sales Tax/VAT (1966/67 to 2001/02)

(As Percent of Indirect Taxes, Total Revenue and GDP)

Fiscal Year	Revenue from Sales Tax/VAT (Rs. in million)	As Percent of Indirect Taxes	As Percent of Total Revenue	As Percent of *GDP*
1966/67	12.15	7.90	4.24	0.19
1967/68	26.92	15.11	8.26	0.38
1968/69	48.04	18.50	11.63	0.60
1969/70	51.10	18.07	11.01	0.58
1970/71	62.33	22.63	13.56	0.70
1971/72	69.08	20.85	12.48	0.67
1972/73	79.82	20.69	12.96	0.80
1973/74	98.55	21.32	12.86	0.77
1974/75	190.52	29.83	18.89	1.15
1975/76	161.88	24.81	14.51	0.93
1976/77	221.98	28.67	16.78	1.28
1977/78	273.09	30.47	17.26	1.38
1978/79	356.77	30.34	19.66	1.61
1979/80	401.19	32.77	21.29	1.72
1980/81	537.66	33.69	22.17	1.97
1981/82	597.40	32.41	21.14	1.93
1982/83	709.30	35.71	22.32	2.10
1983/84	770.70	35.01	22.56	1.96
1984/85	845.80	32.58	21.57	1.82
1985/86	985.90	32.85	21.21	1.77
1986/87	1143.80	31.72	19.13	1.79
1987/88	1300.50	27.40	17.69	1.69
1988/89	1379.70	27.80	17.72	1.55
1989/90	1650.10	28.20	17.71	1.60
1990/91	2026.10	29.76	18.88	1.68
1991/92	2840.70	34.31	21.02	1.90
1992/93	3438.20	35.72	22.70	2.02
1993/94	4693.30	37.50	23.97	2.36
1994/95	6031.70	38.15	24.51	2.75
1995/96	6431.30	37.80	23.06	2.58
1996/97	7126.50	37.34	23.46	2.54
1997/98	7122.60	36.06	21.62	2.37
1998/99	7882.20	37.12	21.11	2.30
1999/00	9854.90	40.72	22.98	2.60
2000/01	12047.80	41.97	24.64	2.94
2001/02	11964.00	41.64	23.72	2.84

Source: Calculated from Various Issues of Economic Survey

The contribution of sales tax/VAT to indirect taxes, total revenue and GDP follow an almost similar increasing trend. The fraction of sales tax/VAT to indirect taxes increased from 7.9 percent in FY 1966/67 to 41.64 percent in FY 2001/02, and remained at 32.21 percent on an annual average during the period, with some minor fluctuations. However, during the period from 1982/83 to 1987/88, the contribution declined sharply from 35.71 to 27.4 percent.

Similarly, the ratio of sales tax/VAT to total revenue rose from 4.24 percent in FY 1966/67 to 23.72 percent in FY 2001/02. While the annual average contribution of sales tax/VAT to total revenue remained at 18.62 percent during the period from 1966/67 to 2001/02, it rose sharply from 4.24 percent in FY 1966/67 to 22.17 percent in FY 1980/81 and remained fairly stable in between 17 percent to 24 percent throughout.

The contribution of sales tax/VAT to GDP during the period from 1966/67 to 2001/02 was 1.66 percent on an annual average. The contribution increased from 0.19 percent in FY 1966/67 to 2.84 percent in FY 2001/02 with two short periods where there was remarkable decline in the contribution. The ratio of sales tax/VAT to total revenue declined from 22.32 percent in FY 1982/83 to 17.72 percent in FY 1988/89. A similar decline in the ratio occurred when the contribution fell from 24.51 percent in FY 1994/95 to 23.72 percent in FY 2001/02.

5.6.4 Land Tax

The history of land tax in Nepal is very old (Regmi,1963). However, in the economy, where approximately 40 percent of GDP comes from the agricultural sector, its contribution to total revenue has been extremely low. The actual size of land tax increased from Rs. 56.64 million in FY 1966/67 to as high as Rs. 100.7 million in FY 1980/81, which declined harshly to only Rs. 0.80 million in FY 2001/02. Even though the actual amount remained highest in FY 1980/81, the contribution of land tax to total revenue, direct tax and GDP was highest in FY 1967/68 during the period from 1966/67 to 2001/02. In FY 1967/68, the contribution of land tax to direct tax stood at 78.78 percent; its contribution to total revenue remained at 25.55 percent; and its ratio to GDP was 1.16 percent. The size and share of land tax actual values and as percent of direct tax, total revenue and GDP are illustrated in Table (5.11)

Table(5.11)

Size and Share of Land Tax, (1966/67 - 2001/02)

(As Percent of Direct Taxes, Total Revenue and GDP)

Fiscal Year	Revenue from Land Tax (Rs. in million)	As Percent of Direct Taxes	As Percent of Total Revenue	As Percent of *GDP*
1966/67	56.64	78.75	19.76	0.88
1967/68	83.29	78.78	25.55	1.16
1968/69	79.35	73.06	19.21	0.99
1969/70	87.72	68.23	18.90	1.00
1970/71	76.40	63.56	16.62	0.85
1971/72	83.17	61.43	15.03	0.80
1972/73	74.45	55.01	12.09	0.75
1973/74	96.93	53.76	12.65	0.76
1974/75	90.90	44.34	9.01	0.55
1975/76	94.76	36.51	8.49	0.54
1976/77	97.94	29.90	7.40	0.57
1977/78	87.00	24.77	5.50	0.44
1978/79	54.60	17.96	3.01	0.25
1979/80	56.20	18.21	2.98	0.24
1980/81	100.70	22.57	4.15	0.37
1981/82	81.70	15.87	2.89	0.26
1982/83	66.70	8.65	2.10	0.20
1983/84	77.20	14.25	2.26	0.20
1984/85	76.90	13.74	1.96	0.17
1985/86	74.20	11.21	1.60	0.13
1986/87	72.40	9.42	1.21	0.11
1987/88	80.70	7.99	1.10	0.10
1988/89	80.40	6.04	1.03	0.09
1989/90	74.60	5.20	0.80	0.07
1990/91	82.10	6.00	0.77	0.07
1991/92	64.80	4.06	0.48	0.04
1992/93	69.40	3.41	0.46	0.04
1993/94	61.00	2.14	0.31	0.03
1994/95	34.90	0.91	0.14	0.02
1995/96	18.20	0.39	0.07	0.01
1996/97	5.90	0.11	0.02	0.00
1997/98	3.60	0.06	0.01	0.00
1998/99	1.40	0.02	0.00	0.00
1999/00	4.60	0.05	0.01	0.00
2000/01	5.10	0.05	0.01	0.00
2001/02	0.80	0.01	0.00	0.00

Source: Calculated from Various Issues of Economic Survey

The contribution of land tax to direct taxes was extremely high at 78.75 percent in FY 1966/67, which declined to a negligible 0.01 percent in FY 2001/02. The ratio declined sharply and monotonically from 78.78 percent in FY 1967/68 to 17.96 in FY 1978/79. Even though the actual revenue collected from land tax remained fairly stable with some fluctuation during the period from 1966/67 to 1993/94, its contribution as percent of total revenue and GDP declined stridently during the same period. However, the actual amount of land tax revenue also declined after 1993/94, thereby reducing its contribution as fraction of direct tax, total revenue and GDP to negligible.

As far as the structure of Nepal's land tax is concerned, many developments took place such as the existence of compulsory savings scheme, the taxation of presumptive land, i.e., income tax and the introduction of Panchayat Development and Land Tax. But the implications of these measures were far from satisfactory. In fact, the overall results were disappointing.

Agricultural Income Tax

With a view to mobilizing resources from big holdings, earnings from agriculture in excess of 10 *bighas* were taxed in 1973/74. The following year, the exemption limit was reduced to five *bighas* and assessment rates were increased. Manifold increases in the rate of agricultural income tax could not also bring any substantial revenue to the exchequer. The income tax collection from agriculture was very negligible, and unfortunately, the government had to suspend the agricultural income tax.

Compulsory Savings Scheme

Even the fate of compulsory savings scheme was disappointing. The Land Act of 1964 launched a compulsory savings scheme which remained in effect for about four and half years, that is, from 1964 to 1969. The main objective of this program was to provide credit for financing agricultural and related field activities. It was said that the program was suspended due to administrative problems (Dhital, 1971). But as a matter of fact, the program collapsed because it was a direct burden to the subsistence economy. Moreover, this kind of strategy will be successful only when society handles the production process through collectivization. Otherwise, saving in subsistence would be forced saving, in turn, tending to be abortive.

Panchayat Development and Land Tax (PDLT)

The Panchayat Development and Land Tax came into existence in 1965 with a view to mobilizing the resources from the agricultural sector on a greater scale for rural development at the district and village levels. It had a good beginning and the pilot program fetched revenue three to four times higher than the land tax which was very encouraging.

5.6.5 Income Tax

Though income tax is of recent origin, it occupies the foremost place in the tax structure of Nepal and has emerged as the biggest component of direct tax; the objective being to enhance revenue mobilization through an effective revenue collection procedure for the economic development of the nation as well as to amend and integrate the laws relating to the Income Tax Act-2002 (2058).This Act has replaced the Income Tax Act 1974(2031), which was amended eight times and was functioning for a period of 28 years. The key features of the Income Tax Act 2002 (2058) are as follows:

- The Act has broadened the tax base. The tax rates are spelled out in the Act itself and the tax rates and concessions are harmonized on equity grounds.
- A full-fledged self-assessment system has been implemented and presumptive taxation and current year taxation system are its strengths.
- The Act has introduced a poor system of charging depreciation - intangible assets are also depreciated. The Act has introduced taxation of capital gains as well.
- The Act has introduced a provision for administrative review to allow the tax administration to correct mistakes made by the tax administrator internally.
- The Act has made provision for stringent fine and penalty for defaulters.
- Global income of a resident has been made taxable. Non-residents are also taxed on their income with source of Nepal.
- The Act has made provision for international taxation. Foreign tax credit has been introduced for the first time.
- The Act has separated administrative and judicial responsibilities by distinguishing civil liabilities of the taxpayers from criminal liabilities.

- The appeal system has been further streamlined by making it mandatory for the taxpayers to file an objection with the inland revenue department for administrative review before appealing to the revenue tribunal.

A small amount of Rs. 7.73 million was collected as income tax in FY 1966/67, which rose to Rs. 8436 million in FY 2001/02 at an incredible annual average of 24 percent. Actually, the income tax grew from Rs. 746 million in FY 1990/91 to nearly 11 fold or Rs. 8436 million in FY 2001/02, at a remarkable growth rate of 25.69 percent per annum. Income taxes as percentage of direct tax, total revenue and GDP are shown *in Table (5.12).*

During the period from 1966/67 to 2001/02, the contribution of income tax to direct taxes, total revenue and GDP was on an annual average of 46.25, 8.31, and 0.77 percent respectively. As is clearly seen from the figures, not only the actual amount of collection from income tax, but also the contribution of income tax to direct taxes, total revenue and GDP in Nepal has increased significantly during the period since 1966/67 till now.

The contribution of income tax to direct taxes grew at an annual average of 7.1 percent, which increased from 10.75 percent in 1966/67 to 79.60 percent in 2001/02. In fact, the contribution increased from 10.75 percent in 1966/67 to 38.96 percent in 1977/78, after which it declined to 31.14 percent in 1982/83 and increased again to 64.68 percent in 1988/89. It declined thereafter to 53.63 percent in 1991/92 and rose to a maximum of 85.14 percent in 2000/01. The contribution of income tax to total revenue, however, fluctuated with a gradually increasing trend. The annual average of the contribution of income tax to total revenue was 6.37 percent during the period from 1966/67 to 1991/92, after which the contribution rose monotonically to 17.69 percent in FY 2000/01. The contribution of income tax to GDP also followed a similar pattern, however, the intensity of fluctuation during the period from 1966/67 to 1991/92 being less as compared to fluctuation of the contribution of income tax to total revenue. The fraction of income tax to GDP increased from 0.12 percent in FY 1966/67 to 2.0 percent in FY 2001/02.

Table 5.12

Size and Share of Income Tax (1966/67 to 2001/02)

(As Percent of direct Taxes, Total Revenue and GDP)

Fiscal Year	Revenue from Income Tax (Rs. in million)	As Percent of Direct Taxes	As Percent of Total Revenue	As Percent of *GDP*
1966/67	7.73	10.75	2.70	0.12
1967/68	11.41	10.79	3.50	0.16
1968/69	16.73	15.40	4.05	0.21
1969/70	19.63	15.27	4.23	0.22
1970/71	21.17	17.61	4.61	0.24
1971/72	22.05	16.29	3.98	0.21
1972/73	23.38	17.28	3.80	0.23
1973/74	32.64	18.10	4.26	0.25
1974/75	47.00	22.93	4.66	0.28
1975/76	87.17	33.59	7.81	0.50
1976/77	113.30	34.59	8.56	0.66
1977/78	136.84	38.96	8.65	0.69
1978/79	103.02	33.88	5.68	0.46
1979/80	101.20	32.78	5.37	0.43
1980/81	144.00	32.27	5.94	0.53
1981/82	189.70	36.85	6.71	0.61
1982/83	240.10	31.14	7.56	0.71
1983/84	290.90	53.69	8.52	0.74
1984/85	307.30	54.90	7.84	0.66
1985/86	364.40	55.06	7.84	0.65
1986/87	437.50	56.91	7.32	0.69
1987/88	579.00	57.32	7.87	0.75
1988/89	861.20	64.68	11.06	0.96
1989/90	919.00	64.04	9.87	0.89
1990/91	746.00	54.51	6.95	0.62
1991/92	855.50	53.63	6.33	0.57
1992/93	1124.80	55.24	7.43	0.66
1993/94	1824.50	63.90	9.32	0.92
1994/95	2711.80	70.45	11.02	1.24
1995/96	3311.60	71.13	11.87	1.33
1996/97	3969.00	74.33	13.07	1.41
1997/98	4685.90	75.73	14.23	1.56
1998/99	5850.70	77.84	15.67	1.71
1999/00	7006.20	78.27	16.33	1.85
2000/01	8650.10	85.14	17.69	2.11
2001/02	8436.00	79.60	16.72	2.00

Source: Calculated from Various Issues of Economic Survey

5.6.6 Registration

In Nepal's tax structure, registration (duties) had been providing considerable revenue till the early 1990s. Registration duties are imposed on the transfer of property, which was a meager amount of Rs. 2.59 million in 1966/67. It rose to a remarkable amount of Rs. 1131 million in 2001/02 with a significant growth rate of 22.2 percent a year. However, as far as its contribution is concerned, the fractions of registration to direct taxes and total revenue grew up to the period of 1991/92. The actual amount of the registration (fees) together with its contribution to direct taxes, total revenue and GDP are shown in Table5.13.

The contribution of registration to direct taxes remained at 18.57 percent on an annual average during the period from 1966/67 to 2001/02. The fraction of registration to direct taxes increased with some variations from 3.6 percent in FY 1966/67 to a maximum of 35.81 percent in FY 1991/92, which declined monotonically thereafter to 5.98 percent in 2000/01. The ratio was 10.67 percent in FY 2001/02.

The registration as percent of total revenue also grew during the period from 1966/67 to 1991/92 and declined throughout the 1990s. The fraction of registration to total revenue was at an annual average of 3.26 percent during the period of 36 years from1966/67 to 2001/02. The registration to total revenue grew rapidly from 0.9 percent in 1966/67 to 3.36 percent in 1969/70 and remained fairly stable with a slightly increasing trend and reached 4.53 percent in FY 1992/93. The ratio, nevertheless, declined sharply to 1.24 percent in 2000/01 and increased subsequently to 2.24 percent in 2001/02.

The contribution of registration to GDP remained at 0.28 percent per year during the period from 1966/67 to 2001/02. The ratio of registration to GDP grew continuously from 0.04 percent in 1966/67 to 0.42 percent in 1995/96 with very little ups and downs. Even so, the ratio declined steeply to 0.15 percent in 2000/01 and increased to 0.27 thereafter in 2001/02.

Table 5.13

Size and Share of Registration, (1966/67 to 2001/02

(As Percent of Direct Taxes, Total Revenue and GDP)

Fiscal Year	Revenue from Registration (Rs. in million)	As Percent of Direct Taxes	As Percent of Total Revenue	As Percent of *GDP*
1966/67	2.59	3.60	0.90	0.04
1967/68	5.11	4.83	1.57	0.07
1968/69	6.42	5.91	1.55	0.08
1969/70	15.58	12.12	3.36	0.18
1970/71	15.77	13.12	3.43	0.18
1971/72	18.85	13.92	3.41	0.18
1972/73	19.93	14.73	3.24	0.20
1973/74	28.82	15.98	3.76	0.23
1974/75	37.96	18.52	3.76	0.23
1975/76	39.60	15.26	3.55	0.23
1976/77	42.70	13.03	3.23	0.25
1977/78	54.10	15.40	3.42	0.27
1978/79	55.70	18.32	3.07	0.25
1979/80	65.00	21.06	3.45	0.28
1980/81	77.80	17.43	3.21	0.28
1981/82	88.30	17.15	3.12	0.28
1982/83	104.80	13.59	3.30	0.31
1983/84	135.20	24.95	3.96	0.34
1984/85	141.70	25.32	3.61	0.30
1985/86	170.10	25.70	3.66	0.31
1986/87	211.60	27.53	3.54	0.33
1987/88	286.20	28.33	3.89	0.37
1988/89	320.60	24.08	4.12	0.36
1989/90	377.10	26.28	4.05	0.36
1990/91	456.60	33.36	4.26	0.38
1991/92	571.30	35.81	4.23	0.38
1992/93	685.50	33.67	4.53	0.40
1993/94	772.20	27.04	3.94	0.39
1994/95	902.80	23.45	3.67	0.41
1995/96	1048.40	22.52	3.76	0.42
1996/97	1009.50	18.90	3.32	0.36
1997/98	1000.60	16.17	3.04	0.33
1998/99	1001.80	13.33	2.68	0.29
1999/00	1011.30	11.30	2.36	0.27
2000/01	607.80	5.98	1.24	0.15
2001/02	1131.00	10.67	2.24	0.27

Source: Calculated from Various Issues of Economic Survey

5.6.7 Miscellaneous Items

As components of direct taxes a large number of tax headings are included in miscellaneous items. The prominent tax headings included are entertainment tax, hotel tax, air flight tax, vehicle tax, tax on loan and interest.

Table (5.14) shows the actual amounts collected from miscellaneous items and its contribution to direct taxes, total revenue and GDP from 1966/67 to 2001/02. The magnitude of revenue from miscellaneous items increased from Rs. 4.96 million in 1966/67 to Rs. 1029.7 million in 2001/02 with an approximate growth rate of 20 percent. The patterns of the contribution of revenue collected from miscellaneous items as percent of direct taxes, total revenue and GDP are almost similar: falling slightly during the first five years from 1966/67 to 1970/71 and increasing sharply till 1977/78, falling substantially again up to 1981/82 and then rising gradually till 2001/02. During the period from 1966/67 to 2001/02, the contribution of the revenue collected from miscellaneous items as percent of direct taxes, total revenue and GDP was 8.29, 1.65 and 0.13 respectively. All these ratios were at their highest level in 1977/78. In FY 1977/78, the contribution of miscellaneous items to direct taxes, total revenue and GDP was 19.37 percent, 4.30 percent and 0.34 percent respectively.

Table 5.14

Size and Share of Miscellaneous Items (1966/67 to 2001/02)

(As Percent of Direct Taxes, Total Revenue and GDP)

Fiscal Year	Revenue from Miscellaneous Items (Rs. in million)	As Percent of Direct Taxes	As Percent of Total Revenue	As Percent of *GDP*
1966/67	4.96	6.90	1.73	0.08
1967/68	5.92	5.60	1.82	0.08
1968/69	6.11	5.63	1.48	0.08
1969/70	5.63	4.38	1.21	0.06
1970/71	6.87	5.71	1.49	0.08
1971/72	11.33	8.37	2.05	0.11
1972/73	17.57	12.98	2.85	0.18
1973/74	21.91	12.15	2.86	0.17
1974/75	29.14	14.21	2.89	0.18
1975/76	36.89	14.21	3.31	0.21
1976/77	51.89	15.84	3.92	0.30
1977/78	68.03	19.37	4.30	0.34
1978/79	39.80	13.09	2.19	0.18
1979/80	31.40	10.17	1.67	0.13
1980/81	30.70	6.88	1.27	0.11
1981/82	20.20	3.92	0.71	0.07
1982/83	38.50	4.99	1.21	0.11
1983/84	38.50	7.11	1.13	0.10
1984/85	33.80	6.04	0.86	0.07
1985/86	53.10	8.02	1.14	0.10
1986/87	47.20	6.14	0.79	0.07
1987/88	64.30	6.37	0.87	0.08
1988/89	69.20	5.20	0.89	0.08
1989/90	64.40	4.49	0.69	0.06
1990/91	83.80	6.12	0.78	0.07
1991/92	103.60	6.49	0.77	0.07
1992/93	156.50	7.69	1.03	0.09
1993/94	197.60	6.92	1.01	0.10
1994/95	199.80	5.19	0.81	0.09
1995/96	277.70	5.96	1.00	0.11
1996/97	355.60	6.66	1.17	0.13
1997/98	497.80	8.04	1.51	0.17
1998/99	662.20	8.81	1.77	0.19
1999/00	929.40	10.38	2.17	0.24
2000/01	896.40	8.82	1.83	0.22
2001/02	1029.70	9.72	2.04	0.24

Source: Calculated from Various Issues of Economic Survey

5.6.8 Marginal Tax Ratio or Flexibility Coefficient

The marginal tax ratio or flexibility coefficient is defined as the ratio of absolute change in revenue to the absolute change in GDP over the same period. It shows how much of the increase in GDP in any given period is absorbed by higher taxes. The tax structure must be adjusted so as to increase its revenue response to rising GNP *(*Musgrave, 1967). "The long term trend in the tax ratio is obviously dependent on the incremental tax - income ratio which the governments are able to achieve and maintain over the long haul. In the case of countries with a fairly low ratio, the difference between the marginal and the average should be sufficiently large to attain a satisfactory level of taxation, within a relatively short period of time (United Nations Economic Commission for Asia and the Far East, 1967).

If marginal or additional income taken in the form of taxation is higher than the average rate of taxation, the particular tax system will be considered as elastic. In that case, elasticity will be greater than unity. If marginal tax ratio or flexibility coefficient of a tax is higher, the tax is highly responsive to increase in GDP or GNP. This responsiveness in the share of additional income taken in taxation depends on the inherent responsiveness of the tax system to changes in income, the capacity to levy additional taxes and the willingness to tax (ibid). Thus, if the economy is growing, the share of additional income diverted to treasury depends, apart from other factors, to a large extent on the willingness to tax. This is known as the marginal propensity to tax. The (Table 5.15) shows the marginal tax rate of different taxes during the period from 1966/67 to 2001/02.

Table 5.15 (A)

Marginal Tax Ratio or Flexibility Coefficients (1966/67 to 2001/02)

(In percentage)

Fiscal Year	Indirect Taxes			
	Custom Duties	Excise Duties	Sales Tax / VAT	Total
1966/67				
1967/68	1.05	0.20	1.94	3.19
1968/69	6.63	0.81	2.60	10.04
1969/70	1.27	1.29	0.39	2.95
1970/71	-21.76	10.85	6.61	-4.31
1971/72	2.94	0.49	0.47	3.90
1972/73	-9.90	-1.04	-2.69	-13.63
1973/74	1.69	0.34	0.66	2.69
1974/75	1.12	1.12	2.44	4.69
1975/76	3.64	1.50	-3.48	1.66
1976/77	-24.29	-29.86	-52.72	-106.87
1977/78	2.96	-0.07	2.08	4.98
1978/79	6.76	1.14	3.37	11.27
1979/80	-1.65	1.99	3.91	4.25
1980/81	5.25	0.68	3.45	9.39
1981/82	0.25	1.73	1.62	3.60
1982/83	-2.32	2.17	4.04	3.89
1983/84	1.15	1.18	1.09	3.42
1984/85	3.32	0.72	1.04	5.08
1985/86	1.82	0.82	1.53	4.17
1986/87	3.37	1.48	1.94	6.79
1987/88	5.44	1.12	1.20	7.76
1988/89	0.61	0.42	0.64	1.67
1989/90	2.79	1.55	1.91	6.25
1990/91	2.10	0.60	2.20	4.90
1991/92	1.09	0.74	2.81	4.64
1992/93	2.86	0.19	2.91	5.96
1993/94	4.48	0.48	4.29	9.25
1994/95	8.86	0.33	6.72	15.31
1995/96	1.04	0.97	1.34	3.35
1996/97	3.11	1.12	2.20	6.43
1997/98	0.95	2.89	-0.02	3.82
1998/99	2.47	0.16	1.84	4.47
1999/00	3.46	0.47	5.27	9.20
2000/01	5.65	2.09	7.12	14.86
2001/02	0.97	0.32	-0.76	0.53

Source: Calculated from Various Issues of Economic Survey

Table 5.15 (B)

Marginal Tax Ratio or Flexibility Coefficients,(1966/67 to 2001/02)

(Contd.)

Fiscal Year	Direct Taxes				
	Land Tax	Income Tax	Registration	Miscellaneous Items	Total
1966/67					
1967/68	3.50	0.48	0.33	0.13	4.44
1968/69	-0.49	0.66	0.16	0.02	0.35
1969/70	1.07	0.37	1.17	-0.06	2.55
1970/71	-6.66	0.91	0.11	0.73	-4.91
1971/72	0.47	0.06	0.22	0.31	1.06
1972/73	2.18	-0.33	-0.27	-1.56	0.02
1973/74	0.79	0.33	0.31	0.15	1.58
1974/75	-0.16	0.38	0.24	0.19	0.66
1975/76	0.47	4.88	0.20	0.94	6.49
1976/77	-2.79	-22.92	-2.72	-13.16	-91.59
1977/78	-0.45	0.96	0.46	0.66	1.68
1978/79	-1.30	-1.36	0.06	-1.14	3.74
1979/80	0.14	-0.16	0.82	-0.74	0.90
1980/81	1.12	1.08	0.32	-0.02	2.50
1981/82	-0.52	1.24	0.29	-0.29	1.72
1982/83	-0.54	1.82	0.60	0.66	2.54
1983/84	0.19	0.90	0.54	0.00	1.63
1984/85	0.00	0.23	0.09	-0.07	0.25
1985/86	-0.03	0.62	0.31	0.21	1.11
1986/87	-0.02	0.90	0.51	-0.07	1.32
1987/88	0.06	1.08	0.57	0.13	1.85
1988/89	0.00	2.28	0.28	0.04	2.60
1989/90	-0.04	0.41	0.40	-0.03	0.73
1990/91	0.04	-1.01	0.47	0.11	-0.39
1991/92	-0.06	0.38	0.40	0.07	0.78
1992/93	0.02	1.31	0.56	0.26	2.15
1993/94	-0.03	2.39	0.30	0.14	2.80
1994/95	-0.13	4.46	0.66	0.01	4.99
1995/96	-0.06	2.02	0.49	0.26	2.71
1996/97	-0.04	2.08	-0.12	0.25	2.16
1997/98	-0.01	3.53	-0.04	0.70	4.17
1998/99	-0.01	2.83	0.00	0.40	3.22
1999/00	0.01	3.09	0.03	0.71	3.83
2000/01	0.00	5.34	-1.31	-0.11	3.92
2001/02	-0.04	-1.94	4.74	1.21	3.97

Source: Calculated from Various Issues of Economic Survey

Table 5.15 (C)

Marginal Tax Ratio or Flexibility Coefficients, (1966/67 to 2001/02)

(Contd.)

Fiscal Year	Revenues		Total Revenue
	Tax Revenue	Non-Tax Revenue	
1966/67			
1967/68	3.69	1.48	5.16
1968/69	10.39	0.33	10.72
1969/70	5.50	1.02	6.51
1970/71	-9.22	6.67	-2.55
1971/72	4.97	1.58	6.55
1972/73	-13.61	-1.99	-15.60
1973/74	4.28	1.03	5.30
1974/75	5.35	1.08	6.43
1975/76	8.29	4.74	13.03
1976/77	-166.54	-15.30	-181.84
1977/78	5.94	4.63	10.57
1978/79	9.37	0.02	9.39
1979/80	4.66	1.43	6.09
1980/81	12.86	0.82	13.68
1981/82	8.59	2.30	10.89
1982/83	14.40	-1.72	12.68
1983/84	-0.25	4.47	4.23
1984/85	5.73	1.30	7.03
1985/86	5.54	2.40	7.94
1986/87	8.76	7.60	16.36
1987/88	10.59	-0.04	10.55
1988/89	4.35	-0.84	3.51
1989/90	7.01	3.78	10.80
1990/91	5.21	3.07	8.28
1991/92	5.86	3.74	9.60
1992/93	8.71	-0.74	7.97
1993/94	12.67	2.47	15.14
1994/95	21.54	3.70	25.24
1995/96	6.75	4.30	11.06
1996/97	8.72	-0.87	7.85
1997/98	7.45	5.16	12.61
1998/99	6.83	3.86	10.69
1999/00	11.75	3.08	14.82
2000/01	18.55	0.93	19.48
2001/02	4.21	9.83	14.05

Source: Calculated from Various Issues of Economic Survey

During the period from 1966/67 to 2001/02, the GDP increased in each year except for two years - in 1972/73 and in 1976/77. However, the marginal tax rates computed by using change in total revenue were found to be negative in three years - in 1970/71, 1972/73 and 1976/77. Moreover, the marginal tax rates were less than average tax rates in many years.

For almost all individual components of the total revenue, the flexibility coefficients are found to be fluctuating. There were several factors for fluctuating marginal tax rates: firstly, the government's willingness to tax was very low; secondly, there was no significant economic expansion in real terms; thirdly, the government's capacity to impose additional taxes was very poor due to the limited economic base; and finally, ineffectiveness of tax administration. Tax evasion could also be considered a very strong reason for the low marginal tax rates.

The trend of flexibility coefficient fluctuated greatly during the period from 1966/67to 2001/02 and its response to the change in GDP was not very encouraging, especially in FY 1976/77. The marginal tax rate was computed to be – 181.84. In that period, the GDP declined slightly but the total revenue increased substantially. Such a period is regarded as an exceptional situation because either the GDP figure was wrongly computed or there was something wrong with the tax system in that period. Even though the marginal tax rate was found to have the extreme negative value in 1976/77, there were other periods also where a similar situation existed, but the extent of fluctuation was much smaller.

In FY 1967/68, the marginal tax rate was 5.16, which reached its maximum value of 25.24 in 1994/95. In 2001/02, the marginal tax rate was 14.05. Though the performance of marginal tax rate was not promising, it exceeded the average tax rate in many cases.

The marginal tax rates of indirect taxes were fairly high as compared with that of direct taxes. In other words, the increasing GDP was proportionately well absorbed by increased indirect taxes while direct taxes performed considerably lower. The marginal

tax rate of indirect taxes was highest - 16.55 percent - in 1994/95 as against the highest of direct taxes, which was 9.24 in 1982/83.

Among the individual components of indirect taxes, customs and sales tax/VAT had higher marginal tax rates. The marginal tax rate of custom duties varied more frequently than other components of indirect taxes and it lay between a maximum of 8.86 percent in 1994/95 to a minimum of -24.29 percent in 1976/77. The flexibility coefficients of excise duties remained lowest in most of the periods, but its highest value exceeded the highest values of other components and fluctuated between 10.85 in 1970/71 to -29.86 in 1976/77.

CHAPTER VI
REVENUE PRODUCTIVITY AND THE RESPONSIVENESS OF TAXES

The concepts of elasticity and buoyancy of taxes are often used in measuring the responsiveness of tax collection with respect to change in GDP or GNP. A high elastic tax system is said to be desirable, but in most of the cases, the major sources of government revenue may have low elasticity in which cases the authorities must seek additional revenue by introducing discretionary changes. Then, growth in tax revenue may come about through high buoyancy as opposed to the natural growth through elasticity (Mansfield, 1972).

The given tax system is said to be elastic if elasticity coefficient exceeds unity, otherwise it is considered as inelastic. To bridge the resource gap in any economy, an elastic tax system is highly advantageous which reduces the probable instability in the economy due to change in tax rates or its legal base.

In an attempt to measure revenue productivity of taxes in Nepal, two popular concepts, buoyancy and elasticity, have been estimated for the period under study. To make a comparative study and to identify the actual critical point where the elasticity problem was acute, the period of analysis - 1968/69-2001/02 has further been split into two sub-periods: (i) From 1968/69 to 1984/85 and (ii) From 1985/86 to 2001/02. The rationale of this division is to see whether economic reforms in the country launched from the mid-eighties have significantly affected the productivity of tax revenue or not. That is, the analysis makes an attempt to facilitate comparison of pre-reform period and post-reform period with respect to tax productivity. Though these periods do not seem large enough for statistical analysis, they provide an opportunity to make a comparative study which may be useful on several grounds. More importantly, results can be taken to be indicative for evaluation of tax yields of two different periods. Similarly, the reason behind not including the period prior to 1968/69 is due to lack of sufficient information for separating natural growth and discretionary changes in all categories of taxes.

To compute the elasticity and buoyancy coefficients for the periods under study, double log linear has been employed, that is , the regression model log (T) = log (a) + b log(Y) is used to fit the data. In this model, coefficient b is of prime importance as it measures the percentage change in dependent variable T for one percentage change in independent variable Y. Accordingly, the intercept (log a) term has little scope for analysis, and hence, has not been considered for analysis.

6.1 Empirical Findings of Elasticity and Buoyancy Coefficients

In Nepal's tax structure, various researchers have found heterogeneous responsiveness of taxes to GDP. Dahal (1983) has studied the responsiveness of Nepal's tax structure for the period 1952/53 to 1981/82. In this period, the overall elasticity of the total revenue equals almost unity (1.01); for indirect tax, it is marginally higher than unity (1.02) compared with the elasticity of direct tax (0.68), and the elasticity of tax revenue is 0.92 reflecting that the tax system is less responsive to change in income. But the buoyancy coefficients for the same period are 1.54 for total revenue, 1.52 for tax revenue, 1.63 for indirect taxes and 1.23 for direct taxes.

Among the individual taxes, the elasticity of sales tax is 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 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 the inelasticity of taxes in the tax structure of Nepal is primarily concentrated on land tax, export duty, import duty, excise duty, and to some extent, on income tax.

Agrawal (1998) found that the buoyancy of income tax for the period 1967/ 68 to 1975/76 was 2.18 and elasticity 2.0, implying that income tax has promising future prospects (Reejal, 1976). But elasticity of the land tax is the lowest (0.12) as the buoyancy coefficient (0.17), while sales (1.74) and excise duties (1.29) are fairly elastic. In terms of buoyancy coefficient, excise tax (2.20) secured the first position followed by sales tax (2.20) and income tax (2.18).

Reejal (1976) covered the period from 1964/65 to 1970/71. This study has indicated that Nepal's tax structure as a whole is fairly elastic, with elasticity coefficient 1.82 and

buoyancy 2.18 for the total tax revenue. In this study, income tax seemed to be highly progressive with elasticity coefficient 4.39, which is highest among all the tax categories. For this, Reejal pointed out that it was due to "exemption effect" and "rate effect". As between direct and indirect taxes, the elasticity coefficient of the former (2.25) is bigger than that of the latter (1.52), indicating that direct tax as a whole is more progressive than indirect tax as a whole, which contradicts the findings of Dahal (1983) and Agrawal (1998).

Dhungana (1980) has dealt with the productivity of the Nepalese tax structure in his study. His study covered the main components of indirect taxation, that is , excise, sales and customs, and found that the elasticity coefficient for total tax revenue is 1.24 and buoyancy coefficient 1.73, indicating that the Nepalese tax system is fairly progressive.

Laldas (1985) has tried to compare the tax and non-tax revenue productivity of Nepal. In his findings, the elasticity coefficients for tax and non-tax revenue for the study period are 0.09793 and 1.02 respectively; indicating that the discretionary changes made over tax revenue is comparatively more effective than on non-tax measure. But the productivity of both is not satisfactory.

Pant (1991) has tried to provide suggestions for structural changes in the revenue administration of Nepal after the restoration of Multiparty Democracy. He has measured tax elasticity as 0.04951 for the period from 1974/75 to 1983/84. Tax buoyancy, on the other hand, has declined to 1.28 in the period from 1974/75 to 1988/89, from 1.37 in 1974/75 to in 1984/85. During the period, elasticity of customs, excise, sales, and import have improved but elasticity of income, contract, and hotel tax has declined indicating that efforts to raise revenue through discretionary measure are unproductive.

Gurugharana (1993) in an article "Weaknesses of the tax policy and tax structure in Nepal" has found that the elasticity coefficient of total revenue is 0.495 for the period from 1974/75 to 1983/84 and 0.587 for the period from 1974/75 to 1988/89, implying a marginal improvement in revenue elasticity. For the same period, buoyancy coefficients are 1.365 and 1.281 respectively. Except for contract tax (1.898) and sales tax (1.053), the elasticity of remaining taxes (customs, excise, income, hotel, entertainment, land revenue, etc.) is either extremely low (far below unity) or negative, whereas the

buoyancy but low elasticity shows that the government is engaged in imposing high rates on a few taxed commodities and the regressive nature of the tax system.

In one study for the period from 1974/75 to 1984/85, IDS (1987) has reported that the elasticity of Nepalese tax is extremely low (0.86) in comparison with buoyancy (1.35). This study also supports the findings of Gurugharana. Except sales (1.007) and income taxes (1.0559), the elasticity of the remaining taxes under consideration are either extremely low (below unity) or negative (export (-) 0.249 and excise (-) 0.328), whereas the buoyancy of all taxes except export duty (-0.035) are above unity [from 1.057(direct tax) to 1.751(sales tax)].

Shrestha (2001) in his research paper on "Elasticity and Buoyancy of Nepalese Taxes with Special Reference to Custom Duties in Nepal", covering the period from 1980/81 to 1993/94, has found that elasticity and buoyancy coefficients of tax revenue are 0.55 and 3.25 respectively. Buoyancy of tax revenue is multiple times higher than elasticity of tax revenue. It reveals that elasticity of tax revenue is not so encouraging but higher buoyancy indicates favorable fiscal policy towards changing tax rate, tax base, structure and number of taxes. The elasticity and buoyancy coefficients of direct taxes are 0.68 and 3.24 respectively, meanwhile, that of indirect taxes are 1.58 (elasticity) and 3.25 (buoyancy) respectively. Similarly, elasticity and buoyancy coefficients of custom revenue are 0.77 and 3.26 respectively. In import revenue, elasticity and buoyancy coefficients have been estimated at 1.28 and 3.19 respectively, and in export revenue, -2.49 and 2.49 respectively.

Table 6.1

Summary and Findings of Elasticity and Buoyancy of Various Taxes Estimated by Researchers

Researchers	Study Period	Elasticity	Buoyancy	Most Elastic Head	Most Buoyant Head
M. K. Dahal	1965/66 to 1981/82	TR =1.01 TXR = 0.92 IT = 1.38 DT= 0.68 IDT = 1.02 IT = -0.04 ST = 1.96	TR =1.54 TXR = 1.51 IT = 1.68 DT = 1.23 IDT = 1.62 LT = 0.31 ST = 2.56	Sales tax	Sales tax
G. R. Agrawal	1967/68 to 1975/76	ST =1.74 LT = 0.12 IT = 2.01 ED = 1.28 CD = 0.86	ST = 2.20 LT = 0.17 IT = 2.18 ED = 2.24 CD = 1.18	Income tax	Excise duties
P. R. Reejal	1964/65 to 1970/71	TXR = 1.82 IT = 4.39 DT = 2.25 IDT = 1.52 LT = 0.77 ST = 0.48	TXR = 2.18 IT = 3.14 DT = 1.89 IDT = 2.30 LT = 1.34 ST = 0.46	Income tax	Income tax
H. D. Pant	1965/66 to 1989/90	TXR = 0.59 IT = 0.55 CT = 0.59 ED = 0.75 ST = 0.76 LT = -0.42	TR = 1.28 IT = 1.47 CT = 1.67 ED = 1.29 ST = 1.35 LT = 0.07	Sales tax	Custom duties
K. K. Guru-gharana	1974/75 to 1989/90	TR = 0.59 IT = 0.55 CT = 0.59 ED = 0.76 ST = 0.76 LT = -0.42	TR = 1.28 IT = 1.47 CT = 1.17 ED = 1.29 ST = 1.35 LT = 0.07	Sales &Excise duties	Income tax
IIDS	1974/75 to 1984/85	TXR = 0.86 IT = 1.06 DT = 0.67 IDT = 0.93 ST = 1.007 ED = -0.33	TXR = 1.35 IT = 1.49 DT = 1.06 IDT = 1.44 ST = 1.35 ED = 1.43	Income tax	Sales tax
Chandra Lal Shrestha	1980/81 to 1993/94	TXR=0.55 DT=0.68 IDT=1.58 CT=-0.77 IR=1.28 ER=-2.46	TXR=3.25 DT=3.24 IDT=3.25 CT=3.26 IR=3.19 ER=2.49	Indirect Tax Revenue	Custom Revenue

In the above table,

TR = Total Revenue	TXR = Tax Revenue	IT = Income Tax
DT = Direct Tax	IDT = Indirect Tax	LT = Land Tax
ST = Sales Tax	ED = Excise Duties	CT = Customs Duties
IR = Import Revenue	ER = Export Revenue	

Table (6.1) shows the heterogeneous findings of different studies, which might be due to the choice of proxy bases. For example, in the period from 1974/75 to 1988/89 (Gurugharana, 1993), sales ad excise duties are most elastic and income tax is less elastic. However, IDS findings indicate that income tax is more elastic for the period from 1974/75 to 1984/85. But homogeneous response is found in the case of land tax in all studies, which is either negative or below unity.

6.2 Estimation of Elasticity Coefficients of Various Taxes, 1968/69 to 2001/02

Elasticity of yield is an important aspect of the tax structure. An elasticity of 'unity' implies that one percent change in GDP will be accompanied by one percent change in tax revenue, and accordingly, elasticity greater than unity implies that the percentage change in tax revenue will exceed that of GDP. Consequently, a tax system is said to be elastic if the coefficient exceeds unity, and inelastic if it is less than unity. For economic dynamism, an elastic tax system is highly advantageous for public expenditure activities which help to balance between equity, growth and efficiency in an economy as well.

In Table (6.2), the elasticity coefficients of individual groups of taxes have been presented. In addition, various parameters that signify the goodness of fit of model and explanatory power of independent variables like R-squared, adjusted R-squared, F, t and DW statistics have been presented.

The elasticities of selected group of taxes are rather divergent (Table 6.2). They range from 0. 35 for direct taxes to 1.013 for the total non-tax revenue. As the elasticities of group of taxes other than non-tax revenue are less than unity, the tax system as a whole could not be considered elastic and responsive to national income. An efficient tax system ought to give better results, and a progressive tax system should necessarily possess greater elasticity than unity. This intensifies the need to go for individual tax elasticity analysis to identify the specific taxes responsible for the emergence of this lacuna. Tax-wise analysis becomes more significant as the elasticity of indirect tax (0.58) is nearly one and half times more than direct tax (0.35). This is the

greater challenge for Nepalese fiscal authorities, contrary to general acceptance, as direct taxes seem to be more regressive than indirect ones, which is really a paramount problem for the government also as it wants to increase the share of direct taxes in the total structure. Elasticity coefficient for total tax revenue is 0.539 which explains an inelastic relationship between total tax revenue and the country's GDP. This shows that about a 1 percent change in GDP has contributed on an average of 0.539 percent change in total tax revenue.

Table 6.2

Elasticity Coefficients (β) for whole period (1968/69-2001/02)

Tax Heads	Coefficients	R^2	Adj. R^2	t	F	DW
Total Revenue	0.64 (0.013)*	0.98	0.98	49.69	2469.5	0.873
Total Tax Revenue	0.539 (0.015)	0.97	0.97	36.86	1358.84	0.84
Total Non Tax Revenue	1.013 (0.025)	0.98	0.98	41.028	1683.2	0.609
Total Direct Tax	*0.35 (0.028)*	*0.83*	*0.82*	*12.68*	*160.18*	*0.705*
Land Tax	-0.94 (0.108)	0.72	0.71	-9.25	85.708	0.476
Income Tax	0.64 (0.024)	0.95	0.95	27.22	741.14	0.76
Registration**	0.648 (0.024)	0.9	0.95	27.35	748.17	0.82
Total Indirect Tax	*0.583 (0.017)*	*0.97*	*0.97*	*34.178*	*1168.10*	*0.786*
Custom Duties	0.519 (0.021)	0.94	0.94	24.47	599.19	0.71
Excise Duties	0.297 (0.029)	0.75	0.74	10.126	102.53	0.36
Sales Tax***	0.524 (0.071)	0.62	0.61	7.38	54.50	1.33

Source: Author's estimate using data available in the economic survey

Note: * Values within parenthesis are the standard errors of the parameters

** Registration includes house and land registration

*** Sales tax includes Value added tax (VAT) also

The values of parameters – R squared and adjusted R squared = 0.97, F= 1358.441 and t=36.86- all justify the best fit of the model at 0 percent significance level. Total non-tax revenue, however, seems relatively elastic as the coefficient for it is great than unity (1.013). That is, about one percent change in GDP has explained on an average 1.013 percent change in total non-tax revenue. It shows that percentage change in total non-tax revenue is greater than the

percentage change in GDP. The parameters also show best fit of the model at 0 percent significance level. DW statistics remained at 0.609. It follows that overall elasticity of tax revenue of Nepal seems not so encouraging. But, surprisingly, non-tax revenue seems more elastic than the total tax revenue with respect to the country's GDP. The high elasticity of non-tax revenue (1.013) obviously reflects the importance of user charges in the total revenue collection. Unlike taxes, most user charges do not involve the trade-off between revenue and efficiency. Greater reliance on user charges might also reduce instability in public revenue, because demand for services is much less volatile than revenue from custom duties, which is the major source of current revenue having an elasticity coefficient of only 0.519 or about half of the non-tax revenue.

The elasticity of total direct tax during the period from 1968/69 to 2001/02 has been found to be less than unity (0.350). It exhibits that about one percent increase in GDP has contributed on an average 0.35 percent increase in total direct tax collection. Since the coefficient is less than one, the system seems less responsive for the change in total direct tax due to the change in the country's GDP. However, the statistic parameters show the significance of the model. Adjusted R squared is near to 0.82 implying that 82 percent change in total direct tax has been explained by the change in explanatory variable - GDP. F and t statistics are both significant at 0 %. The DW statistics, however, show the positive autocorrelation among disturbances terms. Among direct tax categories, land tax elasticity coefficient (-0.94) exhibits a strong negative relationship between land revenue collection and the country's GDP. This negative relationship is a fundamental issue on which policy makers should focus their attention very seriously. Income tax, on the other hand, has an elasticity coefficient of 0.644 which explains that about one percent increase in the country's GDP has on an average contributed to 0.64 percent increase in the income tax during the period under study.

The model fits best as the parameters R squared and adjusted R squared are as high as of 0.95; F and t are significant at zero percent . DW statistics, however, is 0.76 showing positive autocorrelation among error terms at 1 percent significance level. The elasticity of income tax (0.64) is equal to that of total revenue. This may be due to the exemption of agricultural income from the tax net, which leads to narrowness of the tax base in one hand, and due to high evasion caused by loopholes in tax laws on the other. In the registration category which includes house and land registration is at 1 percent significance level. The registration category that includes house and land registration is 0.648, referring to the fact that about one percent increase in the country's GDP would lead, on average, to a 0.648 percent increase in the registration tax collection. The parameters and test statistics show the goodness of fit of the model - adjusted R

squared is 0.95 implying 95 percent change in registration, which is explained by the change in GDP; F and t being 748.178 and 27.353 respectively which are both significant at 0 percent. It follows from the above analysis of direct tax categories that direct taxes categories are not very responsive to the growth of the economy. This is justified by the fact that all coefficients are less than unity. Among different heads, registration seems more responsive followed by income tax.

Regarding indirect tax categories, elasticity coefficient for total indirect tax is 0.583 implying that about one percent increase in the country's GDP has brought on an average 0.583 percent increase in total indirect tax. The relationship is best fit at zero percent significance level. Custom duties have an elasticity coefficient of 0.51, which is less than unity referring to less elastic relationship. Adjusted R squared value of 0.94 implies that 94 percent variation in custom duties is explained by the change in GDP. The test statistics show the goodness of fit of the model. Excise duties also have an elasticity coefficient less than unity (0.29), showing that hundred percent increase in GDP has contributed only 29 percent increase in excise duties during the period under study. F and t statistics are both significant at 0 percent. Sales tax has an elasticity coefficient of 0.52. R squared, adjusted R squared, F and t statistics all show the best fit of the model at 0 percent significance level. The above findings of indirect tax elasticity show no strong responsiveness of the tax with respect to the country's GDP. Among three subheads of indirect taxes, sales tax is found to have a higher elasticity coefficient than the other two components in relative terms. However, excise duties are found least elastic among others, while the share of custom duties to total indirect tax is higher than those of excise and sales taxes.

In Table (6.2), the DW statistics measure autocorrelation which refers to the relationship, not between two (or more) different variables, but the successive values of the same variable. Here DW < 2 indicates positive autocorrelation implying the economic growth and cyclical movement of the economy, or the variables Y and T tend to grow in periods of growth, or they tend to show cyclical patterns.

6.3 Estimation of Elasticity Coefficients of Various Taxes, 1968/69 to 1984/85 (Period I)

During the period from 1968/69 to 1984/85, that is, during the pre-reform period, elasticity coefficient for overall revenue of the country is found to be 0.74 with highly significant fit of the model (Table 6.3). The elasticity coefficient reveals that about one percent change in the country's GDP has explained on an average a 0.74 percent change in total revenue. R squared and adjusted R squared both are around 0.95, showing the 95 percent variation in total revenue is explained by the change in GDP. F and t statistics are significant at 0 percent significance level. DW, however, is 1.37 showing no autocorrelation among disturbances terms at 0.01 significance

level. The total tax revenue is found to be less than the total revenue (0.596), giving a less responsive tax revenue collection with respect to the country's GDP. The model, however, is best fit at 0 percent significance level. DW is 0.79, showing a positive autocorrelation among error terms. The total non-tax revenue is found to be relatively elastic with coefficient 1.1, showing that 1 percent change in the GDP has contributed to a 1.1 percent increase in total non-tax revenue. The relationship is strongly built at 0 percent significance level. R squared and adjusted R squared value are both 0.91 showing that 91 percent change in total non-tax revenue is explained by change in explanatory variable GDP.

Between total direct tax and total indirect tax, the coefficient of indirect tax is higher. Total direct tax has an elasticity coefficient of 0.276 which explains that 1 percent increase in the GDP has contributed on an average 0.276 percent increase in total direct tax, while total indirect tax is found to be 0.704 implying a 0.704 percent increase in total indirect tax for one percent increase in GDP. Total indirect tax fits best with GDP at 0 percent significance level. However, the case is not so for total direct tax and GDP. Adjusted R squared value is only 0.41, showing that 41 percent change in total direct tax is explained by the change in GDP. F and t are significant only at 3 percent. Among individual tax heads, elasticity coefficient for land tax is found to be negative (-0.802), that is, 1 percent increase in GDP has caused a decline in land tax by 0.802 percent. Adjusted R squared value is 0.69 showing a satisfactorily explained relationship by the change in GDP. F and t statistics show a statistically significant fitting of estimated parameter. Income tax has an elasticity coefficient of 0.736 explaining that 100 percent increase in GDP has contributed a 73.6 percent increase in income tax collection. R squared value is 0.88 implying 88 percent change in income tax is explained by the change in GDP. F and t statistics support the fit of the model at 0 percent significance level. DW is 1.43 that shows no autocorrelation among disturbances terms at 1 percent significance level. Registration, which has registered the highest elasticity coefficient among individual direct tax categories, has an elasticity coefficient of 0.75. R squared and adjusted R squared values are found to be 0.88 and 0.87 respectively. F and t statistics support the statistically significant estimated parameter at 100 percent confidence level.

Table 6.3

Elasticity Coefficients (β) for period I (1968/69-1984/85)

Tax Heads	Coefficients	R^2	Adj. R^2	t	F	DW
Total Revenue	0.74 (0.044)*	0.95	0.94	16.93	286.807	1.37
Total Tax Revenue	0.596 (0.041)	0.93	0.93	14.67	215.407	0.79
Total Non Tax Revenue	1.1 (0.085)	0.91	0.91	13.01	169.48	0.67

Total Direct Tax	*0.27 (0.074)*	*0.44*	*0.41*	*3.48***	*12.16***	*1.47*
Land Tax	-0.802 (0.130)	0.71	0.69	-6.16	38.042	1.33
Income Tax	0.736 (0.70)	0.88	0.87	10.54	110.74	1.43
Registration	0.75 (0.067)	0.89	0.88	11.26	128.85	0.38
Total Indirect Tax	*0.704 (0.045)*	*0.94*	*0.94*	*15.478*	*239.56*	*0.67*
Custom Duties	0.504 (0.089)	0.68	0.66	7.36	32.219	1.14
Excise Duties	-0.047 (0.112)	0.012	-0.59	-0.41***	0.17***	0.59
Sales Tax/VAT	1.23 (0.073)	0.95	0.94	16.972	288.051	0.79

Source: Author's estimate using data available in the economic survey

Note: * Values within parenthesis are the standard errors of the parameters

** Significant at 3 percent

*** Significant at 68 percent

Among indirect tax categories, sales tax is found to be relatively elastic with an elasticity coefficient of 1.23. Adjusted R squared is 0.94 showing that 94 percent change in sales tax is explained by the change in GDP. F and t statistics are found to have higher value that permits the significance of the model at 0 percent. DW is found to be 0.79. Custom duties has an elasticity coefficient of 0.504 showing that 100 percent increase in GDP has just contributed on an average 50.4 percent increase in custom duties collection. Adjusted R squared is satisfactorily found to be 0.66. The test statistics support the fit of the model at 0 percent significance level. Excise duties, however, are surprisingly found to be negative (-0.047) implying that increase in GDP has caused a decline in excise duties. The test statistics, however, do not explain the theoretical fit of the model. The model is found to be significant at 68 percent only.

It follows from the above findings that the Nepalese tax system seems less responsive with respect to the change in GDP, even during the period from 1968/69 to 1984/85. Table 6.3, as in the case of Table 6.2, reveals the fact of a less responsive tax system with respect to the country's GDP. Non-tax revenue has registered an elasticity coefficient of 1.1 than that of tax revenue (0.59). However, during this period, excise duties have registered a negative elasticity coefficient. This result can be attributed to the large variations in tax rate during the period. This period, however, seems relatively elastic than that of the whole period except for some selected categories. Total revenue, total tax revenue and total non-tax revenue all have registered a higher elasticity during the period from 1968/69 to 1984/85 than the whole period from 1968/69 to

2001/02. These results can be taken as indicative hypothesis that post-reform period is associated even with lower responsiveness of tax yields.

6.4Estimation of Elasticity Coefficients of Various Taxes, 1985/86 to 2001/02 (Period II)

During the period from 1985/86 to 2001/02, total revenue registered an elasticity coefficient of 0.66 with best theoretical fit of the estimated parameter at 0 percent significance level (Table 6.4). Since the coefficient is less than unity, total revenue cannot be considered to be elastic with respect to the change in GDP. Adjusted R squared value is 0.96 which clarifies that 96 percent change in total revenue is explained by the change in GDP.

Table 6.4

Elasticity Coefficients (β) for Period II (1985/86-2001/02)

Tax Heads	**Coefficients**	**R^2**	**Adj. R^2**	**t**	**F**	**DW**
Total Revenue	0.66 (0.033)*	0.96	0.96	20.23	409.41	0.77
Total Tax Revenue	0.639 (0.039)	0.94	0.93	16.22	263.14	1.35
Total Non Tax Revenue	0.79 (0.044)	0.95	0.95	18.115	328.15	1.603
Total Direct tax	*0.61 (0.056)*	*0.88*	*0.87*	*10.931*	*119.49*	*0.93*
Land Tax	-2.15 (0.31)	0.71	0.71	-6.77	45.91	0.61
Income Tax	0.77 (0.064)	0.90	0.89	12.15	147.66	0.67
Registration	0.662 (0.076)	0.82	0.81	8.76	76.73	1.09
Total Indirect Tax	*0.598 (0.052)*	*0.89*	*0.89*	*11.62*	*132.72*	*1.05*
Custom Duties	0.656 (0.034)	0.96	0.95	19.51	380.79	0.74
Excise Duties	0.428 (0.022)	0.95	0.95	19.35	374.75	1.50
Sales Tax/VAT	0.82 (0.21)	0.48	0.45	3.88	15.108	2.27

Source: Author's estimate using data available in the economic survey

Note: * Values within parenthesis are the standard errors of the parameters

Total tax revenue has an elasticity coefficient of 0.639 showing that 100 percent increase in GDP has contributed to a 63.9 percent increase in total tax revenue collection during the period under study. R squared and adjusted R squared is found to have value of 0.94 and 0.93 respectively. F and t statistics support the statistically significant fit of the estimated parameter at 100 percent confidence level. Non-tax revenue has a higher elasticity coefficient (0.79) than the total tax revenue coefficient. Adjusted R squared value is 0.95 implying that 95 percent variation in non-tax revenue is explained by the change in explanatory variable GDP. The model is significant at 0 percent.

Total direct tax is found to have an elasticity coefficient of 0.61 explaining that 100 percent increase in GDP during the period under analysis has contributed to a 61 percent increase in total direct tax. The relationship between explained and explanatory variable is satisfactorily maintained and the estimated parameter is statistically significant at 0 percent. DW statistics, however, fall in the inconclusive zone. Land tax has a negative elasticity coefficient (-2.15) showing a negative relationship between land tax and GDP. The test statistics support the theoretical fit of the model. Income tax has registered an elasticity coefficient of 0.77 implying that a 10 percent increase in GDP has contributed to a 7.7 percent increase in income tax. Adjusted R squared value is 0.89 showing 89 percent change in total income tax, which is explained by the change in GDP and the rest - 11 percent variation - due to other factors. F and t statistics show best theoretical fit of the estimated parameter at 0 percent significance level. Registration, including house and land registration, has an elasticity coefficient of 0.662. This coefficient reveals that a 1 percent increase in GDP has caused on an average 0.662 percent increase in tax collection under registration title. Values of R square and adjusted R square is given by 0.82 and 0.81 respectively. The test statistics support the good fit of the model at 0 percent significance level.

Total indirect tax is found to have an elasticity coefficient of 0.598 implying that one percent change in explanatory variable has caused on an average 0.598 percent increase in total indirect tax. R squared and adjusted R squared both are 0.89 showing that 89 percent change in total indirect tax is explained by the change in GDP. F and t are values permitting statistically significant fit of the model at 0 percent. DW is 1.05. Among individual tax heads under indirect tax categories, sales tax is found to have a higher elasticity as compared to other individual indirect tax categories. Sales tax has an elasticity coefficient of 0.82 showing that 100 percent increase in GDP has contributed to a 82 percent increase in sales tax collection. However, the variations are explained with relatively low value of R squared and adjusted R squared. Adjusted

R squared is 0.45 showing that 48 percent change in sales tax is explained by the change in GDP, and the rest - 55 percent change is explained by the change in other significant factors. F and t statistics are found to be not so encouraging, which explains the extent of linear relationship between explained and explanatory variables. Custom duties has an elasticity coefficient of 0.656 during the post-reforms period, showing that 1 percent increase in GDP has contributed on an average a 0.656 percent increase in custom duties. The model is of good fit at 0 percent significance level. DW is 0.74, showing a positive autocorrelation among error terms. Excise duties, which has the least elasticity coefficient among individual indirect tax categories, is found to be 0.428 showing that 1 percent increase in GDP has contributed on an average a 0.428 percent increase in excise duties collection during the second period of analysis. The variations are best explained thus - the value of adjusted R squared shows that 95 percent change in excise duties is explained by the change in GDP. F and t statistics permit the best theoretical fit of the estimated parameter at 0 percent significance level.

6.5 Estimation of Buoyancy Coefficients of Various Taxes, 1968/69 to 2001/02 (Whole Period)

It is observed from elasticity estimate that the Nepalese tax system is not necessarily of automatic responsive type with respect to changes in the country's GDP. To make the system more responsive, governmental efforts are needed in the form of additional taxation and improved administrative competence. These governmental efforts are called discretionary measures, and can be seen from the buoyancy estimate of a tax system. The buoyancy coefficient of a tax is given by the ratio of percentage change in the tax revenue to the percentage change in national income. This provides an idea of the overall increase comprising the effects of both automatic increase and of increase attributable to discretionary measures.

Table(6.5) provides the buoyancy estimates of total revenue, including tax revenue and non-tax revenue as well as selected individual taxes, covering the period from 1968/69 to 2002/03. The buoyancy coefficient for total revenue is found to be 1.17 implying that every one percent change in GDP on an average is associated with 1.17 percent increase in total revenue. Since buoyancy coefficient is greater than unity, the total revenue can be considered as relatively buoyant with respect to the growth of the economy. The model is well explained at 0 percent significance level. Similarly, buoyancy coefficient of total tax revenue (1.14) reveals that the tax structure during the period under study is revenue buoyant. The buoyancy coefficient for non-tax revenue is 1.3 with best fit of the linear relationship between explained and explanatory variables at 0 percent significance level. Like elasticity coefficient, non-tax revenue is found to be more

responsive with respect to change in the country's GDP. It has a buoyancy coefficient of 1.3 with highly significant theoretical fit of estimated parameter at 0 percent significance level.

Table 6.5

Buoyancy Coefficients (β1) For Whole Period (1968/69 to 2001/02)

Tax Heads	Coefficients	R^2	Adj. R^2	t	F	DW
Total Revenue	1.17 (0.016)*	0.99	0.99	72.16	5207.7	0.62
Total Tax Revenue	1.14 (0.015)	0.99	0.99	76.37	5832.3	0.75
Total Non Tax Revenue	1.3 (0.024)	0.98	0.98	53.70	2803.7	0.58
Total Direct Tax	*1.09 (0.028)*	*0.94*	*0.94*	*39.41*	*1553.73*	*0.54*
Land Tax	-0.804 (0.12)	0.55	0.54	-6.39	40.84	0.28
Income Tax	1.47 (0.024)	0.98	0.98	42.72	1825.61	0.52
Registration	1.145 (0.037)	0.96	0.96	31.067	965.17	0.55
Total Indirect Tax	*1.17 (0.017)*	*0.99*	*0.99*	*69.16*	*4783.19*	*0.77*
Custom Duties	1.074 (0.017)	0.99	0.99	62.73	3935.24	1.507
Excise Duties	1.097 (0.029)	0.97	0.97	38.27	1465.24	0.31
Sales Tax/VAT	1.314 (0.053)	0.94	0.94	24.72	611.399	1.56

Source: Author's estimate using data available in the economic survey

Note: * Values within parenthesis are the standard errors of the parameters

These high buoyancy but low elasticity coefficients of total revenue, including total tax revenue and total non-tax revenue, is attributed to the additional governmental efforts to raise the tax revenue.

As displayed in Table (6.5), among selected tax group of direct tax category, all are found with buoyancy coefficient greater than unity, except that of land tax, which explains a negative

relationship between land tax and GDP. Land tax has a buoyancy coefficient of -0.804 showing that about 1 percent increase in GDP has contributed to a 0.804 percent decrease in land tax during the whole period under analysis. However, the GDP has satisfactorily explained the change in land tax. Adjusted R squared is just 0.54 referring that 54 percent change in land tax is explained by the change in GDP and the rest - 46 percent change is explained by the change in other variables. Income tax and registration tax have buoyancy coefficients of 1.47 and 1.14 respectively. Income tax is found to be more sensitive to change in the country's GDP, which indeed should be the case. Both these relationships are best explained and estimated parameters are significant at 0 percent. However, the low value of DW statistics for both cases indicates a positive autocorrelation among disturbance terms.

Total indirect tax is found to have a buoyancy coefficient of 1.17 explaining the fact that about 100 percent change in GDP is associated with 117 percent increase in total indirect tax. The model is best explained at 0 percent significance level. Adjusted R squared value of 0.99 refers that about 99 percent change in total indirect tax is explained by change in the country's GDP and the rest (1 percent) is explained by other insignificant factors. Among components of indirect taxes, custom duties have a buoyancy coefficient of 1.074. R squared and adjusted R squared value of 0.99 supports best explanatory power of independent variable GDP for the change in custom duties collection. DW is 1.507 showing that error terms are normally distributed with zero covariance. Excise duties have a buoyancy coefficient (1.097), which is greater than custom duties, and this shows that about 10 percent increase in GDP has contributed on an average 10.74 percent increase in excise duties. Sales tax, which has registered the highest buoyancy coefficient among individual indirect tax categories, is found to have an elasticity coefficient of 1.314. Both these relationships are supported by high value of R squared and adjusted R squared. F and t statistics support the statistically significant fit of estimated parameter at 0 percent.

6.6 Estimation of Buoyancy Coefficients of Various Taxes, 1968/69 to 1984/85 (Period I)

Total revenue is found to have a buoyancy coefficient of 1.398 implying that about one percent increase in GDP is associated with, on an average, 1.398 percent increase in total tax collection during the period from 1968/69 to 1984/85. The adjusted R squared value is 0.97 which shows 97 percent variation in total revenue is explained by the change in GDP and the rest (3 percent) due to other insignificant factors. F and t statistics support the best fit of the model at 0 percent significance level. Total tax revenue is found to have a buoyancy coefficient of 1.327 while the coefficient of total non-tax revenue is 1.571. This shows that total non-tax revenue has a higher buoyancy coefficient than total tax revenue, giving less buoyant tax revenue of the country than non-tax revenue. This definitely has implication for efficiency of taxes in Nepal. Both these

models are significant at 0 percent. High value of R squared and adjusted R squared supports the strong explanatory power of GDP for the changes in tax revenue and non-tax revenue.

During the period from 1968/69 to 1984/85, the buoyancy coefficients for the variables under consideration are found to be greater than unity except that of land tax. Land tax has an buoyancy coefficient of -0.067 depicting a negative relationship between land tax and GDP.

Table 6.6

Buoyancy Coefficients (β1) for period I (1968/69 to 1984/85)

Tax Heads	Coefficients	R^2	Adj. R^2	t	F	DW
Total Revenue	1.398 (0.051)*	0.98	0.97	27.23	741.81	1.47
Total Tax Revenue	1.327 (0.041)	0.98	0.98	32.138	1032.82	1.21
Total Non Tax Revenue	1.571 (0.077)	0.96	0.96	20.454	418.45	0.78
Total Direct Tax	*1.07 (0.075)*	*0.93*	*0.92*	*14.305*	*204.63*	*1.52*
Land Tax	-0.067 (0.081)	0.04	-0.019	-0.834**	0.695**	1.68
Income Tax	1.78 (0.104)	0.95	0.94	17.105	292.57	0.97
Registration	1.505 (0.086)	0.95	0.95	17.43	304.001	1.21
Total Indirect Tax	*1.408 (0.041)*	*0.98*	*0.98*	*34.068*	*1160.6*	*1.96*
Custom Duties	1.059 (0.076)	0.92	0.92	13.87	192.41	1.66
Excise Duties	1.508 (0.068)	0.97	0.96	22.09	488.21	1.14
Sales Tax/VAT	1.79 (0.068)	0.97	0.97	26.38	696.015	1.38

Source: Author's estimate using data available in the economic survey

Note:* Values within parenthesis are standard error of parameter

** Significant *at 5 percent*

This relation, however, is not well explained as the estimated parameter is significant at only 5 percent with low R squared and even negative adjusted R squared values. Income tax, on the other hand, is found to register the highest buoyancy coefficient (1.78) among individual direct tax heads. The high value of R squared and adjusted R squared supports best fit of the model. F and t statistics both support the significance of estimated parameter at 0 percent level. Among

other direct tax categories, registration is found to have an elasticity coefficient of 1.505 with best fit of the relationship at 0 percent significance level.

Total direct tax is found to have a lower buoyancy coefficient than total indirect tax during the period from 1968/69 to 1984/85. Total direct tax has a buoyancy coefficient of 1.076 while total indirect tax has a coefficient of 1.408. Both these relationships are well explained by explanatory variable GDP. F and t statistics support the best theoretical fit of the estimated parameter at 0 percent significance level. Among indirect tax categories, sales tax has the highest (1.79) buoyancy coefficient. This is indeed the highest coefficient among all individual as well as major tax heads. It follows from Table 6.6 that income tax and sales tax are seen to be highly buoyant with respect to changes in the country's GDP in direct tax and indirect tax categories respectively.

6.7 Estimation of Buoyancy Coefficients of Various Taxes, 1985/86 to 2001/02 (Period II)

During the post-reform period (1985/86 to 2001/02), total revenue has a buoyancy coefficient of 1.18, referring to the fact that every one percent increase in GDP is associated with 1.18 percent increase in total revenue of the country. The model is highly significant, which is supported by high value of R squared, adjusted R squared, F and t statistics. Among its components, total tax revenue and total non-tax revenue have buoyancy coefficients of 1.205 and 1.149 respectively during the period II under analysis. This shows that total tax revenue is found to be more buoyant than total non-tax revenue, contrary to the results of period I where total non-tax revenue is found to be more buoyant than total tax revenue. Both these estimated parameters follow well theoretical fit at 0 percent significance level. At the same time, high values of R squared and adjusted R squared support the strong explanatory power of GDP to the changes in revenue collection of the country.

Total direct tax has an buoyancy coefficient (1.37) greater than one, showing a relatively buoyant total direct tax with respect to GDP. Total indirect tax has a quite lower buoyancy coefficient (1.16) in comparison to total direct tax. This shows that total direct tax seems more responsive than total indirect tax during the post-reform period.

Table 6.7

Buoyancy Coefficients (β1) for period II (1985/86 to 2001/02)

Tax Heads	Coefficients	R^2	Adj. R^2	t	F	DW
Total Revenue	1.18 (0.019)	0.99	0.99	61.16	3741.6	1.65
Total Tax Revenue	1.205 (0.029)	0.99	0.99	41.857	1752.094	2.0
Total Non Tax Revenue	1.149 (0.038)	0.98	0.98	30.13	907.83	1.91
Total Direct Tax	1.37 (0.055)	0.97	0.97	24.97	638.84	0.485
Land Tax	-2.152 (0.318)	0.74	0.72	-6.77	45.845	0.613
Income Tax	1.55 (0.084)	0.95	0.95	18.375	337.641	0.96
Registration	0.853 (0.081)	0.87	0.86	10.557	111.44	0.96
Total Indirect Tax	1.16 (0.033)	0.98	0.98	35.41	1254.02	2.29
Custom Duties	1.128 (0.031)	0.98	0.98	35.837	1284.26	1.2
Excise Duties	0.919 (0.04)	0.97	0.96	23.253	540.64	0.726
Sales Tax/VAT	1.585 (0.068)	0.86	0.85	10.06	101.31	2.67

Source: Author's estimate using data available in the economic survey

* Values within parenthesis are the standard error of parameters

Among direct tax categories, income tax is found to have greater than unity coefficient, while registration is found to have less than unity and even negative coefficient for land tax. Income tax, which has the highest coefficient among direct tax categories, has an buoyancy coefficient of 1.55 referring that one percent increase in GDP has contributed on an average 1.55 percent increase in income tax during the period from 1985/86 to 2001/02. This relationship is best

explained at 0 percent significance level. Low value of DW statistics, however, indicates presence of positive autocorrelation among disturbances terms. Land tax, like in most cases, has registered a negative relationship with growth of the economy. It has an buoyancy coefficient of -2.152 showing a highly responsive negative relationship between land tax and GDP. This shows that percentage decrease in land tax is higher than percentage increase in the country's GDP. This relationship, however, is satisfactorily explained.

Among indirect tax categories, sales tax has the highest buoyancy coefficient (1.585) followed by custom duties (1.128) and excise duties (0.919). The former two categories seem relatively buoyant with respect to change in the country's GDP, while the latter is found less responsive during the period from 1985/86 to 2001/02. All these models are highly significant at 0 percent which is supported by high value of R and adjusted R squared, as well as F and t statistics.

Period-wise comparison of buoyancy coefficients for major tax heads reveal the fact that total revenue seems more buoyant with country's GDP during period I than period II. Total tax revenue, however, has registered a higher buoyancy coefficient (1.32) during period I than period II (1.20). Total non-tax revenue has a buoyancy coefficient of 1.57 during period I which is higher than the coefficient (1.14) during period II.

In summary, these Tables (6.2, 6.3, 6.4, 6.5, 6.6, and 6.7) reveal the following facts:

Except non-tax revenue, the elasticity coefficients of remaining taxes under consideration are less than unity - far below unity in some cases - or even negative during the whole period under study. However, sales tax and total non-tax revenue have registered a greater than unity elasticity coefficient during period I while none of the coefficients have marked greater than unity elasticity during the period II.

Buoyancy coefficients for major heads and individual tax heads are above unity, except that of land tax which is negative during the whole period under study. The same is the case for period I, that is , all buoyancy coefficients are found to be greater than unity, excluding land tax. However, excise tax has a less than unity buoyancy coefficient while the rest have registered greater than unity elasticity coefficients during period II.

This low elasticity and high buoyancy for total revenue as well as individual taxes indicated that the government has concentrated more on introducing various discretionary measures, rather than broadening the tax base which is not conducive to support 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 that a. given the existing tax structure, automatic growth in total revenue is insignificant; and b. the heavy reliance on indirect taxes like customs, sales and excises, which have low or even negative elasticity, will lead to revenue reduction.

CHAPTER VII

TAXATION IN NEPAL:

ISSUES AND PROBLEMS, REFORMS AND POLICY PERSPECTIVES

7.1 Experience of Nepalese Tax Reform

The process of Nepalese tax reform truly started in the mid-1980s as a major component of the Structural Adjustment Program (SAP). This process accelerated in the 1990s after the restoration of democracy. However, some adjustments had been made in the tax system (in terms of rates and number of taxes) before the reform process started.

Before the restoration of democracy, until the mid-1980s, emphasis was given on high and multiple tax rates and large exemptions/incentives were given to achieve various goals, including revenue generation, maintaining equity, and providing protection. For example, customs rates were stepped up from time to time resulting in multiple and high rates by the mid-1980s. In 1980/81, there were 63 general rates, ranging from 1 percent to 467 percent. Similarly, the rate of sales tax was increased considerably over the years from its original flat rate of 2 percent. Similarly, the income tax rate was also substantially increased from its original rate (10 percent) to rates ranging from 5 to 25 percent in 1959/60, and further to its highest level of 60 percent in 1975/76.

The coverage of various taxes was also expanded over the years. For example, the coverage of customs duties was expanded due to the increasing trade relations with several countries, and income tax levied on business and remuneration income only, was expanded to other sources of income. The tax base, however, remained narrow due to the large exemptions granted under various taxes. For example, most of agricultural products and their inputs (live animals, fish, and many more goods) were exempted from import duties. Similarly, large tax incentives were granted to industries in the form of tax holidays, exemptions, rebates and deductions. Such large exemptions/incentives, etc. eroded the tax base considerably. This led to many undesirable implications, which are as follows:

- Exemptions keep a large section of the economy out of the tax net, thereby eroding the tax base considerably.
- Since exemptions erode the tax base, high rates are required to generate a given amount of tax revenue. High rates not only encourage tax evasion, but also become economically costly since they generate more tax-induced distortions.
- Exemptions complicate the tax system considerably since taxpayers have to keep separate records of taxed and tax-exempted items, while the tax administration has to check these records.
- As exemptions are also granted by ad hoc decisions through gazette notification in the absence of a clear exemption policy, tax payers often apply for tax exemption, which increases the paperwork of tax administration.

In brief, before tax reform and restoration of democracy in 1990, a large number of multiple and high tax rates had encouraged tax evasion, corruption, difficulty in tax administration, and significant distortions in economic incentives, while large exemptions/incentives had eroded the tax base considerably. As a result, the performance of the Nepalese tax system in terms of responsiveness, productivity, efficiency, and equity was very low. For example, before the restoration of democracy, until the mid-1980s, ten years' average (from 1967/68 to 1976/77) reveals that the share of consumption, income, and capital-based taxes were 74.1, 7.1, and 18.1 percent respectively in total tax revenue. Over the period from 1965/66 to 1975/76, on an average, about 40 percent of the growth in tax revenue appeared to be due to the built-in response to economic growth and improved tax administration; the remaining 60 percent was contributed by discretionary tax measures. Similarly, Table 5.5 reveals a very disappointing performance during 1967/68 to 1976/77. The tax-GDP ratio ranges from 4.5 to 7.7, which is considerably low. Chelliah, Bass, and Kelly (1975) have shown that the tax-GDP ratio of 47 developing countries in 1969-71 was 15.1.

Further, in the early 1980s, the Nepalese economy also encountered several economic problems, including increasing fiscal deficit due to low revenue mobilization and fast growing public expenditure financed mainly through bank borrowing as well as increasing foreign assistance in the form of loans, which increased both internal and external debt burden, thereby creating inflationary pressure. Thus, Nepal had no choice but to adopt the stabilization and structural adjustment program for the second half of the

1980s, which was financed by the World Bank and IMF. Under these programs, attempts were made for the economic reform of the country, including the tax reform.

Thus, the main goal of tax reform in Nepal is to reduce fiscal deficit and increase revenue mobilization. To attain these goals, attempts were made to widen the tax base, simplify and rationalize the tax rate structure, and strengthen revenue administration from the late 1980s. This process was accelerated in the early 1990s after the restoration of democracy. The main features of tax reform after the restoration of democracy in 1990 can be summarized as follows:

- Reduction in the number and level of tax rates: There was a broad trend to reduce the level and number of tax rates since the mid- 1980s. For example, custom tariff was rationalized in 1987/88 when only 12 basic rates (5,10,15,20,25,30,50,70,100,110,150 and 200) were levied on imports irrespective of their origin .Further changes were made in 2000/01 with the rates fixed at (5,10,15,25,40,80 and 130) percent in 2000/01. In addition, up to 20 percent rebates were provided to imports from India. Similarly, on the sales tax front, difference in the treatment of imports and domestic products was abolished in 1986/87 and four different rates were set (5, 10, 15, and 20 percent) on both imports and domestic products. Further changes were also made in subsequent years. With the introduction of VAT, different rates of sales tax were converted into VAT in 1997 with a single positive rate of 10 percent. At present, it is 13 percent. Similarly, the rate structure of income tax was also rationalized. It was reduced from 7(10, 15, 20, 25, 30, 40, and 50 percent) in 1988/89 to 3(15, 25, and 40 percent) in 1992/93. Further, in 1997/98, individual income tax was levied at 15 and 25 percent, and corporate income tax at 25 percent (banks and financial institutions 30 percent). The rationale for reducing the tax rate structure is that a high rate encourages tax evasion and acts as a disincentive for further production and affects revenue mobilization as well. In this context, raising revenue requires reduction in the rate structure. Similarly, bringing the number of tax slabs to a manageable level will make tax administration simple.
- Conversion of specific rates into Ad Valorem Rates: An effort was also made over the years to replace specific rates of import duties with Ad Valorem rates. Similarly, the rates fixed in the specific and the Ad Valorem basis has been replaced by purely Ad Valorem rates. As a result, the current custom rates are largely expressed in Ad Valorem terms. This has made the custom service more efficient and simple than before.

- Efforts for broadening the tax base: Attempts were also made to broaden the base of various taxes in the 1990s. For example, VAT was introduced in order to broaden the tax base of domestic trade taxes, both legally and administratively. Since sale tax was collected only at the import/manufacturing point, value added below this point was not included in the sales tax base. Further, since all major taxes were collected at source, there was a tendency to smuggle goods or understate the taxable value, leading to erosion in the tax base. VAT intends to address both of these issues. In Nepal, the existing level of threshold is Rs. 2 million. Importers having commercial imports less than Rs. 200,000 annually or less than Rs. 10,000 at one time are not required to register. Similarly, in the field of income tax, tax holidays were scratched in 1997. Likewise, attempts were made to include more and more taxpayers in the income tax net after the restoration of democracy in 1990.
- Changes in local tax system: Considerable changes in the local tax system could be also noticed. For example, local development tax was adopted as an alternative to Octroi. This, however, did not satisfy the criteria of a good local tax such as a property-based tax. It was taken as a temporary measure developing other local taxes together with property-based taxes. Similarly, for fixing rates of house roof tax, the lower and upper limits were fixed, within which municipal authorities were to fix rates. The rate structure was further refined in 1993. Similarly, VDC taxes were also changed in 1994. All these indicate that HMG/N is also moving towards achieving the goals of local self-governance. In this process, HMG/N has introduced the Local Self-Governance Act and Regulation 1999. The main thrust of this act is to increase resource mobilization and utilization at the local level.

In brief, after tax reform and restoration of democracy, there has been a desperate attempt to improve resource mobilization and reduce fiscal deficit through broadening the tax base and rationalization of the tax structure. To some extent, this tax reform process was successful in exerting a positive impact (in terms of revenue generation, maintaining equity, etc) on the tax structure as indicated by Table 7.1. Table 7.1 reveals that after tax reform and restoration of democracy, the tax-GDP ratio increased from 7.5 percent in 1980/81 to 9.8 percent in 2002/03. Similarly, direct taxes (tax on profit, property, and income) increased from 0.6 in 1980/81 to 2.0 in 2002/03. Similarly, indirect taxes such as customs and tax on consumption and production increased from 3.0 and 3.2 percent in 1980/81 to 3.3 to 4.2 percent in 2002/03 respectively. This shows

an improvement, yet not substantial. However, it proves that lowering the tax rates and retaining the number of tax slabs to a manageable limit have discouraged tax evasion and also provided incentive for further production. Similarly, implementation of VAT in 1997 has been a significant attempt towards broadening the tax base and modernizing the tax system.

Lowest GDP, growing resource gap, inequalities, and growing reliance on foreign loans have become inherent problems in the revenue aspect of the Nepalese economy. Tax policy plays an important role in addressing these issues. However, the objectives of the Nepalese tax policy have varied almost every year showing ad hocism and lack of long-term perspective and consistency.

Table 7.1

The Ratio of Important Taxes to GDP (Period I)

Fiscal Year	1980/81	1990/91	2000/01	2002/03
Land revenue and registration	0.7	0.5	0.2	0.3
Tax on profit, property and income	0.6	0.7	2.4	2.0
Customs	3.0	2.6	3.2	3.3
Tax on consumption and production	3.2	3.2	4.1	4.2
Total Tax	7.5	7.0	9.9	9.8

Source: Economic Survey 1998 and 2004

Further, effective implementation of tax policy in operational terms is also one of the discouraging features of Nepalese tax policy. Analysis of budget speeches from 1961/62 to 2004/05 indicates the following main thrust of Nepalese tax policy:

Before Restoration of Democracy

- Reducing dependency on foreign aid through internal resources mobilization (Budget speech: 1962/63).
- Removing all obstacles impeding economic growth (Budget speech: 1971/72).
- Discouraging investment in unproductive real estate and consumption of luxury goods (Budget speech: 1972/73).

- Stabilizing prices and achieving better tax administration (Budget speech: 1973/74).
- Giving priority to quick -yielding projects and mobilizing additional resources through economic reform (Budget speech: 1974/75).
- Controlling prices of essential consumer goods, reducing the burden of tax on low-income groups, and adopting progressive rates (Budget speech: 1975/76).
- Increasing the efficiency of public goods and ensuring adequate returns of HMG/N investment through cooperation (Budget speech: 1976/77 to 1978/79).
- Providing incentives for the promotion of export (Budget speech: 1978/79 to 1981/82).
- Creating congenial atmosphere and opportunities to reinvest profits in the industry by allowing deduction for taxable amount of new investment as well as improving and modernizing organizational structure for increased revenue collection (Budget speech: 1985/86).
- Rationalizing tax rates, widening tax coverage and increasing elasticity of revenue in order to mobilize internal resources for development (Budget speech: 1986/87 to 1987/88).
- Reducing tax evasion and expanding the base instead of introducing new taxes as well as increasing the share of direct taxes for social justice (Budget speech: 1988/89).
- Providing relief to consumers, encouraging savings and indigenous raw materials based employment-generating industries, reducing inequalities through measures to discourage the tendency of wealth amassing by illegal means, and mobilizing revenue (Budget speech: 1990/91).

In brief, before the restoration of democracy in 1990, the Nepalese tax policy was concentrated on meeting the minimum needs of the majority of the people. In addition, tax policy was also focused on additional revenue generation, efficient resource allocation, equitable distribution, economic stabilization, regulation, protection, and public sector growth. These reflect a significant amount of control in the economy, such as, protection to domestic industries, exemption on capital goods, discouragement to investment in unproductive sectors, price stabilization, avoidance of adverse effect on prices of essential goods, etc. After the mid-1980s, some new policies were introduced,

such as, rationalizing the rates and expanding the tax base in order to increase the share of direct taxes. However, significant impact on the tax structure was far below expectations. This can be seen in Table 7.1. The table reveals that the tax-GDP ratio decreased from 7.5 percent in 1980/81 to 7.0 percent in 1990/91. Similarly, direct taxes (tax on profit, property, and income) increased slightly from 0.6 in 1980/81 to 0.7 in 1990/91. Similarly, indirect taxes, such as customs and tax on consumption and production, decreased from 3.0 and 3.2 percent in 1980/81 to 2.6 and 3.2 percent respectively in 1990/91.

After Restoration of Democracy

- Enhancing mobilization of domestic resources through simple, efficient, and improved revenue administration and by bringing all eligible individuals and entities under the tax net, as well as neutralizing the adverse impacts of devaluation on the common people's lives (Budget speech: 1991/92).
- Strengthening the revenue administration, simplifying and reducing rates mainly for increased revenue collection, and supporting the government's overall liberalization efforts (Budget speech: 1992/93).
- Broadening the tax base and reducing the tax rate structure for increased revenue mobilization, making the tax system more simplified and transparent, increasing efficiency in tax administration, increasing the contribution of direct taxes over indirect taxes, and rationalizing the structure by maintaining the balance between private sector competitive capacity and social justice (Budget speech: 1994/95 to 2004/05).

Over the past two-to-three years, the Government of Nepal (GON) has vigorously implemented wide-ranging reforms. The tax reform agenda is aimed at improving domestic resource mobilization to help finance development activities. The tax reform program was initiated during the Ninth Plan and a number of important measures (such as the introduction of VAT, simplification of tax legislation, establishment of an Inland Revenue Department by merging the VAT and income tax departments, etc.) have been under implementation. The Government intends to continue, and build on, these initiatives, by implementing the recommendations of the Fiscal Commission, particularly by reducing exemptions and widening the tax base, strengthening tax administration and

making it autonomous, periodically revising custom valuations, and making arrangements to reduce existing tax arrears.

Good progress has been made in implementing this agenda over the past two years. The 2003/04 budget introduced several tax policy and administration reforms, for example, eliminating VAT exemption on edible oil, rationalizing import duties (lowering some import duties and offsetting these reductions by countervailing excise duties) in line with WTO needs, and increasing the income tax threshold together with a widening of the lowest tax bracket. To strengthen tax administration, a Large Tax Payer office (LTO) was established to focus on audit, taxpayer service and collection functions; and a three-year customs modernization plan has been developed (based on IMF recommendations) and is being implemented. The ASYCUDA system has been introduced to a fourth customs entry point recently and now covers the bulk of imports. To discourage tax evasion, a special Enforcement Task Force has been established, to conduct investigative tax audits and take appropriate action.

The ongoing tax reform program over the past few years has helped to improve the tax administration and make it more transparent and payer-friendly. The taxpayer database has been improved and fully automated, with a single identification number for each payer which has made monitoring easier. Also, income tax has been converted fully on a self assessment/self-reporting basis, with selection of payers for auditing based on revenue risk indicators. Taxes are now also based on current year's income and are payable at specified intervals during the year. This, in turn, has helped to improve buoyancy of the tax system, as indicated by the strong growth of revenue (by 14% so far) this year in response to economic recovery. Notwithstanding this progress, there are continuing weaknesses in the tax system, for example, under-invoicing, excessive interaction among tax payers and tax officials, especially in the case of customs. The future reform program is aimed at addressing these weaknesses.

In brief, after the restoration of democracy in 1990, the tax policy was based on the distinct features of liberalization, globalization, and privatization. The situation of economic control has changed with the restoration of democracy. Today, the democratically elected government seems to be serious about revenue mobilization through simplification of tax structure, broadening the tax base, and strengthening

revenue administration. Moreover, the tax policy also focuses on making the tax system more simple and transparent to meet the people's aspirations. Similarly, in the light of national and international conditions during the 1990s, HMG/N initiated a program of economic liberalization, stressing the need to develop a more open and market-oriented economy. New industrial, foreign investment and commercial policies have been introduced in 1992. These policies stress the need for deregulating the economy so that the private sector can flourish and contribute to the economic development of the country. Table 7.2 reveals the significant impact of these policies on the tax structure. It reveals that the tax-GDP ratio increased from 7.2 percent (average during 1981/82 - 1990/91) to 8.8 percent (average during 1991/92-2000/01). Further, it increased to 9.8 percent in 2002/03. This is not yet a substantial improvement but it is certainly a significant progress.

The review of Nepalese tax reform and policy disclosed the fact that HMG/N focused on more restrictive, regulative, and protective policies to meet the basic needs of the people and to achieve various goals viz. revenue generation, maintenance of equity, growth, and stabilization of the economy, before the restoration of democracy in 1990. Emphasis was laid on high and multiple rates and large exemptions/incentives. As a result, this policy encouraged tax evasion, corruption, difficulty in tax administration, and considerable distortion in economic incentive during the 1980s. Further, the tax base remained narrow due to large exemptions/incentives under various taxes.

Table 7.2

Ratio of Important Taxes to GDP (Period II)

FY	Average of 1998/82-1990/91	Average of 1991/92-2000/01	2000/01	2002/03
Land revenue and registration	0.5	0.3	0.2	0.3
Tax on property, profit and income	0.9	1.7	2.4	2.0
Customs	2.6	2.9	3.2	3.3
Tax on consumption and production	3.3	3.8	4.1	4.2
Total Tax	7.2	8.8	9.9	9.8

Source: Calculated from data available in Economic survey 1998 and 2004

However, these policies have been replaced by more liberal, open and market-oriented policies, based on the distinct features of globalization, liberalization, and privatization, after the restoration of democracy in 1990. HMG/N has initiated programs of economic liberalization. New industrial, foreign investment and commercial policies have been introduced in 1992. These policies stress the need for deregulating the economy so that the private sector can flourish and contribute to the economic development of the country. On the revenue front, emphasis is given on broadening the tax base, rationalizing the rate structure and improving the tax administration. The first step in this direction was the implementation of broad-based VAT in 1997. Further, attempts have been made to endorse a more uniform pattern of tax rate structure for achieving the goals of both economic efficiency and horizontal equity, as similar incomes will face similar tax burden regardless of source. These strategies of HMG/N indicate that the recent tax reform and policy may be much more modest than before, but at the same time, they are also realistic.

7.2 ISSUES AND PROBLEMS IN TAXATION

Although recurrent expenditure is evidently higher compared with capital expenditure, revenue deficit does not exist in Nepal's tax structure. However, fiscal and budget deficits are higher the international level and the prospect for counterpart funding is extremely limited to ensure partnership in development activities pursued by external

assistance. In Nepal's tax structure revenues are buoyant but inadequate to supplement development activities. Interestingly, there was no adverse impact of conflict on internal revenues and, subsequently, ODA to Nepal have increased over the years. The import duties are collected at customs points, which are mostly located in urban–centered border areas, and VAT on imported goods is also collected at the same customs points. Internal as well as external borrowings also moderately increased without disruption during the period. The size of revenue is primarily influenced and shaped by import duties in Nepal, and revenues from customs and VAT have increased with growing size of imports from India and overseas over the years.

The Tenth Plan (2002-2007) envisaged that number of taxpayers registered under VAT would reach 40,000 and income taxpayers would level 250,000 by the end of plan. The premier direct tax - income tax - is estimated to be around 19.0 percent of revenue and 3.0 percent of GDP during FY 2008/09. During the Tenth Plan "the proportion of revenue to the GDP was targeted to reach 14 percent by the final year of the plan. The proportion of direct tax/GDP, indirect tax/GDP and non-tax/GDP was targeted to remain at 3.5 percent, 8.7 percent and 2.8 percent respectively. By the end of the plan, the contribution of revenue surplus to funding development expenditure will mark 25 percent of total revenue". Although the 3-Year Interim Development Plan (TYIDP), 2007-010 (the 11th Plan) lacks setting quantitative targets, tax effort ratio is estimated to be 16 percent of GDP during the plan period (TYIDP, 2007).

The tax system suffers from structural constraints with tremendous administrative and procedural complexities envisaged in the existing Income Tax Act that it lacks simplicity and transparency. Taxpayers are often unknown about the specific size of tax they are to comply with, because tax is determined arbitrarily between taxpayers and the tax officials resulting to huge corruption. The major problems of taxation in Nepal include: (1) marginally high tax rates (2) limited tax base (base eroded due to prevalence of a number of tax shelters, for example: no tax on income from agriculture because this is a subsistence sector; relatively blanket exemptions, concessions and deductions provided to industry sector) (3) low lax elasticity (4) poor voluntary compliance (4) leakages in tax collection (5) rigid and complex Income Tax Act, 2000 (6) inefficient, indifferent and

corrupt tax administration, and (7) no consolidated record of property (land and building) with the Internal Revenue Department.

The problems of taxation in Nepal greatly differ with respect to individual taxes. For example, under-invoicing, bribery and smuggling due to open border with India are the most crucial tribulations associated with the customs administration, while non-issuance of invoices/proper invoices and prevalence of huge tax shelters eroding tax base with a large number of exemptions and deductions are the major problems associated with VAT. Income tax suffers from poor voluntary compliance, rigid tax laws and regulations coupled with built-in administrative and procedural complexities, and growing arbitration to arrive at taxable income resulting to massive corruption, which is attributed to tacit understanding between taxpayers and tax officials. Therefore, income tax is ascribed to "negotiation" due to lack of simplicity and transparency encapsulated by unlimited discretionary powers assigned to tax officials. The crude estimation suggests that base of VAT is eroded primarily for two reasons: exemptions to business transactions below the threshold of Rs. 2 million, and around 50 percent goods are in-fluxed to Nepal from India through unauthorized channel. However, it is difficult to lowering down the threshold due to poor capacity of tax administration to supervise and monitor the business transactions of small retailers with no accounts. The extent of unsanctioned or parallel economy is estimated to be as high as 40 percent in Nepal (Dahal et. al).

As a member of WTO, SAFTA and BIMSTEC, Nepal has binding constraint to lower down customs duties within the range of 0-5 percent by 2012. Therefore, there is danger that internal revenue from customs duties will decline resulting to widening resource gap. Alternatively, internal revenues can be mobilized on a greater scale through VAT preferably not by increasing rate, but by expanding base through gradually reducing the list of huge exemptions and improving efficiency of VAT administration. The exemption list of VAT includes: basic agricultural products including herbals, basic essential commodities, livestock products, agricultural instruments including fertilizer, health services, pharmaceuticals (medicines) and health equipments, education, commodities having cultural and antique value and carpenter handicrafts services, passenger transport

services except cable car. The exemptions to VAT also include casino, postal services, excise stamp and passport, financial services and life insurance services, banks notes and cheque-book, fire-brigade, ambulance, donations given to fight natural calamities, land and building and many other miscellaneous items. This list is very long.

Additional revenue mobilization through expanding VAT would substitute deficit particularly accrued from customs duties. VAT, a premier indirect tax, is account-based scientific tax system ensuring a large degree of transparency. The Internal Revenue Department and Department of Customs Duties are the prime fiscal authorities to collect revenues in Nepal and, therefore, their role is crucial to mobilize internal resources to the treasury. These institutions require improving capacity building and strengthening efficiency in all spheres comprising human resources, IT, Act and Regulations, physical facilities with dignified incentive package, and overall environment including supervision, monitoring and evaluation system.

Nepal's tax system is circumscribed by serious structural constraints. The major constraint existing in the tax system is that it lacks simplicity and transparency (Dahal et., 1995). With an extremely limited tax base, low tax elasticity, relatively higher tax rates, poor voluntary compliance, ineffective tax administration, growing arbitration in assessment, rigid and incomprehensive tax laws and regulation, and numerous tax shelters, taxation in Nepal has so far been attributed to 'negotiation' resulting in rampant corruption. Tax avoidance, evasion and delinquency have also increased substantially over the years. This is one of the critical reasons why the number of taxpayers, as of 1997/98, is confined to 309,665, i.e., just over 1 percent of the total population (statistical abstract, 1981:96). Besides, the low revenue response of Nepal’s tax system is attributed to lack of clear cut and consistent tax policy for long-term development and short-term stability. Ad-hocism in tax policy is the main character of the Nepalese fiscal system which would be clear from the following tax policies of different fiscal years. The problems of taxation differ with respect to taxes. For example, under-invoicing and smuggling are the most important problems of customs administration, while non-issuance of invoice/proper invoices is the basic problem of VAT administration at this stage. Lack of strong political commitment, administrative capability and recording system are the major problems in implementation of local taxation. Furthermore, lack of

proper accounting and auditing, indifferent attitude among the tax officials, and weak appeal system have also been hindrances for the proper functioning of the Nepalese tax system. In the absence of a long-term revenue policy, tax measures are adopted annually on an ad hoc basis.

7.2.1 Low Elasticity but High Buoyancy of Major Taxes

The regression results in Chapter Six reflect the fact that the overall tax system of Nepal is inelastic in nature during the period under study. Moreover, direct taxes have smaller elasticities in comparison with indirect taxes, which indicate that direct taxes are responsible for the sluggishness of tax yields. Buoyancy coefficients of major taxes are much higher than their respective elasticities implying the high discretionary effects of the government to obtain more revenue.

When we compared the elasticity coefficients of previous studies with the present study, we found that over periods tax elasticity has been declining, despite the various efforts to increase tax revenue. Even if some individual taxes show a nominal increase in terms of their yield, they are far from satisfactory. This indeed indicates deterioration in Nepal's tax system and it even denudates the implication and implementation of government tax policies in the study period. Furthermore, high share of discretionary measures implies ad-hocism and volatility in government tax policy, and imposition of high rates on a few taxed commodities, in turn, induces distortions and inefficient resource allocation.

Among the major individual taxes, the elasticity, and in some cases, buoyancy coefficients are below unity. The high percentage of discretionary measures with respect to direct as well as indirect taxes indicates contradiction of the general argument that the necessity of raising tax revenue in least developed countries may lead to a lopsided development of the tax system through frequent raising of rates on easily administered taxes (indirect), while taxes that are difficult to administer (direct) are neglected. Despite measures to increase revenue through both direct as well as indirect taxes, the government's effort to make direct taxes progressive and responsive to national income became unsuccessful. As revealed by this study, about one-fifth of all government revenues were shared by direct tax; it might be argued that the best way of combating direct tax evasion is to further reduce reliance on direct taxes.

7.2.2 Limited Potentialities of Direct Taxes

The tax structure of Nepal is not conducive to elevation of revenue from direct tax front. Its contribution during the study period has contracted from 30.80 percent in 1963/64 to 21 percent in 2001/02 (Table 5.4) which is rather a pessimistic scenario of the Nepalese fiscal system. This is due to the unprecedented reduction in land tax and slow growth of income tax.

As land is inelastic in terms of supply and the population of this agricultural country is increasing at the rate of more than 2% per annum, the cultivable land per agricultural household is declining day by day. In the name of giving relief to marginal farmers, land tax was revised downward from time to time. Thus, land tax shrank during the study period. This is a serious issue for a country like Nepal where more than 40 percent of the GDP comes from the agricultural sector, absorbing about 80 percent of the labor force.

In the case of income tax also, the situation is not satisfactory. Exemption of agricultural income from the tax net is one of the main reasons. Additionally, income tax probably offers more opportunities for tax evasion than commodity taxes due to the presence of too many tax shelters. The policy tools available to the government from the purpose of reducing the tendency to evasion are the tax rates themselves, penalty rates and expenditure on investigation, which determines the probability of being detected.

The failure to report one's full income to the tax authorities does not automatically provoke a reaction in the form of penalty. The tax payer has a choice between two main strategies: to declare actual income or declare less than actual income. If the second option is chosen, taxpayer's payoff will depend on whether or not he is investigated by the tax authorities. If he is not, he is clearly better off than under the former strategy. Though it is a matter of empirical investigation, it can be said a priori that tax rules and regulations as well as revenue administration in Nepal are inefficient, leading to income tax evasion. The tax collection process suffers from leakages and loopholes from which tax collectors as well as the tax payers do get some extra benefits by cheating the government.

These factors primarily, among others, are responsible for the limited potentialities of direct taxes and increasing reliance on indirect taxes, posing difficulties in making the Nepalese tax system progressive. Thus, we can sum up the reasons that seem responsible for the declining importance of direct tax revenue. They are:

- The number of tax incentives and concessions that have been granted, following the supply-side tax policy, for capital formation under the private sector;
- The gradual raising of the exemption limit and too many deductible expenses in the case of income taxation;
- The prevalence of self-employment which has kept many people(hard-to-tax group) away from entering the ambit of direct tax net (low voluntary compliance);
- Weak tax administration and ineffective tax laws;
- The existence of general poverty;
- Blanket exemption of taxation in industrial sector; and
- Agricultural sector outside the jurisdiction of taxation.

A majority of the taxpayers are ignorant of existing laws and regulations and various circulars frequently issued by the tax authorities. The increasing use of discretionary power by the tax authorities for tax assessment has been a perennial source of corruption. There is apprehension that the taxpayers are neither sufficiently protected by the law nor is their contribution ever recognized. A significant amount of revenue is missing before reaching treasury in between the taxpayers and tax officials. The tax administration in Nepal appears to be inefficient, indifferent and corrupt. In fact, corruption has weakened the tax base. The major challenge facing Nepal's tax administration is how to identify the taxpayers that are still unrecorded and bring them into the tax net, thereby improving voluntary compliance.

7.2.3 Negative Responsiveness of Land Tax with Higher Administrative Costs

Among the various principles, the principle of tax administration is one of the important aspects which relates to determinant of taxation, convenience and effort to ensure lowest possible collection costs. Regarding the Nepalese tax experience with respect to land tax

and agricultural income, land tax has not only negative elasticity coefficient but also needs higher administrative costs.

7.2.4 Reforms in Taxation and Adjustment to Globalization

There have been no significant departures in approaches to tax reforms in Nepal over the years, therefore, the objectives set and strategies employed are almost identical. These approaches were inclined basically to mobilize revenue through direct taxes, reduce reliance on indirect taxes, rationalize tariff structure, simplify and improve tax laws and regulation as well as adjust them in the new circumstance compatible with WTO and SAFTA provisions, and strengthen tax administration. The comprador groups are detrimental to tax innovations, limiting the prospects for effective resource mobilization in Nepal. The opposition to tax levy by anti-lobby is found to be often politically motivated, and thus, there is no tax on income from agriculture, the biggest sector of the economy that still contributes about 40 percent of the GDP.

With the emergence of globalization and regionalism, especially with reference to SAFTA and WTO/GATT provision, tax rates are supposed to be drastically lowered down within a range between 0.5 and 20 percent by 2005. This is a major challenge to Nepal's tax system in the context of the sustainable resource mobilization that may decline with the new tax regime and the pace of industrialization in Nepal may also be affected. Thus, the existing tax system demands adjustment to the new tax base and simplified tax laws with stringent measures in order to check rampant corruption.

In fact, tax administration is tax policy and, therefore, it should be designed in such a way so as to bridge the gap between actual and potential base. "Taxes must be designed for the economic, political and administrative conditions prevailing in a particular country, not for the same average abstract hybrid of all countries"(Bird, 1992). Since the persistent feature of political instability prevailed over the last three-four years, there was a lack of political will and determination in the government which inhibited the emergence of an effective tax administration in Nepal.

Although the revenue provision envisaged in the LSGA 1999 provided tremendous opportunity for internal resource mobilization at the local level, its further prospects are

conditioned to limited tax base, relatively lower tax rates, and poor revenue administration capacity. Thus, the local authorities have limited tax potential.

7.2.5 Challenges to Improving Tax System and Administration

This calls for an urgent effort toward improving tax system and administration in Nepal through a. changing the environment, b. changing the administration, and c. changing the laws and regulations.

The government can change the environment by providing education, information and knowledge to the taxpayers that may help to increase voluntary compliance. Computerization of tax administration, motivation for public servants, and possibly 'tax farming', may be instrumental in changing tax administration. The best way to cope with administrative problems, however, is to make a change in law. The tax laws and regulations must be simple and concise. Too many tax shelters with a series of exemptions and deductions must be eliminated as this has not only distorted the tax structure, but also led to massive corruption. Even the format for income tax returns and customs declaration forms are very long and cumbersome to digest by the tax payers. The so called psychological confrontation between the taxpayers and tax officials – the former may illegally pay less or the latter extract more - marginalized the prospects for resource mobilization in Nepal. However, the recent efforts made by the government to mobilize internal resources through the implementation of voluntary disclosure of income scheme (VDIS) is commendable, which yielded Rs. 650 million within a short span of two months during December 15, 2001 -February 15, 2002. The VDIS is based on efficiency criteria of property such as house, land, car, mobile, credit card, foreign travel.

7.3 PROPOSALS FOR REFORMS IN TAXATION

In line with the above mentioned tax issues and problems, the options left are not simply standing with ‘restructuring’ of tax systems in Nepal and rather call for overall reforms agenda. The following agenda for reforms has been proposed for improving Nepal's tax system (Dahal: 2004):

- Introduction and expansion of IT system to all revenue offices through networking;
- Human resource development for sustainable revenue service;
- System development and its improvement through developing appropriate long-term revenue policy, simplifying procedures, and reforming tax administration;
- Improvement in tax laws and regulations;
- Institutional and infrastructure development; and
- Improvement in the capacity of revenue administration.

7.3.1 Improving IT system

Since data arrangements have been relatively poor, it is imperative to develop and expand the networking of database and information system at all levels. This is one of the significant areas where technical cooperation is urgently required both at national and local levels. This would help estimate forecasting of revenues more authentically, as well as monitoring of noncompliance and delinquency of the taxpayers.

In this context, the development of customs requires the total computerization of all activities such as filling up of declaration form, tax assessment, tariff determination, and accounting system, etc through the application of ASYCUDA system. The department has the objective of gradually reducing the manual system in customs administration and, therefore, it is absolutely important to galvanize continued support for the expansion of ASYCUDA system, particularly in the area of networking of computer system between the centre and local offices. This will help improve customs techniques, procedures and valuation system.

Although ASYCUDA project has time constraint, it is essential that it be continued for a few years. Upon completion of the project, it must have built-in feature of sustainability in future. The tax authorities are of the view that the Department of Inland Revenue should develop some kind of linkage with ASYCUDA. The development of inland revenue suggests that technical assistance must have wider coverage to include maintenance of IT. Infrastructure development is also required especially for the maintenance of IT. VAT is a priority that must be made perfect by resolving existing

problems such as under-invoicing, non-issuance of bill, education of the taxpayers, and enforcement of laws. In addition, information campaign should be intensified through opening website, organizing seminars/symposia and training programs, and advertisement in the media.

7.3.2 Developing Human Resources

The development of inland-revenue necessitates manpower development with reference to IT, tax laws, auditing and accounts, and training and observation/study tours for both senior and junior staff. There is urgent need of support for manpower development, especially through providing 1to 6 months' training to junior as well as senior staff within and outside the country. The senior officials should get the opportunity to undergo trainings on audit, tax laws, investigation techniques and international taxation. As for the development of customs, more training is required for customs valuation and there is also need for internationalization of administration through participation in regional and international seminars and enforcement activities. Human resources development is also significant for sustainable quality revenue service which could be possible through improving curricula by the Public Service Commission. A separate entrance examination is highly essential for those aspiring to join the revenue service before the final examination.

7.3.3 System Development through improving Tax Administration

Tax administration can be improved through designing an appropriate organizational structure compatible with the changing circumstances. Priority should be given to technical support for strengthening physical facilities, inclusive of vehicles, photocopy, etc., developing forms and manuals, simplifying procedures, and educating the taxpayers. The system can be improved through developing manuals and work procedures, as well as maintaining archives and macro-films. Organizational support is necessary for logistic support and improving internal monitoring system. The IMF is of the view that DANIDA should focus more on improving revenue administration. The system can also be developed through devising long-term revenue policy.

7.3.4 Improving Tax Laws and Regulations

The Income Tax Act has already been amended. The Department of Customs has given priority to amendment of the laws and regulations that are outdated and conflicting so as to make them compatible with the WTO and SAFTA provisions. The VAT Act also has to adjust the legal provisions made through the annual finance bills.

7.3.5 Improving Institutional and Infrastructure Development

Infrastructure development is also required especially for the maintenance of IT. In this context, the Department of Inland Revenue receives assistance through ITAC project in cooperation with GTZ, to deal with registration, collection and assessment of income tax.

a) Improving Capacity of the Department of Revenue Investigation

The Department of Revenue Investigation has been assigned a crucial role to fight unauthorized trade and control revenue leakages. This department is functioning at a low profile in recent years for it lacks enthusiasm due to its vulnerable status. There is speculation that this organization might come under the direct control of PM office or merge with the Commission for the Investigation of Abuse of Authority (CIAA). Thus, there is an urgent need to clarify the status of the Department of Revenue Investigation.

b) Improving Status of the Revenue Training Center

The Revenue Training Center was established with the purpose of providing training on taxation and auditing as well as disseminating knowledge to the employees under revenue service. In recent years, the status of this center has been relegated to a dumping site for the personnel at the Ministry of Finance (MOF). This kind of organization has great significance for developing excellence of those employed in revenue service. Thus, it is necessary to activate the institution in its fullest capacity. Similarly, the Office of the Comptroller General must be recognized as a separate entity for it deals with the technical area requiring special attention.

c) Strengthening Capacity of the Revenue Advisory Board

The MOF has constituted the Revenue Advisory Board by replacing the Tariff Board in May 2000 with the purpose of providing counseling to the government on various dimensions of taxation, especially devising long-term revenue policy, and thereby, improving the tax system. Although the Revenue Advisory Board is not a statutory body, it has a great bearing on the development of tax policy in Nepal. The Revenue Division at MOF is also the secretariat of the Revenue Advisory Board and it should be strengthened by making it well equipped for policy design, implementation, and research on fiscal issues.

d) Need for a Permanent Local Authority Fiscal Commission

The government has set up the Local Authority Fiscal Commission (LAFC) at the Ministry of Local Development (MLD) with the specific objective of improving the local tax system by standardizing and maintaining uniformity in the format, improving the audit system and developing appropriate norms for revenue sharing between the center and local authorities. Therefore, the status of LAFC must be strengthened in conformity with the principles of fiscal decentralization in Nepal (Local Authority Fiscal Commission, 2000).

7.3.6 Providing Autonomy to Revenue Administration

Moreover, tax administration can be made efficient by providing autonomy and security for revenue service with dignified incentive structure. Although it is essentially a challenging proposition to establish an independent revenue administration in a developing economy like Nepal, this would be a pioneering effort towards the emergence of a dynamic tax administration.

7.3.7 Updating of Land Records

The Department of Land Revenue suffers from the lack of records of entitlement, transfer, and division of land, whereas the VDCs and the municipalities have no record of land ownership and database for revenue collection. Although family disputes are attributed to property in Nepal, land is not only a perennial source of resources, power, and status, but also people have a great sentimental attachment to it. Land has high credit rating and is accepted as effective collateral for borrowing from the banking sector.

Unfortunately, the government has no consolidated records of property, inclusive of land and house, of an individual or family within the Kingdom of Nepal. The Department of Land Revenue should launch a fresh scientific land survey in order to prepare consolidated records of land.

7.3.8 Fiscal Decentralization and Improving Capacity of Local Authorities

The government has attached great importance to fiscal decentralization in recent years. In this context, the LSGA 1999 grants full authority to the local bodies to mobilize revenues from various given sources of taxes (LSGA 2000). However, the existing capability of the local authorities is extremely limited with regard to effectively mobilizing revenue from these tax headings. Voluntary compliance is very low, especially in the case of land tax. A crude assessment reflects that revenue collection has been less than 50 percent in majority VDCs and municipalities due to absence of any punitive measures for non-compliance.

Considering the spirit of fiscal decentralization and of LSGA 1999 Article 60, 135, and 232, the local authorities are entitled to perform the function of auditing for their income and expenditure. This is most challenging as their capacity is low. In this context, the local authorities are required to: (a) improve capacity of revenue administration by employing efficient staff and providing them appropriate in-service training, (b) improve capacity of internal auditors to manage the audit function through qualified staff by providing them appropriate training, (c) develop a sound database for land ownership and revenue collection from different sources as specified in the LSGA 1999, and (d) establish either a separate revenue section or form it jointly with account section.

7.3.9 The Role of the Private Sector

The donors, government and the private sector should work in tandem to expedite efforts for improving the tax system in Nepal. Since the capacity of both national and local taxation authorities are limited to effective mobilization of resources, the priority of the government should be to improve the efficiency of revenue administration. The prime stakeholders such as FNCCI and the Chambers of Commerce can play a significant role in developing a sound taxation policy and formulate an appropriate strategy to eliminate

arbitrary assessment of taxation, which has not only distorted the tax system but the people have also lost confidence that taxation is the function of economic development.

7.4 EFFORTS TOWARD REFORMS IN TAXATION

The tax system is said to be perfect and successful only when additional revenue is mobilized without creating excess burden to the taxpayers with no change in the tax rates and legal base and with modest discretionary changes attributed to improving efficiency in tax administration. The tax system in Nepal calls for a periodic reforms to ensure growth, equity and stability. The studies and reports on taxation exhibit that several reforms have had been undertaken in the past at the initiation of the government to simplify and modernize the tax system (George E. Lent, 1973; Y. P. Pant, 1973; A. Prem Chand, 1985; B. Khatri, 1991; Emil M. Sunley, 1993; Madan K. Dahal, 1995). These reforms were confined to improving tax structure by designing appropriate policy instruments. The reforms in taxation in Nepal consist of three types: (1) reforms in tax laws and regulations (2) reforms in environment and (3) reforms in tax administration.

Recently, the Committee on 'VAT Multi-rates' constituted by MOF/GON recommended four rates viz., 0 percent, 1 percent, 4 percent and 13 percent respectively, in addition to exemptions, for implementation, which would help restrain unauthorized trade between Nepal and India and encourage imports through official channel, and mobilize additional resources by expanding base of VAT with adjustment to tax rates under four categories. Under the assumption that base of VAT would increase by 40 percent due to application of multiple rates, the report estimates that revenue from VAT would increase by 24 percent, Income tax by 2.4 percent and Customs Duties to increase by 40 percent higher the existing size (Dahal et. al, 2008). However, this requires strengthening administrative and human resources capacity, improving capacity of IT to handle new software and develop networking effectively among Internal Revenue Offices throughout the country, and adjusting to rules and regulations as per requirements. The major problems facing Nepal's tax system is how to identify the taxpayers and bring them into tax-net.

DANIDA facilitated technical assistance for the implementation of VAT in February 1997 and took over the VAT project in September 1997. The Department of Internal Revenue implemented Income Tax Administration Consolidation (ITAC) project with the technical assistance of GTZ in 1997. The Automated System for Customs Data and Accounts (ASYCUDA) project was introduced to the Department of Customs in cooperation with UNCTAD in 1994 (Dahal, 2004).

The Tenth Plan envisaged that "tax base will be broadened for bringing effectiveness in revenue mobilization through structural and income tax reforms system. The value added tax will be developed as the main base of internal revenue and its yield will be extended. Custom tariffs will be further simplified. Administrative and legal reforms will be carried out to make tax administration simple, transparent and clean". Non-tax revenue will be increased through timely reforms on dividend system concerning dividend to be received from telecommunication, electricity and drinking water sector through the cost-based pricing and from other sectors as well. A permanent revenue board will be providing quick understanding on prevailing situation of the economy and for making institutional arrangement to assist in decision makings concerning steps to be taken immediately regarding government finance. Revenue tribunal will be made active to make quick settlement of tax cases for reducing the tax arrears. Permanent structure of the revenue police will be established to replace revenue patrolling made active to check revenue leakage. Different awareness and promotional programs will be launched for bringing into tax-net to the possible tax payers having liability to pay tax but not incorporated into the tax-net. "Institutional development of the Revenue Counseling Committee and its effectiveness will be emphasized to enhance participation of the private sector on revenue policy formulation, execution, monitoring and evaluation" (Tenth Plan, 2002). A generic guideline for general as well as specific reforms in taxation has been given below:

General Reform: There is need to devise an appropriate method for revenue forecasting inclusive of external borrowing, which will help bridging the widening gap between estimated and actual revenue mobilization. The Revenue Consultative Committee (RCC) at MOF/GON must be replaced by a high-powered "Revenue Board" with legal status.

The government should introduce performance budgeting or zero-based budgeting to selective projects under key ministries, and establish "Efficiency Unit" under each key ministry to make supervision and monitoring system more vibrant so that revenue leakages could be effectively checked. It is imperative to improve efficiency of civil servants by providing them exposure to budgetary innovations and dignified package of incentives based on performance.

Policy Reforms: It is necessary to improve responsiveness and productivity of tax yields by widening the legal bases of value added tax (VAT), income tax, and excise duties, and streamlining the tax rates and tax slabs with respect to these taxes in conformity with principles of liberalization. It is important to minimize the long list of exemptions provided under VAT considering country requirements. There is need to abandon conventional practice or method of providing tax rebates, exemptions and concessions through sectoral-laws and regulations, cabinet decisions and circulars frequently issued by MOF. It is vital to improve culture among tax personnel towards developing taxpayer-friendly behavior and strengthen revenue services to utilize best brains by MOF and provide exposure to civil servants for improving their competence and developing professionalism.

The government must make efforts to increase taxpayers' voluntary compliance by strengthening "self-assessment" system more effectively to mobilize revenues from income tax and VAT on a greater quantum. This requires imparting education to taxpayers through organizing deliberations, interactions and workshops. In order to identify new taxpayers there is need to organize survey of potential income taxpayers each year and deal with delinquency in payment of taxes with effective supervision and monitoring system. Voluntary Disclosure of Income Scheme (VDIS) is one effective strategy to mobilize additional revenue, which would help identifying new taxpayers and expanding base of income tax. The opposition to VDIS (and for that matter opposition to VAT in the beginning of implementation in 1997) by private sector seems to be politically motivated. The VDIS provides a golden opportunity to entrepreneurs to surface themselves as bona-fide taxpayers by voluntarily declaring income and pay 10 percent tax and continue to undertake economic activities authoritatively. However, VDIS must be linked with earmarking of taxation in providing public goods.

Legislative Reform: In Nepal VAT was enforced in 1997 comprising a wide range of business with a threshold of Rs. 2 millions. New Income Tax Act was enacted in 2000 covering global income into the tax-net. New Excise Law was introduced in 2001 covering domestically manufactured and imported excisable goods and services. Customs Act was amended to introduce the General Agreement on Tariffs and Trade valuation system.

Institutional Reform: VAT Department and Income Tax Department were merged into Internal Revenue Department. Twenty one district level frontline offices were established to administer the VAT, income tax, and excise duty. A Large Taxpayer Office (LTO) was established in 2005 to administer the state-owned public enterprises, banks, finance company, and big business houses whose annual turnover exceeds 150 millions. There is proposal to establish a separate Excise Department to make excise administration more effective. A preliminary study was conducted to change current Internal Revenue Department into an autonomous body, namely, Revenue Authority Board. The Revenue Consultative Committee (RCC), earlier known as 'National Tariff Board', a think-tank organization of the government to look at fiscal affairs, was formed to solicit advice on fiscal policy in 2003. Rigorous training programs are being conducted by Revenue Training Center to make employees more capable and professional. VAT system was computerized and income tax system is under way to be fully computerized.

Process and procedure are being rationalized; manuals, returns, formats, and enclosures are being simplified. Taxpayer education program is highly focused by the government through different interaction programs, public notice in National Daily, Website and home page design, consumer awareness programs through Lottery provision in VAT billing. Taxpayers' Charter and grievance handling system in tax administration was introduced. The annual budget proposed to conduct feasibility study to introduce e-filing.

The Government intends to continue, and build on, these initiatives, by implementing the recommendations of the Fiscal Reform Taskforce, particularly by reducing exemptions and widening the tax base, strengthening tax administration and making it autonomous, periodically revising customs valuations, and making arrangements to reduce existing tax arrears. The ASYCUDA system has been introduced to a fourth customs entry point

recently and now covers the bulk of imports. To discourage tax evasion, a special Enforcement Task Force has been established. The income tax regime has been converted fully into a self assessment/self-reporting system, backed up by selective audit on the basis of risk assessment.

It is necessary to introduce presumptive tax on small retail business. The Department of Internal Revenue must frequently organize survey of potential taxpayers and prepare fully computerized roster of new taxpayers. Capital gain tax, inheritance tax, and gift tax can be implemented after merging these taxes into integrated property tax with advanced stage of economic development. There is need to strengthen tax administration by introducing 15 percent commission on tax collection in excess of target to tax officials in addition to salary and eliminate all kinds of kick-backs and fringe benefits available directly or indirectly to them. Discretionary powers of tax officials to assess taxable income must be abolished and special court should be established to punish corrupt officials and taxpayers, if proved guilty. Delinquency of tax payment must be dealt with stringently through strengthening revenue tribunal. 'Self-assessment' system must be strengthened with adequate supporting documents especially audit report certified by authorized CA.

Since VAT is a prime source of revenue it can be increased from 13 percent to 15 percent flat rate for specific luxurious items with adjustment to income tax lowering down to 20 percent for corporate taxation and a maximum 15 percent for personal income tax. In Sri Lanka, tax on remuneration is exempted; Income tax is exempted to encourage investment in Gulf countries, and import duties are fully exempted in some other countries. In US, there is no VAT but sales tax, which is still in operation successfully. Nepal government must devise mechanism to chase the offenders who are not within the jurisdiction of taxation after operating business or industrial enterprises and services sufficiently to earn income from their transactions. This could be possible through organizing annually survey of taxpayers. It is also necessary to develop and expand networking of computer system to maintain and update the record of taxpayers, and get consolidated information about the collection of taxes from various district offices.

There is need to mobilize revenues through improving efficiency of tax administration with more transparency and simplicity. Tax assessment procedure is cumbersome that

makes payment delayed, which gives rise to scope for negotiation between taxpayers and tax officials to determine the size of revenue for particular year. And also the government and policy makers should increase confidence of the people in them about effective utilization of resources through restraining corruption, and minimizing discretionary powers of tax officials ensuring that payment made by taxpayers would fully flow to treasury. There is apprehension that out of total tax payment only around 50% reaching treasury and rest of the amount missing somewhere between the taxpayer and the tax official.

It is often argued that tax administration is inefficient, indifferent and corrupt in developing economies, and so in Nepal. Under the circumstances, the taxpayers often attempt to escape from taxation through the process of exchange and production. This has given impetus to corruption for making Nepal a tax haven attributing to strong nexus between taxpayers and the agents of government. In Nepal tax payment is not a responsibility but an obligation to gratify bureaucracy and politicians for ensuring spillover kick-backs and fringe benefits derived from undertaking unsanctioned economic activities.

Imports are under reported at customs points; many individuals and firms with relatively big transactions are not yet registered in VAT; Income tax never settled in time and the tax deducted at source (TDS) by various organizations not regularly submitted to treasury; business houses and enterprises including private schools, contractors, and professionals earning huge income and profits with taxable income manipulate and minimize their turnover and income with the help of auditors assigned to them by OAG to evade tax; Many potential taxpayers are either not recorded in tax office or absconding to declare income under VDIS occasionally implemented by the government; House rent tax is seldom collected in metropolis; Property tax is paid only during sale and purchase of property comprising land and buildings; Tax on interest is confined to savings and fixed deposits in banks; And tax collection from utilities is not encouraging. Entire gamut of tax collection procedure suffers from corruption and delinquency.

In addition, the strength of tax system is weakened by existence of large number of tax shelters provisioned by government with respect to customs duties, VAT, income tax and

other prevailing taxes. The problem of diminishing administrative efficiency and increasing delinquency is widening and becoming acute in recent years. Moreover, the success of any tax system depends on political will and determination of the government to effectively implement tax policies and ability to collect taxes both at the center and local levels. The existence of democratic, strong, far sighted and pro-active government is pre-condition to efficient tax administration for mobilizing revenue on a greater scale by combating delinquency. Transparency, simplicity and moderately low tax rates are antidotes to corruption in taxation. Finally, government of Nepal must work in tandem with private sector ensuring investment-friendly environment to attract FDI in joint ventures by providing relatively a competitive package of tax incentives for diversifying investment to developing regions from across the globe.

7.5. POLICY PERSPECTIVES

Taxation is the only practical means of raising the revenue to finance government spending on the goods and services. Setting up an efficient and fair tax system is, however, far from simple, particularly for developing and vulnerable economies like Nepal. The ideal tax system should raise essential revenue without excessive government borrowing, and should do so without discouraging economic activity and without deviating too much from tax systems in other countries (Tanzi and Zee, 2001).

Developing and poor economies face formidable challenges while developing efficient tax systems for two reasons: most workers are typically employed in agriculture or in small, informal enterprises. As they are seldom paid a regular, fixed wage, their earnings fluctuate, and many are paid in cash, "off the books." The base for an income tax is therefore hard to calculate. Nor do workers in these countries typically spend their earnings in large stores that keep accurate records of sales and inventories. As a result, modern means of raising revenue, such as income taxes and consumer taxes, play a diminished role, and the possibility that the government will achieve high tax levels is virtually excluded. Similarly, it is difficult to improve efficiency of tax administration without well-educated and well-trained staff, when there is lack of dignified package of incentives (salary and fringe benefits) provided to tax officials and to computerize the operation, and when taxpayers have limited ability to keep accounts. Tax offices have

constraints in generating reliable statistics due to the informal structure of the economy and financial limitations. Lack of data prevents policymakers from assessing the potential impact of major changes to the tax system. As a result, marginal changes are often preferred over major structural changes, even when the latter are clearly preferable. In addition, income tends to be unevenly distributed in developing countries and so in Nepal. Although raising high tax revenues in this situation ideally calls for the rich to be taxed more heavily than the poor, the economic and political power of rich taxpayers often allows them to prevent fiscal reforms that would increase their tax burdens. This explains in part why many developing countries have not fully exploited personal income and property taxes and why their tax systems rarely achieve required level of progressivity

7.5.1 Level of Tax Revenue

What level of public spending is desirable at a given level of national income? Once this is decided, level of tax revenue should be determined. Unfortunately, the vast literature on optimal tax theory provides little practical guidance on how to integrate the optimal level of tax revenue with the optimal level of government expenditure. The statistical approach has no theoretical basis and does not indicate the "optimal" tax level for any country. The most recent data show that the tax level in major industrialized countries is about double the tax level in a representative sample of developing countries (38 percent of GDP compared with 18 percent). In this context, it is also necessary to be specific about the burden of taxation - whether it is high or low in Nepal.

The studies exhibit that tax burden in Nepal is high considering per capita burden approach, and it is low employing elasticity criterion. Tax burden is relatively higher when compared with the economies having higher per capita income. However, tax burden is low since elasticity coefficient for overall taxation in Nepal is found to be below unity. Therefore, there is scope for raising tax to GDP ratio depending on the economic situation of the country. The tax to GDP ratio is bound to increase with the rise in the level of economy from a low income to middle and high level income. Economic development will often generate additional needs for tax revenue to finance a rise in public spending, but at the same time it increases the countries' ability to raise revenue to

meet these needs. More important than the level of taxation per se is how revenue is used. Given the complexity of the development process, it is doubtful that the concept of an optimal level of taxation robustly linked to different stages of economic development could ever be meaningfully derived for any country.

7.5.2 Composition of Tax Revenue

The issues are mainly concerned with taxation of income versus consumption and taxation of imports versus the taxation of domestic consumption. Both efficiency and equity aspects are important elements in the analysis of taxation. The conventional belief that taxing income entails a higher welfare (efficiency) cost than taxing consumption is based in part on the fact that income tax, which contains elements of both a labor tax and a capital tax, reduces the taxpayer's ability to save. The choice between taxing income and taxing consumption involves their relative impact on equity. Taxing consumption has traditionally been thought to be inherently more regressive than taxing income. Theoretical and practical considerations suggest that the equity concerns about the traditional form of taxing consumption are probably overstated and that, for developing countries, attempts to address these concerns by such initiatives as graduated consumption taxes would be ineffective and administratively impractical.

“With regard to taxes on imports, lowering these taxes will lead to more competition from foreign enterprises. While reducing protection of domestic industries from this foreign competition is an inevitable consequence, or even the objective, of a trade liberalization program, reduced budgetary revenue would be an unwelcome by-product of the program. Feasible compensatory revenue measures under the circumstances almost always involve increasing domestic consumption taxes. Rarely would increasing income taxes be considered a viable option on the grounds of both policy and administration, because their revenue yield is less certain and less timely than that from consumption tax changes (Tanzi and Zee, 2001)”.

Data from advanced economies reveal that the ratio of income to consumption taxes has consistently remained more than double the ratio in developing countries. The data have also shown a notable difference in the ratio of corporate income tax to personal income tax. Industrial countries raise about four times as much from personal income tax than

from corporate income tax. Differences between the two country groups in wage income, in the sophistication of the tax administration, and in the political power of the richest segment of the population are the primary contributors to this disparity. On the other hand, revenue from trade taxes is significantly higher in developing countries than in industrial countries. International comparison exhibits that economic development tends to lead to a relative shift in the composition of revenue from consumption to personal income taxes.

7.5.3 Selecting the Right Tax System

In developing economies where market forces are increasingly important in allocating resources, the design of the tax system should be as neutral as possible so as to minimize interference in the allocation process. This is also true to the context of Nepal. The tax system should be simple and transparent with easy administrative procedures.

7.5.3.1 Income Tax

In Nepal, the number of income taxpayers (especially at the highest marginal rate) is small. The rate structure of the personal income tax is the most visible policy instrument available to underscore their commitment to social justice and hence to gain political support for their policies. It is good to attach great importance to maintaining some degree of nominal progressivity in income tax through applying various slabs and tax rate brackets. However, too many tax shelters would to tax evasion and corruption.

More often the effectiveness of rate progressivity is severely undercut by high personal exemptions and the plethora of other exemptions and deductions that benefit those with high incomes (for example, the exemption of capital gains from tax, generous deductions for medical and educational expenses, the low taxation of financial income). Tax relief through deductions is particularly severely erodes tax base because these deductions typically increase in the higher tax brackets. Experiences suggest that effective rate progressivity could be improved by reducing the degree of nominal rate progressivity and the number of brackets and reducing exemptions and deductions. Indeed, any reasonable equity objective would require no more than a few nominal rate brackets in the personal income tax structure. If political constraints prevent a meaningful

restructuring of rates, a substantial improvement in equity could still be achieved by replacing deductions with tax credits, which could deliver the same benefits to taxpayers in all tax brackets. In some countries the top marginal personal income tax rate exceeds the corporate income tax by a significant margin, providing strong incentives for taxpayers to choose the corporate form of doing business for purely tax reasons. Professionals and small entrepreneurs can easily siphon off profits through expense deductions over time and escape the highest personal income tax permanently. A tax delayed is a tax evaded. Good tax policy, therefore, ensures that the top marginal personal income tax rate does not differ materially from the corporate income tax rate.

In addition to the problem of exemptions and deductions tending to narrow the tax base and to negate effective progressivity, the personal income tax structure in many developing countries is riddled with serious violations of the two basic principles of good tax policy: symmetry and inclusiveness. The symmetry principle refers to the identical treatment for tax purposes of gains and losses of any given source of income. If the gains are taxable, then the losses should be deductible. The inclusiveness principle relates to capturing an income stream in the tax net at some point along the path of that stream. For example, if a payment is exempt from tax for a payee, then it should not be a deductible expense for the payer. Violating these principles generally leads to distortions and inequities. The tax treatment of financial income is problematic in all countries. Two issues dealing with the taxation of interest and dividends in developing countries are relevant:

(a) Interest income, if taxed at all, is taxed as a final withholding tax at a rate substantially below both the top marginal personal and corporate income tax rate. For taxpayers with mainly wage income, this is an acceptable compromise between theoretical correctness and practical feasibility. For those with business income, however, the low tax rate on interest income coupled with full deductibility of interest expenditure implies that significant tax savings could be realized through fairly straightforward arbitrage transactions. Hence it is important to target carefully the application of final withholding on interest income: final withholding should not be applied if the taxpayer has business income.

(b) The tax treatment of dividends raises the well-known double taxation issue. For administrative simplicity, most developing countries would be well advised either to exempt dividends from the personal income tax altogether, or to tax them at a relatively low rate, perhaps through a final withholding tax at the same rate as that imposed on interest income.

Tax policy issues relating to corporate income tax are numerous and complex, but particularly relevant are the issues of multiple rates based on sectoral differentiation and the incoherent design of the depreciation system. The developing and poor economies are more prone to having multiple rates along sectoral lines than industrial countries, possibly as a legacy of past economic regimes that emphasized the state's role in resource allocation. Such practices, however, are clearly detrimental to the proper functioning of market forces. They are indefensible if a government's commitment to a market economy is real. Unifying multiple corporate income tax rates should thus be a priority. Allowable depreciation of physical assets for tax purposes is an important structural element in determining the cost of capital and the profitability of investment.

7.5.3.2 Value-Added Tax, Excises, and Import Tariffs

VAT is a prime source of revenue in Nepal’s tax structure. However, it frequently suffers from being incomplete in one aspect or another. Many important sectors, most notably services and the wholesale and retail sectors, have been left out of the VAT net, or the credit mechanism is excessively restrictive, especially when it comes to capital goods. As these features allow a substantial degree of cascading (increasing the tax burden for the final user), they reduce the benefits from introducing the VAT in the first place. Rectifying such limitations in the VAT design and administration should be given priority in Nepal.

Many developed (OECD countries) as well as developing economies have adopted multiple VAT rates. Multiple rates are politically attractive because they ostensibly—though not necessarily effectively—serve an equity objective, but the administrative price for addressing equity concerns through multiple VAT rates may be higher in developing than in industrial countries. The cost of a multiple-rate system should be carefully scrutinized. In Nepal multiple VAT rates are essential to encounter trade

deflection due to open border with India, which would also be instrumental in mobilizing revenues on a greater scale (Dahal, 2008). As a member country Nepal has to comply with binding principles of WTO, SAFTA and BIMSTEC that rates for customs duties have to be lowered down to between 0 and 5 percent within 2012. This will, subsequently, lead to decline in the magnitude of revenue to be received from customs duties. The expected loss from the revenue from customs duties could be off-set and compensated through mobilizing revenue from VAT. Therefore, VAT is a premier impost under indirect tax and it is a cornerstone for internal revenue mobilization in future.

The most notable shortcoming of the excise systems is their inappropriately broad coverage of products—often for revenue reasons. As is well known, the economic rationale for imposing excises is very different from that for imposing a general consumption tax. While the latter should be broadly based to maximize revenue with minimum distortion, the former should be highly selective, narrowly targeting a few goods mainly on the grounds that their consumption entails negative externalities on society. The goods typically deemed to be excisable (tobacco, alcohol, petroleum products, and motor vehicles, for example) are few and usually inelastic in demand. A good excise system is invariably one that generates revenue from a narrow base and with relatively low administrative costs.

Reducing import tariffs as part of an overall program of trade liberalization is a major policy challenge currently facing Nepalese economy. Tariff reduction should not lead to unintended changes in the relative rates of effective protection across sectors. Nominal tariff reductions are likely to entail short-term revenue loss. This loss can be avoided through a clear-cut strategy in which separate compensatory measures are considered in sequence: first reducing the scope of tariff exemptions in the existing system, then compensating for the tariff reductions on excisable imports by a commensurate increase in their excise rates, and finally adjusting the rate of the general consumption tax to meet remaining revenue needs.

As developing countries have envisaged the plan to integrate domestic economy into global economies to reap and maximize benefits from globalization in the long run,

liberalization in foreign trade is an essential instrument to spur economic growth. Liberalization of foreign trade entails removal or lowering down of tariff and non-tariff barriers. The potential loss of revenue from tariff reform is often offset by expanding base through eliminating exemptions, deduction and exonerations. The size of trade is likely to be compressed when the trade regime is very restrictive because of high tariff rates. Fiscal problem will arise when trade restrictions fall below revenue maximizing level of around 15 percent. The extent of loss of revenue from imports due to trade liberalization depends on the level of trade restriction index (trade tax revenues/trade volumes), which could be expressed as follows:

Trade tax revenues = tariff rate X tariff base
Here, the tariff base is trade values,
So: Trade tax revenues = tariff rate X trade values
Rearranging gives the index of trade restriction:
Tariff rate = trade tax revenues/trade values

This gives an idea of "realized" tariff: the measure is based on how much tariff revenue is actually collected. Experiences suggest that early liberalization in trade could yield substantial amount of revenue, which is likely to conspicuously decline at a later stage and pose threat to macroeconomic stability. Implementation of WTO, ASEAN, SAFTA, BIMSTEC arrangements calls for adjusting tariff and non-tariff barriers to downward direction resulting in revenue loss in member countries. Therefore, the prime challenge for developing economies is how to offset expected loss of revenues and maintain fiscal stability during and after trade liberalization to sustain desirable growth and reducing the extent of poverty in conformity with the spirit of millennium development goals. The effects of trade liberalization on revenue are diverged, which could be classified as follows:

(a) Replace non-tariff barriers with tariffs Positive
(b) Eliminate tariff exemptions and subsidies Positive
(c) Reduce tariff dispersions Neutral/Positive
(d) Eliminate state trading monopolies Neutral/Positive
(e) Reduce high average tariffs Ambiguous

(f) Reduce medium or low average tariffs Negative

(g) Lower maximum tariffs Ambiguous

(h) Eliminate export taxes Neutral/Negative

(i) Initial exchange rate depreciation Neutral/positive

However, the dimension of effects of trade liberalization on revenues may vary depending on the status of trade restriction index and capacity of the economy to mobilize revenue without distorting the economy and with no excess burden. However, with the induction of liberalization and economic reforms there is no choice for small economies like Nepal but to maintain a balance between fiscal reform and trade liberalization to compensate expected loss of revenue by raising built-in flexibility coefficient to the level greater than 2 and improving efficiency in tax administration (Dahal, 2006).

7.5.3.3 Tax Incentives

While granting tax incentives to promote investment is common around the world, evidence suggests that their effectiveness in attracting incremental investments—above and beyond the level that would have been reached had no incentives been granted—is often questionable. As tax incentives can be abused by existing enterprises disguised as new ones through nominal reorganization, their revenue costs can be high. Moreover, foreign investors, the primary target of most tax incentives, base their decision to enter a country on a whole host of factors (such as natural resources, political stability, transparent regulatory systems, infrastructure, a skilled workforce), of which tax incentives are frequently far from being the most important one. Tax incentives could also be of questionable value to a foreign investor because the true beneficiary of the incentives may not be the investor, but rather the treasury of his home country.

Tax incentives can be justified if they address some form of market failure, most notably those involving externalities. For example, incentives targeted to promote high-technology industries that promise to confer significant positive externalities on the rest of the economy are usually legitimate. By far the most compelling case for granting targeted incentives is for meeting regional development needs of these countries.

Nevertheless, not all incentives are equally suited for achieving such objectives and some are less cost-effective than others. Unfortunately, the most prevalent forms of incentives found to be the least meritorious. Incentives are also required during recession. To address recession there are two options: either to increase public spending to sustain aggregate demand or, alternatively, provide incentives to investors by lowering down tax rates and increasing personal and business exemptions and deductions.

Of all the forms of tax incentives, tax holidays are the most popular among developing countries. Although it is simple to administer, tax holidays contain numerous shortcomings. Tax holidays tend to benefit an investor who expects high profits and would have made the investment even if this incentive were not offered. Tax holidays provide a strong incentive for tax avoidance, as taxed enterprises can enter into economic relationships with exempt ones to shift their profits through transfer pricing. Time-bound tax holidays tend to attract short-run projects, which are typically not so beneficial to the economy as longer-term ones. The revenue cost of the tax holidays to the budget is seldom transparent, unless enterprises enjoying the holiday are required to file tax forms.

Compared with tax holidays, tax credits and investment allowances have tremendous advantages. They are much better targeted than tax holidays for promoting particular types of investment and their revenue cost is much more transparent and easier to control. A simple and effective way of administering a tax credit system is to determine the amount of the credit to a qualified enterprise and to "deposit" this amount into a special tax account in the form of a bookkeeping entry. A system of investment allowances could be administered in much the same way as tax credits, achieving similar results. There are weaknesses associated with tax credits and investment allowances. These incentives tend to distort choice in favor of short-lived capital assets since further credit or allowance becomes available each time an asset is replaced and qualified enterprises may attempt to abuse the system by selling and purchasing the same assets to claim multiple credits or allowances or by acting as a purchasing agent for enterprises not qualified to receive the incentive.

Providing tax incentives in the form of accelerated depreciation has the least of the shortcomings associated with tax holidays and all of the virtues of tax credits and

investment allowances—and overcomes the latter's weakness to boot. Since merely accelerating the depreciation of an asset does not increase the depreciation of the asset beyond its original cost, little distortion in favor of short-term assets is generated. While investment subsidies have the advantage of easy targeting, they are generally quite problematic. They involve out-of-pocket expenditure by the government up front and they benefit nonviable investments as much as profitable ones. Hence, the use of investment subsidies is seldom advisable. Indirect tax incentives, such as exempting raw materials and capital goods from the VAT, are prone to abuse and are of doubtful utility. Exempting from import tariffs raw materials and capital goods used to produce exports are somewhat more justifiable. The mechanism by which tax incentives can be triggered can be either automatic or discretionary.

The cost-effectiveness of providing tax incentives to promote investment is generally questionable. The best strategy for sustained investment promotion is to provide a stable and transparent legal and regulatory framework and to put in place a tax system in line with international norms. Some objectives, such as those that encourage regional development, are more justifiable than others as a basis for granting tax incentives. Not all tax incentives are equally effective. Accelerated depreciation has the most comparative merits, followed by investment allowances or tax credits. Tax holidays and investment subsidies are among the least meritorious. As a general rule, indirect tax incentives should be avoided, and discretion in granting incentives should be minimized.

A developing economy like Nepal attempting to become fully integrated in the world economy will probably need a higher tax level if they are to pursue a government role closer to that of industrial countries, which, on average, enjoy twice the tax revenue. There is need to reduce sharply their reliance on foreign trade taxes, without at the same time creating economic disincentives, especially in raising more revenue from personal income tax. To meet these challenges, policymakers in these countries will have to get their policy priorities right and have the political will to implement the necessary reforms. Tax administrations must be strengthened to accompany the needed policy changes.

As trade barriers come down and capital becomes more mobile, the formulation of sound tax policy poses significant challenges for developing countries. The need to replace foreign trade taxes with domestic taxes will be accompanied by growing concerns about profit diversion by foreign investors, which weak provisions against tax abuse in the tax laws as well as inadequate technical training of tax auditors in many developing countries are currently unable to deter. A concerted effort to eliminate these deficiencies is therefore of the utmost urgency.

Tax competition is another policy challenge in a world of liberalized capital movement. The effectiveness of tax incentives—in the absence of other necessary fundamentals—is highly questionable. A tax system that is riddled with such incentives will inevitably provide fertile grounds for rent-seeking activities. To allow their emerging markets to take proper root, developing countries would be well advised to refrain from reliance on poorly targeted tax incentives as the main vehicle for investment promotion.

Finally, personal income taxes have been contributing very little to total tax revenue in many developing countries. Apart from structural, policy, and administrative considerations, the ease with which income received by individuals can be invested abroad significantly contributes to this outcome. Taxing this income is therefore a daunting challenge for developing countries. This has been particularly problematic in several developing economies that have largely stopped taxing financial income to encourage financial capital to remain in the country.

CHAPTER VIII
FINDINGS, CONCLUSION AND RECOMMENDATIONS

8.1 Summary of the Findings

As Nepal is undergoing the process of economic development, it needs higher government expenditure to meet the proposed development programs. This ultimately creates a resource gap on one hand. On the other, foreign aid, loan and grant as well as domestic borrowing are not considered as permanent solutions to fill the resource gap between expenditure and revenue. In this connection, the share of non-tax revenue is very low. These facts justify the ultimate solution that only by means of taxation that the gap can be bridged. Raising the tax rate is not the sole solution. Therefore, improvement in tax structure is required. Taxation is not only an instrument of obtaining higher revenue, but also the medium to eliminate undesirable effects in the economy as well as the introducer of desirable effects.

The overall trend of revenue from taxation in Nepal shows that the contribution of tax revenue to GDP has been increasing from 6.41 percent in 1975/76 to 11.97 percent in 2001/02 with some steady rates. But this ratio seems to be minimal as asserted by Sir Arthur Lewis that less than 10 percent tax-GDP ratio in UDCs would have to be raised to at least 17 percent in order to satisfy the minimum requirement of a modern state. At the same time, the share of direct tax to GDP increased from 1.4 percent in 1972/73 to 2.5 percent in 2001/02, but the share of indirect tax heightened to 7.7 percent from 3.94 percent during the same period.

In terms of tax revenue ratio, the contribution of direct tax to total tax revenue has continuously declined and indirect taxes have continuously risen. Indirect tax has been exceeding the contribution to the total tax revenue over the period. In the total revenue, the share of total tax revenue has been playing a dominant role over the study period. Though indirect tax is considered regressive in nature, the structure of taxation in Nepal is not justifiable on equity grounds and progressiveness.

In the case of Nepal, if the budget is analyzed, then it is found that the share of development expenditure is decreasing, while the share of regular expenditure is

increasing. The situation has reached a point where Nepal is almost unable to meet even the regular expenditure through internal sources of revenue. The resource gap is increasing every year which has led to wide budget deficit. The problem is how to reduce this resource gap in order to supplement development expenditure.

Regarding elasticity and buoyancy, the elasticity coefficient of almost all taxes is less than unity, that is, inelastic in nature while that of land tax and excise duties have negative elasticity. In fact, the inelastic nature of the tax system in developing countries is an inherent characteristics resulting from heavy reliance on indirect taxes. The import and export duties are based on the pattern of Nepalese people which does not reflect a good scenario because more than 38 percent are below the poverty line. 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. Excise duties would be more responsive to income only when industrialization of the country takes momentum. Therefore, inelasticity of excise duties would be reduced with the growth of industrialization.

This vulnerability of Nepal's tax system in its built-in-flexibility is due to the sluggishness of direct taxes in general and due to negative responsiveness of land tax in particular. The receding share of direct tax is due to exclusion of the agricultural income into the orbit of direct tax net. Land holdings in Nepal are considered as representative of the social status and taxing agricultural income is a political matter rather than economic. In this sense, none of the governments were bold enough to take necessary measures in order to tax agricultural income.

Beside this, the major findings of the study are as follows:

1) Regressed equation of Resource Gap (RGI) known as revenue deficit shows that increased revenue increases resource gap.
2) The amount of (RG1) has increased by more than twofold during the period from FY1991/92 to 2001/02.
3) The average growth rate of (RG1) was 16.7 percent during the period from1966/67 to 2001/02.
4) (RG1) has been increasing during the same period.

5) (RG1) as a percentage of GDP has been declining, particularly during the period 1991/92-2001/02.

6) The regression equation from 1974/75-2001/02 between trade deficit and budget deficit known as Resource Gap (RG2) shows that increase in (RG2) by one unit leads to increase in trade deficit by1.91 units. The budget deficit has had a positive impact on trade deficit in the Nepalese case.

7) Trade deficit has increased by more than twofold in the period 1974/75-2001/02.

8) The average growth rate of (RG2) was 8.1 percent in the period 1966/67-2001/02.

9) RG2 as a percentage of GDP has been declining after 1974/75-2001/02.

10) The amount of Resource Gap known as fiscal deficit (RG3) has increased by approximately four times in the period 1991/92-2001/02.

11) The average growth rate of RG3 was 19.63 percent during the period 1966/67-2001/02.

12) RG3 has been increasing continuously from 1966/67- 2001/02.

13) RG3 as a percentage of GDP has been declining in the period 1974/75-2001/02.

14) In the early 1990s, the share of external loan was about 60 percent. After 1991/92, the proportion of external loan decreased and internal loan increased.

Findings of Analysis of Tax Structure in Nepal consist of:

1. Tax effort ratio

- Nepal's average tax rate during the period under consideration was 9.2 percent, which is approximately threefold less than developed countries like United Kingdom and still half than that of developing countries like Malaysia.

2. Composition and magnitude of tax and non-tax revenues (Major Trends during the period 1963/64-2001/02)

- Average growth rate of total revenue was 16.38 percent in the period

1963/64-2001/02.

- Average growth rate of total tax revenue was 16.51 percent in the same period.
- Average growth rate of non-tax revenue was 15.97 percent in the same period.

3. Contribution of different taxes to total revenue (Average Contribution during the period 1963/64-2001/02)

- Average contribution of total tax revenue to total revenue was 80.30 percent in the period 1963/64-1983/84. On the other hand, the contribution was 78.15 percent in the period 1984/85- 2001/02.
- Average contribution of total tax revenue to total revenue was 78.44 percent during the period 1963/64-2001/02.
- Average growth rate of total tax revenue was 16.51 percent in the period 1963/64- 2001/02.
- Average contribution of total non-tax revenue to total revenue was 16.84 percent in the period 1963/64-1983/84 and 21.85 percent in the period 1984/85-2001/02.
- Average contribution of total non-tax revenue was 15.99 percent in the period 1963/64-2001/02.
- Average growth rate of total non-tax revenue was 15.97 percent in the period 1963/64-2001/02.
- Average contribution of total direct tax to total revenue was 20.68 percent in the period 1963/64-1983/84 and the contribution was 18.01 percent in the period 1984/85-2001/02.
- Average contribution of total direct tax to total revenue was 18.17 percent in the period 1963/64-2001/02.
- Average growth rate of total direct tax was 15.22 percent in the period 1963/64-2001/02.
- Average contribution of total indirect tax to total revenue was 62.30 percent in the period 1963/64-1983/84 and was 61.70 percent in the period 1984/85-2001/02.

- Average contribution of total indirect tax to total revenue was 60.26 percent in the period 1963/64-2001/02.
- Average growth rate of total indirect tax was 17.17 percent in the period 1963/64- 2001/02.
- Average contribution of custom duties to total revenue was 30.92 percent in the period 1963/64-1983/84 and was 26.25 percent in the period 1984/85-2001/02.
- Average contribution of custom duties to total revenue was 26.53 percent in the period 1963/64-2001/02.
- Average growth rate of custom duties was 15.18 percent in the period 1963/64 -2001/02.
- Average contribution of sales tax/VAT to total revenue was 18.60 percent in the period 1963/64-1983/84 and 22.50 percent in the period 1984/85-2001/02.
- Average contribution of sales tax/VAT to total revenue was 22.33 percent in the period 1963/64-2001/02.
- Average growth rate of sales tax/VAT was 24.09 percent in the period 1963/64-2001/02.
- Average contribution of excise duties to total revenue was 11 percent in the period 1963/64-1983/84 and was 8.29 percent in the period in the period 1984/85-2001/02.
- Average contribution of excise duties to total revenue was 8.45 percent in the period 1963/64-2001/02.
- Average growth rate of excise duties was 16.72 percent in the period 1963/64-2001/02.
- Average contribution of income tax to total revenue was 5.60 percent in the period 1963/64-1983/84 and was 11 percent in the period 1984/85-2001/02.
- Average contribution of income tax to total revenue was 12.96 percent in the period 1963/64-2001/02.
- Average growth rate of income tax was 23.47 percent in the period 1963/64-2001/02.

- Average contribution of land tax to total revenue was 6.28 percent in the period 1963/64-1983/84 and was 0.20 percent in the period 1984/85-2001/02.
- Average contribution of land tax to total revenue plummeted to 0.56 percent in the period 1963/64-2001/02.
- Average growth rate of land tax was -9.78 percent in the period 1963/64-2001/02.
- Average growth rate of registration to total revenue was 3.28 percent in the period 1963/64-1983/84 and was 2.97 percent in the period 1984/85-2001/02.
- Contribution of registration to total revenue was 2.99 percent in the period 1963/64-2001/02.
- Average growth rate of registration duty was 16.73 percent in the period 1963/64-2001/02.
- Average growth rate of miscellaneous from 1363/64-2001/02 was 20 percent.

4. Overall Tax Ratios or Tax Levels (1966/67-2001/02)

- Average tax effort ratio was 8.42 percent in the period 1966/67-2001/02.
- Tax effort ratio increased from 4.47 percent in 1966/67 to its utmost level of 11.97 percent in 2001/02.
- Tax effort ratio of non-tax revenue rose from 0.5 percent in 1966/67 to 2.64 percent in 2001/02.
- Under the category of direct taxes, income tax effort ratio was 2 percent, the highest being in 2001/02.
- Similarly, under the category of indirect taxes, custom duties effort ratio scores the highest, which was 3 percent in 2001/02.
- Direct tax effort ratio was 2.5 percent in 2001/02.
- Indirect tax effort ratio was 6.8 percent in 2001/02.

Findings related to Direct and Indirect Taxes

- The amount of indirect taxes was Rs 97.19 million in 1964/65 and rose to

287333 million in 2001/02.

- In 1964/65, indirect tax to total revenue was 50.53 percent and 1.73 percent of GDP. However, in 2001/02, indirect tax to total revenue was 56.96 percent and 6.82 percent of GDP.
- The amount of direct taxes was Rs 53.6 million and rose to 10,597.50 in 2001/02.
- In 1964/65, direct tax to total revenue was 27.90 percent and 0.96 percent of GDP. However, in 2001/02, direct tax to total revenue was 21.01 percent and 2.52 percent of GDP.
- The direct tax and indirect tax ratio was 1:1.81 in 1964/65 and 1:2.71 in 2001/02.

Behavior of Individual Taxes 1966/67-2001/02)

1. Average contribution of custom duties to indirect tax was more than 50 percent during the period 1966/67-2001/02.
2. Average contribution of custom duties to total revenue was 32 percent during the same period.
3. Contribution of custom duties as percentage of GDP was 3.6 percent during the same period.

Excise Duties

1. Average contribution of excise duties to indirect tax was 16.11 percent during the period 1966/67-2001/02.
2. Average contribution of excise duties to total revenue was 9.7 percent during the same period.
3. Average contribution of excise duties to GDP was 0.82 percent during the same period.

Sales Tax/Vat or Purchase Tax

1. Average contribution of sales tax/VAT to indirect tax was 32.2 percent during the period 1966/67-2001/02.
2. Average contribution of sales tax to total revenue was 18.6 percent during the same period.

3. Average contribution of sales tax/VAT as percentage of GDP was 1.66 percent during the same period.

Land Tax

1. Average contribution of land tax to direct tax was 21.47 percent during the period 1966/67-2001/02.
2. Average contribution of land tax to total revenue was 25.25 percent during the same period.
3. Average contribution of land tax to GDP was 0.41 percent during the same period.

Income Tax

1. Average contribution of income tax to direct tax was 46.25 percent during the period 1966/67-2001/02.
2. Average contribution of income tax to total revenue was 8.31 percent during the same period.
3. Average contribution of income tax to GDP was 0.77 percent during the same period.

Registration

1. Average contribution of registration to direct tax, total revenue, and GDP was 18.57 percent, 3.2 percent and 0.28 percent respectively during the period 1966/67-2001/02.

Miscellaneous

1. Average contribution of miscellaneous to direct tax, total revenue, and GDP was 8.2 percent, 1.6 percent, and 0.13 percent respectively during the period 1966/67-2001/02.

Marginal Tax Ratio or Flexibility Coefficient

1. During the period from 1966/67 to 2001/02, the GDP increased in each year except for two years - in 1972/73 and 1976/77.
2. The marginal tax ratio computed by change in total revenue was found to be negative in three years, i.e., 1970/71, 1972/73, and 1976/77. Moreover, the marginal tax ratio was less than the average tax rates in many years.

3. The marginal tax ratio was computed to be -181.84. In that period, GDP declined slightly but the total revenue increased substantially. So the period is regarded as an exceptional situation because either the GDP figure had been wrongly computed or there was something wrong with the tax system.

4. Marginal tax ratio of tax revenue was highest, i.e., 18.55 in the year 2000/01, whereas non-tax revenue showed the highest change in 2001/02 which was 9.83.

5. Marginal tax ratio of income tax was highest with 5.34 percent in 2000/01, whereas registration was highest with 4.74 percent in 2001/01.

6. Under the category of indirect taxes, custom duties had the highest marginal tax ratio with 5.65 in the year 2000/01, whereas the figure for sales tax/VAT was 7.12 in the year 2000/01.

7. Marginal tax ratio of indirect taxes was fairly higher compared to direct taxes.

8. The flexibility coefficient of excise duty remained lowest in most of the period but its highest value exceeded the highest values of other components.

Revenue Productivity and Responsiveness of Taxes

In the Nepalese tax structure, various researchers have found heterogeneous responsiveness of taxes to GDP. From 1974/75 to 1988/89 (Gurugharana, 1993), sales tax and excise duties were most elastic and income tax was less elastic. But IDS findings are that income tax was more elastic for the period from 1974/75 to 1984/85. However, homogeneous response was found in the case of land tax in all studies, i.e., either negative or below unity. According to Dahal(1983), with respect to responsiveness of the tax structure for the period from 1952/53 to 1981/82, all elasticity of the total revenue equals almost unity(1.01), elasticity of direct tax (0.68) and elasticity of tax revenue (0.92) reflecting that the tax system is less responsive to change in income. But in the case of buoyancy coefficients, all are greater than 1.

Estimation of Elasticity Coefficients of various taxes for the period (1968/69 to 1984/85), Pre-liberalization Period, Period (1)

1. Elasticity coefficient for direct tax was 0.276, adj R squared was 0.41.

2. Elasticity coefficient for indirect tax was 0.70, adj R squared was 0.94.

3. Among individual tax heads, elasticity coefficient for land tax was -0.802.

4. Excise duties have registered a negative elasticity.
5. Between total direct tax and indirect tax, indirect tax was found to have a higher coefficient.
6. Under indirect tax category, registration had the highest elasticity which was 0.75.
7. Under the indirect tax category, sales tax elasticity was 1.23 which was the highest.
8. Total revenue, tax revenue and non-tax revenue all registered a higher elasticity during the period from 1968/69 to 1984/85, than the whole period 1968/69 to 2001/02.

Estimation of Elasticity Coefficients of various taxes, 1985/86 to 2001/02. Period (2), Post-liberalization Period

1. Elasticity coefficient of direct tax was 0.61, adj R squared was 0.71.
2. Elasticity coefficient of indirect tax was 0.598, adj R squared was 0.89.
3. Land tax elasticity was negative.
4. Elasticity of total non-tax was 0.79, adj R squared was 0.95.
5. Elasticity of tax revenue was 0.63, adj R squared was 0.93.
6. Elasticity of total revenue was 0.66, adj R squared was 0.96.
7. Under the category of direct tax income, tax elasticity was the highest which was 0.77, adj R squared was 0.89.
8. Under the category of indirect tax, sales tax/VAT elasticity was the highest which was 0.82, adj R squared was 0.45.

Elasticity Coefficients of various taxes, 1968/69to 2001/02, whole period

1. Elasticity of total revenue was 0.64, adj R squared was 0.98.
2. Elasticity coefficient of tax revenue was 0.539, adj R squared was 0.97.
3. Elasticity coefficient of total non-tax revenue was 1.013., adj R squared was 0.98.
4. Elasticity of direct tax was 0.350, adj R squared was 0.83.
5. Elasticity coefficient of indirect tax was 0.583, adj R squared was 0.94.
6. Under the category of indirect tax, elasticity of sales tax/VAT was 0.524 and that of custom duties was 0.519.

7. Under the category of direct tax, elasticity coefficient of land tax was -0.94, which is negative, while elasticity of income tax was 0.644, adj R squared was 0.95. Registration elasticity was also the same as income tax.

8. Elasticity of indirect tax was 0.583, adj R squared was 0.97.

Buoyancy Coefficients for whole period (1968/69- 2001/02)

1. Buoyancy coefficient of total revenue was 1.17, adj R squared was 0.99.

2. Buoyancy coefficient of total tax revenue was 1.14, adj R squared was 0.99.

3. Buoyancy coefficient of non-tax revenue was 1.31, adj R squared was 0.98.

4. Under the direct tax category, land tax was negative while others were buoyant.

5. Similarly, under the indirect tax category, all the components were buoyant.

Buoyancy Coefficients for period (1), (1968/69- 1984/85) (pre-liberalization period)

1. Buoyancy coefficient of total revenue was 1.398, adj R squared was 0.97.

2. Buoyancy coefficient of tax revenue was 1.327, adj R squared was 0.98.

3. Buoyancy coefficient of non-tax revenue was 1.571, adj R squared was 0.96.

4. Under direct tax category, except for land tax which was negative, others were buoyant.

5. Under indirect tax category, all the components were relatively buoyant.

Buoyancy Coefficients for period (2), (1985/86-2001/02) (post-liberalization period)

1. Buoyancy coefficient of total revenue was 1.18, adj R squared was 0.99.

2. Buoyancy coefficient of tax revenue was1.205, adj R squared was 0.99.

3. Buoyancy coefficient of total non-tax revenue was 1.148, adj R squared was 0.98.

4. Under the total direct tax category, the two components were relatively buoyant, except for land tax which was negative.

5. Under the total indirect tax category, except excise duties nearly equaling buoyancy, i.e., at the same level.

6. All buoyancy coefficients were found with greater than unity, excluding excise duties and land tax.

Experience of Nepalese Tax Reform Before Democracy

1. Until the mid-1980s, there were high and multiple tax rates and large exemptions/incentives.

2. Over the period from 1965/66 to 1975/76, on an average, about 40 percent of growth from tax revenue appeared to be due to built-in-response to economic growth and improved tax administration, the remaining 60 percent was contributed by discretionary measures.

3. Nepal adopted stabilization and structural adjustment program (SAP) in 1985. Thus, the main goal of the Nepalese tax system was to reduce fiscal deficits and increase revenue mobilization.

4. After the mid-1980s, some new policies were adopted such as rationalizing tax rates and broadening the tax base to increase the share of direct tax. Tax-GDP ratio had decreased from 7.5 percent in 1980/81 to 7 percent in 1990/91. At the same time, direct and indirect taxes also decreased during the same period.

Experience of Nepalese Tax Reform after Democracy

1. The main features of tax reform after the restoration of democracy in the 1990s was (a) Reduction in the number and level of tax rates, (b) Conversion of specific rates into *ad valorem* rates, (c) Efforts to broaden the tax base, and (d) Changes in the local tax system.

2. After democracy, the tax policy was based on the distinct feature of liberalization, globalization and privatization. The policy stressed the need for deregulating the economy so that the private sector could flourish and contribute to the economic development of the country.

3. The policies revealed a significant improvement in tax structure. Tax-GDP ratio increased from 7.2 percent in 1981/82- 1990/91 to 8.8 percent in 1991/92-2001/02.

4. On the revenue front, emphasis was given to broadening the tax base, rationalization of the tax rate structure, and improving tax administration. The first step in this direction was the implementation of broad-based VAT in 1997.

5. Attempts were made to endorse a more uniform pattern of tax rate structure for achieving the goals of both economic efficiency and vertical equity as similar incomes would face similar tax burden regardless of source.

Issues

Overall problems

1. The Nepalese tax system is circumscribed by serious structural constraints. The major constraints in the tax system are that it lacks simplicity and transparency.
2. With extremely limited tax base, low tax elasticity, relatively higher tax rates, poor voluntary compliance, ineffective tax administration, growing arbitration in tax assessment, rigid and incomprehensive tax laws and regulations, and numerous tax shelters, taxation in Nepal has so far been attributed to negotiation resulting in rampant corruption.
3. Tax avoidance, evasion, delinquency has also increased substantially over the years.
4. This is one of the critical reasons why the number of tax payers as of 1997/98 was 3, 09,605 or just over 1 percent of the total population.
5. The tax administration in Nepal appears to be inefficient, indifferent and corrupt.
6. The major challenges facing Nepal's tax administration are how to identify the tax payers that are still unrecorded and bring them into the tax net, thereby improving voluntary compliance.
7. The tax system suffers from structural constraints with tremendous administrative and procedural complexities envisaged in the existing Income Tax Act that it lacks simplicity and transparency. Taxpayers are often unknown about the specific size of tax they are to comply with, because tax is determined arbitrarily between taxpayers and the tax officials resulting to huge corruption.

Problems of Individual Taxes

The problems of taxation differ with respect to individual taxes.

1. *Ad-hocism*

AD-hocism in tax policy is the main character of the Nepalese fiscal system, for example, under-invoicing and smuggling are the most important problems of the customs administration, while non-issuance of invoice/proper invoices is the basic problem of VAT administration at this stage.

(a) Lack of strong political commitment, administrative capability and recording

system, lack of proper accounting and auditing, indifferent attitudes among the tax officials and weak appeal system have also been hindrances for the proper functioning of the Nepalese tax system.

(b) In absence of a long-term revenue policy, tax measures are adopted annually on an ad hoc basis.

2. Low elasticity but high buoyancy of major taxes

The regression results recorded in above mentioned various tables attest that the overall tax system of Nepal is inelastic. Buoyancy coefficients of major taxes are much higher than their respective elasticities, and this has implications for the high discretionary effects of the government to get more revenue.

3. Limited potentialities of direct taxes

The tax structure of Nepal is not conducive for the elevation of revenue from the direct tax front. The study shows that the contribution of direct taxes has shrunk from 28.1 percent to 11.8 percent which is rather a pessimistic scenario of the Nepalese fiscal system. The situation of income tax is also not satisfactory, i.e., from 10.7 percent in 1966/67 to 80 percent in 2001/02.

4. Negative responsiveness of land tax with higher administrative costs

Regarding the Nepalese tax experience with regard to land tax and agriculture income, land tax has not only a negative elasticity coefficient but also requires higher administrative costs.

5. Tax reform and adjustment to globalization

There has been no significant approach to tax reform in Nepal. These approaches were inclined basically to mobilize revenue through direct taxes, reduce reliance on indirect taxes, rationalize tariff structure, simply improve tax laws and regulations, and adjust them to the new environment compatible with W.T. O. and SAFTA provisions as well as strengthen tax administration.

With the emergence of globalization and regionalism, especially with reference to SAFTA/GATT provisions, tax rates are supposed to be drastically lowered down within

the range between 0.5 and 20 percent. This is a major challenge to Nepal's tax system in the context of resource mobilization, which may decline with the new tax regime and also affect the pace of industrialization in Nepal.

Thus, the existing tax system demands adjustment to new tax laws with stringent measures to check rampant corruption.

6. Challenges to improve tax administration

Urgent efforts towards improving the tax system and administration are required. In this context, the following measures should be adopted.

a) Changing the environment

The government can change the environment by providing education, information and knowledge to the tax payers that may help to increase voluntary compliance.

b) Changing the administration

Computerization of tax administration, motivation of public servants, and possibly, tax farming may be instrumental in changing tax administration.

c) Changing the laws and regulations

The best way to cope with administrative problems is to make legal changes. Tax laws and regulations must be simple and concise. Too many tax shelters, as well as series of exemptions and deductions, must be eliminated as they have not only distorted the tax structure but also led to corruption on a massive scale.

Options

The tax system is said to be perfect and successful only when additional revenue is mobilized without creating excess burden to the taxpayers with no change in the tax rates and legal base and with modest discretionary changes attributed to improving efficiency

in tax administration. The tax system in Nepal calls for a periodic reforms to ensure growth, equity and stability. The reforms can be both general and policy reforms. Towards general reform, There is need to devise an appropriate method for revenue forecasting inclusive of external borrowing, which will help bridging the widening gap between estimated and actual revenue mobilization. It is necessary to improve responsiveness and productivity of tax yields by widening the legal bases of value added tax (VAT), income tax, and excise duties, and streamlining the tax rates and tax slabs with respect to these taxes in conformity with principles of liberalization. It is important to minimize the long list of exemptions provided under VAT considering country requirements. There is need to abandon conventional practice or method of providing tax rebates, exemptions and concessions through sectoral-laws and regulations, cabinet decisions and circulars frequently issued by MOF. It is vital to improve culture among tax personnel towards developing taxpayer-friendly behavior and strengthen revenue services to utilize best brains by MOF and provide exposure to civil servants for improving their competence and developing professionalism. The reforms and improvement to be carried are:

1. Improving Information Technology

Since data arrangements have been relatively poor, it is imperative to develop and expand the networking of database and information system at all levels. This would help estimate forecasting of revenues more authentically as well as monitoring of non-compliance and delinquency of tax payers.

2. Developing Human Resources

The development of Inland Revenue necessitates manpower development with reference to IT, tax laws, auditing and accounting, training and observation/ study tours for both senior and junior staff. Urgent support is required for manpower development, especially through training to junior as well as senior staff within and outside the country. Senior officials should get the opportunity to undergo trainings on audit, tax laws, investigation techniques and international taxation. Human resources development is also significant for sustainable quality revenue service which could be possible through improvement of curricula by the Public Service Commission.

3. System Development Through Improving Tax Administration

The top priority of the Inland Revenue Department should be technical support for strengthening physical facilities inclusive of vehicle, photocopy machine, etc, developing forms and manuals, simplifying procedures, and educating the tax payers besides maintaining archives and macro-films. Logistical supports and internal monitoring system should also be developed.

4. Improving Tax Laws And Regulations

The top priority of the Department of Customs should be amendment of the laws and regulations that are outdated and conflicting so as to make them compatible with WTO and SAFTA provisions.

5. Improving Institutional And Infrastructure Development

Infrastructure development is also required, especially for the maintenance of IT.

a) Strengthening capacity of the Department of Revenue Investigation

The Department of Revenue Investigation has been assigned a crucial role to fight unauthorized trade and control revenue leakages. This department is functioning at a low profile in recent years.

b) Strengthening capacity of the Revenue Training Centre

The Revenue Training Centre was established with the purpose of providing trainings on taxation and auditing as well as disseminating knowledge to the employees in the revenue service. In recent years, the status of this centre has been relegated to a dumping site for the personnel at MOF. This kind of organization has great significance for developing excellence of those in revenue service.

c) Strengthening capacity of the Revenue Advisory Board

The MOF constituted the Revenue Advisory Board by replacing the Tariff Board in May 2000 in order to provide counseling to the government on various

dimensions of taxation, especially devising a long-term revenue policy, and thereby, improving the tax system. The revenue division at MOF is also the secretariat of the Revenue Advisory Board and it should be strengthened by making it well equipped for policy design, implementation, and research on fiscal issues.

d) Need for a permanent Local Authority Fiscal Commission (LAFC)

The government has set up the Local Authority Fiscal Commission at the Ministry of Local Development (MLD) with the specific objective of improving the local tax system by standardizing and maintaining uniformity in that format, improving the auditing system, and developing appropriate norms for revenue sharing between the centre and local authorities.

e) Providing autonomy to revenue administration

Tax administration can be made efficient by providing autonomy and security for the revenue service with a dignified incentive structure. It will be a pioneering effort towards the emergence of a dynamic tax administration.

f) Updating of land records

The Department of Land Revenue suffers from the lack of records of entitlement, transfer and division of land, whereas the VDCs and municipalities have no records of land ownership and database for revenue collection. The department should launch a fresh scientific land survey in order to prepare consolidated records of land.

g) Fiscal decentralization and improving capacity of local authorities

The government has attached great importance to fiscal decentralization in recent years. In this context, the LSGA (1999) grants full authority to the local bodies to mobilize revenues from various given sources of taxes.

In this context, the local authorities are required to (a) improve capacity of revenue administration by employing efficient staff and providing them appropriate in-service

training, (b) improve capacity of internal auditors by providing them appropriate training, (c) develop a sound database for land ownership and revenue collection from different sources, and (d) establish a separate revenue section.

6. THE ROLE OF THE PRIVATE SECTOR

The donors, government and the private sector should work in tandem to expedite the efforts towards improving the tax system in Nepal. The prime stakeholders such as FNCCI and the Chambers of Commerce can play a significant role in developing a sound taxation policy and formulating an appropriate strategy to eliminate arbitrary assessment of taxation, which has not only distorted the tax system but the people have also lost confidence that taxation is a function of economic development.

8.2 Conclusion

Increasing the tax revenue is not an end in itself, rather it is a means to meet the fiscal imbalance, reduce inequality of wealth and income, and make proper allocation of resources and incentives to work and invest, which would lead to increase in productivity, and hence, the national income. Thus, raising revenue is only one of many goals and a tax system must be administratively feasible. Moreover, the equality principle cannot be neglected and the tax system must be directed not to misallocate resources. All these goals cannot be achieved simultaneously, so tax reform is a matter of trade-offs.

Given amount of revenue can be obtained with higher tax rates, but if the tax base is narrow, it leads to higher chances of tax evasion. So broadly-based taxes are supposed to be useful with smaller rates. As increased revenue is necessary to enhance and strengthen overall domestic resource mobilization, mere upward adjustment in the rates, or even the introduction of new taxes, may not be able to ensure desirable increase in revenue.

Many well-designed and well- meaning tax policies have failed due to the lack of institutional and administrative capacities of the government .Thus " a logical inference that can be drawn is that Nepal has been suffering from serious financial crisis due to lack of tranquility during the past few years. Its stability in terms of the availability of higher revenue resource without causing excess burden to the 'have-nots' groups

depends on the ability of the government as to what extent it can increase the taxable capacity, which is generally measured by the per capita income and on the willingness and preparedness of the people to tighten their belts."

As more than 40 percent of the GDP comes from the agricultural sector, inadequate taxation of this sector has often been attacked on the criterion of equality. In Nepal, more than 69 percent of the labor force is engaged in agricultural activities, but the majority of them are below the absolute poverty line. In this sense, taxing the agricultural sector in the present situation may not be justified on economic grounds. Thus, the foremost objective would be to raise agricultural income, thereby raising the income of the rural population.

Most of the elasticities of different tax heads are less than unity for the period from 1975/76 to 2001/02. This is indicative of poor responsiveness and productivity of tax yield with respect to GDP. The significance of elasticity in the tax system is that it is a crucial determinant to siphon-off automatically the increasing portion of national income into public exchequer without additional effort. The primary factors responsible for low tax elasticity in Nepal's tax structure can be attributed to the following reasons: (1) Agriculture, the biggest sector of the economy, contributing 40 percent of the GDP, which is still a subsistence sector that falls outside the jurisdiction of taxation; (2) Blanket exemptions in the industrial sector with a series of tax shelters in conjunction with numerous ad hoc exemptions and deductions: and (3) Government inability to drive for effective internal resource mobilization.

In this study, tax to GDP $\overline{R}^2$ is 0.98, supporting the macroeconomic proposition that tax is the increasing function of the national income.

8.3 Recommendations

On the basis of the findings of the present study, some recommendations have been made for a sound and effective tax system, which could be considered by the concerned authorities while reforming Nepal's tax system. They are as follows:

(a) Sound administrative capacity is one of the major bottlenecks that have to be overcome for increasing the built-in-flexibility of Nepal's tax system. Thus, tax assessment and collection should be carried out by well- prepared, well-trained and well-remunerated personnel. Rewards should be given for honesty and severe punishments for corruption without discriminating politically, and without giving unnecessary political protection to corrupt officials. At the same time, tax evaders should be punished accordingly.

(b) The tax policy should have a clear-cut direction and be consistent with a long-run perspective of the policy. The tax policy should be concentrated on optimum revenue mobilization for reducing tax revenue expenditure gap.

(c) To understand in detail how the present tax system really works, wide publicity should be given regarding tax laws, tax structure, and the implication of tax revenue to the general people.

(d) The present Nepalese tax structure depends heavily on indirect taxes. The more than 61.1 percent share of indirect tax to total revenue over the study period has been mentioned in the results. The inelastic nature of tax revenue is due to the sluggishness of direct taxes as there is ample scope for tax evasion and avoidance. So the effective way for more revenue generation from direct taxes is to make them progressive supported by a competent tax administration.

(e) The absence of a progressive tax structure creates disparity in the distribution of income and wealth. Therefore, progressive direct taxes like income tax and property tax are to be considered as an effective measure to reduce inequality in the distribution of income and wealth. Hence, prudent wealth tax should be imposed on unproductive accumulation of wealth while making productive investment tax free.

(f) The general direction of tax reforms should be towards broadening the tax base and lowering tax rates in the long run.

(g) To increase revenue elasticity, the tax authorities must extend the tax base, ensure maximum mobilization of domestic resources, gradually reduce dependency on

foreign assistance, increase voluntary compliance, and improve efficiency in tax administration.

(h) The tax base should be broadened, especially in the areas of income tax and value added tax.

(i) The tax rates should be competitive in comparison to other neighboring countries.

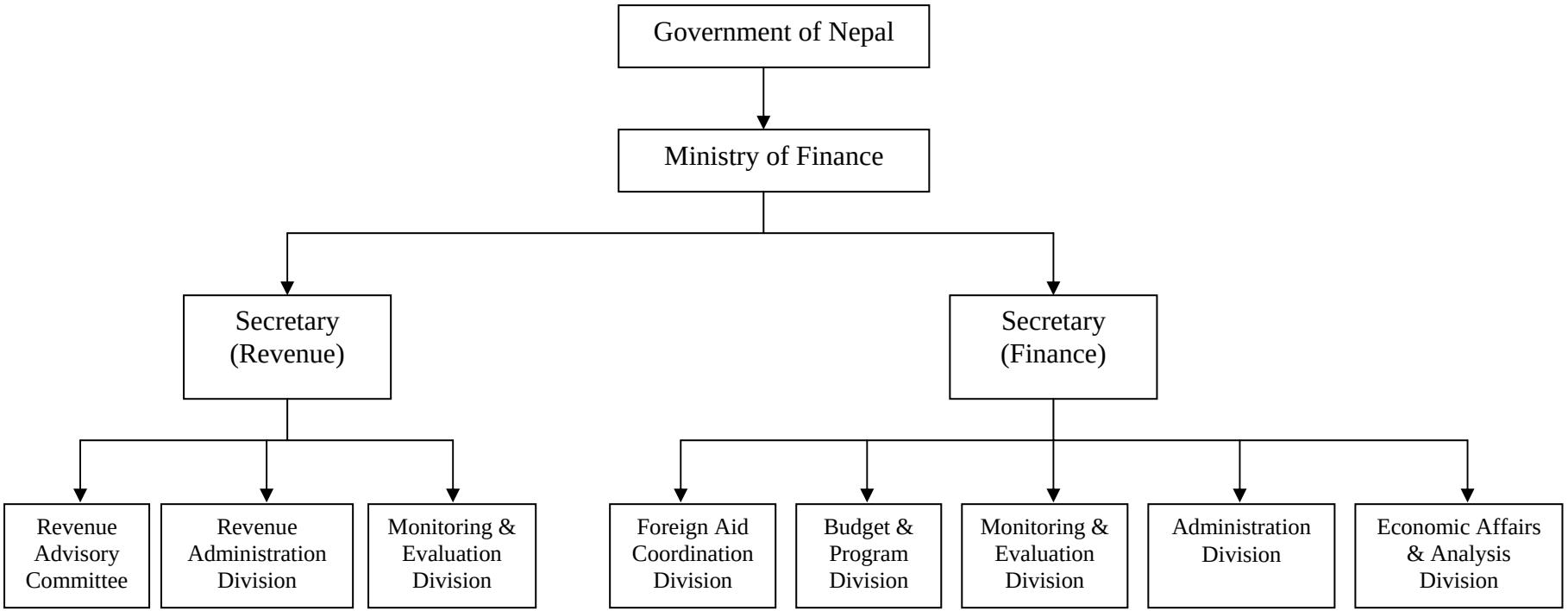
(j) Formulation and implementation of a policy on customs duties conducive to economic development and foreign trade, which is also WTO-friendly, is imperative.

(k) Strengthening of the consultation process with the private sector on revenue policy matters through the Revenue Consultative Committee is another requirement.

The key to the success of any taxation policy is the promotion of a strong and self-sustaining tax structure, which will be obtained through improving tax system. The significance of elasticity in the tax system is that it is a crucial determinant to siphon off automatically the increasing portion of national income into the public exchequer.

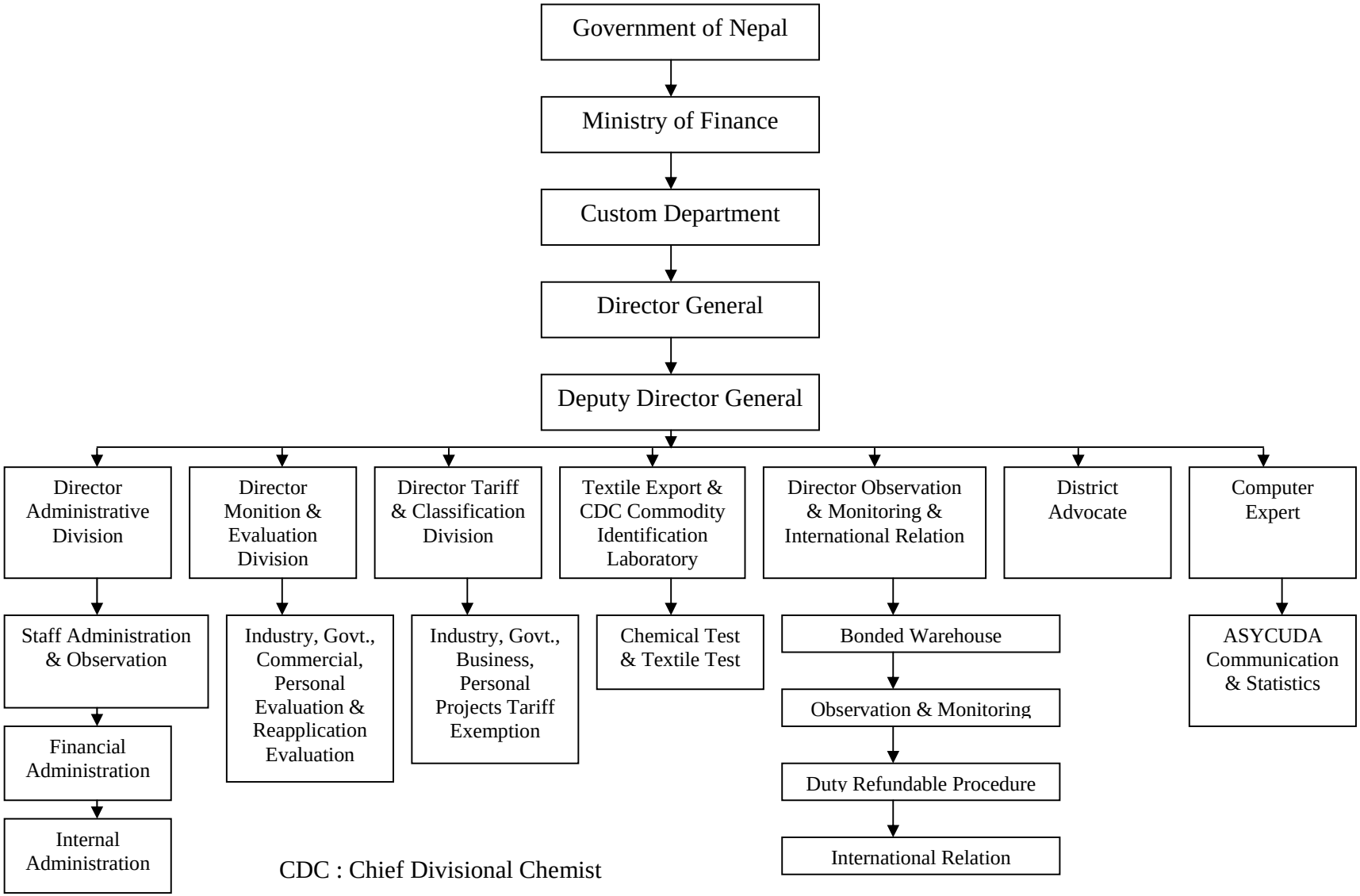
ANNEX 1

Organizational Chart of Ministry of Finance



ANNEX 2

Organization Chart of Customs Department



CDC : Chief Divisional Chemist

ANNEX 3

Tax Related Rules and Acts

1. Income Tax Act, 2002 and Income Tax Rules, 2002
2. Value Added Tax Act, 1996 and Value Added Tax Rules, 1996
3. Excise Act, 2001 and Excise Rules, 2001
4. Customs Act, 1962 and Customs Rules, 1962
5. Vehicle Tax Act, 1974
6. Tax Arrears Clearance Commission Act, 1976
7. Revenue Tribunal Act, 1974

ANNEX 4

Recent Trends in Revenues and Expenditures, FY 2006/07 – FY 2008/09

(Rs. in billion)

Headings	FY 2006/07 Actual	FY 2007/08 Revised Estimates	FY 2008/09 Estimates	In % of GDP FY 2008/09
Total Revenue	**87.7**	**107.5**	**141.7**	**15.7**
Tax Revenue	71.1	85.0	116.6	
	(81.1)	(79.1)	(82.3)	
Non-Tax Revenue	15.6	19.8	23.9	
	(17.8)	(18.4)	(16.9)	
Principal Refund	1.0	2.7	1.2	
	(1.1)	(2.5)	(0.8)	
Total Expenditure	**133.6**	**163.3**	**236.0**	**26.2**
Recurrent	77.1	91.4	128.5	14.3
	(57.7)	(56.0)	(54.4)	
Capital	39.7	55.5	91.3	10.1
	(29.7)	(40.0)	(38.7)	

Principal Repayment	16.7 (12.5)	16.4 (10.0)	16.2 (6.9)	1.8
Surplus(+) Deficit(-) Before Foreign Grant	**-45.9**	**-55.8**	**-94.3**	**10.5**
Foreign Grant	15.8 (11.8)	22.7 (13.9)	47.1 (20.0)	5.2
Surplus (+) Deficit (-) After Foreign Grant	**-30.1**	**-33.0**	**-47.2**	**5.2**
Sources of Deficit Financing				
Foreign Loan	10.0 (7.5)	11.3 (6.9)	18.7 (7.9)	2.1
Domestic Borrowings	17.9 (13.4)	20.5 (12.5)	25.0 (10.6)	2.8
Cash Balance Surplus (+) Deficit (-)	-2.1 (1.6)	-1.2 (0.9)	-3.5 (1.5)	0.4

Note: Figures in the parentheses are percentage distribution. Calculated by the reseracher based on data available in the Budget Speech, FY 2008/09.

ANNEX 5

Classification of Revenues, FY 2008/09 (Estimated)

Code No	Revenue Headings	Total Revenue (Rs. in billion)	In % of Total	In % of GDP
1.1.01.00	**Commodity Tax based on Foreign Trade**	**26.0** 22.4	**18.3** 15.8	**2.9**
	Import Duties	3.0	2.1	
	Indian Excise Refund	0.6	0.4	
	Others			
1.1.02.00	**Internal Commodity Tax Based on Goods and Services**	**55.2**	**38.9**	**6.1**
	VAT	41.0	28.9	
	Excise Duties	14.1	9.9	
	Others	0.1	0.1	
	Total Indirect Tax	**81.2**	**57.3**	**9.0**
1.1.03.00	Income Tax	27.1	19.1	3.0
1.1.04.00	Tax on House, Land and Other Property	8.3	5.8	0.9
	Total Direct Tax	**35.4**	**24.9**	**3.9**
	Total Tax Revenue	**116.6**	**82.3**	**12.9**
1.1.05.00 - 1.1.12.00	**Total Non-Tax Revenue**	**25.1**	**17.7**	**2.8**
	Total Revenue	**141.7**	**100.0**	**15.7**

Note: Calculated by the author based on data available in the Budget Speech, FY 2008/09.

ANNEX 6

Recent Trends in Tax Effort Ratio, 2000/01 - 2008/09

Fiscal Year	GDP Rs. in billion	Total Revenue Rs. in billion	Total Revenue as % of GDP
2000/01	441.5	48.9	11.1
2001/02	459.4	50.4	11.0
2002/03	492.2	56.2	11.4
2003/04	536.7	62.3	11.6
2004/05	589.4	70.1	11.9
2005/06	654.0	72.3	11.1
2006/07	727.1	87.7	12.1
*2007/08	820.8	107.5	13.1
**2008/09	900.0	141.7	15.7

Note: Calculation based on data available in the Economic Survey, July 2008. * Revised Estimates. ** Budget Estimates.

ANNEX 7

Trends in Revenue: International Comparison for 1998

(As percent of GDP)

Countries	Current tax revenue	Current non-tax revenue	GNP per capita, 1999
Argentina	12.4	1.2	7,600
Germany	26.6	5.1	25,350
India	8.6	3.0	450
Malaysia	18.9	4.1	3,400
Nepal	8.8	1.8	220
Pakistan	12.6	3.3	470
Sri Lanka	14.5	2.7	820
Thailand	14.4	1.8	1,960
United states	20.4	1.4	30,600

Source: World Development Report, 2000/01.

ANNEX 8

This annex explains the methodology adopted to estimate the two regression equation shown in chapter IV.
The equations estimated in chapter IV are

1. $\text{trade deficit} = \alpha + \beta(\text{budeget deficit})$
2. $\text{Resource gap} = \alpha + \beta(\text{total revenue})$

Since both of these equation consists of the variables having time series data. One of the prerequisite for time series data is that they should be stationary. Hence to check stationarity of the data, I run Dicky-Fuller test for unit root. The result is shown below.

1. **Test for stationarity and unit roots:** All the variables are I(1).

Table 1:Results of Unit Root Tests		
Variables	Augmented Dicky-Fuller Test	
	Variables in Level	Variables in 1st Difference
RG1	2.858	-4.801
RG2	-0.981	-6.773
Trade deficit	-1.871	-4.589
Total revenue	-2.203	-6.854
Critical values at 1 percent, 5 percent and 10 percent level of significance the critical values for ADF test statistics are –3.58, -2.93, and –2.60 respectively when T=50. (Fuller, 1976)		

2. Since all variables are in I (1), I run the regression taking first difference and obtained following result.

$$\Delta\text{trade deficit} = -1058.945 + 1.91(\Delta\text{RG2})$$

$$(t = -0.32) \quad (t = 9.87)$$

$$R^2 = 78.93\%$$

And

$$\Delta RG1 = 1424.4 + 0.6\Delta revenue$$

$$(t = 3.18) \qquad (t = 25.26)$$

$$R^2 = 94.94\, percent$$

Where Δ = change in

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