CHAPTER 1
INTRODUCTION

The importance of the study of tax structure follows logically and essentially from the growing importance of the role of the government in accelerating the rate of economic development particularly in developing countries/states. These countries generally regard development as a process to be planned and guided by the state. Taxation is considered as the most important source of development finance. The steady increase in the demand for governmental services and economic plans for the rapid growth of a country's economy has considerably changed the role and scope of taxation. Taxation is treated as an important fiscal instrument in increasing the state revenue and in achieving the economic and social objectives of the country. It is viewed primarily as a means of transfer of resources from private hands to the public exchequer to be utilized for financing developmental expenditure.

The Royal Commission on Taxation (Carter Commission) of Canada (1954) has stated that if the government had to choose one method to the exclusion of all other methods by which it can command over resources, taxation would be preferable because it can be more equitable, can be less disruptive to the economy and can give the government more effective control over the total demand for goods and services.¹

Goode (1963) also stated that the way to economic development is not along the easy path of low taxation and minimum government activity.² In other words,
taxation is a powerful tool, which can and should be used primarily to influence the volume of economic activity. Thus, emphasis on the taxation is mainly owing to the basic characteristics of the developing countries such as low-income level, absence of voluntary saving and the consequent low investment.

The strategy of development policy in these countries is to concentrate on the addition of investment, primarily in the public sector. As economic development generates a demand for more public services, higher levels of taxation became necessary to finance development. However, the level of taxation in these countries is found to be quite low. The tax-GDP ratios in these countries are typically low ranging from 8 to 18 percent. These countries/states should work steadily towards a flexible tax system, in which the total tax yield will increase more than proportionately to the rise in national income/state income.

The functions of the tax system in developing countries should be

1. Curtailing consumption;
2. Reallocating resources from less to more productive investments;
3. Providing a flow of funds to government; and
4. Providing incentives to alter economic behavior so as to facilitate growth.

In other words, the tax structure should maximize the output at a given level of government expenditure.

While it is important to know about the over-all level of tax revenue required to secure a given rate of growth, the feasibility of achieving that level of taxation is also an important consideration. The tax policy must be considered along with other
aspects of developmental policy. The policy should be directed to mobilize resources for development and allocate them according to priorities.

The efficiency of tax system in promoting a county's development depends on the tax structure of a country at a given time and place which depends on a set of available 'tax bases', level of development reached and also on the social and political factors, including the cultural style of the taxing governments.

In the early stages of economic development of a country/state, the 'tax handle' is scarce and the tax-GDP ratios are low. But as the economy advances to higher stages of development, the availability of tax bases increases and the extent of reliance on direct taxation increases. So depending on the stage of economic development the tax structure varies from country to country. The feasibility of a particular tax structure depends on factors such as the country's legal systems; the balance of political and social power within the country; the administrative ability to enforce the tax comprehensively and justly; the effects of different taxes on incentives; and the objective of a proper balance between short term revenue-rising measures for financing urgent development projects and for long run resources which will give steady encouragement to economic development over the longer pull. To be more precise, the tax systems of different countries are not uniform and they differ widely from one another with the structure of the economy in which they are applied and with the climate of the public attitude towards taxation.

However, it may be stated that the optimum level of taxation for a given country at a particular time will be one that is within the limits of that county's
taxation capacity. It can be noted in this context that the increases in the rate of taxation are not always accompanied by the increase in the revenues and the reverse may, in fact, be the case. Therefore, the level of taxation should not be strained beyond the taxable capacity. However, this potential should grow as economic development proceeds. In the context of this vital linkage between tax structure and economic development, the study entitled “Tax Structure of Karnataka State during the period from 1980-81 to 1999-2000” assumes importance.

Review of Literature

There were many studies made by different economists representing different organizations and universities on the tax structure of different countries of the world. Among these studies the researcher, herein, reviewed only the important studies which have inter-country comparisons and in the nature of historical development. They were as follows.

International studies on tax structure

Hinrichs, Harley, H (1966) has sketched out a pattern of tax structure change from primitive to advanced societies. From this study, he found that tax structure flexibility to be a luxury of advanced economies, which have a wealth of tax base from which to choose and adopt a tax structure fitting their cultural and political styles. However, this flexibility is limited in the case of underdeveloped or developing economies.

Another approach to tax structure change has been offered by Richerd, A. Musgrave (1969). According to him the availability of tax bases are very less in
the early stages of development, but as an economy's development improves the tax authorities are offered a much greater verity of tax bases. Therefore, he opined that the problems of revenue collection tend to shift from the search for feasible tax bases to the devising of forms of taxation yielding effective collection from the wide verity of tax bases available during the process of economic development.\footnote{7}

Another important study made by Lotz and Morss (1967) explored the relationship between number of dimensions of development and different types of taxes. They focused on the relationship between separate taxes and three major variables: two relating to the stage of development of the economy (percapita income and an index of monetisation) and one relating to the degree of openness (ratio of exports to GNP). From this study, they found that revenue collected from the corporate income tax depends on the openness of the economy, while sales tax, stamp duty and social security tax are closely related to the degree of monetisation of an economy, as distinct from its level of percapita income.\footnote{8}

Richard Goode (1980) observed that tax revenue has been growing faster than national income in all industrialised countries and in most of the less developed countries and found that the tax income ratio exceeded 45% in several countries in the northeastern Europe. Therefore, he concluded that high taxation, beyond safe limit, impairs productive capacity, weakens economic incentives, arouses resistance and evasion and imposes insupportable administrative burdens. He also recommended for tax reform measures to maintain safe limit to the taxation of a country.\footnote{9}
Raja J. Challaiah (1975) found that the countries those achieved strong tax performance in terms of tax effort index in the earlier period continued to do so, and that those countries who had low tax effort indices, in general, continued to score low tax effort indices. However, he found that the relative positions of a few countries changed dramatically. Of the 47 countries compared, 30 remained in the quartiles as before, 9 moved up and 8 moved down, mostly to the next quartile. Finally, he found that about 52% of the selected countries have changed their tax structure from indirect to direct taxes during the period of study.\(^{10}\)

Nurun, N. Choudhary (1985) used divisia index approach to measure the revenue effects of discretionary changes in the tax structure. In this study, he found that differences in the tax structure between any two-reference years would be reflected in the difference between the estimated values of elasticity with respect to the two different references years given. Finally, he concluded that divisia index approach is simple to estimate the elasticity of taxation than any other methods, because it uses only unadjusted historical data.\(^{11}\)

Keith Marsden (1983) found that half of the selected countries had tax-GDP ratios below the average for their income groups during the 1970's, while the other half had tax-GDP ratios above the average for their income groups. From this study, he found that lower income tax levels are compatible with a pattern of development that raises output and reduces poverty significantly.\(^{12}\)
Mukul, G. Asher (1987) found that the tax structure of Singapore remains overwhelmingly in-rem. Therefore he suggested that Singapore's tax system must be reformed so that substantial improvement in the tax revenue should take place.\textsuperscript{13}

Raghavendra Jha and Balbir, S. Suhani (1997) found that aggregate tax efficiency has increased over time, but not uniformly. The federal government and some provincial governments have lagged behind. Based on the study they suggested that the federal government should give importance to tax efficiency in the formulae to determine the volume of grants to provincial government. So that the provincial government should try to improve their tax efficiency and tax productivity.\textsuperscript{14}

Having reviewed the studies on tax structure at the inter-national level, the following section draws light on some of the national level studies on tax structure.

\textbf{Review of the studies at National level.}

M.L. Nath (1978) had examined the structure of individual commodity taxes in India and he suggested value added tax system to overcome the inherent shortcomings of the commodity taxes during 1970's. According to him the structure of indirect taxes during 1970's is very complex one resulting into administrative difficulties.\textsuperscript{15}

B. Chakraborty (1981) examined the place of corporate income tax in the Indian tax structure. He also evaluates the relative importance of corporate income tax in the tax structure of India by estimating the trend line with respect to time and elasticity with respect to national income. According to him the tax policy measures
such as grant of exemption, deductions and allowances erode the base of the tax, which results in the loss of tax revenue to the government.\textsuperscript{16}

I.K. Khadye (1981) examined the responsiveness of tax revenues to the changes in national income through the measurement of tax elasticity and tax buoyancy, both for taxes of central and state governments. She found that tax elasticity is less than unity in all of the union government taxes and all taxes have buoyancy coefficient higher than unity. In the case state taxes she found that Sales Tax, Excise Duties, Motor Vehicle taxes and Entertainment taxes have elasticity greater than unity and the other taxes have elasticity less than unity. However, She found that Indian tax system is providing increasing responsiveness to the national income.\textsuperscript{17}

G. Thimmaiah (1984) discussed the defects in the Indian tax system and outlined the need and scope for tax reforms in Indian tax structure.\textsuperscript{18}

Anil Kumar Jain (1989) expressed that the government of India has been levied new taxes to form integrated tax structure and tax rates have been increased to mobilise a large part of the income generated as a result of economic development. According to him indirect taxes have continued to play an important role in Indian tax system, because direct taxes have a limited coverage on account lower incomes.\textsuperscript{19}

P. Mishra (1991) found that per capita income and industrialization are two most important determinants of the growth of tax revenue of the union government in India. Per capita income as one of the significant explanatory variables in all the categories of taxes suggests that the change in per capita income have significantly
changed the taxable capacity in India. The Growth of industrialization had widened the tax base, particularly in the case of Union Excise Duties and Corporation Tax.

The Tax Reform Committee (1991) headed by prof. Chelliah also stressed the need to replace the existing taxes on domestic trade with a Value Added Tax. According to this committee, the Indian tax system should be re-structured towards a greater reliance on a less oppressive, simple and better-enforced regime of taxes urgently in the interest of neutrality and equity, as also revenue.

Amaresh Bagchi (1994) expressed that the programme of tax reform initiated by the government of India, recognizes the need for moving over to a system of value added tax to promote competition and efficient allocation of resources in the economy.

Raja. J. Chelliah, (1996) suggested the reform measures which would create fair, rational and broad based tax system. According to him if the government introduces a broad based tax system without disturbing center-state financial relations, it is possible to raise the ratio of direct taxes to indirect taxes.

With this knowledge about the changes in the tax structure of the Government of India, the following section deals with studies on the tax structure of Indian states.

Review of State Level Studies on Tax Structure

During economic development, there is a pressure for raising resources to meet the development funding of the state governments. Thus, tax structure undergoes
a change-one that brings in more revenue to the state exchequer. Changes in tax revenue depend on the build-in-flexibility of the tax structure.

These characteristics vary from state to state. In a federal setup, important problems of such state, like resource mobilization, resource needs for development and resources transfer from the center differ from state to state having various levels of development.

Hence, a state-wise analysis is of paramount importance for analyzing tax structure change during economic development.

M. C. Purohit (1976) found that taxes on commodities and services occupy an important place in states’ tax revenue. More than three fourth of states own tax revenue comes from these taxes in each state except Assam, where the share is 62 percent On the other hand, taxes on land and income have made an unimportant and declining contribution to the states tax revenue.24

M. C. Purohit (1978) found that the elasticity of tax structure of states brings out three important features. First, the tax resources assigned to the states are though elastic, the elasticity to a greater extent depends upon the structure of the tax. Accordingly, direct taxes on farm sector are inelastic and taxes on commodities and services are highly elastic. Secondly, the development of the state might affect the base elasticity causing an upsurge in the income elasticity of the taxes. Finally, the effect of improvement in the tax administration cannot always be separated to obtain a clear series. Hence, with the development of the state, it is possible to have higher revenue and greater elasticity owing to the state factor.25
Raja. J. Chelliah and Sinha (1983) found that general sales tax on consumer goods, the state excise duty, the stamps and registration fee and the passengers and goods tax have been the major contributors to the tax effort of the Indian state governments. On the other hand, land revenue and the agricultural income tax have contributed negatively to the tax effort. They also found that some states like Karnataka and West Bengal are fairly high in terms of per capita taxable capacity, but they have low ranking in terms of effort.\(^{26}\)

D.N. Dwiwedi (1986) found that most state governments have made high tax effort to mobilise their taxable potential. He also found that most of the poorer states, which have per capita income less than the average of 15 states, have had a better tax performance than most of the rich states.\(^ {27}\)

R.K. Bansal (1988) found that the state governments in India depends basically on the capacity of the tax structure to generate revenue with or without additional tax effort to fulfill the growing needs of development finance. He concluded that most of the state governments made half-hearted tax efforts to raise additional resources during the decade of 1970's and the percentage of tax revenue to per capita income was generally low in the states with relatively high per capita income.\(^ {28}\)

M.S. Subramanian (1991) found that the manifold increase in total tax revenue of the Tamil Nadu state government seems to have been caused primarily due to raising prices than expansion of the real tax base. The real tax base is expressed in
terms of either change in per capita real income or percentage of primary sectoral income to NSDP or plan effort.  

Dr. Hemalatha Rao (1993) estimated taxable capacity and tax efforts of the individual states. She considered Sale Tax, State Excise Duties and Motor Vehicle Tax for the study of the responsiveness of tax system of Indian states. She also made an attempt to forecast the tax yield for the Indian states up to 2001. However, she did not touch upon structural changes in the tax system of Karnataka in her study.

M.L. Kantha Rao and M. D. Bhavaiah (1994) made a comprehensive review of the tax system in Andhra Pradesh with a view to making it simpler, fairer, more rational and transparent. They found that Sales Tax is the single largest source of tax revenue in Andhra Pradesh. Sales Tax, State Excise Duties, motor Vehicle Tax, Stamps and Registration Fee are the important individual taxes, which have high coefficients of buoyancy and elasticity in the tax structure of Andra Pradesh. Nearly 95 percent of the tax revenue is generated by these four types of taxes in Andhra Pradesh. They have suggested the alternative methods of taxation such as, imposition of new taxes, widening the base of the existing taxes, rationalisation or reform of the taxes; plugging the loopholes, arresting evasion of taxes, improving the machinery for tax collection to raise tax revenue of Andra Pradesh without increasing the tax rates of the existing taxes.

T.N. Varma (1995) observed that Sales Tax occupies at the top place in the tax structure of the state governments, and it has proved to be an elastic source of tax revenue to the state governments.
With this general review on the tax structure of state government in India, following section reviews the studies on Karnataka tax structure.

**Review of the studies on Karnataka Tax Structure**

Karnataka is one of the states that are reorganized largely on a linguistic basis, form the formation the state on 1-11-1956. There were some studies on the tax structure of Karnataka, which have taken only short periods to review the tax structure. Notables among them were as follows.

G.R.Goankar (1988) found that state’s own tax revenue is the largest component of total revenue of the state government and it is also recorded the highest growth rate during the period of study.\(^{33}\)

G. Thimmaiah (1984) pointed out that Sales Tax is the major source of revenue potential for the government of Karnataka. He opined that the other important source of revenue potential for Karnataka State lies in Agriculture sector. But because of the concentration of voters in the rural areas and political dominance of rural Karnataka, the state government could not risk its political fortune by taxing the agricultural sector heavily. Therefore, the Karnataka government had fulfilled its additional resource mobilization efforts only by pushing up the rates of Sale Tax and other taxes, which are mostly in the form of indirect taxes.\(^{34}\)

The Karnataka Taxation Review Committee (1982) examined the structural changes in the tax system of Karnataka upto 1980 and found that Sales Tax is the single largest tax followed by State Excise Duty and Motor Vehicle Tax.\(^{35}\)
The Committee on State Finances (1991) expressed that the state's own tax revenue is the major source for state finances. But it did not discuss the structural changes in the tax structure of Karnataka.36

The review of literature presented here above on the subject indicate that there is no specific study on the tax structure of Karnataka state that examined the long-term trends of the level and composition of taxation in Karnataka state. The present study, therefore, assumes importance and tries to fill the gap in the existing literature on the tax structure of Karnataka.

Need for the study on the tax structure of Karnataka State

Questions like the following remain to be examined in greater detail. How did the tax structure of Karnataka evolved from 1980-81 to 1999-2000? What changes have taken place in the tax system as a whole? What is its composition? What are the individual elements in the tax structure and what are their rates of growth and what are the economic variables that affect them? To what extent the level of economic development determined the tax system? What are the political, economic and social factors that influenced the tax structure? In short, how well the tax structure of Karnataka has been designed and executed? How for it has been influencing the rate of economic growth and in turn has been influenced by it? These are the vital questions that remain to be examined. Hence the present study is undertaken to find answers to the above questions.
Objectives of the study

The following are the objectives of the study;

1. To estimate the important changes in the tax structure of Karnataka government.

2. To examine the importance of state taxes in the revenue structure of Karnataka.

3. To estimate buoyancy and elasticity coefficients of state taxes to know the responsiveness of the tax system to state income.

4. To estimate the impact of discretionary changes on the tax structure of Karnataka government.

5. To examine the factors affecting the tax structure of Karnataka government.

Hypotheses of the study

The following are the hypotheses of the study

1. There is no relative change in the importance of individual taxes in the tax structure.

2. There is no improvement in the importance of state taxes in the revenue structure of Karnataka.

3. There is no difference between buoyancy and elasticity coefficients of state taxes.

4. Discretionary changes do not affect the tax revenue in Karnataka.

5. The improvement in tax capacity factors does not affect the tax structure for the improvement.

Data sources and Methodology of the study

The present study is based on the secondary sources of data and the approach of the study is descriptive and analytical. The basic data have been culled from the
Budget documents of the government of Karnataka; Reviews on the state finances made by RBI, Economic Surveys of the government of Karnataka and the Report on taxation of Karnataka prepared by different committees/commissions constituted by the government of Karnataka. The necessary data on state net domestic product have been collected from the Directorate of economics and statistics, Government of Karnataka. The data on the estimates of additional resources through taxation have been collected from the finance department of the government of Karnataka.

The data thus collected have been analyzed by using appropriate statistical techniques like averages, percentages, annual compound growth rates, elasticity and buoyancy coefficients and multiple regression analysis.

The annual compound growth rates were estimated by fitting the exponential regression equation of the following from:

\[ \log Y = \log a + t \log b \]

Where \( Y \) is the variable, \( t \) is time period and \( a \) and \( b \) are coefficients of the function. The annual compound growth rate (ACGR) is estimated by using the following equation:

\[ \text{ACGR} = (\text{Anti-log of } \log b) - 1 \times 100 \]

The elasticity and buoyancy coefficients were estimated by using the log linear regression equation of the form

\[ \log Y = \log a + b \log X, \]

\[ \log Y = \log a + t \log b \]
Were $Y$ is the tax revenue, $X$ is the NSDP and 'a' and 'b' are regression coefficients. In this model, the value of 'b' indicates the nature of buoyancy of taxes if the current series of tax revenue were used in the estimation and it indicates the nature of the elasticity of taxes if the adjusted series of tax revenue for discretionary changes were used.

To measure the influence of the tax determinates on tax revenue, the present study employed a multiple regression analysis of form.

$$\log Y = b_0 + b_1 \log PCNSDP + b_2 \log TS + e$$

where

$Y$ = per capita tax revenue (SOTR/population)

$PCNSDP$ = per capita Net State Domestic Product

$TS$ = Share of Tertiary Sector in NSDP and

$e$ = Stochastic error term.

The regression coefficients $b_0$, $b_1$, $b_2$ are the constants which explain the influence of the tax determinants on per capita tax revenue.

**Period of the study**

The present study is confined to a period of two decades from 1980-81 to 1999-2000, which comprises the decade before the introduction of economic reforms (1980-81 to 1989-90) and the decade after the introduction of economic reforms (1990-91 to 1999-2000). The main reason for the selection of this period is to compare the growth rates, elasticity and buoyancy coefficients and the compositional changes during the two sub-periods of the study period.
Chapter Outline

The study has been presented in five chapters. The first chapter explains the importance of taxation in the economic development, review of literature on the subject, the need for the present study, the objectives and hypotheses of the study and the appropriate methodology adopted in the study. The changes in the tax structure and economic development with special reference to Karnataka State is presented in the second chapter. The responsiveness of tax revenue to the changes in the Net State Domestic Product, measured through the estimation of buoyancy and elasticity, is examined in the third chapter. The influence of tax determinants on the tax revenue is discussed in the fourth chapter. The research findings and suggestions have been incorporated in the last chapter of the present study.
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