STATE FINANCES OF ORISSA
A TEMPORAL STUDY

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By

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This is to certify that I, **Pratap Ranjan Jena**, have carried out the research embodied in the present thesis entitled **"STATE FINANCES OF ORISSA: A TEMPORAL STUDY"** for the full period prescribed under the Ph.D. ordinances of the University.

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CHAPTER I

INTRODUCTION

1.1 State Finances in India: An Over View

State Finances in India is an important and complex subject which carries both economic and political issues and is broadly influenced by functioning of both the Central and State Governments. In a federal structure, the States carry out many functions and bear responsibilities which have far reaching consequences, towards development of the economy. The Constitution of India sets forth in detail, the political and governmental structure of the country based on specified sphere of activities of Central and State Governments. The Constitution provides a three fold classification regarding the division of taxation and legislative powers, which are termed as, State List, Central List and Concurrent List. Both the Centre and the State Governments exercise their powers to raise revenues and determine the expenditure pattern based on the Constitutional classification. As it has been observed, the assignment of certain taxation powers to the States, does not give them resources sufficient to meet the responsibilities bestowed upon them. So the Constitution mandates the transfer of resources from the Centre to the States in the form of tax shares and grants as determined by the Finance Commission. Outside the Finance Commission, the Planning commission also provides for the States' plans in the form of plan grants and loans. States also receive funds in lieu of Centrally Sponsored Schemes from various ministries.

Though not originally envisaged by the Constitution, the Planning Commission has become central to Indian plan process and more so for the Centre-State financial relations. The Planning Commission support to State plans as determined by the "Gadgil Formula"(which has been revised now) and other Centrally sponsored plan schemes have been established which involve matching to the State spending. Due to time bound nature

of the schemes, the subsequent recurrent expenditure responsibilities devolve wholly on the States; which believed to have worsened the long term fiscal situation of the States.

The soundness of a State's finances depends upon the following factors. First; the State should generate enough resources to meet its own development needs; second; share of debt in the State Domestic Product should be at a lower level; and third; the borrowings from various sources should be made for productive investments. These factors invariably assume a well designed expenditure scheme which is development oriented. The expenditure pattern should take care of underprivileged sections of the population and also give impetus to the development process. In the federal structure of India, the States are bestowed with responsibilities which outweigh their resources. So far as debt burden of the States is concerned, a major chunk of it comes from the Centre. The loans granted by the Centre are mostly for specified projects which, in reality, reduces the autonomy of the States in deciding about their development plans. As it has been mentioned earlier, the recurrent expenditures on various projects are borne by the States, which in fact compounds their fiscal problem.

The recent interest in the study of State finances has its root in the increasing fiscal imbalances and regional inequalities experienced by the States and their wider consequences on the growth of the economy. Bagchi et al(1992, pg. 1) while analysing the fiscal crisis faced by the States, pointed out that "the development expenditures have been severely affected due to the worsening budgetary squeeze faced by the State governments. Revenue sources are overutilised and Central transfers have generally failed to grow as fast as the States' own revenues. The squeeze on State finances has been due to rapid growth of current expenditures particularly on salaries and other establishment costs. Burgeoning subsidies and declining cost recovery rates for economic and social services provided by State governments have been responsible for the poor performance of State non-tax revenues and have contributed to budgetary problems in a major way".

Many problems emerge from the structure of Centre-State transfers and the incentives and distortions inherent in the system. Increasing interference in States' affairs by the Centre through Centrally sponsored schemes and implementation of externally aided projects, has reduced States' autonomy in decision making in various fields. In addition to the regular transfer of resources to the States, these programmes have created increasing reliance of States on the Centre for funds. Also, the States are not free to borrow on their own as permission of Central Government is mandatory for various borrowing transactions involving internal and external sources.

The federal structure of India evoked lot of interest in academic circle and an enormous volume of literature on administrative and financial set up has been produced. Compared to federal States like USA and Canada, it is argued that the Central government in India has accumulated more fiscal powers. The role of Planning commission which has become the principal instrument of planned economic growth is cited as one of the clear indicators. The widening of the inter class and inter-regional imbalances over the decades is pointed out as the result of such an arrangement. Instead of devolving the residuary powers to the States as expressed in pre independence plan programmes for future set up, the Centre reserved this power for itself. With the increment of complexities in State activities as major administrative responsibilities were with the States, the financial inadequacy was felt more severely.

The role of sub-central authorities in a federation should be understood from the point of view of allocation, distribution and stabilisation functions. The general consensus seems to be that the sub-central authorities may have a considerable role to play in the allocation function which means providing local public goods. Other goals may be served

better by the Central Government[1]. The most commonly claimed advantage with federating units (States), is that they have the ability to provide services in accordance with the needs of local areas. If the Central Government provides for these services, a uniform provision to everybody may arise, which may not be suitable to local conditions and aspirations.

States in a federation also may not always be able to provide services to the optimum level due to the presence of distortions in the system itself. A major problem with decentralised provision is that, the authorities might be too small to exploit many of the economies of scale, which is possible for the Central Government. In India, according to the Constitutional provision, income tax, corporation tax, union excise duties and also the import and export duties, are with the Centre. Such taxes with wide economic bases enable the Central Government to maintain a vast unified market. Such a unified and large national market seems to have helped the States also[2].

Some other considerations are there, for which the role of Central Government is essential. One such consideration is with regard to certain governmental services whose externalities spill over the boundaries of individual States. Also administrative constraints at the State level limit their capacity to provide certain services economically. .

Despite the above advantages, distribution of financial resources poses a serious problem in a federation. In India, the mismatch between administrative responsibilities and financial resources of the States has been a matter of concern. Problems arising out of division of tax powers and other resources vis-à-vis the distribution of responsibilities

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[1] see David King(1984), Fiscal Tiers, The Economics of Multilevel Government, George Allen and Unwin, London.

[2] see 'Report of finance Commission, 1973, Government of India, pg 5

assume importance in this regard. In a federal structure, Central intervention is necessary (a) to bring about more efficient solutions in such of those areas where autonomous actions of the regional Governments might lead to less than optimum solutions, and (b) to reduce inequalities between regions and also to ensure horizontal equity throughout the country[3]

The persistent fiscal imbalance involving increasing deficits in revenue account and consequent debt burden on States, requires to be corrected through higher mobilisation of resources internally and sustained flow of resources from the Centre. The poor State are also required to go for higher resources mobilisation. The quest for additional resource mobilisation internally may need a comprehensive reforms in tax system and fresh look at the priorities in the expenditure pattern.

Total revenues of the States could be augmented by strengthening the non-tax revenue sources. State Governments have made substantial amount of investments in public sector enterprises, which have been yielding very low rate of returns. Presence of large number of sick and loss making industries in the States has deepened the fiscal problems due to budgetary support to such loss making units. Total non-taxes of the States include recoveries from economic and social services provided by the Government along with the public sector enterprises. The reluctance to levy proper user charges on social and economic services and the poor and declining returns from departmental and non-departmental economic enterprises are the principal reasons for the low and declining proportion of non-tax revenues. The low rates of return and some times negative return on these kind of services involve budgetary subsidies which has been increasing over the years. State subsidies to undeserving people and chronically loss making industrial units

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[3] see Chelliah, R. J. et al (1981), Trends and Issues in Indian Federal Finances, NIPFP, Allied Publishers, Pvt. Ltd.

does not make much sense looking to the overall fiscal crisis faced by the States. The rationale behind allocation function for any Government is that the resources should be put to proper use to derive optimum social benefit.

The current liberalisation process ushered in India requires States participation. The financial and institutional weaknesses at the State level are becoming a major constraint for the provision of infrastructure and social services. This apart, it is also felt that, only some policy changes at the Central level can no longer improve the economic environment substantially. Rather, the reform process should encompass both the Centre and the States in a co-ordinated manner. Further development of the economy ensuring that the liberalisation of the economy leads to sustained increase in GDP and living standard of the population, will depend increasingly on sustained reform efforts in many areas like irrigation and road transports, power and education, which come under the jurisdiction of the States.

1.2 A case for Orissa State

Finances of any State depends on the level of its development and structural framework. State finances of Orissa, to great extent, reflects its relative backwardness among the States in India. Orissa is one of the poorest States in India. The per capita income of the State was Rs.5157 in 1994-95, which was the lowest among the major States in India except Rajasthan and Bihar. A major share of the population of the State live in rural areas mostly depending upon agricultural activities. The degree of urbanisation was as low as 13.4 percent in 1991 as compared to 25.73 percent for the country as a whole. More than 70 percent of the population depend upon agriculture for their livelihood. Inspite of heavy dependence on agriculture in the State, this sector is very underdeveloped. Lack of adequate irrigation facility, low level of consumption of fertiliser and other inputs, lack of institutional support and above all, traditional way of farming are the major reasons for the underdeveloped nature of agriculture in Orissa. The State,

considerably lags behind both in terms of industrialisation and provision of employment which causes extensive migration of labour to other industrial belts of the country.

The State of Orissa is not devoid of factors of production and resources. The State is endowed with large amount of natural resources and has considerable amount of land under cultivation. Coexistence of abundance of resources and continued poverty are reflected in the inherent structural backwardness of the State. The structural constraints that inhibit the development process is more pronounced in the fiscal policy of the State. Study of State finances of Orissa, in this context, is very important to understand the fiscal drawbacks. .

As mentioned earlier, the autonomy of the States in India are rather restricted, so far as raising revenue and borrowing powers are concerned. Orissa being a low income State, its position in the federal structure of India is of considerable interest. How far the Central transfers to Orissa are progressive? Whether such transfer of resources has helped the State to further its development has to be analysed. The level of revenue generation is another facet of State finances of Orissa, which need close scrutiny. Own revenues of the State give a lot of flexibility in the management of economy.

Due to the low level of per capita income in the State, the dependence of people on public provision of basic nature is higher. So the expenditure pattern has to be biased in favour of spending more on social sectors. While Government expenditure on social sectors is important, it should also be noted that expenditure in the productive sectors are essential for growth of the State economy. A poor State like Orissa requires sufficient funds to provide for the public services as well as investing in productive sectors. State finances of Orissa has not been in good shape for quite a long time. The fiscal policy in the State has resulted in growing deficits and huge debt burden.

In order to understand the State finances of Orissa, in proper perspective, it would be very essential to examine and analyse the broad budgetary parameters, such as the tax and non-tax revenues, borrowings of the State from different sources and the pattern of expenditure. Orissa being one of the poorest States in India, has certain inherent weakness to generate adequate tax and non-tax revenues. Earlier studies[4] show that the tax effort of the State has been one of the lowest among the Indian States. An examination of tax effort needs looking into the individual taxes of the State together with their corresponding bases. It is also necessary to find out whether, the buoyancy and elasticity of individual taxes are in tune with the increase in State's NSDP during the recent years. As in other States in India, Orissa also had resorted to discretionary measures for mobilising additional revenues.

So far as expenditure pattern is concerned, the State's expenditure has been increasing much faster since 1980-81 onwards which in fact had resulted in growing budgetary deficits. To what extent the increases in Government expenditure, during the recent years is supported by the State's own revenue resources needs to be examined. Such an analysis would through light with regard to the State's dependence on Central transfers and/or on increased borrowings. There is also need to understand the capital account transfer of the budget. As in other States, it has been found that, in Orissa also the public investment in crucial sectors of the State's economy has been declining for quite some time. The debt position of the State is very important issue as the interest payments assumes prominence in the expenditure of the revenue account of the State's budget. The more the debt, the lesser the flexibility to manage the State's finances.

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[4] see studies by Chelliah and Sinha (1952) and Wallich Christine (1982) for tax effort analysis.

In addition, to these aspects, some scholars[5] have attempted to find out as to what Government expenditure in fact depends upon the State's ability to generate more tax revenue. Such an analysis is carried out by using the popularly known Granger and Sims causality test. It is therefor necessary to find out whether such causal relationships could be established for the State finances of Orissa.

Keeping all these aspects in view, an attempt is made in the present study to analyse the State finances of Orissa in terms of the State's own revenue resources, Central transfers, expenditure pattern, composition of public debt and fiscal deficit.

1.3 Objectives of the Study

First, the study tries to find out as to what extent Orissa State could increase its own tax and non-tax revenues in terms of putting adequate tax effort measures. It also examines the trends in the growth of tax and non-tax revenues for the period covered by the study.

Second, to examine the aggregate budgetary transfers from the Centre to the States in general and to Orissa in particular for the period covered by the study. It also tries to find out the degree of dependence of Orissa State on such Central transfers.

Third, the study examines the expenditure pattern of the State, in terms of sectoral allocation both functional and economic classification of budgetary items. It also analyses the different types of budgetary deficits including gross fiscal deficit. The study tries to find out whether any causal relationship does exist between the State's expenditure and its NSDP or the State revenues.

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[5] For instance, see studies by Gupta (1968), Gandhi (1971), and Rati Ram (1968), Goffman and Mahar (1971) for causality analysis between revenue and expenditure.

In addition to these aspects the study also tries to analyse the public debt of the State. The present study covers the period from 1970-71 to 1995-96.

1.4 Data Sources and Methodology

1.4.1 Data used and Sources

The present study spans over more than two decades from 1970-71 to 1995-96. Data and other relevant materials for the study have been obtained mostly from the State Government's budgetary documents and also from the Central Government's various publications and Reserve Bank of India bulletins and Report of Currency and Finances. CMIE publications, reports of NIPFP and the World Bank have also been used. Data on population and related indicators, viz., density, urbanisation etc., were obtained from various issues of Economic Survey published by Government of India as well as Government of Orissa. Data on State Domestic Product and Sectoral Income are obtained from the publications of Central Statistical Organisation and also from the relevant Statistical Abstracts of Government of Orissa.

Data relating to important State enterprises viz., State Electricity Board, State Road Transport Corporation could be obtained from Planning Commission, Finance Commission and RBI bulletins. Research papers of NIPFP, World Bank and IMF and other works of individual researchers also provided certain important materials for the study.

1.4.2 Methodology

For calculating trend growth rates of important variables covered by the study, least square linear regression method has been used. As the study relates to time series, it is quite possible to notice different trends. For instance, while estimating expenditure growth rates, from graphs, clearly two phases of growth were discernible. For such

situation, kinked exponential growth rate(Byoce, 1986) was used to find out growth rates for both the periods.

Tax and expenditure elasticity with respect to State's domestic product have been estimated by applying multiple regression technique. As the study relates to a time series data, the tax data have been first adjusted to the discretionary changes using Prest's method (1962); and later the cleaned tax series data are used for calculating the elasticity coefficients. In order to find out the possible causal link between important variables such as State expenditure vis-à-vis State income (or State income and revenue), the popularly known Granger and Sims tests have been applied. To estimate relative tax effort, mainly two approaches, namely, Aggregate Regression Approach and Representative Tax System Approach have been followed in various studies. In this study, one of these methods, namely Aggregate Regression Approach has been used to estimate relative tax effort of States in India including that of Orissa State.

In order to find as to how far the Central transfers are equitable, a rank correlation analysis was tried between various categories of transfers to the States and per capita income. Per capita transfers to the States were estimated in order to see the relative position of Orissa State in the overall devolution process. For this purpose the gross transfers were further categorised into statutory transfers, plan transfers and discretionary transfers.

Details of statistical methods used in the study have been enumerated in the Appendices at the end of the chapters.

1.5 Organisation of the Study

The present study is organised into seven chapters. The first chapter dovetails the importance of the study of State finances of Orissa. It clearly narrates the objectives of the study. The second chapter explains the position of Orissa among the 16 major States

in India in terms of important Socio-Economic parameters. Such an analysis is a prerequisite to understand the further analysis undertaken in the subsequent chapters. The third chapter makes an attempt to review a few important studies in this area and other related topics, directly or indirectly concerned with the State finances.

The fourth chapter analyses the revenue resources(tax and non-tax) of Orissa State. Various types of tax and their behaviour over the years are analysed in terms of buoyancy/elasticity and growth rates. Performance of Orissa State among major States in India in terms of raising revenue has also been examined.

The fifth chapter concentrates on Central transfers to State of Orissa. The present federal structure and the progressivity of various categories of transfers are analysed. A comparative analysis of resource devolution to the States in India is given and the position of Orissa in federal structure is discussed.

The sixth chapter discusses the expenditure pattern of the State. Expenditures on various heads and their relationship with the development of the State in view of increasing State activities has been analysed in this chapter. The effect of the State's expenditure pattern in terms of its influence on State income is also given here. It includes analysis relating to public debt also. Causality tests have been carried out as to find out whether there is any causal relationship between State's expenditure and its Income (or revenue)

The last chapter (Chapter VII) presents summary and conclusions of the study. A few important suggestions are also given, for undertaking further studies. The appendices containing statistical methods are given at the end of chapters and the bibliography is presented at the end.

CHAPTER II

SOCIO-ECONOMIC PROFILE OF ORISSA

Five decades of planned development has resulted in a steady but slow growth of income in Orissa vis-à-vis other States. The increase in per-capita income could not be able to eradicate poverty. A major portion of the population still live below poverty line. Uneven regional and personal distribution of income, underdeveloped social services reinforced the difficulty faced by the people in the State. A major portion of the State (nearly 36 percent) is recorded as the forest area which is considered as a high percentage and has implications for agricultural activities and government finances. It has a long coast line and substantial mineral reserves including bauxite, manganese ore, iron ore, coal and several other minor minerals.

Basically the State is agricultural in nature. A high proportion of State Domestic Product (SDP) is being generated in agriculture and also a large portion of population are dependent on it. Agriculture in Orissa has been traditional and green revolution benefits have not touched it. Due to low productivity and profitability unlike other agriculturally developed States like Punjab and Haryana or neighbouring States like Andhra Pradesh and West Bengal, the agriculture sector could not generate enough income to improve the standard of living of people in the State.. The economy of Orissa is characterised by rich endowment of natural resources which are not exploited properly to augment the scarce revenues of the State. Industrial development could not take off in the State due to the absence of well developed infrastructural facilities and lack of energy.

Natural resources, long coast line and abundance of land under cultivation could have been the source of development had they been exploited properly. Orissa is one of the richest States in natural resources. The State's share in the mineral deposits is of the

order 21.72 percent in the case of Iron Ore, 57.10 percent in Bauxite, 23.16 percent in Manganese and 23.85 percent in Coal, 97.72 percent in Chromite and 23.57 percent of Dolomite. Such a vast deposit of minerals could not help the State to improve its economic position. The federal structure in the country was not able to reduce the regional inequality and in fact the backwardness of Orissa State has been perpetuated over the years.

2.1 Socio-Economic Indicators

The basic underdeveloped nature of the economy is manifested in the quality of man power and services in the State. The general information on population based on 1991 census is presented in Table 2.1. The total population of the State was 3.17 crores with an exponential growth rate of 1.83 percent (1981-91), which is lower than that of many other States in India except Kerala and Tamilnadu. The population density was 203 persons per sq. km. which is neither too high as in Kerala nor too low as in Madhya Pradesh or Rajasthan for administration convenience. There are however, regional variances. The process of urbanisation has been slow in Orissa as is evident from its share of 13.4 percent which is much lower than most of the States barring Assam and Bihar. Thus a major portion of population i.e., nearly 85 percent live in rural areas mainly depending upon agriculture. Share of total population living below poverty line in the case of Orissa is 44.7 percent (1987-88 estimates), which is the highest among all the States.

Some of the statistics regarding health and literacy rate of the States as per the 1991 census has been given in Table 2.2. The literacy rate of the State is 49.1 percent (as against 41 in 1981), which happens to be higher than those in States like Andhra Pradesh, Bihar, Madhya Pradesh and Rajasthan. But the literacy rate among females is abysmally low at 34.7 percent; the male literacy being 63.1 percent. The quality of life judged from the angle of life expectancy is quite low at 53 years both for male and females. The infant

mortality rate of 144 per thousand births being highest in Orissa among States speaks the lack of health care facilities and awareness.

Cultivation of paddy is the major occupation of agricultural activities in Orissa which suits to its climate. The indicators regarding agricultural activities are shown in Table 2.3. The yield rate of paddy (kg/hect, 1992-93) was only 1836, which was way below All India average of 2618. The share of food grains production in the State in All India production level during 1990-93 was only 4.27 percent. The low productivity of agriculture in Orissa could be traced to the factors like fertiliser consumption per hector of gross cropped area, which was 21.9 kg and net irrigated area as percentage of net area shown, which was 32.8 percent (1992-93). Proper irrigation facility, use of inputs like fertilisers and other insecticides and scientific way of cultivation are most significant for development of agriculture. In all these aspects Orissa State lags behind most of the States in India for which agriculture being the main livelihood of the people in the State, remains backward and unprofitable.

Infrastructural facilities could not develop much in Orissa due to lack of funds which remains as a big set back for the overall development of industry and trade. Annual per capita power consumption in 1994-95 was 216 Kwh which has improved from 153 Kwh in 1990-91, whereas the All India average consumption was 330.6 Kwh. Railway route length per thousand sq. km. in 1994-95 was 12.90 which has slightly improved from 12.86 kms in 1990-91 kms, (compared to the All India average of 19.01 kms). Road length per one lakh population in Orissa seems to be at a higher side but the surfaced road length is only 18.30 percent. Overall index of relative development of infrastructure in Orissa as computed by CMIE stood at 81.5 in 1980-81, which has increased to 87.6 in

1985-86, 93.5 in 1990-91 and to 97.0 in 1993-94[1]. This index shows a development in the infrastructure front. But due to initial backwardness of infrastructure in the State this development has not been adequate to support the developmental need.

The infrastructural index calculated by K. L.. Krishna et. al.(Tenth Finance Commission Report)[2], for the States in India, is very significant as they have taken various sectors into consideration. They have measured the infrastructural facilities available in different States in terms of eight major sectors: (i) Agriculture, (ii) Banking, (iii) Electricity, (iv) Transport, (v) Communication, (vi) Education, (vii) Health, and (viii) Civil Administration. They have classified these sectors broadly under three heads; Economic Infrastructure, Social Infrastructure, and Administrative Infrastructure. The results of this exercise shows the inherent weakness of Orissa State in the infrastructure sector. The index of infrastructure calculated in this study (in terms of Rupees), works out to Rs.74.46 for Orissa, which is one of the lowest among major States in India, except Madhya Pradesh.

looking at the Manufacturing sector, the situation in Orissa, is also not satisfactory (see Table 2.4). In 1993-94, only 185.3('000) persons were engaged in this sector which is lesser than that of many States in India. The fixed capital in the manufacturing sector in Orissa was Rs.8774.2 crores and the value of output was Rs.8325.4 crores, which was one of the lowest in India. The ratio of output to fixed capital in that year stood at 94.9 percent and the ratio of profit to output was 1.6 percent in 1993-94. In all these aspects, Orissa's performance was one of the lowest in the country.

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(1) For details of infrastructural facilities see State's Economy in Figures, 1994, DES. Government of Orissa and Profile of States, CMIE, March 1997

(2) Ananta, T.C.A., Krishna, K.L. and Uma Roy Choudhury (1994), Measuring Intersttate Differentials in Infrastructure, Report of Finance Commission, 1994 (Tenth Finance Commission Report).

In Dreze and Sen (1995)[3], the level of public services and social infrastructure in the case of Orissa seems to be very low. Proportion of villages with medical facilities (1981) was only 10.6 percent and per capita supply of food grains through the PDS (1986-87) was 7.1 kg/years. Proportion of households having access to safe drinking water in 1991, for rural areas was 46.8 percent and for urban areas, this share was 81.2 percent. Households with electricity connections in 1991, was 17.5 percent for rural areas and for urban areas this was 62.1 percent. In all these aspects the State seems to be very backward compared to other States in India.

The above mentioned facts highlight the basic weakness of the economy of the State. High poverty level, relatively poor infrastructural facility, lower productivity of agriculture and weak industrial base continue to be the major bane of underdevelopment of the State.

2.2 Net State Domestic Product (NSDP)

Over the years the NSDP of Orissa State has grown with a steady pace but with a low rate of growth, which has been the cause for much concern. The NSDP and Per capita income and their growth rates are given in the Tables 2.5 and 2.6. The NSDP at current prices has grown up from Rs.1037 crores in 1970-71 to Rs.3434 crores in 1980-81 and further to Rs.17439 crores in 1994-95 with a overall compound growth rate of 11.52 percent. The real NSDP (NSDP at 1980-81 prices) has increased from Rs.2583 in 1970-71 to Rs.3434 crores in 1980-81 and to Rs.5346 crores in 1994-95. The compound growth rate of real income over the years remained below 3 percent. The difference in the magnitude of index numbers shows the gap between the growth of NSDP at current and constant prices.

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[3] Dreze, Jean and Amartya Sen (1995), India, Economic Development and Social Opportunity, Oxford University Press.

Coming over to Per Capita income which is generally accepted as a good indicator of development does not show much promise(see table 2.5 and 2.6) . The per capita income at current prices has increased from Rs.478 in 1970-71 to Rs.1314 in 1980-81 and Rs.5157 in 1994-95. But the per capita income at 1980-81 prices has grown from Rs.1191 to only Rs.1581 in the same time period. The gap between index numbers of two series is glaring. The growth of per capita income in real terms for the whole period was 1.07 percent. The slow growth of per capita income does not augur well for raising of revenue and above all for development of the economy.

State wise per capita income is given in Table 2.8. Punjab has the distinction of having the highest per capita income through out the period (1970-71 to 1994-95). The per capita income of Punjab has increased from Rs.1070 (current prices) in 1970-71 to Rs.14188 in 1994-95. In 1994-95 other high per capita income States are Maharastra having Rs.13112, Haryana Rs.12158, Gujurat Rs.10578, Tamilnadu Rs.8941 and Karnataka Rs.8082. Compared to these States Orissa has a per capita income Rs.5157 at current prices in 1994-95, which is nearly one third of per capita income of Punjab in that year. Basing upon per capita income the States are ranked and shown in Table 2.9. Through out the period, i.e., from 1970-71 to 1994-95 Punjab retains the first rank. States like Punjab, Haryana, Gujurat and Maharastra remain at first four positions in per capita income ranking. West Bengal which was fifth and sixth in ranks in 1970-71 and 1980-81 respectively came down to ninth position in 1994-95 and Tamilnadu made spectacular rise in per capita income as it rose from tenth position in 1970-71 to fifth in 1994-95. Also States like Karnataka, Kerala and Andhra Pradesh have improved their positions. Orissa was at 15th position and improved its position to 12th in 1980-81 but shifted to 13th rank by 1994-95. It can be seen that Orissa's ranking has not changed much compared to many other neighbouring States.

Compound average growth rate of NSDP and Per capita income of States at 1980-81 prices for three periods, i.e., 1970-71 to 1980-81, 1980-81 to 1994-95 and 1970-71 to 1994-95 are calculated and are presented in Table 2.10. Growth rates of NSDP and per capita income of States like Punjab and Maharastra are on the higher side through out the period. States like Gujurat, Haryana, Karnataka and Tamilnadu had achieved a growth rate of more than 5 percent for NSDP in the second period for which their over all performance become reasonably well. In the case of Orissa the growth rate of NSDP has increased very less, i.e., from 2.65 percent during the period, 1970-71 to 1980-81 to 2.98 percent during the period, 1980-81 to 1994-95. So far as the growth rate per capita income is concerned, the performance of Orissa is not up to mark. The overall growth rate of real per capita income was 1.14 percent which was one of the lowest in India.

2.3 Sectoral Shift

Table 2.11 shows the different sectors of the Orissa's State Domestic Product. Agricultural sector which includes Agricultural activities, Forestry, Logging and Fishing constituted 64.5 percent in 1970-71 generating an amount of Rs.679 crores. In 1989-90 the share of agricultural sector was 48.5 percent with an absolute amount of Rs.4566 crores. Income generated in Manufacture sector which includes mining and quarrying, electricity and construction along with manufacturing activities was Rs.127 crores in 1970-71 which has gone up to Rs.1853 crores in 1989-90. Its share in total NSDP increased from 12.0 percent to 19.7 percent in this period. Transport sector which contains transportation, trade, hotel, restaurants and storage amounted Rs.118 crores in 1970-71 which has increased to Rs.1351 crores in 1989-90. The share of this sector has gone up from 11.3 percent to 14.3 percent in this period. Other Financial services increased from Rs.128 crores to Rs.1646 crores thus resulting in an improvement of its share from 12.2 percent to 17.5 percent. The sectoral shift is more pronounced by a higher percentage contribution of tertiary sector (Sectors other than agriculture and manufacturing) to the NSDP of the State. The fact that, the primary sector constitutes

half of the income generated in the economy, does not suit to the increasing demand for revenues because nearly whole of this income are not taxed.

Sectoral growth rates have also been estimated and shown in Table 2.12. It is found that the growth rate of agriculture sector has been less than that of other sectors. Compound growth rate of agriculture sector at constant prices was less than 3 percent whereas the manufacturing sector has grown at 3.30 percent, transport sector at 3.02 percent and other services at 4.87 percent. during 1970-71 to 1989-90.

2.4 Per capita Consumption Expenditure

Average monthly per capita consumption expenditure for the year 1988-89 of the States in India has been given in Table 2.13. The per capita consumption expenditure has been categorises into food and non-food items for both rural and urban areas. Per capita consumption expenditure for rural areas in 1988-89 in the case of Orissa was Rs.147.34 against all India average of Rs.175.10. This figure was the lowest among the States in India in that year. Consumption of food items constitutes 69 percent of per capita consumption expenditure in the rural areas and non-food items constitutes only 31 percent. The per capita consumption expenditure in urban areas in the case of Orissa in the years 1988-89 was Rs.256.36, which is lower than many States in India. Share of food items in per capita consumption in urban areas has been 60.1 percent and non-food items has a share of 39.9 percent. The percentage of urban population in Orissa has been one of the lowest in the country (13.4 percent according to 1991 census, Table 2.1). So a relatively higher per capita consumption expenditure in the urban areas than that of rural areas in the State does not convey much meaning so far as the standard of living of total population in the State.

Both in urban and rural areas the consumption pattern reveals that the people spend more on food items than any other non-food items which substantiates the fact of

low income of the people in the State. Orissa has the distinction of having highest percentage of people living below poverty line. Nearly 44.7 percent of total population of the State live below poverty line (according to 1987-88 measure, Table 2.1). The low level of per capita consumption expenditure, particularly in rural areas, reflects poor standard of living and poverty level of the State.

2.5 An Assessment of Socio-Economic Profile of Orissa in the Present Context

Orissa has the distinction of being one of the most backward States in India, even after possessing a large amount of natural resources. A host of factors such as an unprofitable and traditional agricultural sector, lack of industrialisation and poor infrastructural facilities are responsible for the continual backwardness of the State. The underdeveloped nature of the State is manifested in the low per capita income, which has been one of the lowest among the States in India. Orissa ranked 13th in terms of per capita income in 1994-95. The growth rates of State Domestic Product and the per capita income of Orissa have also been very disappointing over the years.

Primary sector which includes agriculture, forestry and logging and other associated activities amounts to around 50 percent of NSDP in the State in 1989-90 which has come down from 65 percent in 1970-71. Though cultivation of paddy has been the main agricultural activity, the yield rate of paddy has been very low (1836 kg/hect) compared to the all India average (2618 kg/hect) in 1992-93. Lack of adequate irrigation facility, traditional way of cultivation and very limited credit facility are some of the factors which affects the agricultural activity in Orissa, thus making it more of a subsistence activity. The poverty level in the State is appalling, more so in rural areas due to their dependence on agriculture for livelihood. A very sizeable proportion of the people (44.7% in 1987-88) live below poverty level in Orissa. From the per capita consumption expenditure, it is seen that, a large portion of it is being spent on food items. The per

capita consumption expenditure in rural areas in the State is one of the lowest in the country.

Relative backwardness of the State has been manifested in the existing services provided by the Government. The most essential facilities like health care, educational facilities, and other infrastuctural facilities in the State are inadequate. Transport and communication sector in Orissa has not been well developed to facilitate industrial and other trading activities. Manufacturing, transport and other services have shown higher growth rate than that of primary sector over the years. But the fact that the primary sector still amounts to half of the income generated in the State, which does not augur well from development perspective. All these activities in the secondary and tertiary sectors are mostly limited to urban areas in the State. The urban population consists of only 13 percent of total population of the State. Thus a large percentage of population live in rural areas depending upon primary sector activities without the benefit of any development in services like transport and communication and other infrastructures.

In the present context, while analysing the State finances of Orissa, the socio-economic condition of the State has got its relevance. When the State is facing acute fiscal imbalance, the need for additional resource mobilisation is very essential. The scope for raising more revenue in the State more or less depends on its socio-economic development. Another important aspect of study of State finances is regarding allocation of resources in the State to derive optimum social benefit. Looking at the low per capita income and high poverty ratio in the State, it is imperative to provide for disadvantaged section of the population through budgetary means. The quality of human resources has to be improved in order to make them able to participate in the development process. The responsibility of the State Government to provide adequate educational and health facility, and other training facility become paramount in the changing situation in the country. Unlike any ad hoc measures to alleviate poverty and to raise standard of living, investment

in crucial areas is needed to reinforce long term and sustained growth in the economy. Investments in the areas like irrigation, power sector, and infrastructure are essential to foster economic development in the State. Low income base of the State may come in the way to raise resources internally. An intuitive study of State finances would help finding possible scope for better fiscal management through mobilisation of resources and allocation resources productively to overcome the backwardness of the State.

Table 2.1

Socio-Economic Indicators: Population(1991 Census)

States	Total Population	Growth Rate	Density (No)	Urbani-sation	Sex Ratio	People Below Poverty Line(%)
1	2	3	4	5	6	7
1.AP	66508	2.17	242	26.9	972	31.7
2.Assam	22414	2.17	286	11.1	923	22.8
3.Bihar	86374	2.11	497	13.1	911	40.8
4.Gujarat	41310	1.92	211	34.5	934	18.4
5.Haryana	16464	2.42	372	24.6	865	11.6
6.J&K	7719	2.54	202	23.8	923	13.9
7.Karnataka	44977	1.92	152	30.9	960	32.1
8.Kerala	29099	1.34	749	26.4	1036	17.0
9.MP	66181	2.38	149	23.2	931	36.7
10.Maharastra	78937	2.29	257	38.7	934	29.2
11.Orissa	31660	1.83	203	13.4	971	44.7
12.Punjab	20282	1.89	403	29.5	882	7.2
13.Rajasthan	44006	2.50	129	22.9	910	24.4
14.TN	55859	1.43	429	34.2	974	32.8
15.UP	139112	2.27	473	19.8	879	35.1
16.WB	68078	2.21	767	27.5	917	27.6
17.India	846303	2.14	257	25.7	927	29.9

Note: Columns 2:'000 No., 3:Annual Exponential Growth Rate(1981-91) in Percent, 4:Per Sq. Km., 5:Percentage, 6:Females Per '000 Males, 7:Percent of Total Population (1987-88)

Source: Economic Survey, 1996-97, Govt of India and State's Economy in Figures, DES, Govt. of Orissa

Table 2.2
Socio-Economic Indicators: Health and Literacy

States	Literacy Rate			Infant Mortality	Expectation of Life	
	Male	Female	Total	Rate	Male	Female
1	2	3	4	5	6	7
1.AP	55.1	32.7	44.1	71	57.3	60.3
2.Assam	61.9	43.0	52.2	76	52.4	52.5
3.Bihar	52.5	22.9	38.5	72	54.9	52.3
4.Gujarat	73.1	48.6	61.3	67	55.9	57.9
5.Haryana	69.1	40.5	55.9	75	61.5	59.5
6.J&K	NA	NA	NA	NA	60.2	60.7
7.Karnataka	67.3	44.3	56.0	NA	59.8	62.4
8.Kerala	93.6	86.2	89.8	73	65.9	72.2
9.MP	57.4	28.9	44.2	104	50.6	51.8
10.Maharastra	75.6	52.3	64.9	59	60.1	62.8
11.Orissa	63.1	34.7	49.1	114	53.6	53.1
12.Punjab	65.7	50.4	58.5	56	63.0	64.7
13.Rajasthan	55.0	20.4	38.6	89	53.5	54.3
14.TN	67.2	41.8	54.5	58	57.4	58.5
15.UP	55.7	25.3	41.6.	98	52.3	49.6
16.WB	67.8	46.6	57.7	64	57.9	59.1
17.India	64.1	39.3	52.1	79	55.9	55.9

Note: Columns 2,3 & 4 are according to 1991 census, 5: Per '000 live birth(1992),
6 & 7: Expectation of life at birth (1981-88, years)

Source: Economic Survey, 1996-97, Government of India and State's Economy in Figures, DES, Government of Orissa

Table 2.3
Socio-Economic Indicators: Agriculture

States	Yield Rate of Paddy	Per Capita Production	Share in All India Pdn.	Fertiliser Consumption	Net Area Irrigated
1	2	3	4	5	6
1.AP	3604	174	6.81	114.2	38.5
2.Assam	1962	149	1.96	6.9	21.1
3.Bihar	1221	121	6.17	57.2	46.7
4.Gujarat	2162	109	2.63	73.3	27.6
5.Haryana	3989	575	5.56	107.8	75.6
6.J&K	2924	176	0.80	40.0	42.6
7.Karnataka	3489	166	4.39	64.4	20.3
8.Kerala	3033	137	0.64	67.2	14.9
9.MP	1607	246	9.59	35.3	24.4
10.Maharastra	2299	144	6.67	52.1	13.7
11.Orissa	1838	230	4.27	21.9	32.8
12.Punjab	5086	957	11.34	162.2	93.3
13.Rajasthan	1852	224	5.84	27.4	26.4
14.TN	4332	142	4.64	117.1	46.4
15.UP	2633	252	20.53	86.0	65.6
16.WB	3051	177	7.09	87.5	34.8
17.India	2618	201	100.00	67.1	35.1

Note: Columns 2: Kg/Hect. in 1992-93, 3: Kg/Annum in 1990-93(Food Grain) 4: 1990-93(Food Grain), 5: Per Hector of Gross cropped Area(Kg) in 1992-93)
6: As percentage of Net Area Sown in 1992-93

Source: State's Economy in Figures, DES, Government of Orissa, 1994

Table 2.4
Socio-Economic Indicators: Manufacturing Sector (1993)

States	Persons engaged ('000)	Fixed Capital (Rs. crore)	Value of output (Rs. crore)	Value added (Rs. crore)	Gross output per worker (Rs. Lakhs)	Output to fixed capital (%)	Profit to output (%)
1. AP	884.5	22244.3	28375.4	4909.2	3	127.6	0.8
2. Assam	114.4	1519.1	3682.9	859.8	3	42.4	15.3
3. Bihar	343.8	11458.2	19586.6	6728.8	6	170.9	18
4. Gujarat	771.0	23956.7	46904.0	9425.0	6	195.8	7.4
5. Haryana	290.1	6006.4	15400.1	2112.8	5	256.4	1.5
6. J&K	15.2	89.1	768.2	192.5	5	862	17.7
7. Karnataka	460.7	7414.8	18761.8	4136.6	4	253	6.8
8. Kerala	309.9	3839.0	8814.0	519.9	3	229.6	5.9
9. MP	454.7	16130.5	24565.5	5371.8	5	152.2	7.7
10. Maharastra	1346.3	38952.0	92233.2	21603.9	7	236.8	9.1
11. Orissa	185.3	8774.2	8325.4	1684.4	4	94.9	1.6
12. Punjab	443.7	9819.5	19242.9	2983.9	4	196	4.3
13. Rajasthan	257.0	6112.6	13918.6	2379.7	5	227.7	0.3
14. TN	1127.2	19842.7	45634.5	9883.1	4	230	9.4
15. UP	788.0	23636.6	40199.4	5773.3	5	170.1	3
16. WB	41.9	19750.3	22886.1	5358.2	3	115.9	2.1
17. All States	8837.7	224413.3	425744.3	8843.0	5	189.7	6.7

Source: Profile of States, CMIE, March 1997

Table 2.5

Net State Domestic Product of Orissa (Rs.in Crores)

Year	Net State Domestic Product				Per Capita Income(Rs.)			
	Current Prices	Constant Prices	Index No (2)	Index No (3)	Current Prices	Constant Prices	Index No (6)	Index No (7)
1970-71.	1037	2583	30	75	478	1191	36	90
1971-72	1048	2353	60	68	573	1286	44	98
1972-73.	1297	2595	38	75	575	1150	44	88
1973-74	1607	2765	47	80	699	1203	53	92
1974-75	1673	2387	49	69	715	1020	54	78
1975-76	1739	2819	51	82	729	1182	55	90
1976-77	1674	2628	49	76	690	1083	53	82
1977-78	2090	3099	61	90	845	1253	64	95
1978-79	2199	3307	64	96	873	1313	66	100
1979-80	2174	2731	63	79	847	1064	64	81
1980-81	3434	3434	100	100	1314	1314	100	100
1981-82	3844	3437	112	100	1443	1290	110	98
1982-83	4070	3232	118	94	1501	1191	114	91
1983-84	5253	3885	153	113	1902	1407	145	107
1984-85	5191	3700	151	107	1846	1316	140	100
1985-86	6226	4127	181	120	2175	1442	166	110
1986-87	6748	4184	196	122	2315	1436	177	109
1987-88	6853	4054	199	118	2300	1365	175	104
1988-89	8681	4907	200	143	2871	1623	218	124
1989-90	9917	5234	288	152	3218	1699	245	129
1990-91	9664	4345	281	126	3077	1383	234	105
1991-92	12505	4897	363	142	3907	1530	297	116
1992-93	13416	4814	390	140	4114	1476	313	112
1993-94	15405	5121	447	149	4639	1542	353	117
1994-95	17439	5346	507	155	5157	1581	392	120

Note: NSDP at Current Prices (at 1980-81 Prices)

Source: Net State Domestic Product, CSO

Table 2.6
Compound Average Growth Rate of NSDP and Per Capita Income of Orissa

Periods	Net State Domestic Product		Per Capita Income	
	Current Prices	Constant Prices	Current Prices	Constant Prices
1970-71 to 1980-81	10.64	2.54	8.72	0.76
1980-81 to 1994-95	11.42	2.98	9.54	1.24
1970-71 to 1994-95	11.52	2.89	9.54	1.07

Table 2.7
Net State Domestic Product of States

States	1970-71		1980-81	1990-91		1994-95	
	Current Prices	Constant Prices	Current Prices	Current Prices	Constant Prices	Current Prices	Constant Prices
1.AP	2523	5283	7324	31165	11723	50679	13167
2.Assam	771	1619	2298	9498	3426	13763	4167
3.Bihar	2245	4669	6349	22848	10317	35682	9972
4.Gujarat	2189	4665	6547	24285	10961	46588	14167
5.Haryana	868	1944	3032	12238	5719	21639	6556
6.J&K	250	696	1050	2763	1362	4264	1577
7.Karnataka	1558	4113	5587	20583	9121	38421	11892
8.Kerala	1255	3080	3823	12173	5262	22024	6869
9.MP	1991	5244	7253	26546	11121	41571	12364
10.Maharastra	3876	9696	15163	57577	27007	111028	35198
11.Orissa	1037	2583	3434	9664	4345	17439	5346
12.Punjab	1436	2776	4449	16785	7520	30792	9043
13.Rajasthan	1654	3773	4126	17940	8475	23680	8140
14.TN	2371	6086	7218	28160	12634	51747	15373
15.UP	4257	10476	14012	49496	22780	79024	24653
16.WB	3168	7052	9594	31753	14188	49780	17618
17.India	34519	83172	110340	425619	190218	759262	222448

Note: NSDP at Constant Prices(at 1980-81 Prices), For 1980-81 the Current and Constant Prices are same

Source: Net State Domestic Product, CSO

Table 2.8
State wise Per Capita NSDP(Rs.)

States	1970-71		1980-81	1990-91		1994-95	
	Current Prices	Constant Prices	Current Prices	Current Prices	Constant Prices	Current Prices	Constant Prices
1.AP	585	1248	1380	4726	1779	7155	1859
2.Assam	525	1123	1284	4281	1544	5680	1720
3.Bihar	402	836	917	2665	1204	3819	1067
4.Gujarat	829	1759	1940	5917	2671	10578	3217
5.Haryana	877	1964	2370	7501	3509	12158	3683
6.J&K	548	1526	1776	3625	1786	5099	1886
7.Karnataka	641	1419	1520	4605	2041	8082	2501
8.Kerala	594	1458	1508	4200	1815	7201	2246
9.MP	484	1275	1368	4053	1696	5785	1758
10.Maharastra	783	1959	2435	7376	3456	13112	4157
11.Orissa	478	1191	1314	3077	1383	5157	1581
12.Punjab	1070	2068	2674	8341	3737	14188	4167
13.Rajasthan	651	1485	1222	4113	1943	5050	1750
14.TN	581	1491	1498	5071	2275	8941	2656
15.UP	486	1196	1278	3590	1652	5331	1663
16.WB	722	1607	1773	4710	2105	6877	2434
17.India	633	1525	1630	4983	2222	8237	2401

Note: NSDP at Constant Prices(at 1980-81 Prices), For 1980-81, the Current and Constant Prices are same

Source:: Net State Domestic Product , CSO

Table 2.9

Ranking of States According to the Per Capita NSDP

(NSDP at Current Prices)

States	1970-71	1980-81	1990-91	1994-95
1.Punjab	1	1	1	1
2.Haryana	2	3	2	3
3.Gujarat	3	4	4	4
4.Maharastra	4	2	3	2
5.WB	5	6	7	9
6. Rajasthan	6	15	11	15
7.Karnataka	7	7	8	6
8.Kerala	8	8	10	7
9.AP	9	10	6	8
10.TN	10	9	5	5
11.J&K	11	5	13	14
12.Assam	12	13	9	11
13.UP	13	14	14	12
14.MP	14	11	12	10
15.Orissa	15	12	15	13
16.Bihar	16	16	16	16

Table 2.10
Compound Average Growth Rates of NSDP and Per Capita Income of States (at 1980-81 Prices)

States	Net State Domestic Product			Per Capita Income		
	1970-80	1980-94	1970-94	1970-80	1980-94	1970-94
1.AP	2.84	3.99	3.64	0.92	2.01	1.61
2.Assam	3.24	4.05	3.85	1.23	1.97	1.72
3.Bihar	2.83	3.06	3.08	0.84	1.02	0.98
4.Gujarat	3.17	5.28	4.56	0.89	3.43	2.44
5.Haryana	4.12	5.28	4.98	1.72	2.98	2.55
6.J&K	3.81	2.75	3.33	1.39	0.40	0.85
7.Karnataka	2.82	5.17	4.34	0.63	3.38	2.29
8.Kerala	1.98	3.98	3.26	0.31	2.69	1.74
9.MP	2.73	3.81	3.49	0.64	1.61	1.25
10.Maharastra	4.15	5.77	5.29	2.00	3.63	3.06
11.Orissa	2.65	2.98	2.95	0.90	1.24	1.14
12.Punjab	4.38	4.84	4.84	2.36	3.00	2.84
13.Rajasthan	0.82	4.63	3.12	-1.76	2.42	0.66
14.TN	1.56	5.17	3.78	0.04	3.89	2.34
15.UP	2.68	3.84	3.48	0.60	1.77	1.33
16.WB	2.84	4.14	3.73	0.90	2.13	1.67
17.India	2.60	4.79	4.01	0.66	2.62	1.83

Table 2.11
NSDP of Orissa According to Broad Sectors
(At Current Prices)

Years	Rs. in Crores				Share in NSDP			
	Agri.	Manuf.	Trans.	Others.	Agri.	Manf.	Trans.	others
1970-71	679	127	118	128	64.5	12.0	11.3	12.2
1971-72	674	128	122	137	53.5	12.1	11.5	12.9
1972-73	873	146	143	148	66.6	11.1	10.9	11.3
1973-74	1195	190	173	162	67.6	11.7	10.7	10.0
1974-75	1070	248	183	191	63.2	14.7	10.8	11.3
1975-76	1087	249	192	231	61.8	14.1	10.9	13.2
1976-77	905	341	195	252	53.5	20.1	11.5	14.9
1977-78	1267	324	236	282	60.1	15.4	11.2	13.3
1978-79	1299	371	243	304	58.6	16.7	10.9	13.7
1979-80	1174	486	245	345	52.2	21.6	10.9	15.3
1980-81	1772	521	455	477	54.9	16.2	14.1	14.8
1981-82	2049	557	540	531	55.7	15.1	14.7	14.5
1982-83	1996	607	549	613	53.0	16.1	14.6	16.3
1983-84	2815	638	716	674	57.5	14.1	14.6	13.8
1984-85	2516	806	688	791	52.4	16.8	14.3	16.5
1985-86	3161	992	876	907	53.2	16.7	14.8	15.3
1986-87	3082	1155	915	1054	49.7	18.6	14.7	17.0
1987-88	2966	1374	951	1230	45.5	18.6	14.7	18.8
1988-89	3953	1817	1229	1334	46.9	21.5	14.6	17.0
1989-90	4566	1853	1351	1646	48.5	19.7	14.3	17.5

Note; Agri(Agriculture) includes Agriculture, Forestry, Logging and Fishing.

Mnuf(Manufacture) includes Manufacturing, Mining and Quarrying, Electricity and Construction.

Trans(Transport) includes Transport, Trade, Hotel, Restaurant and Storage

Others includes Banking, Insurance, Public Administration, Real Estate and other Services

Source: Net State Domestic Product, CSO(1991)

Table 2.12
Compound Average Growth Rate of NSDP According to Broad Heads For Orissa (Constant Prices)

Sectors	1970-71 to 1980-81	1980-81 to 1989-90	1970-71 to 1989-90
Agriculture	-0.64	2.99	2.18
Manufacture	4.54	4.93	3.30
Transport	1.33	3.93	3.02
Other Services	3.00	6.44	4.87

Table 2.13
Monthly Per Capita Expenditure: 1988-89

States	Rural					Urban				
	Expenditure (Rs.)			% of Total Exp		Expenditure (Rs.)			% of Total Exp	
	Food	Non-Food	Total	Food	Non-Food	Food	Non-Food	Total	Food	Non-Food
1.AP	108.41	74.73	183.14	59.2	40.8	135.81	109.43	245.24	55.4	44.6
2.Asaam	114.51	45.15	159.66	71.7	22.3	168.61	108.48	277.09	60.9	39.2
3.Bihar	106.25	46.64	152.89	69.5	25.5	144.36	83.51	227.87	63.4	36.7
4.Gujarat	112.87	58.68	171.55	65.8	34.2	155.87	122.97	278.84	55.9	44.1
5.Haryana	147.49	97.16	244.65	60.3	39.7	157.75	118.28	276.03	57.2	42.9
6.Karnataka	103.11	54.24	157.55	65.6	34.4	147.42	102.35	249.77	59.0	41.0
7.Kerala	135.49	82.50	217.99	62.2	37.9	163.66	166.35	280.01	58.5	41.6
8.MP	94.52	58.37	152.89	61.8	38.2	135.48	98.86	234.34	57.8	42.2
10.Maharastra	104.55	66.52	171.07	61.1	38.9	171.44	140.32	311.76	55.0	45.0
11.Orissa	101.59	45.75	147.34	69.0	31.1	153.99	102.37	256.36	60.1	39.9
12.Punjab	152.91	111.80	264.71	57.8	42.2	169.36	129.14	298.50	56.7	43.3
13.Rajasthan	129.85	88.94	218.79	59.4	40.7	152.63	111.49	264.12	57.8	42.2
14.TN	110.93	60.00	170.93	64.9	35.1	144.05	107.29	251.34	57.3	42.7
15.UP	103.65	61.08	164.73	62.9	37.1	130.11	108.11	238.22	54.6	45.5
16.WB	119.74	50.24	169.98	70.4	29.6	164.28	104.39	268.67	61.2	38.9
17.All India	111.80	63.30	175.10	63.9	36.2	152.49	114.36	266.85	57.1	42.9

Source: Profile of States, CMIE, March 1997

CHAPTER III

REVIEW OF STUDIES ON STATE FINANCES AND RELATED TOPICS

The study of State finances involves many important issues in the federal structure of India and is significant in the context of persistent unbalanced development among the States. Under the constitutional set-up, the States have many responsibilities in the socio-economic development of the country. To carry out such activities, they have also access to revenue flows from their own sources and shares in Central Government revenue as ordained by the Constitution. The fiscal arrangement in the States depends more upon the Centre-State financial relationship. The responsibilities as well as the revenue raising powers of both the Centre and States have been delineated in the Constitution. Though the States are free to raise revenue and frame expenditure policy in their own sphere of authority, inadequacy of funds for developmental purposes has been a serious concern. Borrowing powers of the States are rather limited. All these factors lead the States to depend upon Centre for more share in Central revenues and grants.

The major issues in analysing State finances in India are to find out how far States could raise their own resources and prune their budgetary expenditures. In addition, the role of Central transfers in the finances of the States also assumes importance. The tax structure and expenditure pattern of States merit separate discussion looking to the criticisms regarding lack of drive for generating enough resources and indulgence of States in wasteful expenditures, thus precipitating the fiscal problem.

3.1 Centre-State Financial Relations and State Finances

Due to the existence of budgetary transfer system for a long time, an impressive literature on centre-State financial relations have been accumulated in India. Most of the

studies while analysing various aspects of Centre-State financial relations gave importance to the existence of vertical imbalance between the Centre and the States and the horizontal imbalance among the States themselves. The effectiveness of Central transfers to reduce such imbalances in the process of fiscal adjustment process is central to such studies[1]. These two aspects of Centre-State financial relations, however, are very important in the light of existence of huge disparity in the development process among the States. As the fiscal autonomy of the States has been reduced due to emergence of Planning Commission as the main arbiter in the devolution process over and above the Finance Commission and the proliferation of Central interventions in the State subjects, over the years, the importance of vertical and horizontal equality has grown.

In developed federal countries like, USA, Canada, Australia, and West Germany, the lower levels of government receive transfers of resources from higher level government through statutory bodies. These arrangements for resource transfers take into account the vertical fiscal imbalance as well as horizontal fiscal imbalances to formulate the transfer policy[2]. In these countries national priorities have been attempted to be achieved by co-ordinated budgetary policies of both federal and provincial governments. Chelliah et. al. (1981)[3] discussed regarding the two types of transfers in these countries, namely, general and conditional transfers. The provinces are encouraged to spend on projects of federal priorities by giving them grants on matching basis through conditional grants. The general grants depend upon the fiscal performance of the provinces and their

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[1] see Sato Hiroshi (1992), "The Political Economy of central Transfers to States in India, 1972-84", The Developing Economies, 34, Dec, pp 347.

[2] see "A Normative Approach for Resource Transfer in Federal State" by Murthy M.N. and Nayak P.B. in Bagchi, Amaresh and Nicholas Stern (ed), Tax Policy and Planning in Developing Countries (1994)

[3] see R. J. Chelliah et al. (1981), Trends and Issues in the Indian Federal Finances, NIPFP, Allied Publishers, pg 13

relative per-capita income. In many developing countries also budgetary policies of different levels of government are co-ordinated for achieving national objectives. But it is a fact that, provinces in most of the developing countries don't enjoy a much autonomy as their counterparts in developed countries enjoy.

Transfer of resources from the Centre to the States should include criteria based on objectives of efficiency and distributional equity. The efficiency objective in the devolution process comprises of economic and revenue efficiencies. The economic efficiency is aimed at maximising State domestic product (SDP) by proper allocation of resources to various sectors of he economy. The resource transfers by linking it with SDP may induce the States to improve their resource allocation. On the other hand, revenue efficiency pertains to maximising revenue given the tax base and other institutional constraints. Resource transfers taking tax efforts of State governments as a criteria provides incentives to States to improve their performance through various reforms.

The objective of distributional equity in the transfers of resources involves reducing horizontal disparity among the States. The income disparity among the States could be due to difference in the natural endowments or government policies. States with larger population and lower natural resources may have high poverty ratio. Central transfers keeping per capita income as one of the criteria is designed to provide more resources to such States. Murthy and Nayak (1994)[4], in this connection, observed that, the current methods of resource allocations by the Finance Commissions in India basing upon population, per-capita income, poverty ratio and tax effort of States may not act as inducements for State governments to take up reforms to improve the fiscal conditions. Due to apriori decision making regarding the resource allocation, the actual behaviour of States may not be influenced much. According to them, the distribution of income within

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[4] Murthy, M.N. and Nayak, P.B.(1994) pg 234, op cit.

the States should also be given importance in the devolution of resources. Certain measures of inequality within the States could be linked with transfer of resources, to tackle the issue a poverty alleviation better.

3.1.1 The Framework of Transfer of Resources to the States

In a federation, both the Central and State Governments should have adequate financial backing to discharge their responsibilities. The Indian Constitution has made elaborate provisions, mainly following the lines of the Government of India Act, 1935, relating to the distribution of the taxes as well as non-tax revenues and the power of borrowing, supplemented by provisions for grants-in-aid by the Union to the States[5]. Though the State legislature have been given power to levy taxes within their own sphere, the yield from such taxes may not be large enough to serve the purposes of a State. To meet this situation the Constitution makes special provision for sharing of some taxes between the Centre and the State and provision of grants to the States from the Centre.

Levy and administration of taxes with wide economic base such as income tax, corporation tax, union excise duty, and of course also import and export duties remains with Union Government. The experience of intractable problems of conflicting tax jurisdiction due to assignment of taxes with wide economic base to units in many federation might have influenced the architects of our Constitution to assign these taxes to the Union Government[6] . Nevertheless, the desire for a strong centre with more financial leverage guided such an arrangement of financial power. At the same time, subjects like agriculture, education, medical care, public health, irrigation and law and order are entrusted with the States. The heads of revenue and responsibilities are distributed on the

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[5] see "Distribution of Financial Powers" in Introduction to the Constitution of India, by D.D.Basu, Prentice Hall of India, 1993, pp 295

[6] see Report of Finance Commission, 1973, pg 5

basis of whether the Centre or the States are better equipped to deal with particular head. Such a arrangement of distribution of financial powers and expenditure responsibilities has resulted in financial inadequacy in case of the States. This fact was recognised by the Constitution and corrective measures facilitating a wide ranging transfer of resources from the Centre to the States have been made.

The Constitution provides for transfers of resources from the Centre to the States in the following form.

(1) Through the levy by the Centre, but assignment in whole of the proceed of certain taxes levied in respective States. The taxes in this category are, succession duty and estate duty on properties other than the agriculture land, terminal taxes on goods or passengers carried by railways, sea or air, taxes on railway fare and fright etc..(art 269 of the Constitution).

(2) Through mandatory sharing of the proceeds of income tax. (art 270 of the Constitution).

(3) Through permissive participation in the proceeds of union excise duties. (art 272 of the Constitution).

(4) through statutory grants-in-aid of the revenues of the Centre. (art 275 of the Constitution).

(5) through grants for any public purposes. (art 282 of the Constitution).

Apart from these provisions pertaining to assistance on revenue account, the Centre of course has also the power to grant loans for any purpose to the State governments under article 293 of the Constitution. Along with the channels of transfers, the Constitution also provides for a machinery in the form of Finance Commission to effectuate these the flows. The provision of additional grants-in-aid (article 282) by the Centre to the States has helped the Centre to create the Planning Commission through a

resolution of the Parliament in 1950. Thus there are presently two main sources of financial assistance from centre to the States.

(a) The Finance Commission, a statutory body appointed by the Central Government, makes (quinquennial) recommendations on awards to the States for non-plan revenue expenditure.

(b) The Planning Commission, which determines the block assistance for State plan expenditure and grants plan advance and fixes other miscellaneous kinds of assistance for State plan expenditure.

In addition, there is also miscellaneous ad hoc assistance, which may be channelled through Central ministries (with Planning Commission approval and the Reserve Bank), among others termed as discretionary assistance.

3.1.2 Transfer of Resources through Finance Commission

The Finance Commission is issued with terms of reference in the Presidential order to give its recommendation for sharing of the taxes and grants. In their recommendations the Finance Commission details the approach with which it has proceeded with the work. The work done by the Finance Commissions in the sphere of federal finances over the years seems commendable from the amount of basic data on State finances and their periodic scrutiny made available by them. Even then criticisms are made against the approaches and methods adopted by finance Commissions. Due to periodic appointment of Finance Commissions the approaches adopted by various Commissions did not have a continuity though on the whole they have tried to maintain the basic equilibrium in the finances of the State governments. Chelliah et.al.(1981)[7] pointed out that, due to discontinuity in the successive Finance Commissions, long term interests and major problems of the States are sidelined. The normative approach to evaluate the revenues of

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[7] see Chelliah et al.(1981), NIPFP, pg 15, op.cit.

the Centre and the States for the first time adopted by the Ninth Commission which was given up by the Tenth Commission. It was the alternative devolution approach given by the Tenth Finance Commission is seen as correction in this regard.

The Ninth Finance Commission has drawn attention to the steadily deteriorating fiscal scenario in the country, particularly relating to the growing revenue deficits of the States and the Centre and rapid growth of public debt. The approach of the Commission was guided by the objectives such as, phasing out the revenue deficits of the Centre and the States, equity in the distribution of fiscal resources both vertically and horizontally and promotion of fiscal discipline and efficiency in the distribution of resources[8]. For implementing these principles the Commission adopted a normative approach, according to which 'need' and 'capacities' of different States were assessed normatively and such assessments were taken as the basis for determining the volume and pattern of federal transfers. The Commission considered the revenue budget as a whole comprising the non-plan and plan to restore the balance[9].

The Tenth Finance Commission had to undertake an unenviable task of balancing the State budgets on the face of mounting gaps in the revenue accounts of both the Centre and the States. The Commission pointed out that, "our attempt through the reassessment of Centre and State forecasts, has been to generate sustainable non-plan revenue surpluses"[10]. The core of its scheme for Central transfers consists of (a) Projection of revenue and expenditure at the Central and State level in an integrated manner so as to bridge the gap between the Centre's capacity and States' needs, (b) the basis for vertical

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[8] see Report of the Ninth Finance Commission (1990), pg

[9] Earlier, usual practice of the Finance Commissions was to consider the non-plan part of the revenue budget to decide the transfers.

[10] see Report of Tenth Finance Commission, (1994), pg 6

sharing of the shareable taxes between the two levels, and (c) the formulae for horizontal sharing of the devolved amount between the States and, consequent to it, the determination of specific revenue gap grants to the States which would remain still in deficit[11]. The Commission has also presented an Alternative Scheme for Devolution which has the potential for initiating long term reforms in Centre-State fiscal transfers.

3.1.3 Planning Commission and Plan Assistance

Since 1969, the bulk of assistance which States receive for their plans comes from the Planning Commission and is distributed on the basis of "Gadgil Formula'. This replaced the earlier pattern of assistance under which conditional Central assistance was provided on the basis of projects sanctioned. The earlier mode of plan assistance placed considerable discretion at the hands of the Centre so far as the States' plans are concerned and their implementation. According to the revised Gadgil Formula[12], the block assistance for State is distributed; 60 percent on the basis of population (1971), 25 percent on the basis of per capita income[13], 7.5 percent for special problems and 10 percent for fiscal management.

An exception is made for the poorest States which come under special provisions (for instance special category States like North-eastern States) which receive lump-sum payment fixed by the Planning Commission. The assistance given to the States under Gadgil Formula is distributed on a 70 percent loan, 30 percent grants basis; assistance to

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[11] see Guhan, S.(1995), "Report of Tenth Finance Commission" Economic and Political Weekly, April 22, pp 877-78

[12] In the original Gadgil Formula the shares of various factors for distribution of plan assistance were: 60 percent for population, 10 percent for per capita income, 10 percent for tax effort, 10 percent for outlay on major irrigation and power projects and 10 percent for special problems.

[13] Assistance going to States having a per capita income below the national average.

the poorer States is given 90 percent as grants and 10 percent as loans. This block grant is the largest source of assistance for State Plans. There are other sources of assistance for States Plan in lieu of developmental purposes in hill areas, tribal areas, matching assistance for foreign aided projects and advance plan assistance. Advance plan assistance is aimed at plugging the plan gaps which may arise in poorer States and helps in implementing plan priorities so that the targets are achieved. But the advance plan assistance is generally recoverable over the five year plan period[14]. In practice, not all of the advance plan assistance is recoverable, especially the assistance given for relief expenditure.

3.1.4 Discretionary Assistance

Discretionary assistance comprises those funds which come to States through channels other than Planning and Finance Commissions. Its purpose is to finance non-plan expenditure, but not necessarily non-developmental expenditure. Most discretionary assistance is in the form of specific-purpose grants and loans. The most important types of discretionary assistance are: Centrally sponsored and Central sector schemes and 'special accommodation' loans and overdrafts assistance. In addition, there is also assistance for police housing, educational schemes, agricultural schemes, roads and natural calamities.

Centrally sponsored and Central sector schemes make up the bulk of discretionary assistance. There are schemes for which, because of their national importance, the Centre takes initiative, proposed and formulated by Ministry involved, approved by the Planning Commission and financed largely by the Centre. The schemes are implemented by the States because they are in the sectors of State competency. Centrally sponsored schemes are generally financed 100 percent by he Centre, whereas Central sector schemes are matching type. Examples of these schemes are Command Area Development, the

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[14] Advance granted in one year may be offset against the normal plan assistance next year so that the relative share of the State still corresponds to its share under the Gadgil Formula.

Drought Prone Area Programme, Communicable Disease Control, Primary Education, Family Planning, Minor Ports and Pulses and Oilseeds programme, among others.

3.1.5 Issues in the Process of Devolution of Resources

The federal structure of India has evoked lot of interest in academic circle and an enormous volume of literature on administrative and financial set up has been produced. Compared to federal States like USA and Canada, it is argued that the Central government in India has accumulated more fiscal powers[15]. The role of Planning commission which has become the principal instrument of planned economic growth is sited as one of the clear indicators. The widening of the inter class and inter-regional imbalances over the decades is pointed out as the result of such an arrangement. Instead of devolving the residuary powers to the States as expressed in pre independence plan programmes for future set up, the Centre reserved this power for itself. With the increment of complexities in State activities as major administrative responsibilities were with the States, the financial inadequacy was felt more severely.

In this connection studies on Federal Financial Relations by Gulati and George(1988)[16] are noteworthy. In this study the Centre-State resource transfers are studied for the period, 1951-84. They have pointed out that, "since the Constitution came into effect, stresses and strains experienced in federal relations have been largely the result of the difficulties faced by the States in discharging the responsibilities assigned to them on account of the shortage of resources"[17]. Centre's commanding position in revenue raising

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[15] Mitra, A. (1975), " Will Growth and Centralised Fiscal Arrangements Do?", in I.S. Gulati (ed), Centre State Budgetary Transfers, pg 27.

[16] Gulati, I.S. and K.K. George (1988), Essays in Federal Financial Relations, Oxford and IBH Publishing Co. Pvt. Ltd. and Centre for Development Studies, Trivandrum.

[17] Ibid, pg 6

could be seen from the fact that, before the accrual of devolution, the States' share in aggregate budgetary receipts is less than one third. Aggregate transfers from the Centre to the States, though constitutes only one third of aggregate Central receipts, it constitutes major part of the States expenditure. Virtual control of the Centre on financial and semi-financial institutions has limited the borrowing power of States as the lending policy such institutions to a large extent depend upon the policy directions from the Centre. They have also pointed out that the component of arbitrariness in the transfers to States has increased which is manifest more in the discretionary transfers sanctioned by Article 282. The Planning Commission transfers, though determined more or less by the Gadgil Formula, has become dependent on the Union government's overall and specific attitudes. The budgetary transfers have over the years enriched the stronger States and further weakened the economically weaker ones despite the government's avowed objective to reduce inequality between the poor and rich States. The so called non-plan gaps in the State budgets have become focal point for the Finance Commissions' dispensation, which has encouraged fiscal irresponsibility and tilted the balance against the weaker States.

For a period, 1950-51 to 1975-76, in the NIPFP (1981) study by Chelliah et. al.[18] it was shown that, in terms of collections, both of tax revenues and of total revenue, an increasing tendency towards centralisation is discerned. In terms of accruals, however, the centralisation has come down. The States' share in tax revenue accruals (own tax plus shared tax) in total tax revenues of the Central and State Governments increased gradually from 43 percent in 1950-51 to 46.3 percent in 1975-76. Financial advantage to the Centre before the devolution of resources has been evident from the fact that, the total tax revenue generated by the two tiers of Government, is unequally distributed. Nearly 65 percent is raised through the taxes assigned to the Centre and 35 percent through the taxes

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[18] Chelliah et.al.(1981), pg 39, op.cit.

assigned to the States (in 1993-94)[19]. The unequal distribution of taxes between States and Centre prompted successive Finance Commissions to recommend higher shares in income tax and excise duties to States.

Financing of States' plan was studied by Ansari (1983) from the point of view of the per capita real income and relative financial capacity of the States. Regional disparity according to him has grown as the advanced sates were able to finance the bulk of the plan requirements as compared to other States. The assistance from the Centre had generally helped such States in expanding their plan expenditures. Though the revenue efforts by backward States to improve their economic conditions were commendable the rate of increase in the Central assistance to these States had not increased sufficiently. Wallich(1982)[20] points out that due to the absence of equalisation factors such as expenditure on health, education and infrastructure some regions have become impoverished as labour and capital moved to richer regions where their productivity and returns are higher.

Wallich (1982)[21] in the World Bank study, opined that, there seems to have been no systematic favouring of the lower income States in the overall pattern of awards and plan finances. The middle income States have apparently benefited at the expense of both

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[19] see "Introduction: The Issues in Reforms of Commodity Taxes", in Purohit, M.C and V.K.Purohit (ed), Commodity Taxes in India.(1995), pg 3-4.

[20] Wallich, Christine (1982), State Finances in India, Revenue Sharing, Vo 1, World Bank Staff Working Papers, No 523, Washington DC, pg 23

[21] Wallich (1982), pg 24, op cit. Double log regression, T = ayB is adopted in the study, where, T = transfers and y = per capita income.

high and low income States. This applies to the Finance Commissions also. In his study, per capita transfer and its various components on per capita income in cross-section regression for each plan period yielded little correlation between the two. He claimed that, though there is no evidence that transfers have been regressive, some poorer States have received a very low share of transfers, and some richer States have received proportionately more. The reasons for lack consistency in State-wise distribution lies in the formulae adopted by the Planning and Finance Commission.

Though finance Commissions are accused of their piecemeal approach to the devolution process, in general they have been successful in prescribing relatively higher shares for the poorer States. The Tenth Finance Commission in addition to its report gave an `Alternative Scheme of Devolution' which Guhan(1997) argues could be used as the starting point for putting through a process of rationalising Centre-State transfers, sequenced in an orderly manner between 1997-2001. The alternative scheme prescribes a share of 29 percent in the total gross proceeds of all central taxes to be assigned to the States (to be reviewed in 15 years)l[22].

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In the present set-up, the States have to depend upon the Centre for financial viability and meet the expenditure. The resource effort of States has to be reinforced in their sphere to become able to take decisions independently. From the assessment of Finance Commissions, it was found that, as a whole, the States have not lagged behind the Centre with regard to tax effort with the exception of a few backward States. Looking at the vast resources placed at the disposal of the Centre, a comprehensive transfer sharing scheme should be evolved to help the States[23].

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[22] see Discussion Paper on Alternative Scheme of devolution by the Tenth Finance Commission, Ministry of Finance, Government of India, Dec 1996, pg 12.

[23] see "Introduction", by I.S.Gulati in I.S.Gulati (ed), Centre-State Budgetary Transfers, 1987, pg 10.

The revenue deficit and capital deficit in the State budgets are generally taken care of by Finance and Planning Commissions respectively. But non-plan capital requirements of the States has not been tackled systematically. Lakadawala(1990)[24] pointed out that, large sums are needed to repay the plan loans taken earlier from the Centre, but apart from the share in small savings there is no regular major source of non-plan capital receipts which can provide for repayment. This has been the important cause for rising overdrafts by the States as per the Fifth Finance Commission. The Sixth, Seventh and Eighth Finance Commissions have suggested writing off of some debts and rescheduling some of the repayments which fall due in their period. This kind of recommendations could be seen as ad-hoc prescriptions for a malady which should be taken care of on a long term basis.

3.2 Revenue Sources of the States

State revenue receipts are those receipts for which the State has no repayment liability and which are used to finance various expenditure items. The revenue receipts of the State consist of tax revenue, non-tax revenue and grants from Central Government. Revenue sharing is a built-in feature of the Indian fiscal scene. A breakdown has been made in the case of tax revenues, where many taxes, in the interests of efficiency and uniformity, are assigned to the Central Government and the States get share from such taxes. The States receive in the income tax. the central excise duties, central additional excise duties and the estate duty.

States' own taxes include, general sales tax. central sales tax, land revenue, tax on motor vehicles, tax on motor spirits, the stamps and registration fees, entertainment tax, electricity duty, taxes on goods and passengers carried by road, tax on professions, taxes

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[24] Lakadawala, D.T.(1990), "Ninth Finance Cimmission's Award: 1; An Overview", Economic and Political Weekly, June 9, pp 1260-1262.

on urban property and agricultural income tax. The taxes levied and the rates of tax varied among the States. Some times two taxes are combined for administrative convenience.

General sales tax is considered as one of the most elastic sources of revenues to the States. The growth of this tax obviously depend upon the increase in the volume of trade, extent of monetisation and also the price level. General sales tax rates widely differ among the States in India. Central sales tax is levied at the rates of less than or equal to 4 percent on goods involving inter-State trade, This tax is collected and apportioned by the respective States where it is levied. State excise duty is derived from duties on Indian Made Foreign Liquor, other intoxicants, medicinal and toilet preparations etc. Agricultural income tax and land revenue are not very important sources of revenues, the former being non-existent in most of the States. Receipts from Stamps and registration fees has dwindled over the years. Land revenue, although an important source of revenue to the States, has shown major decline over the years because of several concessions granted by the States from time to time.

Non-tax receipts are important sources of revenue for the States in India. Interest receipts on State's loan, receipts under public works, irrigation receipts, forest receipts, receipts from administrative services and social and developmental sources are main non-tax revenues for the States. The receipts from non-tax revenues have been declining in the recent times due to not charging proper 'user charges' by the Government. Also there are other reasons, such as lack of proper management and many other non-economic factors. Properly exploited and managed

The other category of revenue receipts relates to the grants which all States receive from the Central Government. There are many kinds of grants which flow to the States, such as statutory grants provided to the States through the Finance Commission's awards, grants in lieu of Centrally sponsored schemes, grants for natural calamities etc..

Bagchi and Sen(1992)[25], while analysing the budgetary trends in Indian States have marked that, taking the decade of the 1980s as a whole, total revenue receipts of the States grew at a rate of 14.9 percent per annum and total tax receipts by 15.1 percent. Generally speaking own tax revenue grew at a little faster than the share in Central taxes. They have also mentioned that, growth rates of major taxes have shown variation across the States. Two groups of taxes, agricultural taxes (land revenue and agricultural income tax) and entertainment tax (basic entertainment tax, show tax and betting tax), are losing their importance. The undertaxation of agriculture has become an important subject for discussion[26]. The most important tax from the revenue point of view for the States is sales tax; it shows reasonably high rate of growth, without much inter-State variation. For the year 1993-94, the States have sales tax yielding 56.44 percent, State excise, 14.93 percent and vehicles tax, 8.73 percent of total State taxes[27].

3.2.1 Relative Tax Effort of the States

All the Finance Commissions (except the Sixth), have taken tax effort of a State as one of the criteria in the devolution of resources o the States. The Gadgil formula followed in the transfer of resources by the Planning Commission, gives 10 percent weightage to the tax effort of individual States. Tax effort of States should be understood keeping taxable capacity and actual yield of tax revenue in view. With the expansion of the economy and rise in income, taxable capacity increases. Taxable capacity of State could be tapped by streamlining the existing tax policy, expanding the tax base and

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[25] see Bagchi A and Tapas Sen (1992),"Budgetary and Plan financing in the States", in Bagchi and Bajaj (ed), State Finances in India, 1992, pg 83.

[26] Sarma, J.V.M. and M.G. Rao(1988), Financing Public Sector Development Expenditure in Selected Countries, India, Asian Development Bank, Manila.

[27] see Purohit and Purohit (ed), Commodity Tax in India, pg 5

improving the tax administration. The tax effort of a Government can be expressed as a relationship(ratio) between the actual amount of its tax collection and some measure of taxable capacity[28].

In the process of estimation of relative tax effort, normally two methods are used leaving the usual tax-GDP ratio (tax ratio); one is Aggregate Regression approach (AR) and another, Representative Tax System approach (RTS). In the AR approach, variations in the tax ratios of the States can be explained through a regression analysis in which the tax ratio can be taken as the dependent variable, and proxies for, or indicators of, tax capacity and tax effort factors as the explanatory variables. If the objective is to explain variation in the tax ratio, a stochastic model such as[29]

$$T/Y = f(X_1, X_2 \ldots\ldots X_n, U)$$

could be used where T/Y is the actual tax ratio, the X_i are independent variables that are proxy measures for determinants of taxable capacity and U is the error term. The estimated T/Y which is called presumptive tax ratio[30] divided by the actual T/Y ratio, would yield an index by which the tax effort of Countries or States could be compared.

The RTS approach was popularised by the US Advisory Commission on Intergovernmental Relations(ACIR)[31] which was first study of this kind. The RTS approach is applicable to disagregated analysis. It involves identifying actual tax bases or proxies when the actual bases for individual taxes are not available, and then estimating an effective tax rate for each tax as a ratio of actual tax revenue to the actual or proxy base.

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[28] Chelliah and Sinha (1982), State Finances in India, World Bank Staff Working Papers, No 523, pg 3.

[29] Bahl, R.W.(1971), "A Regression Approach to Tax Effort and Tax Ratio Analysis", IMF Staff Papers, Vol 18, No 3

[30] Musgrave and Musgrave (1980), Public Finance in Theory and Practice, pg 802

[31] ACIR(1962), Measures of State and Local Fiscal Capacity and Tax Efforts, Washington DC.

A normative tax rate is then derived from these effective tax rates over the observations (e.g. an average) and applied to the actual or proxy bases used. This yields the taxable capacity or the tax potential. Individual tax potentials can then be summed across taxes to arrive at the aggregate tax potential. Comparing actual aggregate collections against aggregate capacities so derived (taking a ratio of two), an index of aggregate tax effort can then be arrived at. The representative rates for each tax could be estimated by following[32]

$$r_i = \frac{\sum_{j=1}^{m} (T_{ij}/B_{ij})}{m} \quad i = 1,2,.....,6.$$

where T_{ij} = actual collection of ith tax in the jth country

B_{ij} = value of assumed base of the ith tax in the jth country

m = number of countries for which data on revenues from the jth tax are available.

Among the studies analysing tax effort, the notable ones are those by Lotz and Morss(1967), Chelliah(1971), Bahl(1971,), ACIR(1962) and Bahl(1972). The first three studies have employed the AR approach, while the last two used the RTS approach. In the studies employing the AR approach, the determinants of tax ratio included per capita Gross National Product, its distribution by origin, level of openness of the economy given by its exports/imports relative to GNP, level of urbanisation, and literacy rate. The ACIR study, on the other hand used detailed information on individual tax revenues and relevant bases (actual in case of availability and proxies otherwise) of American States. There are some studies on tax effort of States in India using AR approach. These include studies like Reddy(1975), Dwivedi(1980), Sen(1983), and Oomen(1987). In these studies tax effort of States are estimated and ranked according to their tax effort. One thing becomes

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[32] Bahl R.W(1972), "A Representative Tax System Approach to Measuring Tax Effort in Developing Countries", IMF Staff Papers, Volume 19, No 1.

evident from these studies that the ultimate results are dependent upon the specifications of regression adopted for the purpose. Studies like Thimmaiah(1979), Chelliah and Sinha(1982) and Sen and Tulshidhar(1988) have adopted the RTS approach to estimate the tax effort of States in India.

Oomen(1987) studied the tax ratio and the tax effort of the States using regression approach and ranked the States according to their tax efforts at two points of time, viz., 1970-71 and 1980-81. In his study, Punjab gets first rank in the first period and Haryana gets first rank in the second; Orissa gets last rank(16th) in the first period whereas Assam in the second period on the basis of tax effort. Thimmaiah(1979) analysed taxable capacity and tax effort of four States - Andhra Pradesh, Karanatak, Kerala and Tamilnadu and one Union Territory of Pondicherry as there are high degree of uniformity in their tax system. In Chelliah and Sinha(1982)'s Study, detailed and exhaustive bases - actual and proxies to find the tax effort are used. They have calculated taxable capacity in case of all the taxes and total taxable capacity as was in the case of Thimmaiah. In their tax effort analysis taking all the taxes together, Punjab gets the first position while Bihar gets the 15th position(for the period 1973-76). The study by Sen and Tulasidhar(1988) has tried to incorporate bases for taxes keeping Thimmaiah(1977) and Chelliah and Sinha(1982) in view and made refinements wherever deemed necessary. From their study for the period 1982-83 to 1984-85 Kerala gets the first position and Bihar gets the last(15th) position.

3.2.2 State Tax Reform

In order to make the tax system more buoyant some States have gone in for bringing out certain reforms of their commodity taxes. Earlier reports reveal that certain taxes at State level (such as general sales tax) are every complex and are also regressive. To overcome the complexity of the commodity taxation in India the Union Government had suggested that there should be a single integrated commodity tax like the Value Added Tax. Since 1990, many scholars as well as NIPFP have been examining the

feasibility of bringing out suitable tax reforms at the State level by introducing the Value Added Tax (VAT)[33]. In this connection it would be worth mentioning a few studies attempted by some scholars in this area.

For instance, Studies by Purohit(1995), Dwivedi(1995), Burgess, Howes and Stern(1995), Sundaram, Pandit and Mukherji(1995(, Gurumurthy(1995) have highlighted various aspects of problems and reforms in the commodity taxes[34]. These studies suggested that, union excise duties, sales tax, motor vehicle tax, passengers and goods tax, State excise, electricity duty, entertainment tax, octrai, entry tax and the existing and proposed service taxes should be integrated and rationalised. The tax rates should be reduced to three or four rates and total tax incidence should be lowered. Among many other suggestions, a dual VAT (Central-VAT to replace the existing union excise duties and State-VAT to replace sales tax) and States-VAT to completely replace both the union excise duties and sales tax are important. The introduction of States-VAT is expected to strengthen the financial autonomy of States and it would not adversely affect the finances of Central Government. The tax reform Committee headed by R.J.Chelliah in its interim report(1991), also prescribed for comprehensive VAT replacing the present system of Central excise, the States sales taxes and other indirect taxes except the State levy on alcoholic liquor and the entertainment tax and the proceed of the tax could be shared between the Centre and the States.

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[33] see Sen Tapas K and M.G. Rao (1996), Fiscal Federalism in India, Theory and Practice, Macmillan India Ltd. Also see Purohit and Purohit (1995) op. cit.

[34] All these studies are contained in Purohit and Purohit (ed), Commodity Taxes in India: Directions and Reforms, op. cit.

3.3 Expenditure Side of the Budget

Since the Second World War, the composition and character of government expenditure has undergone changes through out the world following the Keynesian line of thought. In India, the public policy geared towards achieving a Welfare State after independence and undertook various programmes to alleviate poverty and provide social justice to the disadvantageous groups of the population. The reasons attributed at the Union level for the growth of public expenditure could also equally apply to the States' public expenditure.

Level, growth and structure of government expenditure in India has been studied by Reddy(1970), Gualti(1961,1963) and many others. Bhattacharya(1984), examines the macroeconomic impact of public expenditure on economic growth; Gupta(1980) tries to assess its impact on income distribution; Premchand(1966) evaluates the control system relating to public expenditure; Reddy et al.(1984) provide a factual account of the growth of government in India; Toye(1981) presents a meticulous analysis of Indian public expenditure policy during 1960-70. He shows how this policy led to decline in public sector capital accumulation, a trend which was contrary to the plan objectives. M.G.Rao, Tapas Sen and M.Ghosh(1995) analysed the growth of government expenditure at Central level which they termed as uneven. Growth of expenditure was sharp in the case of interest payments, subsidies, wages and salaries, while those on maintenance of capital assets lagged behind thus adversely affecting capital formation.

The relative neglect of capital expenditure in India has been well documented and discussed. Shome, Sen and Gopalkrishnan(1996), pointed out that the expenditure trends clearly show a stagnant capital expenditure alongside fast rising revenue expenditure in India, despite the lack of adequate infrastructure facilities within the country. The increasing revenue expenditure has covered the total revenue receipts and cut into capital receipts as well and have thereby reduced the resources availability for capital expenditure.

This trend of expenditure has been reflected in the States also. Bagchi et al.(1992), while analysing State budgets observed that, rapid growth in current expenditures due to more spending on salaries and high establishment costs, has created fiscal instability in the States. From the expenditure trends in the Indian States, during 1970-85, based on economic and functional classification of the budgets, it is seen that, capital expenditure failed to rise in the first half of the 1980s, when compared to faster growth of revenue expenditure. In real terms, capital expenditure of the States grew at only 3.9 percent per annum between 1970-81. States have tended to spend more under the heads where revenue expenditure predominates as compared to those which involve heavy capital expenditure.

3.3.1 Rising Public Sector

The size of the public sector and its relationship with economic growth has remained one of the most discussed topic in public finance literature. The growth of public sector has been analysed focusing on its impact and the factors responsible for it. Higher expenditure by Governments were opposed by many who feel, it would jeopardise the growth of market forces. Many economists justify higher public expenditure, pointing out the causes of such expenditure and the need of it[35]. Along with economic development throughout the World, responsibilities of the States in maintaining a social order, providing impetus to economic development has also increased. In this context, 'Wagner's Law'(1883,1890) of increasing State activities, opines that rise in government expenditure is the result of economic progress and consequent increase in activities undertaken by the State. Wagner's Law has been a focal point for analysing the increase in size of public sector. Bird(1971) proposed three reasons for increasing State activities -

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[35] Abizadeh, S. and Alexander Basilevsky(1990), "Measuring the Size of the Government", Public Finance/Finances Publiques, Vol 45, No 3, pg 353.

(a) the administrative and protective functions (internal and external), (b) to ensure the proper operation of the market forces, and (c) the provision of social and cultural goods. Peacock and Wiseman(1961) while commenting on Wagner's Law, indicated that, as long as increased State activity is an accompaniment of social progress, increased government spending is a must.

Wagner's Law has attracted many studies to test the Law empirically. A commonly used measure of the size of the Government has been the ratio of government expenditure to Gross National Product. Studies like Lybeck(1986), Bird(1971), Landau(1983), and Carr(1989) are some such studies. The results of empirical tests involving expenditure and GNP, are varied in various countries. A major reason for this consistent variation in measuring government size lies in the lack of a commonly agreed overall measure for comparing government size and the difference in social and economic development and consequent expenditure pattern.

On the basis of his empirical findings, Wagner deducted his law of increasing State activity, according to which government expenditure must increase at a rate faster than that of the national output. Peacock and Wiseman(1961), adopted a historical approach and studied the behaviour of British public expenditure. Peacock and Wiseman are concerned primarily with the time pattern of expenditure growth. The important finding of Peacock and Wiseman is that the war time public expenditure did not return to the pre-war level. The upward shift in the level of government expenditure with relation to national output is called 'displacement effect' which is not in conformity with Wagner's Law of increasing State activity.

Wagner's law of increasing State activities, which postulates that, with the rise of economic development the size of the government increases, is an important issue to be analysed in the context of studying State finances also. According to Wagner's law, it is

the rise in income which influences government expenditure. This proposition, which bears immense policy implications has been extensively tested by many researchers world over. Important among them are Hook(1962), Gupta(1968), Musgrave(1969), Gandhi(1971), Rati Ram(1988), Goffman and Mahar(1971). Growing revenues of the State has also been held as the most responsible factor in influencing the rise in expenditure(Burkhead and Minor 1979). This view was contradicted by Barro(1974), maintaining that higher government expenditure forces up the revenue. In many other studies like, Furstenburg, Green and Jeong(1986), Blackley(1990), Anderson, Wallace and Warner(1986), Manage and Marlow(1986), however, the nexus between expenditure and revenue has been tested. But the attempts to find the actual causal link between expenditure and income or revenue are inconclusive.

3.4 A few recent Studies on State Finances

State finances of Tamilnadu was studied by Guhan(1992) for the period of 1960-90. While examining the financial performance of the State, he pointed out some of the difficulties in revenue raising side of the budget. He felt that the State had reached a high Tax-SDP ratio (12 percent in 1984-87) and there was little possibility to raise the revenues upwards. However, he was very critical about the tax administration in not being able to check evasion of taxes. He also examined the scope for agricultural taxation. Tamilnadu during the period under study could not improve its position in the horizontal sharing of Central transfers. The State does not benefit from significant forest or mineral royalty/revenues and so far as the non-tax revenues like government services are concerned, the government could not fix up charges for these services on the basis of their cost of production and supply. Due to increase in direct subsidies, enlargement and extension of schemes and projects and increasing pressure from salaries, the government expenditures were found to be hard pressed. Looking at all these factors, he opined for examining the possibilities for better cost recovery, entailing the containment or rolling back of subsidies and improving returns from public sector enterprises. He viewed that

debt financing should be given high priority and spending should be on relatively high return capital investments through institutional lending, private capital, provident funds and small savings as Tamil Nadu is an "Under Borrowed" State.

Bajaj and Agarwal(1992) made an exhaustive study on the Uttar Pradesh State Finances for the period 1965-90, where they found and impressive expansion in the scope and scale of budgetary operations. In nominal terms, there has been manifold growth of net final outlays (from about Rs.320 crores in 1965-66 to over Rs.4000 crores in 1989-90) and in receipts to finance them. Looking at the dependence of State on its own current revenues and borrowing, they have argued for better tax management by restructuring it. Like Guhan(1992), they also gave importance to recognise the desirability of agricultural taxes. Even as tax revenues have shown relative buoyancy, non-tax revenues have remained sluggish due to significant indirect subsidies and low recovery rates on investments. They are of the opinion that, a significant proportion of subsidies may actually represent transfers to the non-poor sections including affluent farmers, large and medium entrepreneurs and traders. The performance of public sector undertakings is beset with financial malaise and losses incurred in these units reduces the overall non-tax revenues. Instead of closing down these loss making units, they have prescribed for restructuring. The noticeable decline in capital expenditures are a cause for concern which must be taken care of on a priority basis. The authors have also found that the phenomenal growth in budgetary operations have not been managed properly over the years. This calls for an efficient and responsible fiscal administration in the State.

Nizar Jetha's(1992) study of Gujarat State finances are of similar type. The problems of Gujarat which is one of the developed States, are somewhat different from those of a relatively backward State like Uttar Pradesh. He has described the fiscal performance of the State in terms of its revenue and expenditure operations. His major findings include rapidly rising expenditures and growing indebtedness of the State,

particularly to the Centre which has created problems for the future debt management of the State. Increasing difficulty in identifying new sources of revenues due to present intensive use of tax policy limits the scope for further augmentation of State revenues. Inadequate resource generation by public enterprises and under utilisation of user charges are also features of the State finances. The authors felt that above problems in revenue raising, created mounting difficulties in financing expenditures on poverty alleviation, employment generation and other welfare type programmes.

The study of finances of Kerala State made by Aiyar and Kurup(1992) is one of the significant and interesting works. They have tried to bring into focus some of the anomalies in State's financial management. Even having social indicators such as literacy, quality of life and health facilities that are in line with the performance of developed countries, the per capita income remains at a low level and incidence of unemployment is quite high. On the revenue front, Kerala has done badly when compared with the southern States during Sixth and Seventh plan periods. User charges collected for government services have declined as a percentage of expenditures and cost overruns for irrigation projects have deprived the State both benefits from such investments and resulting revenues. State public undertakings continue to make large losses (Rs.514 crores in 1989-90). The authors observed that the financial crisis of Kerala was not only due to slow growth of revenues, but rather largely due to faster growth of revenue expenditures. Another interesting observation of the study was regarding high priority bestowed on social services, which had its fall-out in that economic services received smaller plan allocations in the past, leading to very slow growth in the commodity producing sectors in the State. The financial problems of the State are to large extent the consequence of achieving social goals set up by national planners ahead of time. The authors decry that the Planning Commission transfers are not sufficient for Kerala, even after recognising its successes in social goals. Also, Kerala's inability to generate adequate budgetary savings constrained its per capita plan expenditure. This situation resulted in heavy short-term

borrowing during Sixth Plan, which further compounded the fiscal problem. The authors however did not examine as to why the social sectors' achievement was not reflected in higher labour productivity, that ultimately could have led to higher growth rate of the State's domestic product.

The problems faced by many States are of similar type, such as, the failure to increase the revenues by changing the tax policy, inability to restrain the current expenditure, negligent contribution of public sector undertakings, poor recovery of user charges and heavy borrowing. All these have compounded the financial crisis faced many States in India. At his inaugural address in a seminar on State Finances (held in New Delhi, NIPFP, April 19-20, 1991), Bimal Jalan rightly opined that the problems of State finances go much beyond the scope of Centre-State financial relations. States have reached the limit of borrowing to finance revenue deficits. The revenue deficits should be reversed, otherwise the debt problem will create more difficulties. He emphasised on restructuring functions of Centre as well as States and the question of public sector enterprises should be settled soon. Decentralisation from State to lower level of government and phasing out of the subsidies are major issues to be pursued at the State level.

In this connection, it may be mentioned that there is no comprehensive study on State Finances of Orissa. And such a study is very essential, particularly in the present day context, after the new economic policy has come into existence in India since 1991.

CHAPTER IV

REVENUE SOURCES OF ORISSA STATE

The Constitution of India has made elaborate provisions for both the States and the Union, relating to the distribution of taxes and non-taxes and the power of borrowing. The arrangement of distribution of financial resources, is generally perceived to be not equitable due to the imbalances between revenue raising powers and expenditure responsibilities. Most of the buoyant sources of revenue, such as, customs duty, corporation tax etc. are in the purview of Central Government for the stated reason of administrative efficiency and the desire to make the Centre strong vis-à-vis the States. This has culminated in Central government having a comparative advantage over the States in raising revenues. But the fiscal responsibilities in meeting huge expenditures remained with the State Governments. Even the Central transfers in the form of grants and shares in central taxes could not entirely put a lid on the growing deficits of State budgets, as is evidenced prominently in recent times. Performance of the States in terms of mobilisation of resources from their own sources has not been satisfactory due to many reasons - economic and non-economic. These factor have created acute problems for the fiscal adjustment in the States.

4.1 The General Framework

The budgets of the State governments have been classified into three components, (1) Consolidated Fund, (2) Public Accounts and (3) Contingency Fund. All the budgetary transactions in the category of Capital and Revenue Accounts are contained in the Consolidated Fund. Revenue receipts include (a) State's own tax and non-tax revenues, (b) share in central taxes, and (c) grants from the Centre for financing the State plans and also non-plan grants. The budget is exhibited in terms of two Accounts namely, Revenue Account and Capital Account. Again, in each Accounts, there is division of receipts and

expenditures towards Plan and Non-Plan items. The Revenue Account comprises of routine type of expenditures such as expenditures on administration of the State, (i.e. wages, salaries and other expenditures) and expenditure on various services like social services, economic services and general services. Capital receipts include internal debt, loans from the Centre, the recovery of State's own loans and advances from the State corporations, co-operative societies and dividends if any, and from the State Public Enterprises. Capital disbursements consist of State's own investment outlays, repayment of debts and the loans and advances made by the State to various entities, corporations etc..

The Public Accounts contain funds which the State holds as a trust for other entities. This would include items such as deposits from municipal corporations, pension and provident funds and reserves and depreciation funds. The Contingency Fund is, as its name implies, a fund for emergency use. It does not, in fact, contain any real money, but is an accounting figure which is included in the budget to cover unforeseen expenditures. Expenditures from Contingency Fund can be made with Cabinet consensus which may not need legislative approval.

Sources of State Revenue Receipts

As stated earlier, State's revenue receipts comprise of tax and non-tax revenues and transfers from the Centre. Taxes belonging exclusively to the States by and large are the following; (i) land revenue, (ii) sales tax, (iii) state excise duty, (iv) stamps and registration duty, (v) income tax on agricultural land, (vi) taxes on passengers and goods carried on inland waterways, (vii) taxes on land and buildings, (viii) mineral rights (ix) electricity duty, (x) entertainment tax. There are also some minor taxes such as, taxes on animals and boats, on road vehicles, on advertisements, on luxuries and amusements etc., taxes on entry of goods into local areas, tolls, fees in respect of matters in State list, taxes on professions, trades etc. are also in the purview of States. Non-tax revenue consists of

interest receipts and dividends, public works, irrigation, forests, administrative services, social and developmental services etc..

Share in central taxes as determined by the successive Finance Commissions for every five years include mostly shares of income tax and excise duties. In addition to Finance Commission's devolution, States receive plan transfers from the Planning Commission; earlier under the Gadgil Formula and now under the modified Gadgil formula (Mukharjee formula). States also receive certain grants under the centrally sponsored schemes from the individual ministries. Even after such Central transfers, the resources of the States are often found to be far from adequate to meet their expenditure needs.

4.2 Revenue Receipts of Orissa State

At the outset, trends of various sources of revenues have been analysed and later the elasticity and buoyancy of own taxes have been estimated. The relative tax effort of the State also has been estimated and the same has been compared with that of the major States in India. For a better perspective, the revenue receipts of the State have been analysed for two periods viz., 1970-71 to 1980-81 and 1980-81 to 1995-96.

4.2.1 Trends of Revenue Receipts of the State

Total revenue receipts (tax plus non-tax revenues) of the State has shown an increasing trend over the period covered by the study (see Table 4.1). Total revenue has increased from Rs.119.65 crores in 1970-71 to Rs.621.33 crores in 1980-81 (i.e., the first period) and from Rs.621.33 crores to Rs.4127.66 crores in 1995-96 (i.e., the second period). The trends clearly indicate that the growth rate in the second period is relatively lower than that of the first period. For instance, the average compound growth rate for the period 1970-71 to 1980-81 works out to 16.36 percent per year against 13.73 percent for the period 1980-81 to 1995-96(see Table 4.2).

State's tax revenue which includes own tax and share in central taxes, has gone up from Rs.63.73 crores in 1970-71 to Rs.292.06 crores in 1980-81 (i.e., first period) and from Rs.292.06 crores to Rs.2490.79 crores in 1995-96 (Table 4.1). The average compound growth rate of total tax revenue has declined, though marginally, in the second period compared to the first period. The growth rate was 14.93 percent during 1970-71 to 1980-81, which has declined to 14.79 percent during 1980-81 to 1995-96 (Table 4.2). Both the components of tax revenue i.e., own tax and share in central taxes have shown lower growth rate in the second period. State's own tax revenues have increased from Rs.33.27 crores in 1970-71 to Rs.132.08 crores in 1980-81 and to Rs.1194.63 in 1995-96. The average compound growth rate of own tax revenue, during the period 1970-71 to 1980-81 was 14.66 percent as against 14.61 percent during the period 1980-81 to 1995-96. The share in central taxes has gone up from Rs.30.46 crores in 1970-71 to Rs.159.98 crores in 1980-81, and to Rs.1296.16 crores in 1995-96 . The growth rate was found to be 15.05 percent during the period 1970-71 to 1980-81 and the same has gone down to 14.93 percent during 1980-81 to 1995-96 (Table 4.2).

Now about the trends in non-tax revenues of the State: Total non-tax revenue, in terms of its growth rate has declined substantially thus affecting the growth rate of total revenues of Orissa State. Growth rate of non-tax revenue has gone down to 12.50 percent in the second period compared to the growth rate of 17.60 percent in the earlier period (Table 4.2). Such a steep decline in the growth rate of non-tax revenue in the State is due to sharp reduction in the growth rates of not only its components, namely, own non-tax revenues, but also the grants from the Centre. The growth rate of own non-tax revenue of the State has declined from 17.93 percent during the period 1970-71 to 1980-81 to 11.78 percent for the period 1980-81 to 1995-96. Similarly, the growth rate of grants from the Centre has gone down from 17.50 percent to 12.90 percent during the same period. The above trends are shown graphically in Figure 4.1. It can be seen from the Figure 4.1, that there is sharp increase of total revenue of the State from 1985-86

afterwards. There is no much difference between tax and non-tax revenues upto the years 1982-83; later, tax revenues are higher than the non-tax revenues.

From the shares in tax and non-tax revenues as also the grants, it can be observed that Central transfers (tax and non-tax revenues) constitute a significant proportion of the total revenues of the State (see Table 4.3). Through out the period covered by the study, the share in central taxes and grants from Centre have been more than the own tax and own non-tax receipts of the State. From figure 4.2, where absolute amount of own tax, tax share, own non-tax and grants are plotted, it can be seen that, the share in central taxes is a major source of revenue throughout the period. The grants, after 1985 has shown higher growth than the own tax revenue. It is the own non-tax revenue of the State, which depicts a continuously low level growth through out the period. This trend points out to a higher dependence of the State on Central devolution than its own sources. On the face of declining Central transfers to Orissa, the State should strive for exploiting its own resources. Generation of more resources internally gives a State autonomy and flexibility in decision making.

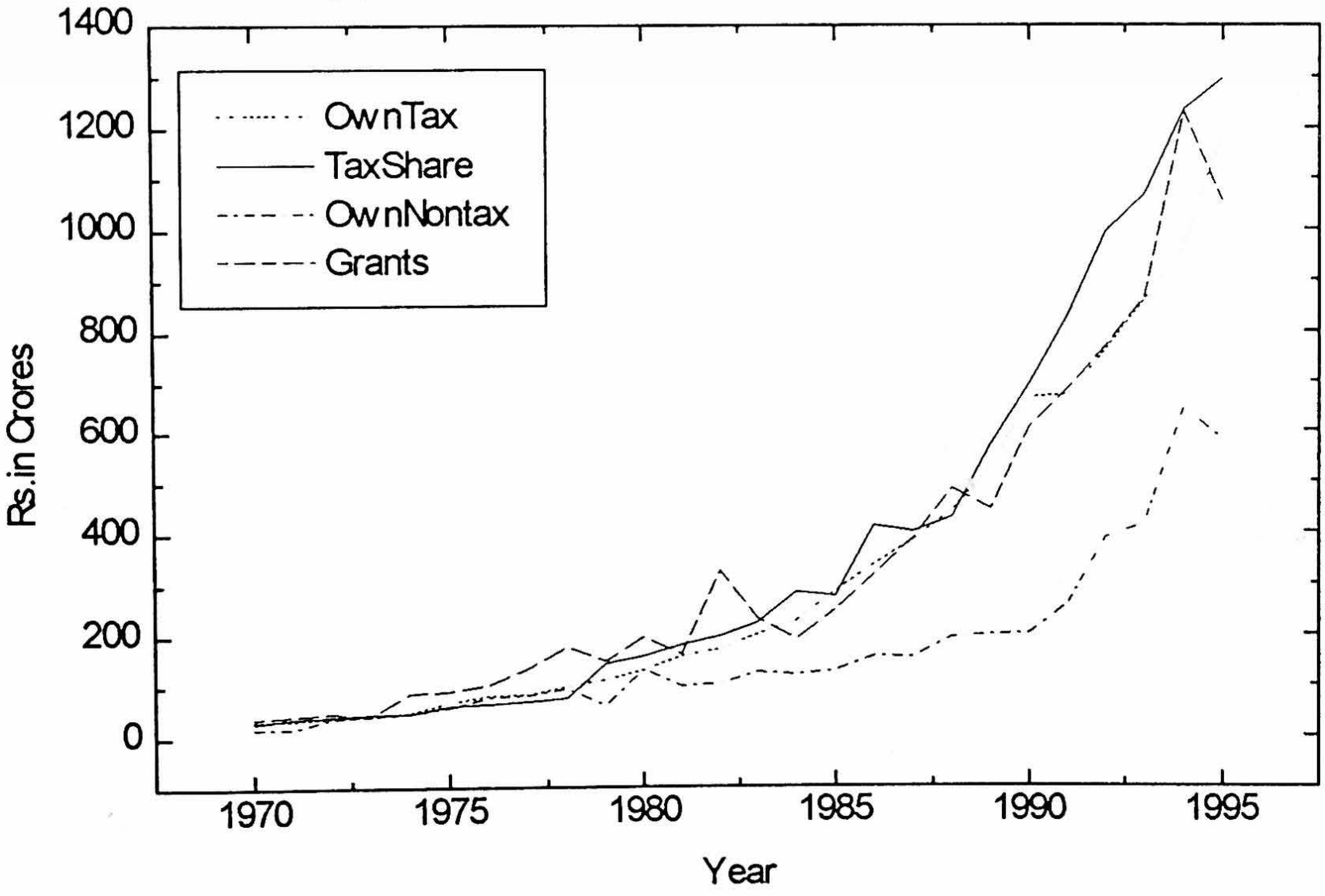
Figure 4.1

Revenue Receipts of Orissa



Figure 4.2

Own Resources and Transfers to Orissa



4.2.2 Share of State's revenues in NSDP

Share of revenue receipts in the Net State Domestic Product (NSDP) is an important indicator to find out as to what extent the State has been successful in mobilising resources. From Table 4.4, it is seen that, both total tax and non-tax revenues of the State, in terms of their share in NSDP, have grown since 1970-71. Share of total tax revenue in the NSDP has grown from 6.15 percent in 1970-71 to 8.50 percent in 1980-81 and to 12.61 percent in 1994-95. Over the same time period, non-tax revenue has grown from 5.39 percent in 1970-71 to 9.59 percent in 1980-81 and to 10.75 percent in 1994-95. In the second period, i.e., 1980-81 to 1994-95, the shares of tax and non-tax revenue have not shown much improvement. Particularly in the case of non-tax revenue, the share has remained more or less same.

Share of own tax revenue in the NSDP, which could be termed as 'tax ratio' for the State's own revenues, has increased from 3.21 percent in 1970-71 to 3.85 percent in 1980-81 and to 5.54 percent in 1994-95. The own tax ratio for the State, has remained around 5 percent throughout the eighties. However, this tax ratio has shown improvement in the second period compared to the seventies. Share of central taxes in the NSDP has increased from 2.94 percent in 1970-71 to 7.07 percent in 1994-95. But own non-tax revenue of the State has not shown much improvement in terms of its share in NSDP, as its share remained below 3 percent through out the period covered by the study. Grants from Centre as percentage of NSDP of Orissa, has also gone up from 3.75 percent in 1970-71 to 7.06 percent in 1994-95.

4.2.3 Per Capita Revenue Receipts

Per capita revenue receipts of Orissa since 1971-72 to 1995-96 is given in Table 4.5. Per capita tax revenue (which includes own tax and share in central taxes), has increased from Rs.32.60 in 1971-72 to Rs.111.43 in 1980-81 and to Rs.738.16 in 1995-96. During the same time period per capita non-tax revenue of the State has increased in

absolute terms, but it is less than the per capita tax revenue. Per capita non-tax revenue has gone up from Rs.28.20 in 1971-72 to Rs.125.63 in 1980-81 and to Rs.485.10 in 1995-96. Similarly, per capita own tax of the State has increased from Rs.15.64 in 1970-71 to Rs.50.59 in 1980-81 and to Rs.354.04 in 1995-96. Looking at per capita figures of own revenue of the State and transfers from the centre, it is seen that, the per capita share in central taxes and grants are more than State's own tax and own non-tax revenues through out the period covered by the study. Per capita own tax being less than the per capita share in central taxes and grants, it implies lack of revenue generating capacity of the tax structure and its weak base in the State.

Per capita revenue receipts of 16 major States in selected years are given in Table 4.6 (Two Part). From the per capita receipts figures, it is seen that, per capita own tax of Orissa has been lower than that of most of the States except Bihar and Assam. The per capita own tax revenue of Orissa was only Rs.290.81 in 1994-95, the highest being Rs.1290.12 of Punjab followed by States like Maharastra, Gujurat and Haryana. States like Karnataka, Kerala, Tamilnadu and Andhra Pradesh have made great strides in increasing their own tax revenues, whereas Orissa has not been able to increase its own tax revenues substantially. In the case of per capita own non-tax also Orissa is one of the lowest among the 16 major States in India.

The per capita total revenue (i.e., tax plus non-tax) of Orissa has remained lower than many of the States throughout the period covered by the study except Bihar, Uttar Pradesh and Madhya Pradesh (which are generally considered as low income States. For instance, in 1994-95, the per capita revenue receipts of Orissa stood at Rs.1226.28, whereas the highest that of Haryana at Rs.3948.35 and the lowest, Rs.738.45 in the case of Bihar. The States have been ranked on the basis of their per capita total revenue and per capita own taxes at two points of time i.e., 1971-72 and 1994-95, which is presented in Table 4.6. In the case of per capita total revenue and per capita own taxes, it is seen

that Orissa remains at the bottom. The State occupies 12th position in regard to per capita total revenue while it is the 15th position for per capita own taxes.

4.3 Individual Own Tax Revenues of the State

4.3.1 Trends of Individual Own Taxes

Among State's own taxes, sales tax is the major source of revenue earning. Sales tax revenue has increased substantially from Rs.17.54 crores in 1970-71 to Rs.76.63 crores in 1980-81 and to Rs.750.00 crores in 1995-96 (Table 4.7). Share of sales tax in State's own tax revenue, has gone up from 52.72 percent in 1970-71 to 58.02 percent in 1980-81 and to 62.78 percent in 1995-96 (Table 4.8). Compound average growth rate of sales tax has shown a decline in the second period compared to the earlier period (Table 4.2). Its growth rate has come down from 15.89 percent during the period, 1970-71 to 1980-81 to 15.07 percent during the second period (i.e., 1980-81 to 1995-96). Sales tax as a major source of revenue, was buoyant throughout the period covered by the study. Its buoyancy coefficient with respect to SDP, stood at 1.47 during the period 1970-71 to 1980-81 and declined to 1.23 percent during the period 1980-81 to 1995-96 (see Box A). The sales tax seems to be elastic during the first period as the elasticity coefficient works out to be more than one (1.11). But in the second period, its elasticity coefficient has declined to 0.78 implying its inelastic nature.

The revenue receipts from State excise has started growing only in the eighties. Its growth rate has improved from 7.18 percent during the period 1970-71 to 1980-81 to 13.62 percent during the period 1980-81 to 1995-96 (Table 4.2). State excise duties formed 12.77 percent of the own taxes of the State in 1970-71. By 1980-81, this share has declined to 6.94 percent and further to 5.44 in 1995-96 . The State excise duty does not seem to be buoyant in the first period, but its buoyancy coefficient works out to be 1.30 in the second period (i.e., 1980-81 to 1994-95), which confirms its higher growth

rate in the same period (see Box A). However, the excise duty in the State is inelastic in both the periods with respect to State income.

Taxes on vehicles and goods, produced a revenue of Rs.3.79 crores in 1970-71 which has increased to Rs.12.04 crores in 1980-81, Rs.52.37 crores in 1990-91 and Rs.114.00 crores in 1995-96 (Table 4.7). Its share in own tax revenue of the State was 11.39 percent in 1970-71 which eventually came down to 9.12 percent in 1980-81 and remained more or less at the same level at 9.54 percent in 1994-95. Taxes on vehicles and goods registered a higher growth rate of 14.75 percent in the second period compared to 13.49 percent in the first period (Table 4.2). This increase in the growth rate however, helped it to retain the share of 8 to 9 percent in the own taxes in most of the years of eighties. From the buoyancy and elasticity coefficient given in Box A, it is seen that, tax on vehicles and goods is a buoyant source of revenue in both periods but its elasticity coefficient has gone down from 1.09 during the first period to 0.88 percent during the second period.

The collection from land revenues has been very discouraging over the time period. Land revenue yielded Rs.1.67 crores in 1970-71 which has gone only to Rs.6.47 crores in 1980-81. This yield from land revenue has declined from Rs.81.90 crores in 1990-91 to Rs.34.65 crores in 1995-96; which is even less than half of the 1990-91 collections (Table 4.7). Its share in own taxes was 5.02 percent in 1970-71 which came down to 4.90 percent in 1980-81 and thereafter this percentage has increased to 2.90 percent in 1995-96. The growth rate of land revenue, has gone up from 14.21 percent in the period 1970-71 to 1980-81 to 14.96 in 1980-81 to 1995-96. The higher growth rate of land revenue in eighties was due to inclusion of cess on royalties on mining and quarrying in land revenue which was abolished after 1991.

The share of stamps and registration fees was 8.00 percent in own tax revenue of the State in 1970-71, which came down to 5.92 percent in 1980-81 and increased to 7.53 percent in 1995-96. Stamps and registration fees has achieved a higher growth rate of 14.52 percent in the second period, compared to 10.76 percent in seventies which made it possible for more than 5 percent share in own taxes during the period 1980-81 to 1994-95. Stamps and registration fees is buoyant source of revenue but is not elastic. The growth of stamps and registration fees depends on the legal cases coming to courts and other registration fees in the time of various transactions. .

Entertainment tax, which was expected to garner a sizeable amount of revenue for the State, came as a big disappointment. Its share in own taxes was 1.47 percent in 1970-71, which has improved to 2.29 percent in 1980-81 and came down sharply to only 0.42 percent in 1995-96. The performance of entertainment tax was the poorest as its growth rate dipped to very low of 2.56 percent from 18.47 percent (Table 4.2). So far as the electricity duty is concerned, which is a tax on electricity rates, performed better. It has grown from a low figure of Rs.2.79 crores in 1970-71 to Rs.16.92 percent in 1980-81, and to Rs.136.32 crores in 1995-96 (Table 4.7). The share of electricity duty in total taxes shows varied figures through out the period. However, its share in own taxes was 8.39 percent in 1970-71 which went up to 12.01 percent in 1980-81 and came down to 11.41 percent in 1995-96. The growth rate of electricity duty has declined to 13.33 percent in the second period from 18.50 percent in the first period (Table 4.2) which resulted in a decline of its share in total taxes.

4.3.2 Buoyancy and Elasticity of Own Tax Revenue

Tax revenue depends upon (a) tax base and (b) tax rate. If certain rate changes are introduced, they are known as 'discretionary changes'. Normally, for many taxes, the base is the State Domestic Product. In other words, if the NSDP increases, the tax revenue also increases as $T = f(Y)$. Buoyancy coefficient represents the increase in tax revenue on

account of not only increase in the NSDP but also due to discretionary changes. If the tax series is cleaned for discretionary changes, we get , what is known as 'elasticity' of the tax with respect to changes in NSDP (i.e., tax base)

For calculating the elasticity coefficients, the yearly gross tax revenue data are initially adjusted for the respective year's discretionary changes and further for the cumulative effects of the previous years' discretionary changes. The reconstruction of the tax revenue series has been done by following data adjustment method, suggested by Prest(1962)[1]. To estimate the buoyancy and the elasticity coefficients for the individual own taxes, the following equations are used.

$$\log T = \log a + b \log Y + u \qquad (1)$$

$$\log AT = \log a + b_1 \log Y + v \qquad (2)$$

where T = Actual tax revenue; AT = Adjusted tax revenue and Y = Net State Domestic Product and u and v are error terms. The coefficient, b, in equation-1 gives buoyancy and b_1, in equation-2 gives elasticity of tax structure.

Buoyancy and elasticity of taxes could be taken as indicators of over all performance of tax structure of the State. In this context, additional resource mobilisation of the State becomes important because different taxes behave in different ways while responding to various policy measures. The growth of the tax revenue corresponding to the growth of the State income is captured by the buoyancy coefficient. But elasticity shows the response of tax revenue to the automatic change in state income which, in other words, represents the built-in-flexibility of the tax system itself.

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[1] The adjustment method used by Prest(1962) and others which has been used here is elaborated in the Appendix.

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The buoyancy and elasticity coefficients of individual own taxes are given in Table 4.9. As already stated, the whole period under study has been divided into two phases, one, from 1970-71 to 1980-81 and second from 1980-81 to 1994-95, for assessing the responsiveness of the tax structure to changes in NSDP. From the regression results, it is seen that, all the individual own taxes except state excise tax, are buoyant in both the periods, as reflected by the values of these coefficients. The buoyancy coefficients during the second period have come down when compared to the first period.

The buoyancy of total own tax revenue of the State has come down from 1.36 in the first period to 1.22 in the second period due to decline in the buoyancy of most of the individual taxes in the second period. The sales tax shows a buoyancy coefficient of 1.47 in the period 1970-71 to 1980-81, which has come down to 1.23 percent in the second period. Excise duty shows a very low buoyancy coefficient of 0.68 in the first period which has improved to 1.30 in the subsequent period. The low growth rate of excise duty in the first period has been reflected in its buoyancy. Stamps and registration duty shows a higher buoyancy coefficient of 1:11 in the second period compared to the earlier period. In the case of tax on vehicles and goods, the buoyancy coefficient has slightly gone down from 1.23 to 1.22. The buoyancy in the case of land revenue, entertainment tax and electricity duty have gone down in the second period.

From the regression results, it is seen that the State's own tax as a whole is inelastic as the elasticity coefficient of total own tax is less than one. The coefficient is 0.94 during 1970-71 to 1980-81 and 0.77 during the period 1980-81 to 1993-94. This could mean that, the automatic response of tax system as a whole is less than proportionate to an increase in the state income. For other individual own taxes, namely, the sales tax and taxes on vehicles and goods, the values of elasticity coefficients are more than one during the period 1970-71 to 1980-81, but eventually the same gone down to

less than one during the period 1980-81 to 1993-94. The elasticity coefficients for all taxes except excise and electricity duty, have gone down in the second period i.e., in 1980-81 to 1993-94 compared to the period 1970-71 to 1980-81.

The buoyancy and elasticity coefficients of individual own taxes of Orissa for both the periods are given in the Box A. More than unity buoyancy coefficients of own taxes in both the periods, indicate the revenue generating capacity of the tax structure vis-à-vis the State income. Compared to the buoyancy coefficients, lower elasticity coefficients points out to lack of built-in-flexibility of the tax structure.

Box A

Buoyancy and Elasticity of Own Taxes of the State				
	1970-71 to 1980-81		1980-81 to 1994-95	
Own Taxes	Buoyancy	Elasticity	Buoyancy	Elasticity
1. Total Own Tax	1.36	0.94	1.22	0.77
2. Sales Tax	1.47	1.11	1.23	0.78
3. Excise Duty	0.68	0.40	1.30	0.59
4. Tax on vehicles and Goods	1.23	1.09	1.22	0.88
5. Land Revenue	1.32	1.26	1.01	0.39
6. Stamps and Registration Duty	1.00	0.97	1.11	0.87
7. Electricity Duty	1.66	0.33	1.11	0.43
8. Entertainment Tax	1.69	0.97	0.26	0.08

It can be seen from Box A, that in the second period covering the years from 1980-81 to 1994-95, the elasticity coefficients are lesser than that of the buoyancy coefficients for all the State taxes. sales tax, motor vehicle tax and stamps and registration duties have shown higher vales of elasticity coefficients compared to other taxes. Elasticity coefficient the least for entertainment tax. Buoyancy coefficients of individual taxes of Orissa are found to be in conformity with estimates given by Tenth Finance Commission (The Commission has given buoyancy coefficients for four taxes, namely excise duty sales tax, stamps and registration duty and motor vehicle tax).

4.4 Relative Tax Effort of the States and the Position of Orissa

Tax effort of a government can be understood as a relationship (ratio) between the amount of its tax collection and some measure of taxable capacity. In an economy the overall tax revenue should have a reasonable rate of growth. Tax effort, in this context is an important tool to assess the tax capability and the level of present effort. Measuring absolute tax effort in a cross section of States may not be possible due to the unreliability of a fixed taxable base for all the States. Rather, a relative tax effort measurement is more suitable to study fiscal performance across the States.

In a federation, tax effort of a State could be judged in relation to other States, or more specifically, in relation to the average performance of the States. The commonly used indicator of relative tax effort is the ratio of tax revenue to the total income of the State which is called `tax ratio'. The use of tax ratio as an indicator of tax effort is not free from conceptual problems. It involves the implicit assumption that total income, irrespective of other circumstances, is the appropriate measure of taxable capacity. As a relative measure, revenue collection depends on the size of income in relation to population, degree of monetisation and the type of `tax handles' available and like.

Tax effort of the States has been recognised by Planning Commission and Finance Commission to evaluate fiscal performance of the States and it serves as one of the criteria on the basis upon which transfer of tax shares and Central plan grants are made. Tenth Finance Commission has fixed 10 percent of income tax and 8.42 percent of basic excise duties have to be shared with States on the basis of tax effort of the State. The Gadgil formula followed by the Planning Commission in allocating the Central share of State plan outlay, since Fourth Plan gives a 10 percent weightage to the tax effort of the States, tax ratio being the criteria of tax effort (In recent revised Gadgil Formula, tax effort as such is not included). Tax effort, could be taken as an attempt at estimating normative yields from the tax base, i.e., state income. The tax base, instead of using State income only, can

be extended in more detail, to the individual tax bases to find the taxable capacity and compare it with actual revenue generated.

In the fiscal policy of the States, tax effort seeks to mobilise more revenue, with the expansion of the economy and resulting rise in taxable capacity. Introduction of new taxes and changes in the base of the tax structure, administrative improvements are various aspects that help in raising the tax effort. Two measures are used here to evaluate the relative tax efforts of the States in general and Orissa State in particular. First, comparison of State's own tax with SDP, i.e., 'tax ratio' and second, an interstate comparison of actual tax ratio (T/Y) ratios with a presumptive tax ratio estimated by multiple regression method[2].

4.4.1 Inter-state Comparison of Tax Income Ratio

In Table 4.10, ratio of average tax revenue and state income of 16 major States in India for two periods, namely, 1980-81 to 1982-83 and 1991-92 to 1993-94 and all States average of tax ratio are presented . An average of three years has been taken in both the cases to avoid possible abnormalities in any particular year. Relative performance of States in terms of index of T/Y taking all States average as 100 during these two periods is also given in the Table 4.10. From the tax-income ratios given in both the periods, it can be seen that, States like Tamilnadu, Kerala, Maharastra, Karnataka, Haryana, Punjab, Gujarat and Andhra Pradesh have recorded rates more than all States average with Tamilnadu occupying the top position during the first period and Gujarat during the second period. All other States have tax ratios below all States average, Assam being at the bottom. Orissa's performance in terms of tax ratio is not at all satisfactory. Looking at the rankings of States on the basis of tax ratio, Orissa was at 15th position in the first period and at 14th position in the second period. In the case of Orissa, the deviation from

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[2] The methodology regarding estimation of tax effort across States has been analysed in the Appendix A.3

all States average has been quite high. The tax ratio for Orissa works out to be 4.4 percent in the first period which has improved to 5.5 percent in the second period. Taking all States average as 100, the index of T/Y for Orissa comes to 62.80 percent in the first period and 65.63 percent in the second period. The improvement in tax ratio for Orissa over a period of one decade seems modest. Among all the States, the State's performance in terms of tax ratio has been one of the lowest.

4.4.2 Actual and Presumptive Tax-Income Ratio

Relative tax efforts of the States could be found by comparing actual tax-income ratio with presumptive tax-income ratio. Presumptive tax-income ratio is an average response to such tax handles as are available, which in other words, are bases for State taxes. Looking at the difficulty in finding comparable bases for each tax across the States, proxies for such purpose could be taken which would form potential bases. Sectoral incomes and per capita income of States are taken as potential bases for State taxes which indicate the taxable capacity. A multiple regression of following type is run to find out the average response of tax handles.

$$TY = a + b_1 YA + b_2 Y_{c1} + b_3 Y_{c2} + b_4 YN + U \qquad (1)$$

where, YA = share of agriculture in NSDP

Y_{c1} = share of manufacturing in NSDP

Y_{c2} = share of services in NSDP

YN = per capita income

The regression coefficient of per capita income is found to be statistically insignificant and therefore per capita income (YN) has been dropped. Later with remaining variables, the regression has been carried out. the equation takes the following form:

$$TY = a + b_1 YA + b_2 Y_{c1} + b_3 Y_{c2} + U \qquad (2)$$

After estimating the equation the values of independent variables are plugged in the equation for all States to calculate the respective presumptive tax-income ratios. Dividing

the actual tax-income ratio by the presumptive ratio, an index was found to compare the tax effort of the States. The method adopted by us is similar to that of the study carried out by Oomen (1987) for the Indian States[3].

To estimate the above equation, average values of tax and sectoral incomes for three years, from 1987-88 to 1989-90 were taken for each State. The State wise sectoral income was available only till the year 1989-90. The results obtained from the multiple regression based on the equation(2) are given below.

$$TY = -13.46 + \underset{(1\ 598)}{0.142}YA + \underset{(1\ 543)}{0.308}Y_{c1} + \underset{(1\ 702)}{0.240}Y_{c2} \qquad (3)$$

$\bar{R}^2 = 0.496$, DW = 1.36

(Figures in brackets are t values)

The relevant values are plugged in the equation(2) for 16 States under study and the estimated tax-income ratios are found. Here one point should be noted regarding the equation (2). To capture the changes in the tax-income ratio, more variables like exact bases for the State taxes could be introduced to find better results. Due to severe difficulty in getting such comparable bases for each tax across the 16 States, this equation is used which would serve our purpose of comparing the tax effort of the States in India.

Actual tax-income ratio, estimated tax income ratio and the ratio of actual and estimated tax income ratio of States are presented in Table 4.11. From the Table it can be seen that, States like Andhra Pradesh, Haryana, Karnataka, Kerala, Punjab, Madhya Pradesh, Rajasthan and Tamilnadu have actual tax-income ratios which are more than the estimated tax-income ratios. Thus the ratio of actual to estimated tax-income ratio, which is used as an index to compare the tax effort of the States, for these States is more than

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[3] see Oomen (1987), "Relative Tax effort of States", Economic and Political Weekly, March 14

one. Other States have a lower actual tax-income ratio than the estimated ratio, thus resulting in lower tax effort index, which is less than one in each case. The States like Assam, Bihar and Uttar Pradesh have performed badly in exploiting their tax potentials. Orissa has a tax effort index of 87 percent which is less than most of the States, except States like Assam, Bihar, Uttar Pradesh, West Bengal and Jammu and Kashmir. Looking at the ranking of the States on the basis of the tax effort index, which is the ratio of actual to estimated tax-income ratio, Andhra Pradesh is at the top position followed by Kerala and Karnataka and Assam is at the lowest position. Orissa Occupies the 11th position in the ranking of the States. It could therefore be concluded on the basis of results of tax effort analysis (by this method) for Orissa, that, there is still scope for the State to mobilise more revenue from its own tax sources.

The relationship between tax ratio and per capita income is an important aspect of any tax structure and the tax effort of a State should be seen from this angle also. A positive relation between tax ratio and per capita income refers to a wide base of the tax structure. Burgess and Stern (1993), estimated this relationship for 82 developing countries and pointed out that rise in tax ratio is related positively with per capita GNP. In the present study, we have estimated the above relationship by taking a total period of 26 years from 1970-71 to 1995-96 for the of Orissa State. The equation takes the following form.

$$LTY = 0.0163 + \underset{(6\ 2039}{0.1995}LPCI + u \qquad (4)$$

$$\bar{R}^2 = 0.68, \; DW = 1.96$$

where LTY = log of tax ratio.

LPCI = log of per capita income.

The positive coefficient in equation (4) shows the capacity of rising per capita income to improve the tax ratio. The low value of the coefficient (nearly 20 percent),

implies that per capita income did not influence much to improve the tax ratio in Orissa. This finding is however, not consistent with the general idea that ability to tax grows faster than the income. Musgrave(1969) expressed that the 'handles' to which the revenue system may be attached become more diverse with economic development resulting in widening in the tax base. From tax effort analysis, it is seen that, the effort of Orissa State in mobilising the tax revenue has not been satisfactory. The weak relationship between per capita income and tax ratio, only reinforces such finding.

4.5 Efforts to Improve Non-Tax Revenues

Non-tax revenue has an important place in the revenue receipts of Orissa State. Vast forest resources, sizeable mineral sources along with other returns from government services have contributed to the non-tax revenues of the State. Broadly, the own non-tax revenue could be divided into certain categories, viz., interest receipts; receipts from dividends generated by public sector enterprise; returns from social and economic services. The grants from the Centre are also considered as non-tax revenue in the State's budget and are also a major part of the total revenues of Orissa. However, grants do not form a part of own non-tax revenue of the State. In the decade of eighties, non-tax revenue in the State has lost its importance compared to the tax revenues. The fiscal imbalance in the State has worsened over the years due to variety of reasons. An important fiscal adjustment difficulty for the State in the recent times has been the declining contribution of non-tax revenues.

State Governments invest in many public sector enterprises, irrigation, transport and other services on which users pay charges at very low rates. The charges are determined by the Government looking at the social objectives and their usefulness for economic development. The investments made on economic services, social services are essential in order to meet the responsibilities entrusted upon them. Social services include providing health facility, education, urban development etc.. The charges for these

services are very low. For instance tuition fees in Government colleges and schools cover very little part of the whole expenditure incurred to supply the services. Expenditures on economic services encourage economic development in the State and a reasonable return on such services are expected. The charges on irrigation, transport, earnings from forests, fisheries, royalty on minerals rights are some of the non-tax receipts in economic services sector.

Looking at the various components of own non-taxes (Table 4.13), in terms of their shares in the total own non-tax revenue, it is found that interest receipts, dividends, receipts from general services and receipts from social community services have declined. The share of economic services has gone up in the total own non-taxes over the years. The share of dividends in own non-taxes which comes from public sector enterprises and other commercial activities, was only 0.53 percent in 1970-71, and the same has come down to 0.14 percent in 1980-81 and to 0.05 percent in 1995-96. The share of dividends in the non-tax revenue being less than one percent, clearly shows the poor health of public enterprises in Orissa.

Two important sources of non-tax revenue in Orissa have been the revenue from minerals and from forests. Forest revenues which generally come from sale of timber, kendu leaves and other forest products have been growing over the years. The revenue from forest has been increased from Rs.5.57 crores in 1970-71 to Rs.37.27 crores in 1980-81, Rs.109.5 crores in 1990-91 and Rs.118.21 crores in 1994-95. The ratio of revenue from forest products to that of its corresponding NSDP has declined during the period covered by the study. Share of revenues from forests out of the income generated in the corresponding sector of NSDP stood at 37.76 percent in 1970-71, and the same has

declined to 21.44 percent in 1980-81 and to 17.44 percent in 1994-95[4]. It is necessary to take appropriate steps to arrest the declining trend of forest revenues.

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Now about the State enterprises: As in other States, the State PSEs in Orissa are heavily subsidised by the State Government. Very few PSEs of Orissa are profit making. Loss making public sector enterprises are a burden to the State. for instance, irrigation department itself shows a return of -2.39 in 1987-88 compared to 0.50 percent in 1977-78. It is the electricity board in non-departmental enterprises, which shows an increase in returns from 2.05 percent in 1977-78 to 23.68 percent in 1987-88 (see Table 4.15). The transport sector shows a steep decline from 7.31 percent in 1977-78 to 0.01 percent in 1987-88.

The State Electricity Board (OSEB), TELCO, State Road Transport Corporation (OSRTC), are some big public enterprises. The impact on State finances from the performance of PSEs has been negative. For instance, the OSRTC performance has been not satisfactory since 1991. Table 4.14 shows the net profit/loss of OSRTC for the years 1991 to 1996. The net profit (Row 9) has been negative for all the years from 1991-92 to 1995-96. Interest and depreciation components seem to contribute for negative net profits during these years. But the story regarding State Electricity Board (OSEB), is different. On the whole, its financial performance is relatively satisfactory as it has been earning positive rate of return (see above analysis relating to returns from electricity department). But the OSEB has been criticised for its shortcomings in so far as its physical performance is concerned. The restructuring of OSEB got underway in 1996 in which OSEB has been

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[4] All statistics regarding income generated and revenue receipts from forestry and loging have been taken from "Statistical Abstracts" (various issues) published by Government of Orissa. The share of revenues from forestry in income generated in forestry has been calculated. These figures are not put in a tabular form.

dismembered. Three autonomous enterprises namely, The Orissa Hydro Power Corporation(OHPC), The Orissa Power Generation Corporation(OPGC) and The grid Corporation of Orissa(GRIDCO) have been established[5]. These corporations would oversee the whole range of functions relating management, power generation and distribution in the State. The restructuring plans undertaken bring further improvement in the performance of Electricity Board. .

Now about the recovery rates for the various services provided by the Government of Orissa: Recovery rates in social services, economic services and public enterprises in Orissa has been presented in Table 4.15 (following Rao and Mundle, 1992). The recovery rates are the charges fixed by Government of Orissa on various services provided in relation to the investment done in these sectors. Recovery rate in social services has gone down drastically in the period 1977-78 to 1987-88. In all the services - education, health, water supply and sanitation and other services, sharp decline in recovery rate has been perceived. All the services taken together, the recovery rate has gone down from 6.84 percent to a mere 1.91 percent. The most sharp decline in recovery rate is seen in the case of irrigation (from 53.49 percent to a mere 2.52 percent). Recovery rates in social and economic services has declined from 25.17 percent in 1977-78 to 9.85 percent in 1987-88; the growth rate being -60.87 percent. This sharp decline in growth rate of recovery in social and economic services in Orissa is by far the worst among all the States .

4.6 Capital Receipts of Orissa State

Capital receipts are basically loans from various sources incurred by the State Government for specific purposes. The loans are made from internal sources like market loans, loans from various development Banks etc.. and Loans from the Centre for plan and

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[5] The restructuring of power sector in orissa has been done under the aegis of World Bank assistance for infrastructral development.

non-plan schemes. The other components of capital receipts in the State are, recoveries from loans and advances given to public enterprises and corporations, small savings and provident fund, reserve fund and other settlement funds. The importance of capital receipts lies in using these funds to finance the projects for which it is raised. The creation and maintenance of capital assets are fundamental to the growth of any economy as they stand for posterity. The recent trends however, show a different picture. The surplus from capital account has been used to finance the deficits in the revenue account, which really defies the logic of sound finance[6].

The growth rate of capital receipts in Orissa State is higher in the period 1980-81 to 1995-96 compared to the earlier period of 1970-71 to 1980-81. It has increased from 8.52 percent to 13.68 percent and the overall growth rate is 13.11 percent (Table-4.16). The growth rate of internal debt, loans from Centre, and small savings and provident funds have also shown higher growth rate in the eighties. It is the recovery of loans and advances, which shows a declining trend in the second period. Its growth rate has come down from 12.83 percent to 7.16 percent. Mobilisation of additional amount under small savings and provident funds has positive aspect for fiscal management.

Looking at the shares of components of capital receipts in total capital receipts (Table 4.17), loans from Centre has been the major component. But its share has come down from 66.36 percent in 1970-71 to 55.84 percent in 1980-81 and to 43.79 percent in 1994-95. The share of internal debt has increased from 11.78 percent in 1970-71 to 17.24 percent in 1980-81 and to 22.90 percent in 1994-95. The rise in share of internal debt involves payment of more interest rates as these loans are more costly than that of Central loans. Share of small savings and provident fund has also increased over the years as is evident from its growth rate. The share of repayment on loans and advances by the State

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[6] see Tenth Finance Commission Report, Government of India.

Government has gone down which should be taken as a serious concern. It has been observed that capital receipts are raised due to increased burden of interest payments and repayment of liabilities; more so in case of market loans as the interest rates are higher than other this kind of loans. If the capital receipts are used productively, the yield would have compensated the liabilities. But the declining capital expenditure in the State bellies this fundamental logic[7].

4.7 Major Findings

From the above analysis of revenue sources of Orissa, some important observations are made. The present study has been divided into two periods, viz., 1970-71 to 1980-81 and 1980-81 to 1995-96, so as to observe the trends of revenues from various sources. Whether Orissa has succeeded in exploiting its own resources, has been given importance while studying various sources of revenues of the State. The effort of the State Government in this regard has been analysed in terms of responsiveness of the tax structure, tax effort analysis and the viability of non-tax revenue of the State.

From the growth rates of the revenue sources of the State, it is observed that, in most cases, the growth rate has slowed down in the second period. The growth rate of total revenue has come down from 16.36 percent during 1970-71 to 1980-81 to 13.73 percent during 1980-81 to 1995-96. Total tax revenue, which includes own taxes of the State and the share in central taxes has shown a decline in growth rate in the second period. The growth rate of own taxes of the State has gone down from 14.66 percent to 14.61 percent over the same periods. Total non-tax revenue has shown a steep decline in growth rate, as the components of total non-tax, namely, own non-tax and grants from Centre have shown sharp decline in their growth rate.

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[7] decling capital expenditures in the State has been discussed in Chapter VI

From the shares of various sources of revenue in the NSDP of Orissa an increasing trend has been observed. However, the shares of revenues in the NSDP, has not shown much improvement in the period starting from 1980-81. Lower growth rate of tax and non-tax revenue in the second period confirms this result. The share of own tax revenue in the NSDP (own tax ratio), has gone up from 3.21 percent in 1970-71 to 5.54 percent in 1994-95. But this tax ratio, remained around 5 percent throughout the second period. From this trend of tax revenue, it could be concluded that the growth of tax revenue in Orissa has been modest. From the per capita revenue figures across States, it is seen that, Orissa has one of the lowest per capita figures. In the case of per capita own tax, Orissa's position was 15th in the period 1971-72 and 14th in 1994-95.

Among the individual own tax revenues of the State, the growth rate of sales tax has come down from 15.89 percent in the first period to 15.07 percent in the second period. The declining growth rate of sales tax starting from 1980-81 causes serious concern as 60 percent own taxes of the State has been generated through this tax only. Other individual State taxes like, state excise duty, taxes on motor vehicles and goods, stamps and registration duty have shown higher growth rate in the second period. Electricity duty and entertainment tax have shown lower growth rate in the second period.

From the regression analysis to estimate the degree of responsiveness of the tax structure to the NSDP of the State, it is seen that, the State taxes are buoyant over the period covered by the study, but they are not elastic. So far as elasticity of own taxes is concerned, except sales tax and taxes on goods and vehicles, all other taxes have shown less than unity value in the first period. In the second period, i.e., 1980-81 to 1994-95, all the individual own taxes show elasticity coefficients less than unity. In all most all the cases, the buoyancy and elasticity coefficients are lower in the second period than that of the first period. Inelastic tax system in the State implies that, the mobilisation of

additional resources depend more upon ad hoc policy measure than on an automatic response to rise in State income.

To estimate tax effort of the States, two measures, namely, tax ratio and aggregate regression approach have been followed. Tax-income ratio of the States has been calculated at two points of time taking average of 1980-81 to 1982-83 and 1991-92 to 1993-94. From the ranking of the States on the basis of tax-income ratio, it could be seen that, Orissa's position was 15th in the first period and 14th in the second. The deviation from all States average (100) for Orissa has been very high in both the periods. While estimating tax effort of the States using aggregate regression approach, Orissa's rank was 11th in the period, 1987-88 to 1989-90 with tax effort index of 87 percent. From the tax effort analysis, as is evident, the effort of Orissa State to exploit its own tax base has been inadequate. Lower tax ratio and tax effort index implies that the State has the scope for mobilisation of resources from its own sources.

Regarding own non-taxes of the State: its share in total revenues has declined substantially in the second period starting from 1980-81. The growth rate of own no-tax revenue of the State has come down from 17.93 percent during the period 1970-71 to 1980-81, to 11.78 percent during the second period at current prices. The scope for mobilising revenue from non-tax revenue sources are quite high in the case of Orissa. The declining non-tax revenue of the State calls for immediate attention to reinforce this important sources of revenue.

The declining non-tax revenues could be traced to the loss making public sector enterprises, stagnation in royalties from minerals and earning from forestry, and low rate of returns from the government investments in economic, social and general services. Road Transport Corporation of the State has continued to incur losses unlike the

performance of the Electricity Board. The recovery rates in social services, economic services, and public enterprises have been very low in the case of Orissa.

Now coming over to capital receipts, it could be seen that, the dependence of the State on loans (other than Central loans) has increased over the years. The share of the Central loans has gone down for which the share of internal debt has increased. This is expected to increase the interest payment burden of the State, as the debt from market is generally more costly than the one taken from the Centre.

Though the demand for generating more revenues internally has been increasing, the effort of Orissa Government has not been adequate. The declining growth rate of tax, and non-tax revenues, during the period starting from 1980-81 to 1995-96 has contributed to the fiscal problem in the State. The per capita own tax receipts of Orissa State has been one of the lowest among major States in India. A comprehensive tax reforms in the State level with strict administration may be attempted to improve the present situation.

Table 4.1
Revenue Receipts of Orissa(Rs. in Crores)

Years	Total Tax Rev	Total Non-Tax Rev.	Own Tax Rev.	Share in Central Taxes	State's Own Non-tax	Grants From Centre	Total Rev.
1970-71	63.73	55.92	33.27	30.46	16.99	38.93	119.65
1971-72	72.35	62.58	34.70	37.65	18.34	44.24	134.93
1972-73	82.02	86.11	39.95	42.07	37.84	48.27	168.13
1973-74	88.62	86.00	42.20	46.42	41.82	44.18	174.62
1974-75	97.67	129.70	50.43	47.24	48.04	87.66	227.37
1975-76	129.87	147.59	68.41	61.46	58.12	89.47	277.46
1976-77	146.03	179.76	80.82	65.21	77.98	101.78	325.79
1977-78	153.14	215.72	83.97	69.37	81.30	134.78	368.86
1978-79	174.06	273.38	98.38	75.68	94.88	178.50	447.44
1979-80	256.46	211.13	112.10	144.36	61.27	149.86	467.59
1980-81	292.06	329.27	132.08	159.98	134.03	195.24	621.33
1981-82	340.46	261.07	159.72	180.74	98.84	162.23	601.53
1982-83	370.88	430.74	173.62	197.26	104.39	326.35	801.62
1983-84	423.69	359.38	200.93	22.76	126.73	232.65	783.07
1984-85	511.87	310.97	227.77	284.10	121.06	189.91	822.84
1985-86	561.44	379.40	285.91	275.53	130.60	248.80	940.84
1986-87	752.23	475.99	337.84	414.39	158.30	317.69	1228.22
1987-88	788.88	544.20	386.74	402.14	156.10	388.10	1333.08
1988-89	871.44	679.49	442.73	428.71	193.26	486.23	1550.93
1989-90	1097.43	643.29	525.84	572.59	198.64	444.65	1740.72
1990-91	1362.88	808.06	668.79	694.09	201.12	606.94	2170.94
1991-92	1504.17	943.14	673.64	830.53	259.81	683.23	2447.31
1992-93	1756.78	1156.38	761.90	994.88	388.15	768.23	2913.16
1993-94	1927.74	1280.04	859.89	1067.85	415.45	864.59	3207.78
1994-95	2199.45	1875.23	966.34	1233.11	644.58	1230.65	4074.68
1995-96	2490.79	1636.87	1194.63	1296.16	583.90	1052.97	4127.66

Source: RBI Bulletins (Various Issues)

Table 4.2
Compound Average Growth Rate of Revenue Receipts of Orissa
(Figures in Percentages)

Items	Current Prices			Constant Prices		
	1970-71 to 1980-81	1980-81 to 1995-96	1970-71 to 1995-96	1970-71 to 1980-81	1980-81 to 1995-96	1970-71 to 1995-96
1. Total Revenue	16.36	13.73	14.04	9.13	5.68	5.56
2. Total Tax Revenue	14.93	14.79	14.82	7.70	6.83	6.79
3. Total Non-Tax Revenue	17.60	12.50	12.65	10.37	4.33	4.14
4. Share in Central Taxes	15.05	14.93	14.95	7.82	7.07	7.33
5. State's Own Non-Tax Revenue	17.93	11.78	14.35	10.70	3.19	3.07
6. Grant-in Aid	17.50	12.90	13.13	10.26	4.97	4.70
7. State's Own Tax Revenue	14.66	14.61	14.75	7.43	6.54	6.24
7.1 Sales Tax	15.89	15.07	15.10	8.65	6.82	6.53
7.2 State Excise Duty	7.18	13.62	12.28	0.05	6.11	3.85
7.3 Tax on Vehicles and Goods	13.49	14.75	14.03	6.20	6.63	6.45
7.4 Land Revenue	14.21	14.96	14.56	6.98	8.45	6.56
7.5 Stamps and Registration Duty	10.76	14.52	13.12	3.53	5.71	4.25
7.6 Electricity Duty	18.50	13.33	16.57	11.23	-5.22	1.10
7.7 Entertainment tax	18.47	2.56	9.10	11.25	5.44	8.31

Table 4.3
Share of Various Sources of Revenue in Total Revenues of Orissa
(Figures in Percentages)

Year	Total Tax	Total Non-tax	State's Own Tax	Share in Central Tax	State's Own Non-Tax	Grants-in -Aid
1970-71	53.26	46.74	27.81	25.46	14.20	32.54
1971-72	53.62	46.38	25.72	27.90	13.59	32.78
1972-73	48.78	51.22	23.76	25.02	22.51	28.71
1973-74	50.75	49.25	24.17	26.58	23.95	25.30
1974-75	42.96	57.04	22.18	20.78	21.13	38.55
1975-76	46.81	53.19	24.66	22.15	20.95	32.25
1976-77	44.82	55.18	24.81	20.02	23.94	31.24
1977-78	41.52	58.48	22.71	18.81	22.04	36.54
1978-79	38.90	61.10	21.99	16.91	21.21	39.89
1979-80	54.85	45.15	23.97	30.87	13.10	32.05
1980-81	4.01	52.99	21.26	25.75	21.57	31.42
1981-82	56.60	43.40	26.55	30.05	16.43	26.97
1982-83	46.27	53.73	21.66	24.61	13.02	40.71
1983-84	51.11	45.89	25.66	28.45	16.18	29.71
1984-85	62.21	37.79	27.68	34.53	14.71	23.08
1985-86	59.67	40.33	30.39	29.29	13.88	26.44
1986-87	61.25	38.75	27.51	33.74	12.89	25.87
1987-88	59.18	40.82	29.01	30.17	11.71	29.11
1988-89	56.19	43.81	28.55	27.64	12.46	31.35
1989-90	63.04	36.96	30.21	32.89	11.41	25.54
1990-91	62.78	37.22	30.81	31.97	9.26	27.96
1991-92	61.46	38.54	27.53	33.94	10.62	27.92
1992-93	60.03	39.70	26.15	34.15	13.32	26.37
1993-94	61.10	39.90	26.81	33.29	12.95	26.95
1994-95	53.98	46.02	23.72	30.26	15.82	30.20
1995-96	60.34	39.66	28.94	31.40	14.15	25.51

Source: RBI Bulletins (Various Issues)

Table 4.4
Share of Various Sources of Revenue in NSDP of Orissa
(Figures in Percentages)

Year	Total Tax	Total Non-tax	State's Own Tax	Share in Central Tax	State's Own Non-Tax	Grants-in -Aid
1970-71	6.15	5.39	3.21	2.94	1.64	3.75
1971-72	6.90	5.97	3.31	3.59	1.75	4.22
1972-73	6.32	6.64	3.08	3.24	2.92	3.72
1973-74	5.51	5.35	2.63	2.89	2.60	2.75
1974-75	5.84	7.75	3.01	2.82	2.87	5.24
1975-76	7.47	8.49	3.93	3.53	3.34	5.14
1976-77	8.73	10.74	4.83	3.90	4.66	6.08
1977-78	7.53	10.32	4.02	3.32	3.89	6.45
1978-79	7.92	12.43	4.47	3.44	4.31	8.12
1979-80	11.80	9.71	5.16	6.64	2.82	6.89
1980-81	8.50	9.59	3.85	4.66	3.90	5.69
1981-82	8.86	6.79	4.16	4.70	2.57	4.22
1982-83	9.11	10.58	4.27	4.85	2.56	8.02
1983-84	8.07	6.84	3.83	4.24	2.41	4.43
1984-85	9.86	5.99	4.37	5.47	2.33	3.66
1985-86	9.02	6.09	4.59	4.43	2.10	3.99
1986-87	11.15	7.05	5.01	6.14	2.35	4.71
1987-88	11.51	7.94	5.64	5.87	2.28	5.66
1988-89	10.04	7.83	5.10	4.94	2.23	5.60
1989-90	11.07	6.49	5.30	5.77	2.00	4.48
1990-91	14.10	8.36	6.92	7.18	2.08	6.28
1991-92	12.03	7.54	5.39	6.64	2.08	5.46
1992-93	13.09	8.62	5.68	7.42	2.89	5.73
1993-94	12.51	8.31	5.58	6.93	2.70	5.61
1994-95	12.61	10.75	5.54	7.07	3.70	7.06

Source: RBI Bulletins (Various Issues) and Net State Domestic Product, CSO

Table 4.5
Per Capita Revenue of Orissa (Rs.)

Year	Total Tax	Total Non-Tax	State's Own Tax	Share in Central Taxes	Own Non-Tax	Grants	Total Rev.
1971-72	32.60	28.20	15.64	16.97	8.26	19.94	60.80
1972-73	36.18	37.99	17.62	18.56	16.69	21.30	74.17
1973-74	38.29	37.16	18.24	20.06	18.07	19.09	75.45
1974-75	41.36	54.93	21.36	20.01	20.34	34.59	96.29
1975-76	53.94	61.30	28.41	25.53	24.14	37.16	115.24
1976-77	59.53	3.28	32.94	26.58	31.79	41.49	132.81
1977-78	61.31	56.37	33.62	27.77	32.55	53.82	147.68
1978-79	68.51	107.60	38.72	29.79	37.34	70.26	176.11
1979-80	99.33	81.77	43.42	55.91	23.73	58.04	181.10
1980-81	111.43	125.63	50.59	61.04	51.14	74.49	237.06
1981-82	127.81	98.01	59.96	67.85	37.10	60.91	225.82
1982-83	136.78	158.86	64.03	72.75	38.50	120.36	295.64
1983-84	153.43	130.14	72.76	80.67	45.89	84.25	283.57
1984-85	181.97	110.55	80.97	101.00	43.04	67.51	292.52
1985-86	196.00	132.45	99.81	96.19	45.59	86.86	328.45
1986-87	257.97	163.23	115.86	142.11	54.29	108.94	421.20
1987-88	265.83	184.00	130.32	135.51	52.60	131.40	449.83
1988-89	288.84	225.06	146.64	142.00	64.01	161.05	513.70
1989-90	357.38	209.49	171.24	186.14	64.69	144.80	566.87
1990-91	436.46	258.77	214.17	222.29	64.41	194.36	695.23
1991-92	473.80	297.08	212.19	261.61	81.84	215.24	770.88
1992-93	545.84	359.29	236.73	309.11	120.60	238.69	905.13
1993-94	589.36	391.34	262.89	326.47	127.01	264.33	980.70
1994-95	661.93	564.39	290.82	371.11	193.99	370.36	1226.28
1995-96	738.16	485.10	354.04	384.12	173.04	312.06	1223.26

Source: RBI Bulletins (Various Issues)

Table 4.6 (Cntd.)

Per Capita Revenue Receipts of States (Rs.) (Contd.)

States	Total Revenue				Total Own-tax Revenue			
	1971-72	1980-81	1990-91	1994-95	1971-72	1980-81	1990-91	1994-95
1. AP	61.81	238.25	838.47	1231.71	25.60	109.67	415.11	594.59
2. Assam	79.19	285.97	716.97	1384.19	19.52	33.50	169.55	277.59
3. Bihar	46.98	142.70	503.67	738.45	14.95	39.94	133.04	199.45
4. Gujurat	96.24	264.49	829.49	1747.39	46.27	137.02	589.07	1067.98
5. Haryana	112.99	359.52	1172.73	1948.35	50.26	182.84	655.52	1051.75
6. J&K	164.28	436.70	1569.91	3702.14	22.61	63.96	221.18	298.07
7. Karnataka	89.08	259.44	864.37	1582.08	37.66	129.21	518.01	934.32
8. Kerala	83.07	252.99	803.17	1505.51	32.94	132.96	448.01	873.87
9. MP	63.90	219.15	712.97	1165.12	22.50	74.58	275.40	424.49
10. Maharastra	102.21	327.33	1162.52	1756.14	53.77	181.54	684.19	1099.55
11. Orissa	68.19	237.06	695.21	1226.28	15.63	50.39	214.17	290.81
12. Punjab	127.30	341.39	1002.53	2661.45	67.36	206.78	655.31	1290.12
13. Rajasthan	70.90	222.64	826.72	1357.04	25.15	68.09	275.64	492.55
14. TN	96.21	265.64	906.91	1404.11	45.28	132.64	556.86	906.09
15. UP	58.92	173.12	614.16	904.47	17.43	58.83	233.70	317.68
16. WB	94.99	201.74	627.73	988.74	32.40	95.00	325.94	515.58

Table 4.6 (Cncld.)
Per Capita Revenue Receipts of States (Rs.)

States	Total Own Non-Tax				Ranks: Total Revenue		Ranks: Own Tax	
	1971-72	1980-81	1990-91	1994-95	1971-72	1994-95	1971-72	1994-95
1. AP	12.89	43.11	121.78	194.40	14	11	9	8
2. Assam	5.36	134.82	112.00	156.50	10	9	13	15
3. Bihar	6.71	13.78	89.19	105.89	16	16	16	16
4. Gujurat	22.61	47.88	99.01	296.68	5	5	4	3
5. Haryana	31.78	93.26	313.25	254.94	3	3	3	4
6. J&K	49.49	131.54	94.28	190.56	1	1	11	13
7. Karnataka	25.40	54.90	114.88	215.07	8	6	6	5
8. Kerala	18.33	39.53	69.79	117.07	9	7	7	7
9. MP	15.58	51.00	132.31	216.85	13	13	12	11
10. Maharastra	19.67	70.24	239.77	317.83	4	4	2	2
11. Orissa	15.66	51.14	64.41	193.99	12	12	15	14
12. Punjab	27.96	55.67	129.26	982.40	2	2	1	1
13. Rajasthan	13.08	58.66	185.85	278.75	11	10	10	10
14. TN	24.35	48.27	68.00	86.50	6	8	5	6
15. UP	16.78	22.15	57.46	119.84	15	15	14	12
16. WB	6.97	28.34	33.48	57.85	7	14	8	9

Table 4.7
State's Own Tax Revenue (Rs. in Crores)

Year	Sales Tax	State Excise	Vehicles & Goods	land Revenue	Stamps & Regis.	Entertain-ment Duty	Electri-city Tax	Total Own Tax
1970-71	17.54	4.25	3.79	1.67	2.66	0.49	2.79	33.27
1971-72	17.48	4.65	3.06	1.79	3.21	0.65	3.86	34.70
1972-73	22.21	4.92	4.32	2.04	3.28	0.79	3.30	39.95
1973-74	22.47	5.09	4.80	2.32	3.47	0.70	3.29	42.20
1974-75	27.31	5.51	6.13	2.43	4.38	1.16	3.45	50.43
1975-76	38.04	6.13	7.67	3.19	5.25	1.32	6.73	68.41
1976-77	47.04	6.69	7.75	4.39	5.16	1.74	7.95	80.82
1977-78	47.13	7.00	8.69	4.83	5.63	1.90	8.52	83.77
1978-79	55.81	7.19	9.93	5.47	6.56	2.10	11.94	98.38
1979-80	65.95	7.82	11.05	4.68	7.21	2.82	12.55	112.10
1980-81	76.63	9.17	12.04	6.47	7.82	3.03	16.92	132.08
1981-82	94.34	11.02	13.39	5.26	9.28	3.50	22.98	159.72
1982-83	102.05	13.07	15.56	4.99	10.79	3.89	23.2	173.62
1983-84	114.00	15.44	18.58	8.94	12.51	3.96	2.50	200.93
1984-85	126.23	18.73	26.02	5.90	14.31	4.14	32.49	227.77
1985-86	148.35	21.63	27.85	15.92	17.28	5.07	48.81	285.91
1986-87	176.14	22.83	32.03	20.81	20.34	5.50	60.19	337.84
1987-88	206.06	26.52	35.28	30.16	22.18	5.42	61.12	386.74
1988-89	238.34	30.96	38.26	35.60	25.62	5.53	68.42	442.73
1989-90	295.21	38.29	43.96	78.94	27.98	5.07	33.39	525.84
1990-91	354.58	45.64	52.37	81.90	30.94	4.61	98.75	668.79
1991-92	394.16	55.07	59.77	24.77	35.43	4.99	99.45	673.64
1992-93	452.00	62.77	77.13	27.16	40.64	4.85	97.34	761.90
1993-94	514.33	76.18	86.43	31.46	47.99	5.03	98.46	859.89
1994-95	600.38	44.94	90.98	33.01	62.20	5.00	129.85	966.34
1995-96	750.00	65.00	114.00	34.65	89.96	5.00	136.32	1194.63

Source: RBI Bulletins (Various Issues)

Table 4.8
Share of Own Taxes of State In the Total Own Taxes (in Percentages)

Year	Sales Tax	State Excise	Vehicles & Goods	land Revenue	Stamps & Regis.	Entertain-ment Duty	Electricity Tax
1970-71	52.72	12.77	11.39	5.02	8.00	1.47	8.39
1971-72	50.37	13.40	8.82	5.16	9.25	1.87	11.12
1972-73	55.59	12.32	10.81	5.11	8.21	1.98	8.26
1973-74	53.25	12.06	11.37	5.50	8.22	1.66	7.80
1974-75	54.15	10.93	12.16	4.82	8.69	2.30	6.84
1975-76	55.61	8.96	11.21	4.66	7.67	1.93	9.84
1976-77	58.24	8.28	9.59	5.43	6.38	2.15	9.84
1977-78	56.13	8.34	10.35	5.75	6.70	2.26	10.15
1978-79	56.73	7.31	10.09	5.56	6.67	2.13	12.14
1979-80	58.83	6.98	9.86	4.17	6.43	2.52	11.20
1980-81	58.02	6.94	9.12	4.90	5.92	2.29	12.01
1981-82	59.07	6.90	8.38	3.29	5.81	2.19	14.39
1982-83	58.78	7.53	8.96	2.87	6.21	2.24	13.40
1983-84	56.74	7.68	9.25	4.45	6.23	1.97	13.69
1984-85	55.42	8.22	11.42	2.59	6.28	1.82	14.24
1985-86	51.89	7.57	9.74	5.57	6.04	1.77	17.42
1986-87	52.14	6.76	9.48	6.16	6.02	1.63	17.82
1987-88	53.28	6.86	9.12	7.80	5.74	1.40	15.80
1988-89	53.83	6.99	8.64	8.04	5.79	1.25	15.45
1989-90	56.14	7.28	8.36	15.01	5.32	0.96	6.35
1990-91	53.02	6.82	7.83	12.25	4.63	0.69	14.77
1991-92	58.51	8.17	8.87	3.68	5.26	0.74	14.76
1992-93	59.33	8.24	10.12	3.56	5.33	0.64	12.78
1993-94	59.81	8.86	10.05	3.66	5.58	0.58	11.45
1994-95	62.13	4.65	9.41	3.42	6.44	0.52	13.44
1995-96	62.78	5.44	9.54	2.90	7.53	0.42	11.41

Source: RBI Bulletins (Various Issues)

Table 4.9
Buoyancy and Elasticity Coefficients of State's Own taxes

Buoyancy Coefficients of Own Taxes								
Own Taxes	1970-71 to 1980-81				1980-81 to 1994-95			
	Buoyancy	$\overline{R^2}$	DW	T	Buoyancy	$\overline{R^2}$	DW	T
1. Total Own tax	1.36	0.86	1.35	7.87	1.22	0.96	1.81	20.98
2. Sales Tax	1.47	0.85	1.47	7.63	1.23	0.97	2.33	26.13
3. Excise Duty	0.68	0.91	1.55	4.87	1.30	0.98	2.95	31.34
4. Vehicles and Goods	1.23	0.88	1.54	8.58	1.22	0.96	2.29	19.81
5. Land Revenue	1.32	0.84	1.02	7.39	1.01	0.68	1.80	4.43
6. Stamps and Registration Duty	1.00	0.87	1.74	8.10	1.11	0.97	1.40	23.49
7. Electricity Duty	1.66	0.74	1.23	5.48	1.11	0.79	2.05	7.16
8. Entertainment Tax	1.69	0.83	1.43	7.12	0.26	0.46	1.55	3.51
Elasticity Coefficients of Own Taxes								
Own Taxes	1970-71 to 1980-81				1980-81 to 1994-95			
	Elasticity	$\overline{R^2}$	DW	T	Elasticity	$\overline{R^2}$	DW	T
1. Total Own tax	0.94	0.79	1.33	6.25	0.77	0.91	1.79	11.73
2. Sales tax	1.11	0.81	1.56	6.69	0.78	0.92	1.73	12.23
3. Excise Duty	0.40	0.78	1.94	6.06	0.59	0.83	1.97	8.08
4. Vehicles and Goods	1.09	0.89	1.68	9.00	0.88	0.92	2.58	12.49
5. Land Revenue	1.26	0.82	0.99	6.87	0.39	0.51	0.80	3.80
6. Stamps and Registration Duty	0.97	0.84	2.00	7.23	0.87	0.95	1.34	16.22
7. Electricity Duty	0.33	0.51	1.10	3.06	0.43	0.45	2.76	3.29
8. Entertainment Tax	0.97	0.73	1.83	5.27	0.08	0.41	0.58	1.59

Table 4.10
State wise Comparison of Tax-Income Ratio (T/Y)
(Average of Three Years, Two Periods)

States	T/Y Ratio 1980-81 to 1982-83	Index with All States T/Y = 100	Ranking of States	T/Y Ratio 1991-92 to 1993-94	Index with All States T/Y = 100	Ranking of States
AP	7.00	110.33	8	8.40	100.24	7
Assam	3.00	42.43	16	4.50	53.70	16
Bihar	4.70	66.40	13	5.40	64.44	15
Gujurat	8.29	117.25	4	11.8	140.81	1
Haryana	8.18	115.70	4	9.00	107.40	5
J&K	4.68	66.20	14	6.20	73.99	13
Karanataka	8.90	125.88	3	11.00	131.27	4
Kerala	9.20	130.13	2	11.60	138.43	2
MP	6.60	93.35	10	7.10	84.73	10
Maharastra	8.26	116.83	5	8.60	102.63	6
Orissa	4.44	62.80	15	5.50	65.63	14
Punjab	8.23	116.40	6	7.90	94.27	8
Rajasthan	6.81	96.32	9	7.70	91.89	5
TN	10.12	143.14	1	11.30	134.85	3
UP	5.12	72.41	12	6.50	77.57	12
WB	6.10	86.28	11	6.60	78.76	11
All States	7.07	100.00		8.38	100.00	

Source: RBI Bulletins (Various Issues) and Net State Domestic Product, CSO, 1991

Table 4.11
Actual and Presumptive Tax-Income Ratio of Individual States (1987-88 to 1989-90)

States	T/Y	$\hat{T/Y}$	(T/Y)/($\hat{T/Y}$)	Ranks
AP	9.75	7.12	136	1
Assam	4.25	5.89	2	16
Bihar	5.03	6.50	77	14
Gujurat	9.63	10.43	92	9
Haryana	9.35	8.20	114	4
J&K	5.64	7.23	78	13
Karanataka	10.03	8.32	121	2
Kerala	11.93	9.28	129	2
MP	8.12	7.30	111	7
Maharastra	9.76	10.98	89	10
Orissa	5.56	6.38	87	11
Punjab	8.49	7.46	113	5
Rajasthan	7.83	6.95	112	4
TN	10.45	10.78	97	8
UP	6.10	8.01	76	15
WB	7.44	8.82	84	12

Note: Actual tax-income ratio: T/Y

Presumptive tax-income ratio: $\hat{T/Y}$

Table 4.12
Compound Average Growth rate of Non-Tax receipts

Non-tax revenues	1970-71 to 1980-81	1980-81 to 1995-96	1970-71 to 1995-96
1. Interest Receipts	-1.48	13.57	4.27
2. Dividends	3.50	5.19	5.52
3. General Services	31.53	7.44	13.72
4. Social Services	7.09	8.78	9.20
5. economic Services	31.39	13.28	16.06

Table 4.13
Share of Non-tax Receipts in Total Non-Tax Revenue

Year	Interest Receipts	Dividends	General Services	Social Services	Economic Services
1970-71	63.09	0.53	4.48	26.65	5.27
1971-72	51.03	0.43	2.60	26.95	14.84
1972-73	34.36	0.26	8.14	5.84	51.40
1973-74	33.76	0.26	9.09	9.64	47.25
1974-75	39.70	0.37	5.70	6.79	47.44
1975-76	32.16	0.17	5.78	6.92	53.94
1976-77	32.71	0.14	11.89	7.71	47.55
1977-78	32.84	0.15	6.00	11.76	49.25
1978-79	30.36	0.11	5.88	7.42	56.23
1979-80	7.96	0.23	11.88	12.31	67.62
1980-81	6.38	0.14	47.44	5.19	40.85
1981-82	7.12	0.21	7.04	10.90	74.73
1982-83	12.64	0.20	6.59	10.61	69.97
1983-84	17.02	0.22	7.24	9.90	65.30
1984-85	17.83	0.14	8.94	8.91	64.17
1985-86	8.55	0.15	17.25	15.71	58.35
1986-87	7.88	0.13	21.35	12.82	57.81
1987-88	5.46	0.14	10.42	8.98	74.99
1988-89	7.98	0.11	22.77	8.43	60.70
1989-90	3.03	0.11	10.14	9.07	77.65
1990-91	4.18	0.05	10.91	11.15	73.71
1991-92	13.10	0.05	10.35	9.21	67.28
1992-93	15.01	0.30	11.93	7.18	65.59
1993-94	21.11	0.17	9.99	6.76	62.00
1994-95	7.60	0.05	3.15	4.68	84.52

Table 4.14
Net Profit/Loss in the State Road Transport Corporation and Contribution to Plan

	Net Profit/Loss (Rs. in Crores)				
Items	1991-92	1992-93	1993-94	1994-95	1995-96
1. Revenue	34.06	35.23	40.50	45.01	53.65
2. Expenditure	32.35	34.16	38.05	39.58	45.42
3. Surplus	1.71	1.07	2.45	5.43	8.23
4. Misc. Net. Receipts	-0.21	2.91	2.67	2.68	2.60
5. Gross Profit	1.50	3.98	5.12	8.11	10.83
6. Depreciation	4.37	4.77	4.65	5.37	5.78
7. Taxes	3.95	3.77	4.00	3.81	4.25
8. Interest	4.05	3.7	3.57	2.7	3.08
9. Net Profit (5-6-7-8)	-11.7	-8.33	-3.84	-2.28	
	Contribution to Plan (Rs. in Crores)				
10.Term Loan Repayments	2.74	1.96	0.29	4.95	5.59
11. Contribution to Plan (6 + 9 -10)	-10.14	-5.52	-2.74	-3.41	-2.09

Table 4.15
Recovery Rates in Various Sectors of State government
(1977-78 to 1987-88)

Recovery Rates in Social Services (in Percent)										
Education		Health		Water Supply,		Others		All Services		
77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88	
6.41	1.37	0.93	0.41	12.08	5.39	13.59	1.93	6.84	1.91	

Recovery Rates in Economic Services (in Percent)											
Agriculture		Irrigation		Power & Energy		Industry & Minerals		Transport & Communication		Total Services	
7-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88
45.32	35.17	53.49	2.52	5.22	69.68	9.50	11.06	7.52	3.01	39.95	16.90

Rates of Return of PublicEnterprises (in Percentage)											
Departmental Enterprises				Non-Departmental Enterprises						All Public Sector Enterprises	
Irrigation		All Departmental Enterprises		Electricity		Transport		All Non Departmental		All Public sector	
77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88	77-78	87-88
0.50	-2.39	3.95	-0.04	2.03	23.68	7.31	0.01	1.87	12.72	3.03	3.42

Total Costs and recovery Rates in various sectors											
Total Cost of Public Services			Cost of Social & Economic Services			Recoveries From Social & Economic. Services			Recovery Rate from Social, Economic Services		
77-78	87-88	Growth Rate	77-78	87-88	Growth Rate	77-78	87-88	Growth rate	77-78	87-88	Growth rate
36072	158588	15.96	28302	120339	15.57	71.22	11850	5.22	25.17	9.85	-60.87

Source: Rao< M.G. and Sudipto Mundle (1992), " An Analysis of Changes in State Government Subsidies: (1977-87), pg 107-133

Table 4.16
Compound Average Growth rate of Capital receipts

Capital receipts	1970-71 to 1980-81	1980-81 to 1995-96	1970-71 to 1995-96
1. Internal Debt	9.64	16.61	16.27
2. Loans from centre	7.26	12.01	11.23
3.Recovery of Loans and advances	12.83	7.16	10.08
4. Small Savings and Provident Fund	14.85	20.01	19.24
4. Total Capital Receipts	8.52	13.68	13.11

Table 4.17
Share of Capital Receipts in Total Capital Revenue

Year	Internal Debt	Loans from Centre	Repayment of Loans	Small Savings, Provident fund	Other Receipts
1970-71	11.78	66.36	5.06	6.31	10.48
1971-72	12.02	72.48	4.78	3.89	6.83
1972-73	10.71	70.11	4.26	2.89	12.03
1973-74	11.30	70.11	6.89	5.02	6.19
1974-75	27.62	51.45	11.20	7.67	2.06
1975-76	16.22	52.11	15.48	11.01	5.18
1976-77	18.65	58.17	12.63	10.28	0.28
1977-78	12.79	53.87	8.86	9.06	15.42
1978-79	11.85	69.68	9.07	9.29	0.11
1979-80	9.75	71.01	5.91	7.49	2.83
1980-81	17.24	55.84	6.18	5.57	15.26
1981-82	18.82	58.67	12.07	8.50	1.92
1982-83	11.80	43.45	6.63	7.49	30.64
1983-84	16.35	63.25	11.33	16.21	-7.12
1984-85	26.63	50.44	9.80	18.38	7.72
1985-86	19.62	41.83	7.88	10.54	19.98
1986-87	25.42	52.38	6.90	17.56	-2.26
1987-88	28.42	45.39	3.62	12.79	9.78
1988-89	17.16	43.39	3.01	16.53	19.91
1989-90	28.48	59.72	2.88	19.03	0.03
1990-91	15.55	60.57	3.29	13.53	9.95
1991-92	24.73	38.75	4.14	17.15	15.21
1992-93	28.64	44.94	7.59	29.84	-11.01
1993-94	24.39	41.06	3.65	22.93	7.97
1994-95	22.90	43.79	4.52	16.13	12.65

APPENDIX - A

Methodology adopted to calculate (i) Compound Average Growth Rate, (ii) Buoyancy and Elasticity of Tax revenues, and (iii) Tax effort

A.1 Compound Average Growth Rate

This is otherwise known as the least square growth rate. The least square growth rate, r, is estimated by fitting a least square linear regression trend line to the logarithmic annual values of the variables in the relevant period. More specifically, the regression equation takes the form:

$$\text{Log } X_t = a + bt + et \qquad (1)$$

where this is equivalent to logarithmic transformation of the compound growth rate equation

$$X_t = X_0 (1+r)^t.$$

In these equations, x is the variable, t is time trend and $a = \log X_0$ and $b = \log(1+r)$ are the parameters to be estimated; et is the error term. If b^* is the least square estimate of b, then annual average growth rate, r is attained by

$$[\text{anti log } (b^*)] - 1$$

and multiplied by 100 to express it in percentage term.

A.2 Buoyancy and Elasticity of Tax Revenue

Buoyancy and elasticity are two measures to estimate the responsiveness of the tax revenue to changes in income. For calculating the responsiveness coefficients of different taxes or a tax system as a whole, from time series data, the revenue function that has been used in this study is,

$$\text{Log } T = \text{Log } a + b \text{ Log } Y \qquad (2)$$

Where T= Tax Revenue, Y = NSDP, a = Constant term, and b = Buoyancy Coefficient. This function, however, needs two basic assumptions: firstly, it assumes that responsiveness would remain constant over a time period, and secondly, it assumes the existence of a significant correlation between two variables Y and T. The equation-2, measures tax responsiveness, which is generally called buoyancy of the tax revenue with respect to income.

But direct application of the equation-2 for the purpose of estimation of built-in-flexibility of elasticity is not appropriate. Tax revenue could change due to changes in discretionary changes in the tax system, like changes in tax rates, base etc. which are not accommodated in buoyancy equation. All these discretionary changes have to be

accommodated to constitute a adjusted tax revenue series for estimation of elasticity coefficient.

Tax elasticity was estimated in some studies without reconstructing the tax revenue series. Groves and Khan (1952) estimated the income elasticity of tax revenue by the following equation;

$$(\Delta T/T)/(\Delta Y/Y) \qquad (3)$$

where T was defined as the tax revenue and Y as income variable. Wilford (1965) tried to include tax rate in the equation-2 to accommodate rate elasticity. His regression equation takes the following form;

$$\text{Log } T = \text{Log } a + b \text{ Log } Y + c \text{ Log } r \qquad (4)$$

where r was defined as the tax rate and c as the rate elasticity. Ray (1966) includes base elasticity in the above equation to get better results. His equation is,

$$\text{Log } T = \text{Log } a + b \text{ Log } Y + c \text{ Log } r + d \text{ Log } B \qquad (5)$$

where B was defined as the tax base and d as the base elasticity. Singer (1968) suggested the use of dummy variable technique to accommodate discretionary changes; a dummy being introduced in the equation-2 when ever a discretionary change occurs. His equation is;

$$\text{Log } T = \text{Log } a + b \text{ Log } Y + \sum_{i=1}^{n} C_i D_i \qquad (6)$$

where D_i denotes ith year's dummy, n the number of years. But the use of dummy variable for discretionary changes may not feasible to capture the changes occurring over the years.

The other method to estimate tax elasticity involves reconstructing the tax revenue series. The adjusted tax revenue is substituted with historical tax revenue series in equation-2. The procedure thus results in the estimation of following equation;

$$\text{Log } AT = \text{Log } a + b \text{ Log } Y \qquad (7)$$

Where AT represents tax variable adjusted with discretionary changes in tax revenue due to changes in tax rate or base.

In the literature basically two procedures are followed to adjust the tax revenue series.

1. The constant structure method, i.e. the reconstruction of a simulated time series based on detailed base rate structure; and

2. The data adjustment method, i.e., the reconstruction of a simulated time series based only on the data of actual tax yields and the estimated revenue effects of each years legislative tax changes.

The constant structure method was used for the estimation of the United States personal income taxes by Harris (1968), Singer (1970), Wasylenko (1975) and Bahl (1983). This method involves utilisation of effective tax rates applicable to each income bracket in the reference years and the distribution of taxable income in other years. The approach assumes that the taxable income do not change across the tax brackets and influence of extraneous factors would remain unchanged. These assumptions, however, are not feasible over a period of time.

The second method of separating discretionary from automatic effects does not need these assumptions. This approach requires data on total tax yields and the revenue effects of each year's legislative tax changes. The data adjustment method has been followed by Prest (1962), Sahota (1961), Bahl (DM/72/83), Nambiar and Joshi (1974); though there are some difference in the methodologies followed in these studies. In this study, Prest (1962) method has been followed. Prest method suggests the use of the following formula.

$$\hat{T}_i = \hat{T}_{i-1} + (T_i - T_{i-1})(\hat{T}_{i-1}/T_{i-1}) \qquad (8)$$

where $\hat{T}_i$ = Tax collections in the ith year adjusted to the statutory rates of years 1;

T_{i-1} = Tax collection in the ith year adjusted to rates in year (i-1)

T_i = Actual tax collection in he ith year.

The methodology seeks to accommodate both rate and base changes. In case of unavailability of data, the Prest method suggests the derivation of the adjusted data from raw data in the following manner.

Let (a) $T_1, T_2, \ldots T_i, \ldots T_n$ be the actual tax yields for a series of years.

(b) $D_1, D_2, \ldots D_i, \ldots D_n$ be the estimate of revenue effects of discretionary changes tried over the corresponding years; and

(c) T_{ij} represents the jth year's actual tax yield adjusted to the tax structure that existed in year i.

Then if i = 1 is taken as the reference year, the series $T_{11}, T_{12}, \ldots T_{1i}, \ldots T_{1n}$ represent what the tax receipts would have been if the tax structure had remained as in year 1 with all discretionary changes removed from the years following year 1. The procedure for adjustment takes the following form.

$$T_{11} = T_1$$
$$T_{12} = T_2 - D_2$$
$$T_{13} = T_{23}(T_{12}/T_2)$$
$$T_{14} = T_{34}(T_{23}/T_2)(T_{12}/T_2)$$

.

.

$$T_{ij} = T_{j-1j}(T_{j-2,j-1}/T_{j-1})(..).....(T_{23}/T_3)(T_{12}/T_2)$$

This means; to adjust the tax yield of any year to the simulated yield for that year, if a base year tax structure had prevailed, the actual tax yield is to be multiplied by a sequence of multiplicative factors. The effect of each one of these is to adjust tax yields to the tax structure that prevailed in the year for which the factor refers to.

A.3 Measurement of Tax Effort

The tax effort of Government can be expressed as a relationship (ratio) between the actual amount of its tax collection and some measure of taxable capacity. The ratio of tax revenue to the total income of a State (tax ratio) is commonly taken as the indicator of measure of relative tax effort. The relative tax effort of a State can be judged in relation to other States or in relation to the average performance of all the State in the country. Taking tax ratio as an indicator of tax effort implies, that total income, irrespective of other circumstances, is the appropriate indicator of relative effort. But there are many other factor which influence the tax effort. Allowances have to be made for other factors so that relation between tax collected and tax potential could be established. In the literature, basically two approaches, namely, Aggregate Regression Approach(AR) and The Representative System Approach (RTS) have been followed to estimate tax effort.

<u>Aggregate Regression Approach (AR)</u>

This is based on the estimation of a multiple regression equation using independent variables which are determinants of taxable capacity, the dependent variable being tax ratio. The choice of independent variables depends partly on the theory to explain the relationship between tax and independent variable, and partly on their ability to explain the variations in the dependent variable. In this study aggregate regression approach has been followed.

A comparative measure of tax effort may be derived by comparing of tax effort may be derived by comparing the actual ratio of tax revenues to SDP of a particular State with such tax handles as are available (Musgrave & Musgrave, 1980, pg 802). Musgrave's equation using cross section data from a set of LDCs. is,

$$T/Y = a + \alpha Y_p + \beta X/Y + \gamma E/Y + \delta A/Y \qquad (9)$$

where T is tax revenue, Y is GNP, Y_p is per capita GNP, X is exports, E is output of extractive industries, and A is output of agriculture. He expected, the α, β and γ coefficients to be positive while δ would be negative. Having estimated the equation, the values of Y_p, X/Y, E/Y and A/Y for a particular country are plugged in the equation (9)to calculate its presumptive tax effort or T/Y ratio. Dividing the presumptive T/Y with actual T/Y, he obtained an index by which the effort of a particular country was compared with that of others.

In the present study, to estimate relative tax efforts of States in India, actual tax-income ratio is compared with presumptive tax ratio. Income generated in various sectors of the economy and per capita income have been taken as the independent variables which are considered as the potential bases for tax revenue. The equation estimated is of the following type;

$$TY = a + b_1 YA + b_2 Y_{c1} + b_3 Y_{c2} + b_4 YN = U \qquad (10)$$

where, YA = share of agriculture in NSDP

Y_{c1} = share of manufacturing in NSDP

Y_{c2} = share of services in NSDP

YN = per capita income

The Representative Tax System Approach (RTS)

This method has been popularised by US. Advisory Committee on intergovernmental Relations (ACIR). It involves identifying actual bases or when the actual bases can not be easily designated, equitable proxy bases for individual taxes, and then calculating an effective tax rate for each tax as a ratio of actual tax revenue to the actual or proxy bases. A normative tax rate is then derived from these effective tax rates over the observations and applied to the actual or proxy bases used. This yields the taxable capacity or the tax potential. Individual tax potentials can then be summed across taxes to arrive at the aggregate tax potential. By measuring actual aggregate collections against aggregate capacities so derived, an index of aggregate tax effort can then be arrived at. However, this approach involves collecting detailed data regarding actual bases for individual taxes across States in India, which may not be possible in the present context. So the aggregate regression approach was employed to estimate relative tax effort of States in India.

CHAPTER V

AGGREGATE BUDGETARY TRANSFERS

The transfer of resources to the State of Orissa is the subject matter of this chapter. The analysis is carried out in terms of plan wise aggregate transfers to the State. At the outset, it may be stated that the Constitution of India did in fact recognise the imbalance in revenue raising capacity of States vis-à-vis the responsibilities bestowed on them. The transfer of resources from Centre to States is made to infuse progressivity in the State governments' expenditure by compensating their weak internal resources. The budgetary transfer to the States thus involves correcting fiscal imbalance vertically between Centre and States and horizontally among the States. The relative strong financial position of the Centre is discernible from the revenue sources entrusted to it. On the other hand the States bear the responsibilities which are developmental in nature and are major sources of expenditure; viz., agriculture, irrigation, health and medical care and law and order etc.. It is also a fact that the States are better equipped and have more intimate knowledge of the basic needs and could plan in a more pragmatic way for future developments in these areas. This is in other words is termed as provision of 'local goods' by the sub-central authorities in a federal structure. Provision of local goods by the sub-central authorities is the main advantage in a federation, as it takes the aspirations and requirements of local people into consideration[1]. Then it becomes imperative that the financial needs of States should be considered carefully and a broad scheme of regional development be framed.

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[1] see David King (1984), Fiscal Tiers, The Economics of Multilevel Government, George Allen and Unwin, London

The Central transfers to the States in general is discussed first and later the position of Orissa has been analysed. Orissa being one of the poorest States in India, the need for more Central transfers is essential to meet its responsibilities. This chapter deals with aggregate Central transfers to the State over the period covered by the study so as to find out whether the State has benefited from the devolution system. The transfers to the State has been analysed keeping the following factors in mind; first, the share of transfers in total receipts of the State; second; the share of transfers in the aggregate expenditure of the State; and third, the share of transfers to the State in the aggregate transfers to all the States in India. The trend of per capita transfers to Orissa in relation to all the States also has been analysed.

5.1 Basic Framework

The transfer of resources from Centre to States are effected mainly by the Finance Commission and the Planning Commission. The transfers could be categorised as statutory transfers by the Finance Commission, plan transfers for State plans by the Planning Commission and discretionary transfers for Centrally Sponsored Schemes and other developmental activities by various ministries[2]. The transfers made in pursuance of the awards of the Finance Commissions follow a clearly laid down framework and are automatic in nature, free from discretionary interference from the Centre. The Finance Commission is a statutory body and was designed with the goal of being the main pillar of Centre-State financial relations in the federal structure. The other categories by which the transfers could be effected have gained more significance over a period of time.

The statutory transfers under the aegis of Finance Commissions, has not been so promising in terms of its share in total aggregate budgetary transfers, as may be seen from Table 5.1. The share of statutory transfers was 35.9 percent of total transfers in Fourth

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[2] Devolution of resources from Centre to the States in India, has been elaborated in Chapter-III

Plan, which has gone up to 40.2 percent in Seventh Plan and 42.4 percent in first four years of Eighth Plan. So around 60 percent of the Central transfers have been accrued to the States through plan transfers and discretionary transfers. The discretionary transfers which are of non-plan and non-statutory type has been calculated by deducting statutory transfers and plan transfers from aggregate transfers (Gulati, 1987)[3]. Thus discretionary transfers include Central assistance given for Central Plan Schemes and Centrally Sponsored Schemes. Share of discretionary transfers in aggregate transfers was 40.7 percent in Fourth Plan, which came down to 26.0 percent in Fifth Plan and gone up to 31.6 percent in Seventh Plan. In the first four years of Eighth Plan, its share was 28.0 percent. So a major portion of Central transfers to the States have been decided by the Central Government outside the preview of Finance Commission.

5.2 Centre's Privileged Position

Centre's commanding position in resource mobilisation vis-à-vis the States has always remained a debated issue in the federal structure of India. The taxes with higher buoyancy and wide base, like income tax, corporation tax, customs duty etc., have been entrusted to the Centre. The Central Government has been in a position to generate more revenues due to the possession of such revenue sources. The share of revenue receipts by the States, before and after the accrual of transfers from Centre, in the combined revenue receipts of Centre and the States, has been calculated to envisage the position of the States (Table 5.2).

Rows 1, 2 and 3 of Table 5.2 show the privilege enjoyed by the Centre both in revenue and capital account in the resource mobilisation process before the accrual of transfers. The share of States' own revenue receipts in combined revenue receipts of

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[3] Gulati, I.S.(1987) has shown that the share of statutory transfers accounted for less than two fifth of the aggregate budgetary transfers during 1951-52 to 1976-77.

Centre and the States was 34 percent in Fourth Plan, which has gone up to 37 percent in the Sixth Plan and was 35 percent in Seventh Plan. In the first Four Years of Eighth Plan (1992-96), this share was 36 percent. Own capital receipts of the States, as percentage of combined capital receipts of Centre and States, was 21 percent in Fourth Plan which went up to 24 percent in Sixth Plan and came down to 20 percent afterwards. Both revenue and capital receipts of States taken together constitute around 30 percent of combined resources raised by Centre and the States over the time period, except in Sixth Plan, in which this share went up to 33 percent. Then it becomes clear that, States' share in aggregate budgetary receipts (revenue and capital) has remained less than one third throughout the time period.

The stakes of the States seem to have improved with the inclusion of devolution of resources in the distribution of total budgetary resources. From the rows 4, 5 and 6 of the Table 5.2, it is seen that, the revenue account share shows a favourable position for the States as it has increased from 54 percent in Fourth Plan to 60 percent in Eighth Plan. But in capital account, the States' relative share in reality has suffered as it came down to 40 percent in Eighth Plan from 42 percent in Fourth Plan and 53 percent in Sixth Plan. Central transfer in capital account to States played an important role in shaping the States' share in capital account. States' overall access to budgetary resources shows a gloomy picture. Compared to Fourth Plan the figures in Seventh Plan and Eighth Plan are higher but the shares shown in last four plan gives a declining picture. One significant observation from this trend is that, since the Sixth Plan (starting from 1980-81), the States position in the resource mobilisation, both before and after the accrual of transfers, has not changed much; rather a declining trend is perceived.

5.3 Shifts in Central Transfers to the States

Transfer of resources from Centre to the States has been aimed at reducing the anomaly in the distribution of revenue sources between Centre and the States.

Dependence of States on the Central transfers to meet their expenditure needs has been quite significant in India and more so for the poor States. Whether an increasing share of Central revenues have been transferred to the States, is the mute question in this regard. From Table 5.3, it could be seen that, the gross transfers to States has increased from Rs.2395 crores in 1970-71 to Rs.9734 crores in 1980-81 and Rs.67015 crores in 1994-95. Though the transfers to the State has increased in absolute amount, it has failed to rise in tune with the Central and State revenues. Share of gross transfers in the total receipts of the Central Government was 43.49 percent in 1970-71, which has declined to 38.16 percent in 1980-81 and further to 31.09 percent in 1994-95. Similarly the Share of transfers in the total receipts of the States has also shown a declining trend. Transfers as percentage of States receipts has declined from 46.23 percent to 41.65 percent in the same time period.

Various categories of transfers (revenue and capital) in terms of their share in total revenue and capital receipts of States have been presented in Table 5.4. Revenue transfers (tax share + grants) as percentage of revenue receipts of the States was 39.92 percent in Fourth Plan, which has gone up to 40.02 percent in Eighth Plan. This has become possible due to upward thrust provided by the successive Finance Commission in their recommendations regarding the share of States in the Central taxes. But capital transfers, which are basically loans to the States, as percentage of capital receipts of States, has gone down drastically from 67.85 percent to 50.90 percent over the same plan periods. Both the categories of transfers taken together (Gross Transfers to the States), in terms of their share in total receipts of States has declined from 48.90 percent in Fourth Plan to 42 .51 percent in Eighth Plan.

Central transfers have been the important source of revenue for the States to meet their expenditure responsibilities. It would not have been possible on the part of the States to spend on various heads and provide for services had it not been for the Central

transfers. Transfers of resources to the States, as percentage of their expenditures have been given in Table 5.5 to assess the dependence of States on Centre to finance their expenditures. From Table 5.5, it could be seen that, 42.3 percent of the States aggregate expenditures including revenue and capital accounts are financed by the Central transfers in Eighth Plan. This share has declined from 47.9 percent in the Fourth Plan. In both revenue and capital accounts, the share of transfers in expenditures have gone down. Then, it becomes clear that, the Central transfers have failed to rise as fast as the expenditures in the States. However, still a major part of the State expenditures are being met from the Central transfers.

The flows of resources from Finance Commission, Planning commissions and Individual Ministries over the years aimed at reducing inequalities among the States in addition to fulfil the expenditure needs. Due to differences in income level and tax bases among States, their revenue generation capacity also differs. States with low income find it very difficult to mobilise revenues on their own. A rank correlation exercise has been attempted at three points of time (1970-71, 1980-81, and 1993-94) between per capita income of 16 major States and three categories of transfers namely statutory, plan and discretionary transfers and per capita revenue to capture the efforts of the funding bodies in reducing inequalities[4]. The rank correlation coefficients are given in Table 5.6. In all the three categories of transfers the rank correlation coefficients being negative imply that the transfers have over the years have helped in reducing the inequalities by transferring more amount of resources to States having low per capita income. But the coefficients in case of statutory transfers which are mainly effected by the Finance Commissions show

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[4] The rank correlation formula used here is as follows:

$$R_s = 1 - \frac{6\sum D^2}{N^3 - N}$$, where D = Difference of ranks between paired items in two series (here per capita income and three categories of transfers, namely, statutory, plan and discretionary transfers and per capita revenue), N = Number of States (here 16)

higher values on three points of time than that of plan and discretionary transfers and the 1993-94 value is more than that of the 1980-81. In other two types of transfers which are effected by the Planning Commission and other Ministries, a continual decline in rank correlation coefficient values over the years has been noticed. The Finance Commissions have been more successful in transferring more resources to relatively poor States than the Planning Commissions and other Ministries accruing discretionary transfers. The positive rank correlation coefficients between per capita income and the per capita revenue in all the cases show direct relationship, which implies more revenue could be raised in a State with high per capita income.

5.4 Devolution of Resources and the Orissa State

The importance of high inflow of resources to the State of Orissa is clearly felt looking at its low per capita income and other indices of development. Lower per capita income in the State not only tells the standard of living of the people and disparity among them, it also affects the resource mobilisation process adversely. The transfer of resources accrued at various levels of government do not always depend on the poverty criteria. Rather, factors like population, fiscal performance, effort of the State in resource mobilisation are also pertinent factor in attracting Central funds for development of the State.

5.4.1 Per capita Transfers to the State

Per capita gross and net transfer of resources to the States during the 1969-70 and 1995-96 plan periods have been given in Tables 5.7 and 5.8. The net transfer of resources involves repayment of loans and interest payments to the Centre by the States. From Table 5.7 we find a consistent progressive trend in aggregate budgetary transfers had been absent over the years. The weak internal resources and institutional flows to the States could not be compensated by such budgetary transfers.

In Fourth Plan (1969-74), the per capita gross transfers to Orissa was Rs.341, which has increased to Rs.3307 in Eighth Plan. The per capita gross transfers to Orissa has been relatively more compared to other States over the plan periods. Except in the case of Orissa, Rajasthan and Assam, the central transfers do not seem to have benefited the lower income States. Bihar, the poorest of all the States, got less than two thirds of what Punjab got.

The States like Orissa, Rajasthan and Assam have received more after netting the interest payments but had fared less than Punjab. For example in Seventh Plan Punjab had got highest amount of per capita net transfers. Both in seventh and Eighth Plan middle income States like Andhra Pradesh and Kerala and high income States like Karnataka, Punjab and Tamilnadu had increased their per capita net transfer receipts. It could then be understood that the progressive increase in the share of poor States like Orissa has suffered in the devolution process. The share of Central transfers to the State of Orissa in total transfers to all States has in fact gone down-a point which we would discuss a little latter. As we have pointed out earlier, the transfers are not always dependent on poverty criteria. In the devolution process, it has been found that the middle income States have received relatively more funds than the low income and high income States[5].

5.4.2 Categorisation of Resource Transfers to Orissa

The Central assistance from various sources are very important for the State of Orissa as they constitute a major portion of the State budget. In the revenue account, Central tax Shares and grants taken together, constitute more than 50 percent of total revenue resources in the revenue account of the State (see Table 4.3, Ch. IV.). Share in

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[5] This point has also been raised in Sinha and Chelliah(1982) World Bank study.

central taxes has been an increasing source of revenue for the State. Its share in total revenue of the State has gone up after 1981-82; it constitutes more than 30 percent of the total revenues. Share of grants-in-aid in total revenue resources was 32.54 percent in 1970-71, which eventually came down to less than 30 percent in most of the years in eighties and till 1995-96. Still these two items in revenue account are major source of revenue receipts for the State. From the compound average growth rate of share in central taxes and grants (Table 4.2, Ch IV), it is seen that, the growth rate of grants has come down to 12.90 percent (at current prices) in the period 1980-81 to 1995-96 compared to the 17.50 percent in 1970-71 to 1980-81. Share in central taxes also shows lower growth rate in the second period. Similarly in the case of loans as a percentage of total capital receipts on capital account has gone down to 66.36 percent in 1970-71 to 55.84 percent in 1980-81 and 43.79 percent in 1994-95 (see Table 4.17, Ch IV).

Various categories of Central transfers to Orissa, namely, tax shares, grants and loans, as percentage of total receipts of the State are presented in Table 5.9. Over the time period, it is seen that, share in central taxes has increased in terms its of its share in total receipts of the State. But grants and loans as percentage of total receipts of the State has gone down; particularly the loans have declined drastically. Consequently, the share of gross transfers in the total receipts of the State has declined from 61.20 percent in 1970-71 to 56.07 percent in 1994-95. The percentage of transfers in the total receipts of Orissa State, under revenue and capital account have been presented in Table 5.10 in a plan wise manner. The share of revenue account transfers (tax + grants), in total revenue receipts of the State, was 54.69 percent in Fourth Plan. This share has gone up to 59.26 percent in Sixth Plan and 59.40 percent in Eighth Plan. Revenue transfers from Centre forms a major portion of revenue receipts of the State, which has become possible due to rise in tax shares. On the other hand, in the capital account, the share of loan transfers to the State, has suffered sharp decline from 69.26 percent in Fourth Plan to 42.82 percent in Eighth Plan. Total Transfers as percentage of total receipts of the State (capital +

revenue), shows a declining trend from 60.67 percent in Fourth Plan to 54.86 percent in Eighth Plan; in Sixth Plan, this share was more than 57 percent. Though the Central transfers to the State has been a major source of revenue, the declining trend in terms of its share in total receipts of the State in fact made fiscal adjustment a difficult task.

The Table 5.11 shows the amount of resources transferred under the heads of shared taxes, grants and loans to Orissa during 1969-70 and 1995-96 plan periods and their shares in total transfers to all States. In Fourth Plan, Orissa received Rs.181.85 crores as share in central taxes which has gone up to Rs.2093.36 crores in Seventh Plan and Rs.4592.00 crores in four years of Eighth Plan. The grants from Centre presented in Table 5.11 includes grants both by the Finance Commission and the Planning Commission and other sources also. Grants to Orissa has increased from Rs.216.54 crores in Fourth Plan to Rs.1885.47 crores in Seventh Plan and Rs.3916.44 crores in Eighth Plan. Loans to States form a major portion of plan and non-plan assistance. Plan and non-plan loans to a greater extent are of matching type to resources generated by the States for various centrally sponsored schemes. Loans to the State of Orissa has increased from Rs.351.15 crores in Fourth Plan to Rs.1424.28 crores in Seventh Plan and Rs.2416.01 crores in Eighth Plan. Gross transfers to the State has gone up from Rs.749.54 crores in Fourth Plan to Rs.5403.11 crores in Seventh Plan and subsequently to Rs.10924.45 crores in Eighth Plan.

The share of Orissa in the total gross transfers from the Centre to all States has not increased (as was expected), rather a declining trend has crept into the scheme. In Table 5.11, it is seen that, this share was 4.96 percent in Fourth Plan which has declined to 4.35 percent in Eighth Plan. Among the constituents of gross transfer it was only the tax share which has shown some consistency over the years by increasing marginally from 4 percent in Fourth Plan to 4.26 percent in Seventh Plan and 4.74 percent in Eighth Plan. Both grants and the loans from the Centre to Orissa have shown a declining trend over the

years. In fourth, fifth and Sixth Plan the share of grants in the total grants to States remained at 5.68, 7.26 and 6.29 percents respectively. But in Seventh and Eighth Plans these shares came down to less than 5 percent. It was the share of loan to the State, which has shown the major reduction from 5.22 percent in Fourth Plan to 3.51 percent Eighth Plan.

In order to understand the types of transfers in a more detailed manner, Tables 5.12 and 5.13 show the statutory, plan and discretionary transfers to the State of Orissa and also the general trends. A declining trend has been noticed both in the shares of statutory and plan transfers in terms of their share in total transfers to all States, whereas share of discretionary transfers shows a marginal rise. Share of statutory transfers has come down from 5.48 percent in Fourth Plan to 4.79 percent in Eighth Plan and the share of plan transfers has declined from 6.31 percent to 3.78 percent in the same period of time. Share of discretionary transfers have gone up from 3.73 percent in Fourth Plan to 4.30 percent in Eighth Plan. Further categorisation of Transfer of resources to understand their composition has been given in Table 5.13. Percentage of tax shares in the statutory transfers, grants under plan and discretionary transfers have increased over time. Loan component shares of both the plan and discretionary transfers have gone down in this period, thus showing overall decline in the loans to the State.

The dependence of Orissa on Central transfers to meet its expenditure need has been quite high. Table 5.14 shows the share of budgetary transfers in State Government expenditure. The total budgetary transfers as percentage of total expenditure was as high as 62.8 percent in Fourth Plan which has subsequently came down to 54.8 percent in Eighth Plan. The steep decline in share of loans in capital expenditure from a high percent of 89.9 percent to 64.8 percent has contributed to aggregate decline in the dependence of the State on the Centre. However, it is found that Orissa's dependence on the Centre is higher when compared with all States average (see Tables 5.5 and 5.14). It implies that if

the Central transfers comes down, Orissa would have to face more difficulty in fiscal adjustment compared to other States.

5.4.3 Equity Consideration

Whether Orissa is benefited by way of Central transfers can also be analysed from equity point of view. Earlier it has already been stated that although the Central transfers to the States have been declining over the period covered by the study, it has affected the fiscal situation of Orissa more than the other States. In order to find out whether the Central transfers are progressive to the State, in the sense that poorer States are supposed to get larger share of Central transfers that the richer States, a regression analysis has been attempted. Two periods namely 1970-71 to 1980-81 and 1980-81 to 1994-95 are chosen for the regression analysis. The per capita SDP and different types of Central transfers have been taken for carrying out the exercise. The results of regression analysis are contained in the following Box.

Coefficients of Regression Analysis

Transfers to Orissa	1970-71 to 1980-81	1980-81 to 1994-95
1. Share in Central Taxes	1.4104	1.3540
2. Grants From the Centre	1.6203	1.1396
3. Loans From the Centre	0.6325	1.010
4. Gross Transfers	1.2109	1.1875
5. Net Transfers	1.4931	1.1713

The coefficients are significant at one percent level of significance

Equation form: LPTR = A + bLPCI +u

Where LPTR = Log of per capita transfers, LPCI = Log of per capita income, and b = Regression coefficient. Here five types of transfers have been taken, namely, (1) Share in Central Taxes, (2) Grants, (3) Loans, (4) Gross Transfers, and (5) Net Transfers

From the regression analysis, it could be seen that the regression coefficients for the period 1970-71 to 1980-81, have higher values than those relating to the period 1980-81 to 1994-95 except in the case of loan transfers. It shows that, although, the per capita

SDP of Orissa during the period 1980-81 to 1994-95 is higher than the corresponding per capita SDP of the previous period (1980-81 to 1994-95), the regression coefficients are lesser. It implies that, that the transfer of resources are regressive with respect to Orissa's SDP during the subsequent period.

5.5 Concluding Observations

From the above analysis, it is clear that the States in India to great extent have been dependent on the Central Government to meet their expenditure responsibilities. This is due to the predominant role of the Central Government in raising revenue from various sources. Before the accrual of the transfers to the States, the Centre's share in combined resources has been around 70 percent. In the process of devolution of resources, the role of Finance Commission, which is a statutory body is rather limited. Over the years a substantial amount of resources have been transferred by the Planning Commission and other Ministries in the form of plan and non-plan transfers, in which element of discretion exists.

Though an increasing trend has been perceived in the revenue account transfers in terms of its share in revenue receipts of the States, the loans to the States as percentage of capital receipts of the States has declined sharply. Consequently, total transfers to the States as percentage of total receipts of the States has declined from 48.90 percent in Fourth Plan to 42.51 percent in Eighth Plan. The dependence of the States to meet their expenditure needs from Central sources has declined as the share in of transfers in aggregate expenditures of the States has gone down. The transfers of resources from the Centre to the States has failed to rise keeping in tune with expenditure needs of the States.

The Central assistance has been the major source of revenue for the State of Orissa. From the devolution of resources to the States, it is seen that, the per capita transfers to Orissa has been relatively higher than many other States in India. Though more than half of the revenue receipts of Orissa are from Central sources, a declining trend

has been perceived in the transfer of resources to the State. The share of transfers in total receipts of the State, has in fact declined from 60.67 percent in Fourth Plan to 54.86 percent in Eighth Plan. It implies that the State has to find alternative avenues to meet its expenditure requirements.

The State of Orissa receives only 4 to 5 percent of total gross transfers made to all States. It is seen that, gross transfers to the State as a percentage of aggregate transfers has come down from 4.96 percent in Fourth Plan to 4.35 percent in Eighth Plan. Except the State's share in central taxes, the loans and grants from Centre have shown declining trend. As was discussed earlier, more than half of the expenditures of the State have been met from Central devolution of resources. But aggregate transfers as percentage of aggregate expenditures of the State, has declined from 62.8 percent in Fourth Plan to 54.8 percent in Eighth Plan. Despite the declining trend of Central transfers to Orissa, its dependence on Centre when compared with other States is quite high.

If the total transfers are disaggregated into statutory, plan and discretionary transfers, it is found that, the plan transfers account for a major decline. Again, the loan component has declined more sharply than grants-in-aid component. The lower quantum of Central Loans from the Centre to Orissa has necessitated the State to borrow more from the market and consequently the interest burden has gone up.

From the regression results, it is found that, the Central transfers to the State are regressive because, when its SDP has increased during the period 1980-81 to 1994-95 compared to the earlier period, the regression coefficients have fallen. This has happened for all categories transfers except loans. Therefore the inference could be that Central transfer have not been equitable as far as Orissa is concerned, particularly during the period from 1980-81 to 1994-95.

As discussed in the above section, a continuous progressive flow of resources is required for the State of Orissa. The recommendations of Tenth Finance commission include an alternative scheme of shareable tax pool for devolution to the States, which would include 29 percent of all Central taxes. It is generally felt that this proportion should be revised upwards to provide more funds to the States. Such an arrangement would certainly increase the share of Orissa in the Central taxes. But still other plan and non-plan transfers involve the element of discretion in favour of high income States. The Central Government should take cognisance of the underdevelopment nature of the State and provide more funds for development projects. Infrastructural developments, transport and communication and other capital investments are certain areas in which the need for more Central funds are necessary.

Table 5.1

Transfer of Resources from Centre to States (Rs. in Crores)

Plan Periods	Statuary Transfers	Plan Transfers	Discretionary Transfers	Gross Transfers
IV (1969-74)	5421 (35.9)	3535 (23.4)	6145 (40.7)	15101 (100)
V (1974-79)	10873 (43.0)	7722 (30.5)	6683 (26.0)	25278 (100)
AP (1979-80)	3644 (44.9)	2242 (27.4)	2254 (27.6)	8160 (100)
VI (1980-85)	24998 (40.2)	17885 (29.3)	18115 (29.6)	60998 (100)
VII (1985-90)	54388 (40.2)	38728 (28.7)	42068 (31.1)	135184 (100)
APS (1990-92)	35437 (41.2)	23430 (27.2)	27135 (31.6)	86002 (100)
VIII (1992-96)	106506 (42.4)	74359 (29.6)	70207 (28.0)	251072 (100)

Note: Figures in the parenthesis are percentage of Gross Transfers

Source: "Finances of State Governments", RBI Bulletins, Various Issues

Table 5.2
Share of States in the Combined Resources of the Centre and States
(Figures in Percentages)

	Plan Periods					
	IV	V	VI	VII	APS	VIII
1. Share of States' own revenue receipts in combined revenue receipts of Centre and States	34	35	37	35	36	36
2. Share of States' own capital receipts in combined capital receipts of Centre and States	21	21	24	20	23	20
3. Share of States' total receipts in the aggregate resources (1+2)	30	31	33	30	32	31
4. Share of States' total revenue receipts (own+transfers) in the combined revenue receipts of Centre and States	54	54	60	58	60	60
5. Share of States' total capital receipts (own+transfers) in the combined capital receipts of Centre and States	42	36	53	47	46	40
6. Share of States' total revenue and capital receipts in the combined revenue and capital receipts of Centre and States	50	47	58	55	56	54

Source: Report on Currency and Finances, RBI, Various Issues

Table 5.3
Total Receipts of Centre and States and Transfer of Resources
(Rs. in Crores)

Year	Receipts of the Centre	Receipts of the States	Gross Transfers	4 as % of 2	4 as % of 3
1	2	3	4	5	6
1970-71	5506	5032	2395	43.49	46.23
1971-72	6698	5881	3044	45.44	50.78
1972-73	7754	7787	3555	45.84	50.56
1973-74	8079	8002	3702	45.82	45.64
1974-75	10086	8583	3377	33.48	38.74
1975-76	12762	10355	4184	32.93	39.71
1976-77	14231	11889	4793	33.67	38.95
1977-78	15270	13031	5715	37.42	42.63
1978-79	18351	16700	7361	40.11	45.84
1979-80	21138	17735	8579	40.58	46.01
1980-81	25507	21766	9734	38.16	43.34
1981-82	28516	24150	10589	37.13	42.89
1982-83	33496	28277	12579	37.53	43.07
1983-84	39272	32980	14707	37.44	42.46
1984-85	47947	38418	17174	35.81	42.99
1985-86	59076	46555	23031	38.98	47.14
1986-87	70206	51118	24115	34.35	45.13
1987-88	76275	59806	28222	37.00	45.09
1988-89	87728	67458	30791	35.09	44.96
1989-90	104420	76621	33256	31.84	42.89
1990-91	117297	91160	42350	36.10	44.82
1991-92	127333	107774	42420	33.31	41.88
1992-93	149044	121092	46762	31.37	42.47
1993-94	161794	134187	50107	30.96	43.25
1994-95	185674	160867	67015	36.09	41.65

Source: "Finances of State Governments", RBI Bulletins, Various Issues

Table 5.4
Share of Central Transfers in the Total Receipts of the States
(Figures in Percentage)

	Plan Periods					
	IV	V	VI	VII	APS	VIII
1. Revenue Transfers as Percentage of Revenue Receipts of the State	39.92	36.28	38.32	39.93	40.10	40.02
2. Loan Transfers as Percentage of Capital Receipts of the State	67.85	56.02	55.08	58.46	51.22	50.90
3. Aggregate Transfers as Percentage of Aggregate Receipts of the State	48.90	41.46	42.78	44.79	43.04	42.51

Source: "Finances of State Governments", RBI Bulletins, Various Issues

Table 5.5
Dependence of States on Central Transfers
(Figures in Percentage)

	Plan Periods					
	IV	V	VI	VII	APS	VII
1. Revenue Transfers as percentage of revenue Expenditure of States	39.7	41.7	39.4	38.9	37.3	37.7
2. Loan Transfers as Percentage of Capital Expenditure of States	64.6	46.4	46.8	64.3	65.8	62.8
4. Aggregate Transfers as Percentage of Aggregate Expenditure of States	47.9	42.6	42.6	45.0	43.3	42.3

Source: "Finances of State Governments", RBI Bulletins, Various Issues

Table 5.6

Coefficients of Rank Correlation with Per Capita Income

	1970-71	1980-81	1993-94
1. Per Capita Revenue	0.718	0.715	0.591
2. Per Capita Statutory Transfers	-0.479	-0.300	-0.397
3. Per Capita Plan Transfers	-0.556	-0.538	-0.118
4. Per Capita Discretionary Transfers	-0.171	-0.284	-0.059

Table 5.7

Per Capita Gross Transfers to States

(1969-70 to 1995-96 Plan Periods) (Rs. Per capita)

States	IV (1969-74)	V (1974-79)	VI (1980-85)	VII (1985-90)	APS (1990-92)	VIII (1992-96)
1.AP	272	438	775	1370	913	2689
2.Assam	492	673	1288	2736	1528	4174
3.Bihar	209	407	818	1406	870	2273
4.Gujurat	244	410	928	1652	708	2391
5.Haryana	320	459	950	1607	773	2222
6.J&K	1112	1864	3077	6673	3910	11745
7.Karnataka	281	379	777	1361	723	2472
8.Kerala	306	489	822	1552	922	2768
9.MP	191	357	791	1408	827	2398
10.Maharastra	271	362	890	1492	881	2068
11.Orissa	341	556	1115	1813	1226	3307
12.Punjab	253	586	1260	3029	1575	3978
13.Rajasthan	455	529	928	1744	1039	2858
14.TN	219	349	783	1353	905	2562
15.UP	202	430	806	1496	1001	2557
16.WB	273	488	892	1550	879	2475
17.All States	278	467	925	1716	1027	2831

Source: "Finances State Governments", RBI Bulletins, Various Issues

Table 5.8
Per Capita Net Transfers to States
(1969-70 to 1995-96 Plan Periods) (Rs. Per capita)

States	IV (1969-74)	V (1974-79)	VI (1980-85)	VII (1985-90)	APS (1990-92)	VIII (1992-96)
1.AP	154	341	624	1072	735	2940
2.Assam	322	545	938	2110	1260	3053
3.Bihar	149	298	657	1098	695	1804
4.Gujurat	169	291	743	1168	103	1405
5.Haryana	167	287	632	982	507	1484
6.J&K	725	1471	2446	5450	2991	9573
7.Karnataka	158	263	567	967	536	1914
8.Kerala	202	765	585	1034	653	2094
9.MP	111	287	677	1122	654	1976
10.Maharastra	191	258	713	1073	611	1294
11.Orissa	221	445	906	1446	951	2671
12.Punjab	149	363	718	2381	1230	1826
13.Rajasthan	266	381	634	1302	767	2295
14.TN	131	275	647	1066	720	2021
15.UP	138	343	650	1205	808	1982
16.WB	173	357	623	1031	542	1801
17.All States	180	356	720	1330	794	2224

Source: "Finances State Governments", RBI Bulletins, Various Issues

Table 5.9
Share of Various Categories of Transfers in Aggregate Receipts of Orissa
(Figures in Percentage)

Year	Share in Central Taxes	Grants From Centre	Gross Loans From Centre	Gross Transfers
1970-71	15.71	20.07	25.42	61.20
1971-72	16.94	19.90	28.49	65.32
1972-73	14.01	16.08	30.84	60.94
1973-74	15.85	15.09	28.50	59.44
1974-75	15.73	29.20	12.49	55.42
1975-76	16.30	23.74	13.75	53.79
1976-77	15.53	24.24	13.04	52.81
1977-78	13.82	26.84	14.30	54.88
1978-79	12.78	30.14	14.04	59.96
1979-80	22.76	23.63	18.66	65.05
1980-81	18.42	22.47	15.90	56.79
1981-82	22.27	19.99	15.19	57.44
1982-83	16.99	28.11	13.44	58.55
1983-84	19.85	20.73	19.11	59.69
1984-85	25.02	16.72	13.89	55.63
1985-86	18.70	16.88	15.12	50.70
1986-87	25.58	19.61	12.67	57.86
1987-88	20.07	19.37	15.19	54.64
1988-89	18.43	20.90	14.46	55.08
1989-90	24.52	19.04	15.21	58.77
1990-91	21.87	19.12	19.14	60.13
1991-92	23.24	19.12	12.22	54.57
1992-93	24.49	19.68	11.40	56.57
1993-94	23.61	19.12	11.94	54.67
1994-95	22.29	22.25	11.54	56.07

Source: "Finances of State Governments", RBI Bulletins, Various Issues

Table 5.10
Share of Central Transfers in Revenue Receipts of Orissa
(in Percentage)

	IV	V	VI	VII	APS	VIII
1. Revenue Transfers as Percentage of Revenue Receipts of the State	54.69	54.94	59.26	58.56	60.95	59.40
2. Loan Transfers as Percentage of Capital Receipts of the State	69.26	58.17	53.77	48.04	49.02	42.82
3. Aggregate Transfers as Percentage of Aggregate Receipts of the State	60.67	55.75	57.67	55.36	57.18	54.86

Source: "Finances State Governments", RBI Bulletins, Various Issues

Table 5.11
Transfer of Resources from Centre to State of Orissa (1)
(Rs. in Crores)

Plan Periods	Share in Central Taxes	Grants From Centre	Gross Loans	Gross Transfers
IV (1969-74)	181.85 (4.00)	216.54 (5.68)	351.15 (5.22)	749.54 (4.96)
V (1974-79)	319.96 (3.87)	584.93 (7.26)	316.80 (3.54)	1221.69 (4.83)
AP (1970-80)	144.36 (4.24)	149.86 (7.19)	118.38 (4.44)	412.60 (5.06
VI (1980-85)	1044.84 (4.44)	1106.38 (6.29)	789.71 (3.70)	2490.93 (4.82)
VII (1985-90)	2093.36 (4.26)	1885.47 (4.74)	1424.28 (3.08)	5403.11 (4.00)
APS (1990-92)	1524.62 (4.90)	1290.27 (4.63)	1044.03 (3.86)	3858.92 (4.49)
VIII (1992-96)	4592.00 (4.74)	3916.44 (4.59)	2416.01 (3.51)	10954.45 (4.35)

Note: Figures in parenthesis show the share in Total Transfers to All States in the respective categories.

Source: "Finances State Governments", RBI Bulletins, Various Issues

Table 5.12
Transfer of Resources from Centre to State of Orissa (2)
(Rs. in Crores)

Plan Periods	Statutory Transfers	Plan Transfer	Discretionary Transfers	Gross Transfers
IV (1969-74)	297.55 (5.48)	222.93 (6.31)	229.07 (3.73)	749.54 (4.96)
V (1974-79)	644.50 (5.93)	370.08 (4.79)	207.11 (3.10)	1221.69 (4.83)
AP (1970-80)	185.91 (5.07)	149.83 (6.68)	76.86 (3.41)	412.60 (5.06)
VI (1980-85)	1140.21 (4.56)	867.17 (4.85)	933.61 (5.15)	2940.93 (4.82)
VII (1985-90)	2298.34 (4.23)	1495.64 (3.86)	1609.11 (3.83)	5403.11 (4.00)
APS (1990-92)	1464.39 (4.65)	804.15 (3.43)	1408.47 (5.19)	3858.92 (4.49)
VIII (1992-96)	5097.06 (4.79)	2810.27 (3.78)	3017.12 (4.30)	10924.45 (4.35)

Note: Figures in parenthesis show the share in Total Transfers to All States in the respective categories.

Source: "Finances State Governments", RBI Bulletins, Various Issues

Table 5.13
Transfer of Resources from Centre to State of Orissa (3)
(Rs. in Crores)

Plan Periods	Statutory Transfers		Plan Transfer		Discretionary Transfers	
	Tax Shares	Grants	Grants	Loans	Grants	Loans
IV (1969-74)	181.85 (61.12)	115.70 (38.88)	50.28 (22.55)	172.65 (77.45)	50.96 (22.07)	178.50 (77.93)
V (1974-79)	319.96 (49.64)	324.54 (50.36)	148.79 (40.20)	221.29 (59.80)	111.60 (53.98)	95.51 (46.12)
AP (1970-80)	144.36 (77.65)	41.55 (22.36)	54.18 (36.16)	95.65 (63.84)	54.13 (70.43)	22.73 (29.57)
VI (1980-85)	1044.84 (91.64)	95.37 (8.36)	316.46 (36.49)	550.71 (63.51)	694.55 (74.39)	239.00 (25.61)
VII (1985-90)	2093.36 (91.08)	204.98 (8.92)	576.00 (38.51)	919.64 (61.49)	1104.49 (68.64)	504.64 (31.36)
APS (1990-92)	1524.62 (92.62)	121.68 (7.38)	362.95 (45.13)	441.20 (54.87)	805.64 (57.20)	602.83 (42.80)
VIII (1992-96)	4592.00 (90.09)	505.06 (9.91)	1295.14 (46.09)	1515.13 (53.91)	2116.24 (70.14)	900.88 (29.86)

Note: Figures in parenthesis show the share in Total Transfers to All States in the respective categories.

Source: "Finances State Governments", RBI Bulletins, Various Issues

Table 5.14
Dependence of Orissa State on Central Transfers
(Figures in Percentage)

	IV	V	VI	VII	APS	VIII
1. Revenue Transfers as Percentage of Revenue Expenditure of the State	49.6	58.3	59.5	55.6	58.3	52.4
2. Loan Transfers as Percentage of Capital Expenditure of the State	89.9	50.1	51.2	52.7	56.0	64.8
3. Aggregate Transfers as Percentage of Aggregate Expenditure of the State	62.8	56.0	57.8	54.8	57.7	54.8

Source: "Finances State Governments", RBI Bulletins, Various Issues

CHAPTER VI

GROWTH AND PATTERN OF PUBLIC EXPENDITURE AND STATE FINANCES OF ORISSA

The role of Government expenditure (public expenditure) has always been given importance in the budgetary transactions of the States in India. The main objectives of Government Expenditure are to reduce economic inequality and also to accelerate economic growth. Progressive taxation and higher level of Government expenditure, particularly public investment have been the two major pillars of fiscal policy. A careful analysis of Government expenditure in India clearly indicates that the current expenditure on revenue account has grown at a higher rate than that of the capital expenditure and fiscal deficit went on increasing which later created fiscal imbalance in the economy (see Rao, et.al., 1995). The States in India are entrusted with very important areas like public health and education etc., for which their expenditure need is much higher than their revenue sources. It is observed that even the surplus from the capital account (i.e., borrowings) has been used to meet the current account expenditure. The deficits in the States have grown at a higher rate and more so after 1980-81. Consequently the debt burden has created severe fiscal problem in the recent times for the States (see Bajaj et. al 1992).

For public expenditure to be an instrument of economic development it requires that the share of investment expenditure should grow. In the case of Orissa, the ratio of public expenditure to State income has been higher than all India average. It is so even for other backward States. One way of looking at the higher share of public expenditure in the NSDP is to find out how far the people of the State depend upon the services provided by the Government. The per capita income of Orissa being one of the lowest in the country, one would expect that the State in a bigger way should come forward to supply

the very essential services to the people. But, it seems it did not happen so. The expenditures on basic facilities like health, education and others help improving the human resources. The role of Government expenditure in redistributing income and diffusing the fruits of development among the people is also another aspect of fiscal policy. In addition, the State should also strive for more investment and capital formation which would accelerate the economic development.

Keeping some of these issues in mind, the public expenditure in Orissa has been analysed in this chapter. The trends of total and functional categories of expenditure, income elasticity of expenditure, causal relationship between expenditure and SDP and State revenues have been analysed to ascertain whether the expenditure pattern in the State has been oriented on these lines. The deficits in the State budget and the problem of debt burden of Orissa State have also been discussed subsequently.

6.1 Trends in Aggregate Government Expenditure

Government expenditure in Orissa has shown a substantial increase over the years since 1970-71. Total expenditure, which includes both revenue and capital expenditure, has gone up from Rs.189.62 crores in 1970-71 to Rs.876.60 crores in 1980-81 and to Rs.5532.03 cores in 1994-95. Revenue expenditure has been more dominant throughout the period covered by the study and it is nearly five times that of the capital expenditure. (see Table 6.1). The per capita expenditure, which was only Rs.87.28 in 1970-71, has gone up to Rs.334.45 in 1980-81 and Rs.1664.87 in 1994-95. In 1994-95, the per capita revenue expenditure was Rs.1378.97 and per capita capital expenditure was only Rs.285.90; the per capita revenue expenditure being five time that of per capita capital expenditure (Table 6.2). The per capita expenditure at constant prices has grown from Rs.217.66 in 1970-71 to Rs.510.38 in 1994-95 at constant prices (1980-81 = 100)

The growth rates of various categories of expenditures are shown in Table 6.3. During the period covered by study, the total expenditure at current prices has grown at

13.67 percent. In the same period the growth rate of revenue expenditure was at 14.20 percent, which is more than that of the growth rate of capital expenditure (12.21 percent). Per capita growth rate of these expenditures have been found to be lower than that of total expenditure growth rate. The per capita total expenditure at current prices grew at the rate of 11.92 percent, revenue expenditure at 12.44 percent and capital expenditure at 10.45 percent. The growth rate of expenditures in terms of constant prices also shows the same trend. Our analysis with respect to the trend of higher growth of revenue expenditure as compared to capital expenditure in Orissa, is in conformity with that of all States taken together (Rao, 1992).

The trends in expenditure both at current and constant prices are shown in Figures 6.1 & 6.2. It is seen that, in the decade of seventies, the growth rate of expenditure was low. It was only after 1982, the curves show upward slope, indicating a higher rate of growth. It is also seen that the expenditure at constant prices show more discontinuities (may be due to price effect). The expenditure trends have been analysed for two periods, viz. 1970-71 to 1982-83 and 1982-83 to 1994-95. The growth rates for two periods have been estimated using the kinked exponential regression method suggested by Boyce (Boyce 1986)[1]. .

The relevant equation is the following:

$$LnY_t = \alpha_1 + \beta_1(D_1 t + d_2 k) + \beta_2(D_2 t - D_2 k) + u_t$$

where Y_i is State Income, D_1 and D_2 are Dummy variables, k is the break point and β_1 and β_2 are exponential growth rates.

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[1] the Boyce(1986) method is discussed in the Appendix.B 1

Figure 6.1: Total Government Expenditure in Orissa
(TRE: Revenue, CTE: Capital & GTE: Total Expenditure)

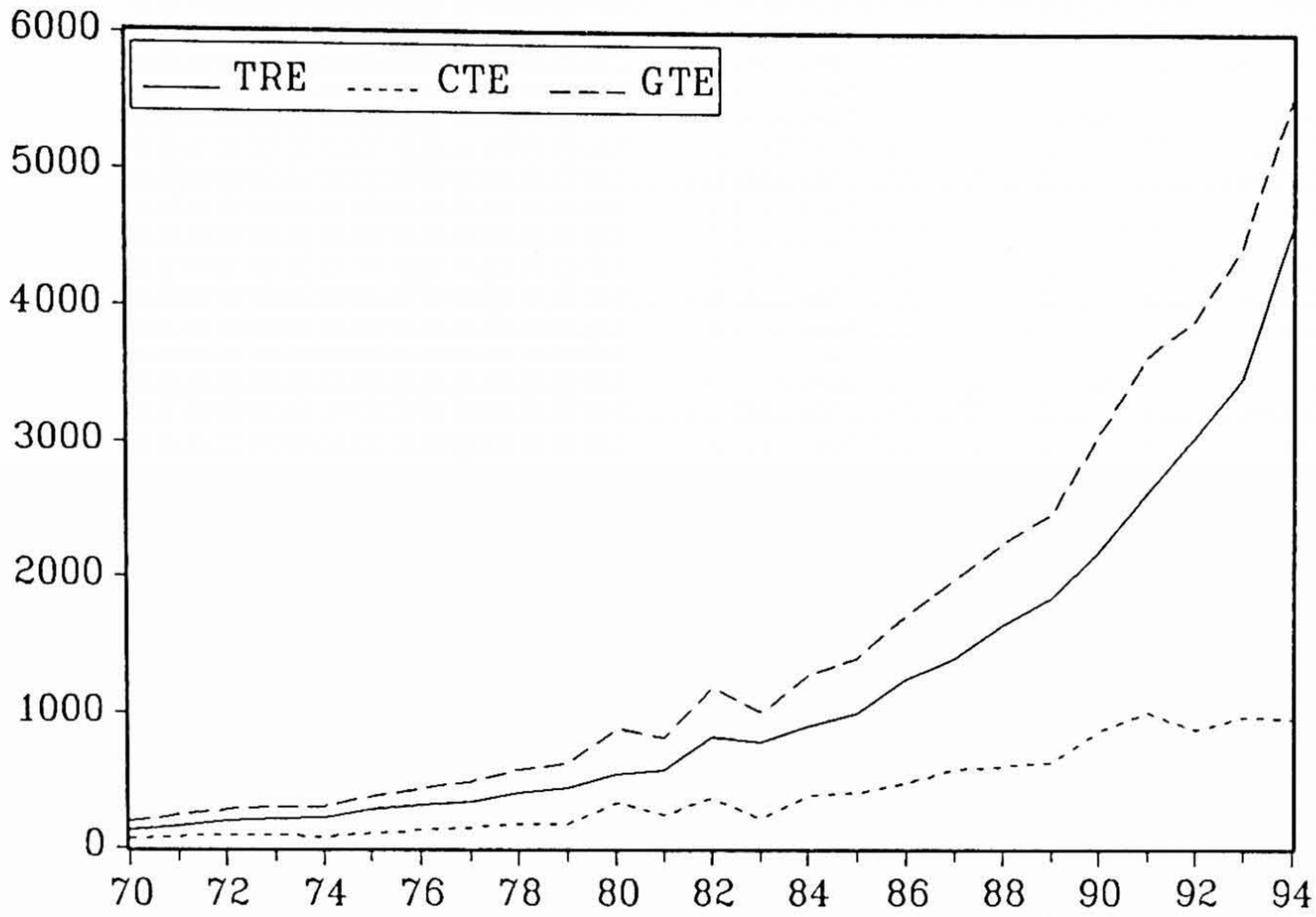
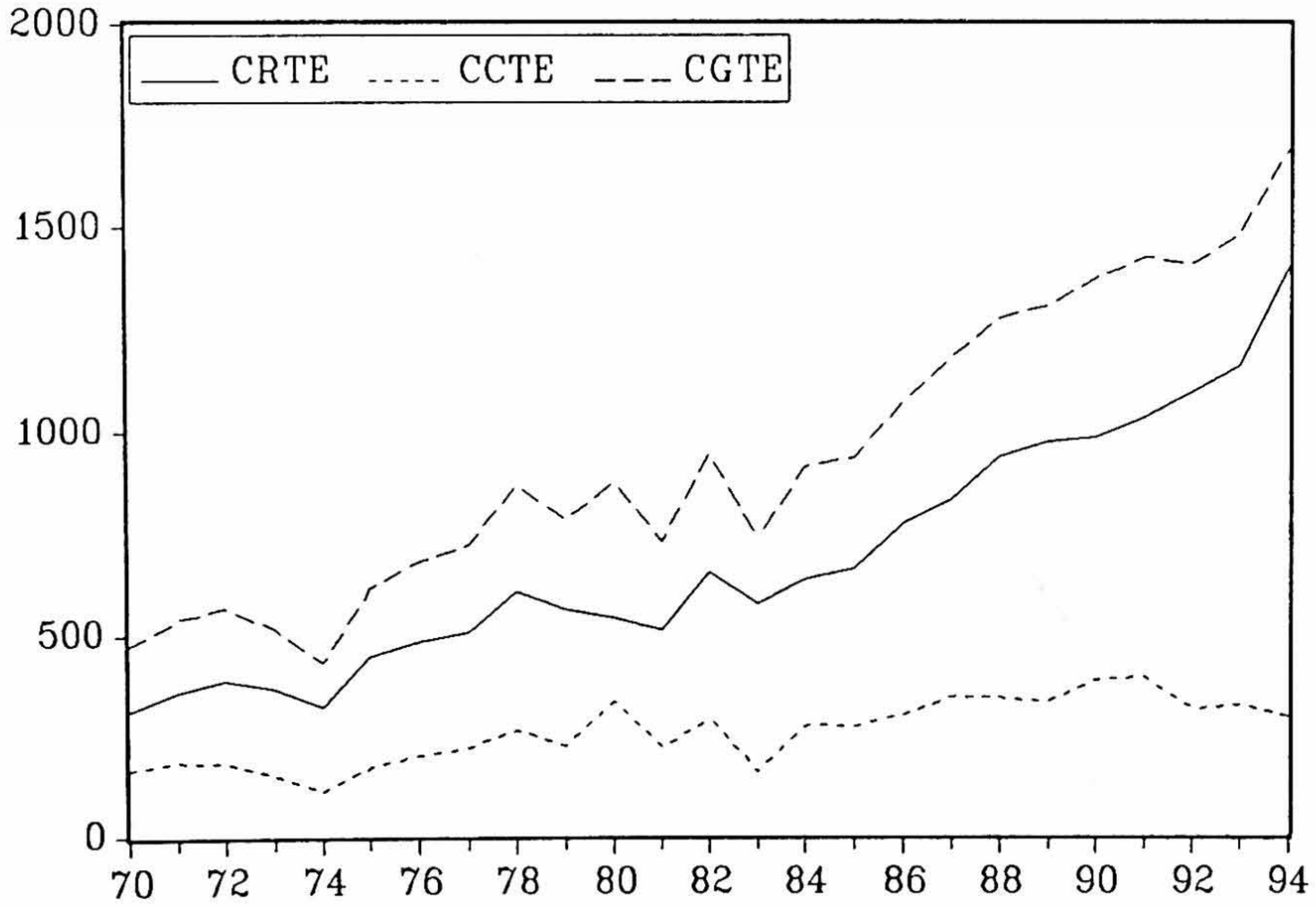


Figure 6.2: Total Government Expenditure at Constant Prices



The OLS estimates of β_1 and β_2 of the above equation give the exponential growth rates for the sub periods. The results are given in Table 6.4. In the period 1970-71 to 1982-83, the growth rates of different expenditure categories are lower than those in the period 1982-83 to 1994-95. The growth rates of total expenditure at current and constant prices in the first period were 8.14 percent and 3.05 percent respectively while for the second period they were at 17.48 percent and 6.62 percent. It has been observed that in both the periods, the growth rates of capital expenditure have been lower than that of revenue expenditure and in per capita terms, it was even half of the growth rate of revenue expenditures.

Classification of Government Expenditure: Government expenditure is classified under two broad headings; revenue expenditure and capital expenditure depending upon the type of expenditure incurred. While distinguishing between these two categories of expenditures, the revenue expenditure is termed as current expenditure and capital expenditure as investment expenditure. The categorisation holds good to some extent and helps in analysing the pattern and trends of expenditure. In the analysis of expenditure pattern of States in India, predominance of revenue expenditure has been termed as the major cause of reduction in capital investment which is essential for economic development.

The share of revenue expenditure in total expenditure of Orissa remained much higher than that of capital expenditure throughout the period covered by the study. for instance, revenue expenditure constituted 65.24 percent of total expenditure and 11.93 percent of NSDP in 1970-71 (Table 6.5). It has gone up to 82.83 percent of total expenditure and 23.13 percent of NSDP in 1994-95. Such a steep rise in the relative share of revenue expenditure clearly reduced the scope for capital investment in crucial sectors. Capital expenditure has grown relatively slowly in Orissa over the period covered by the study, at about 12.21 percent at current prices compared to the revenue expenditure

(Table 6.3). The growth rate of capital expenditure has gone up from 8.12 percent in the first period to 14.80 percent in the second period. However, its growth rate in both the periods are lower than that of revenue expenditure. Share of capital expenditure was 34.76 percent of total expenditure in 1970-71, i.e. half of the revenue expenditure (Table 6.5). Over the years its share has dwindled and stood at 17.17 percent in 1994-95; less than one fourth of the revenue expenditure. As percent of NSDP of the State, it declined from 6.36 percent in 1970-71 to 5.45 in 1994-95. In the same time period, revenue expenditure has increased from 11.93 percent in 1970-71 to 23.13 percent in 1994-95. Capital expenditures are broadly the expenditures on the creation of physical assets (capital assets) and are crucial for the long term development of the State. Given the poor infrastructure facility in the State, the allocation of capital expenditure seems quite inadequate.

The increasing trend of revenue expenditure, though in varying proportion, has also been observed for other States also. Share of revenue and capital expenditures of 16 major States in their respective total expenditure and NSDP has been presented in Tables 6.6 and 6.7 respectively. As a percentage of total expenditure and NSDP, the growth of revenue expenditure of Orissa has been substantial. Other States like, Assam, Bihar, Haryana, J&K, Kerala and Rajasthan have also shown high growth of revenue expenditure. Although many States have experienced declining share of capital expenditure, the decline has been very sharp as far as Orissa is concerned.

The expenditure side of the State budget - its composition as well as amount, is very important in view of the role played by the State in providing basic services and other amenities to the people. The need for higher Government expenditure is indisputably more in Orissa keeping in view, the disadvantaged people and to improve the infrastructural and other services for accelerating development. As already stated, Government expenditure as proportion of NSDP has been quite high in Orissa compared

to many other States in India. In 1970-71, public expenditure as proportion of NSDP was 18.29 percent and the same has gone up to 31.72 percent in 1994-95, which is one of the highest among the States in India (Table 6.8). But such a higher percentage of expenditure-income ratio does not ensure adequate provision of public services to the people. Inspite of higher percentage of Government expenditure in the NSDP, the per capita expenditure has been quite low compared to other States. State wise per capita expenditure is given in Table 6.8 at four points of time. From the per capita figures of the States, it is observed that, in the case of high income States the per capita expenditure has been more than that of the low and middle income States. So far as per capita expenditure of Orissa is concerned, it has been one of the lowest along with Bihar, Rajasthan and Uttar Pradesh. In 1994-95, the per capita expenditure in Orissa, was Rs.1666.27, which was the lowest except States like Bihar and West Bengal only. Lower per capita expenditure and a higher percentage of expenditure in NSDP of the State, show the inadequacy of expenditure allocation to meet the requirement of the people in the State.

6.2 Functional Categories of Revenue Expenditure

Most of the items of Government expenditure, whether at Union or State level and whether classified as revenue or capital expenditure, fall under one or other of the two broad headings-developmental and non-developmental. This categorisation is based on the distinction between Government's optional services (e.g. agriculture, education, health, social welfare etc.) and essential services (e.g. civil administration, law and order, administration of justice etc.). Developmental expenditure in its turn is sub-divided into (a) social and community services (education, health, social welfare etc.) and (b) economic services (agriculture, industry, power development etc.). Non-developmental expenditure includes expenditure in lieu of fiscal services, interest payment on loans and administrative services.

Within the categories of development expenditure, different States have different priorities depending upon their policy framework. It also depends upon the economic standard of the people of the State and availability of services in non-Government sector. In general, in the developmental expenditure of the States, expenditure on social and community services exceeds the expenditure on economic and social services. This is due to the responsibility on the part of the States to provide basic services such as educational, health and other social security facilities to the people (These are inherent in the federal structure of the country).

Expenditure on social and community services may be further classified into following categories:

1. Education, art and culture, scientific services and research
2. Medical, family planning, public health, sanitation and water supply
3. Housing
4. Labour and employment
5. Social security and welfare
6. Relief expenditure on natural calamities
7. Others

The expenditure on economic services contain the following categories:

1. General economic services
2. Agriculture and allied services
3. Industry and minerals
4. Water and power development
5. Transport and communication

6.2.1 Social and Community Services

The expenditure on social and community services is significant from any State's point of view as it is aimed at improving the standard of living of the population. Basic

education, health facilities, sanitation and social security are important components of State's expenditure programme which enhances the quality of life of the people and help in economic development. The share of expenditure on social and community services in total revenue expenditure of Orissa, constituted 34.85 percent in 1970-71 and it has increased to 37.92 percent in 1995-96. The share has remained more than 40 percent upto 1989-90 and later declined (Table 6.9).

Social services, on revenue account shows a growth rate of 14.54 percent in the period, 1970-71 to 1994-95 (Table 6.3), which is marginally lower than that of economic services (14.61 percent) and higher than general services (13.74 percent). In the first period, i.e., 1970-71 to 1982-83, the growth rate of social services on revenue account has been higher than that of economic services and general services. But in the second period, i.e., 1982-83 to 1994-95, the growth rate of social services has been the lowest. From the growth rate of various expenditure categories on revenue account, it is clear that the growth rate of social services has slowed down compared to economic and general services.

Major portion of expenditure on social sector has gone to education and health sectors (Table 6.10). As it has been pointed out earlier, education (Edu)[2] includes education, art and culture, scientific services and research. Expenditure under this head covers half of the expenditure on social services and 20 percent of the revenue expenditure. Next in importance comes the health sector which includes medical, family planning, public health, sanitation and water supply. Expenditure on this head (Med) constituted 24.96 percent of social services in 1970-71 and with some fluctuations remained at 23.41 percent in 1995-96. So far as it's percentage in total revenue

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[2] The short names in the brackets (afterwards also) indicate the particular head of expenditure presented in the Tables.

expenditure is concerned, it varied between 8 to 10 percent over the years and more than 10 percent between 1979-80 to 1988-89. Expenditure on social security and welfare (Soc) constituted 20.20 percent of social service sector in 1970-71, which declined drastically to 10.92 percent in 1980-81. Subsequently its share increased to 17.93 percent in 1995-96. Other heads of expenditure like Housing (hous), Labour and Employment (Lab) in this sector constituted very little amount.

6.2.2 Expenditure on Economic Services

Economic services on revenue account contains expenditure on general economic services, agriculture, industry, water and power development and transport and communication. Share of expenditure on economic services in revenue expenditure was 19.61 percent in 1970-71 which has increased to 29.54 percent in 1980-81 and further to 31.27 percent in 1994-95, but was lower at 26.36 percent in 1995-96. Mostly its share remained around 26 to 31 percent over the study period barring first two years (Table 6.9). The expenditure on economic services in terms of its share in revenue expenditure shows a similar trend as that of social services. Its growth rate is found to be higher than that of social services in the period 1982-83 to 1994-95 (Table 6.4).

Among the various functional categories of economic services, expenditure on agriculture, water and power development and transport and communication have been significant (Table 6.11). The share of agriculture (agr) in economic services was 67.15 percent in 1970-71 which has increased to 67.51 percent in 1980-81 and throughout the eighties remained more than 60 percent. Since 1980-81 the importance given to community and rural development, soil and water conservation in the agricultural sector, has increased as more funds were allotted to these categories.

Expenditure on water and power development (WPD) includes multipurpose river projects, irrigation and flood control, power projects etc. Expenditure on these heads is

significant, as, both agriculture and industry depend upon improvement in these sectors. From 1970-71 to 1978-79, share of this sector in economic services has been around 30 percent. Its share had declined to a great extent in the second decade (21.97 percent in 1995-96.

Expenditures on transport and communication (Trans) constituted 17.93 percent of economic services in 1970-71 and 16.67 percent in 1980-81. But afterwards its share remained below 10 percent, which was a matter of concern. One of the important draw backs of Orissa economy, over the years has been lack of infrastructure. Low level of expenditure on transport and communications has aggravated this situation.

6.2.3 Non-development Expenditures (General Services)

Expenditure on general services are called non-development expenditures because of the type of expenditures involved in it. General services include expenditures on organs of State, fiscal services, interest payments, administrative services and payment of pensions. These are committed type of expenditures and are mostly non-plan in nature (i.e., can not be avoided). Administrative expenditures and interest payments on loans from Centre and other institutional loans are major part of general services.

Expenditure on general services has been a major head of expenditure on revenue account. It consisted of 45.54 percent of revenue expenditure in 1970-71, which came down sharply to 25.17 percent in 1980-81. But since 1980-81, it has again steadily increased to 35.44 percent in 1995-96 (Table 6.9). In the first period (1970-71 to 1982-83), its growth rate was 5.58 percent which was lower than that of social services and economic services. But in the period 1982-83 to 1994-95, its growth rate was as high as 20.17 percent; in fact this growth rate was higher than that of other two categories of expenditure (Table 6.4).

Among the components of general services, appropriation to reserves (against loans from Centre and market) and interest payments and administrative expenditure are major items. Interest payments are made against loans from the Centre, internal debt, small savings and provident funds. Internal debt of State Government consists of mainly market loans, loans from various banks, LIC, etc. Expenditure on administrative services covers the whole range of administrative activities like district administration, police, public works, secretariat services etc. Expenditure on fiscal services is another item (in general services) which includes tax and other revenue collection activities. The administrative expenditures refer to consumption expenditure (i.e., purchases made by Government departments, salaries and remuneration). Expenditures in general services are termed as non-developmental in nature as distinguished from the expenditures on social and economic services.

Expenditures on reserves and interest payments (RInt) against various loans constituted 47.68 percent of total general services in 1970-71, which has gone up to 53.40 percent in 1995-96 (see Table 6.12). Nearly half of the expenditure on general services have been spent on paying interest on outstanding loans and this has been increasing year after year. Next to this item, share of administrative expenditure (Admn) in general services was 38.17 percent in 1970-71 which eventually declined to 36.63 percent in 1980-81 and further to 27.16 percent in 1995-96. Expenditure on fiscal services (Fisc) constituted more than 10 percent till 1985-86 and afterwards it stood at below 10 percent mark. Organs of State (Org) constituted 2 to 3 percent only throughout the period covered by the study. Expenditure on pensions (Pens) has gone up from 4.86 percent in 1970-71 to 11.55 percent in 1995-96.

6.3 Functional Categories of Capital Expenditure

Capital expenditure in the State include development expenditure, non-development expenditure, discharge of internal debt, payment of loans to Centre and loans

and advances by the State Government. Development expenditure once again consists of social services and economic services. Unlike revenue expenditure, economic services (CEC) on capital account consists of nearly 90 percent of the development expenditure (Table 6.14). Among all the constituents of economic services, it is the expenditure on major and medium irrigation projects that has a major share. Capital expenditure on industry, transport and energy are the other important constituents.

Development expenditure (Dev) covers major share of capital expenditure in the State. Its share has increased from 40.25 percent in 1970-71 to 61.73 percent in 1995-96. (Table 6.13). Repayment of loans to Centre (RLC) is the next largest item on capital account, though it has declined recently. Its share in capital expenditure was as high as 50 percent in 1970-71 which has came down to 26.57 percent in 1980-81. Since then, its share has been fluctuating between 15 to 26 percent. Loans and advances (LAS) by the State Government does not show any clear trend. There are many fluctuations. For Instance, its share in capital expenditure was only 8.02 percent in 1970-71, which has increased to 12.68 percent in 1980-81 and again came down to 10.82 percent in 1995-96. Discharge of internal debt (DID) constituted 4.37 percent of capital expenditure in 1970-71 and was only 1.90 percent in 1980-81 and increased to 7.28 percent in 1995-96.

The growth rate of functional categories of capital expenditures were presented in Table 6.15. Development expenditure as a whole has increased at a rate of 13.87 percent over the time period. Its growth rate in the second period, i.e , 1982-83 to 1995-96, was higher than that of the first period. Non-development expenditures, grew at a rate of 13.72 percent over the time period and its growth rate in the second period is higher than that of the first period. Growth rate of internal debt, repayment of loans to Centre, loans and advances by the State Government were higher in the second period than those of the first period.

6.4 Overall Trend of Functional Categories of Expenditure

Overall trends of various functional categories of Government expenditure (revenue + capital), namely, social and community services, economic services, and general services, as percentage of total expenditure and NSDP of Orissa are presented in Table 6.16. From the shares of expenditure categories, it is seen that, share of expenditure on general services was 30.50 percent in 1970-71 and it came down to 15.85 percent 1980-81. Thereafter it has steadily gone up to 27.00 percent in 1994-95. Share of total expenditure on economic services has increased from 24.29 percent in 1970-71 to 38.01 percent in 1980-81 and later declined to 35.20 percent in 1994-95. Total expenditure on social services has increased from 23.53 percent in 1970-71 to 28.80 percent in 1980-81 and further to 31.78 percent in 1994-95. Trends of these expenditure categories as a share of NSDP are more or less similar to above trends.

Now about their growth rates (see Table 6.4): In the first period, the growth rate of total social services (10.36 %) was more than that of total general services (5.53 %) and total economic services (8.22 %). But in the second period, the growth rate of total general services (20.11 %) was the highest, while, the growth rate of total social services was the lowest (16.81 %). Over the years, the share of general services (which is generally expenditures on administrative machinery), has increased at the cost of social and economic services.

From the above discussion of functional categories of expenditure in Orissa, it is clear that the expenditure on general services has grown at a higher rate than those of social and economic services. Interest payments and administrative expenditures are major items of expenditure in the general services. Again out of the expenditure on social services, the major heads of expenditure are (i) education, (ii) health, and (iii) social security measures. For economic services, the major heads of expenditure are (i) agriculture and (ii) water and power development.

Table 6.17 shows percentage of NSDP for different types of expenditures. Among various items of expenditure, education interest payments and administrative expenditures have shown higher shares as percentage of total expenditure and NSDP. The percentage of expenditure on education (in NSDP) has increased from 2.28 percent in 1970-71 to 4.78 percent in 1980-81 and declined to 4.51 percent in 1994-95. Interest payments has shown a rise in terms its percentage in NSDP from 2.09 percent in 1970-71 to 4.43 percent in 1994-95. Administrative expenditure as percentage of NSDP has grown from 2.07 percent to 3.34 percent in the same time period. Other important expenditure items like, health, social security, agriculture, irrigation, repayment of loans and transport have shown improvement as percentage of total expenditure and NSDP.

It may also be observed that, higher share of revenue expenditure in the total expenditure of the State indicates that the State has been spending more funds on administration and maintenance of the assets. It could be also be interpreted that, the State has been spending more towards payment of interest on the loans taken both from centre and other sources. If capital expenditure declines, it should be viewed as serious problem. The State would suffer due to lack of adequate public assets such as infrastructure, roads and communication, irrigation and power facilities etc.

The Government expenditure may not be sufficient to provide for various development requirements of the State. In the present situation, as it is difficult to cut the revenue expenditure, it is necessary to attract non-public sector investments (private sector investments) for certain developmental activities.

6.5 Income Elasticity of Expenditure

The impact of growth of income on the expenditure could be ascertained by estimating the income elasticity of the expenditure. The growth of income which is

generally taken as an important parameter for economic development and its effect on Government spending, has been studied in great detail world over. Wagner's law of increasing State activities has been tested intensively for most countries and States in federal set-up. Wagner, in his empirical investigation, on the relationship between public expenditure and the level of economic development, observed that income elasticity of demand for the Government expenditure was greater than unity. The most comprehensive measure of relationship between Government spending and income is given by the ratio of total Government expenditure and GNP[3]. This relationship also has been measured in many studies using mostly two approaches, viz., elasticity approach and causality approach.

In this study, elasticity approach has been attempted based upon the way in which income and expenditure are conceived. Two types of relations estimated are: first type (Type I), expenditure and income are measured in absolute terms. Under the second type (Type II), the variables are measured in per capita terms. The following equations are used for estimation purpose.

Type I: $LnEX = a + bLY + u$ (1)

Type II: $LnPEX = a + cLPCI + v$ (2)

The results of regression for estimating elasticity are presented in Table 6.19. Elasticity coefficients exceeding unity indicate evidence in favour of Wagner's Law in respective categories. Elasticity measured in terms of absolute amount, shows higher responsiveness of revenue expenditure than those of capital expenditure and total expenditure. Income elasticity of capital expenditure is around one only whereas for revenue expenditure and total expenditure, it exceeds one. The income elasticity of revenue expenditure works out to be 1.1615, while for capital expenditure, it is 1.0090

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[3] Musgrave and Musgrave (1980), Public Finances in Theory and Practice, Macgraw Hill Ltd. , Pg 142

and for total expenditure it is 1.1227 for the period of 1972-73 to 1994-95. It has also been observed that, the plan expenditures are more responsive to rise in income than non-plan expenditure. Plan and non-plan expenditures in the capital expenditure categories however, show less elasticity. Elasticity of expenditure in per capita terms show more than unity in all the above cases. In per capita terms also, the elasticity of revenue expenditure exceeds that of capital expenditure in plan, non-plan and total expenditure. The elasticity coefficients in per capita terms of revenue expenditure, capital expenditure and total expenditures are 1.1934, 1.1545 and 1.1412 respectively. The elasticity results clearly point out that the expenditures in the State has been influenced by the State income thus confirming the Wagners's Law.

Though the plan expenditures show a higher elasticity coefficient, the significance of non-plan expenditure is quite high. As percentage of total revenue expenditure, the plan expenditure was 86.74 percent in 1972-73, which has declined to 73.73 percent in 1995-96. (Table 6.18) Still the non-plan expenditure covers more than 70 percent of the revenue expenditure. It is the capital account where the share of non-plan expenditure has declined substantially so that its share has reached nearly 30 percent. In the total expenditure of the State, the share of non-plan expenditure amounts to more than 60 percent.

From Table 6.20, where elasticity coefficients for the disagregated functional categories are given, it is seen that, in general, the social and community services are more responsive to the rise in income rather than the other categories. Both in revenue and capital expenditures, the elasticity coefficients under Type-I and Type-II are more than unity and significant. Plan and non-plan and total expenditures on general services, economic services and social services are elastic and significant under Type-I and Type-II except non-plan economic expenditure. Plan expenditures in social and community services show more responsiveness than that of general services and economic services.

But in case of non-plan expenditures, it was general services, which shows higher elasticity coefficient than that of other categories.

6.6 Causality Between SDP and Expenditure

In elasticity approach, the reverse causation from expenditure to income could not be tested. This limitation can be taken care of by using causality approach[4]. Two popularly used causality tests, namely, Granger and Sims tests are used here. For the Granger test, a maximum lag length of two periods (years) is considered and for Sims test, a lag and lead of two years is taken. In the causality test, total expenditure as well as the expenditures in plan and non-plan categories are considered. Further, disaggregated functional categories of plan and non-plan expenditures on social and community services, economic services, and general services are also tested for causality with SDP. Tables 6.21 and 6.22 contain the results of Granger and Sims tests respectively. In the Table providing Granger test results, the F-statistic tests the `null hypothesis' that the coefficients of lagged (non-dependent) variables are individually zero. The corresponding significance level indicates the level at which the null hypothesis may be rejected. The F-statistic in Sims test verifies the `null hypothesis' that the lead coefficients are individually zero.

From the Granger test results (Table 6.21), it is indicated that, there is a unidirectional causality runs from SDP to total plan expenditure (TPE). But in the case of components of plan expenditure, this relationship is not so strong. Except plan expenditure in social and community services (PESS), the causality test shows an independent relationship between plan expenditure on economic services (PEES) and plan expenditure on general services (PEGS) and SDP. The Sims test (Table 6.22) shows a bi-directional causality between State income (SDP) and the plan expenditure except in case

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[4] The causality methodology involving Granger and Sims test is discussed in Appendix B2

of general services where a unidirectional causality runs from PEGS to SDP (Though significance level is high at 12 %).

In the case of non-plan expenditure, the Granger test supports unidirectional causality running from SDP to TNPE, NPESS, NPEES and NPEGS. So in non-plan category, the Wagner's Law is supported by Granger test. The Sims test shows that except TNPE and NPEGS, the other non-plan functional categories, viz, NPESS and NPEES have a causal link running from SDP to these variables (the significance level is more than 10 % in case of NPESS). In the case of TNPE and NPEGS, the test results show a bi-directional causality with SDP. From Granger test, it is seen that a unidirectional causality runs from SDP to TE and TESS. But the categories - TEES and TEGS seem to be independent of SDP. In Sims test all these categories of expenditure show bi-directional causal link with SDP. From the causality test Wagner's Law is supported so far as total expenditure is concerned. In many cases, the Granger test shows a unidirectional causal link running from SDP expenditure variables. But from Sims test in most of the cases a bi-directional causal link was found. From both Granger and Sims test Wagner's hypothesis seems to be supported in many cases.

From the results involving estimation of income elasticity and causality tests, it is observed that State Domestic Product is a major factor influencing the expenditure in the State. From the income elasticity results, where per capita expenditure is regressed with per capita income (Type II), the regression coefficients show values of more than one. The per capita income over the period covered by the study has been regressed here with the per capita expenditure to ascertain the impact of rise in expenditure on income of the State. The regression equation takes the following form.

$$\text{Current Prices: } LPCI = 2.3307 + \underset{(28.4161)}{0.8400}\, LPTE + u \qquad (1)$$

$$\bar{R}^2 = 0.96,\ DW = 2.01$$

Constant Prices: LPCI = 6.4879 + 0.1196 LPTE + u (2)
(5.7557)

$\bar{R}^2 = 0.67$, DW = 2.07

The results of the above exercise clearly indicate the positive relationship between per capita Government expenditure and per capita income.

6.7 Causal Nexus Between State Revenue and Expenditure

The relationship between total receipts and total expenditure is still an unresolved issue in the fiscal analysis of any country. The link between revenue and expenditure has been explored in many studies in the context of fiscal imbalance experienced by those countries. The theoretical rationale behind higher Government spending has to be understood from proper perspective. More spending towards social services in poorer countries or rising revenue receipts might also lead to increased public expenditure.

The causal relationship between total receipts and total expenditure has been studied for Orissa State in order to establish whether there is any possible link between these variables. The variables considered in this study are total receipts (TR) and total expenditure (TE). The causality test has been carried out at disaggregated level also i.e., for plan and non-plan expenditure. The expenditure variables considered are (a) revenue plan expenditure (RPE), (b) revenue non-plan expenditure (RNPE), (c) capital plan expenditure (CNPE), (d) total plan expenditure (TPE), (e) total non-plan expenditure (TNPE) and (f) total expenditure (TE). The causality between expenditure variables and total receipts is studied using both Granger and Sims test. The test procedure involves, introduction of a time trend in all the specifications to eliminate possible presence of time trend and two alternative lags (1 1) and (2 2) for Granger test and lead-lag (-1 1) and (-2 2) for Sims test are used in each specification.

The results of both Granger and Sims test between expenditure variables and total receipts are presented in Table 6.23. From Granger test results, except capital non-plan

expenditure, an independent relationship is observed between total receipts (TR) and revenue non-plan expenditure (RNPE) and total expenditure (TE); the results are valid in both (1 1) and (2 2) specifications. A unidirectional causality is observed running from TR to CNPE. Results of Sims causality test show a feedback between these expenditure variables and total receipts except in case of capital non-plan expenditure, where a unidirectional causality runs from TR to CNPE at (2 2) specification. From Table 6.24, however, the results involving plan expenditure and total receipts give a different picture in Granger and Sims tests. The Granger test gives an independent causal relationship between plan expenditure and total receipts. On the other hand, a feedback between these variables is observed in case of Sims test. From the Causality test involving total receipts and expenditure variables, a specific conclusion could not be drawn as the test results in Granger and Sims show different pictures. As the public expenditure is mostly determined by the policy regime, it may have to be taken as an exogeneous variable. If that be the case, the non-specific causality results obtained by us are very much in order.

6.8 Budget Deficits and Public Debt

For any meaningful study of State finances, the deficit in the budget, which may be termed as resource gap, has to be analysed keeping the constraints and requirements in mind. The present situation in the State indicate that the dependence of the State Government on exogenous sources for financing their expenditure schemes, has been very high. In the case of Orissa the mismatch between Government expenditure and revenue has grown over the years and this is more pronounced in the revenue account. From Table 6.25, it is seen that, revenue deficit has been growing continuously, from 1982-83, which is consistent with high growth of expenditure in this period. It is in the capital account where, a surplus could be seen in many years particularly in the second period. The situation in seventies seems to be different as we find surplus in revenue account and deficit in capital account. Surplus in capital account does not count much from development perspective. Surplus in the capital account can be created to cover the

deficit in the revenue account by increased borrowings. The revenue deficit was 4.05 crores in 1970-71; and with certain fluctuations, it stood at Rs.22.98 crores by 1982-83. The revenue deficit has enormously increased to Rs.987.60 crores in 1995-96. This forms 5.66 percent of NSDP in 1995-96

The own deficit (adjusted) which is financed by net resource transferred to the States from Centre and ways and means advances by RBI (after adjusting for the cash balances) is an important measure to understand the deficit in the State budget. The State has tended to use high cost borrowed funds to finance persistently large revenue deficit. The trends in gross fiscal deficit (GFD) reveals that the problem in the finances of State Government lies in the unbridled growth of revenue deficits. The deficit measures could be understood from the following equations.

Own deficit (unadjusted): [(RR - SCT - GFC) + (CR - RLA - LAC)]

- [(RE - IPC) + (CD - DID - RLC)] (1)

Own deficit (adjusted): [(RR - NSGFC) + (CR - RLA -LAC)]

- [(RE-IPC) + (CD - DID - RLC)] (2)

Gross fiscal deficit: RE + [CD - {DID + RLC + RLA)] - RR (3)

Where RR = Revenue receipts, SCT = Share in Central taxes, GFC = Grants from centre.

CR = Capital receipts, RLA = Recoveries of loans and advances.

LAC = Loans and advances from the Centre (Cap. A/C)

RE = Revenue expenditure, IPC = Interest payments on loans from Centre (Rev. A/C)

CD = Capital disbursement, DID = Discharge of internal debt

RLC = Repayment of loans to the Centre, NSGFC = Non-statutory grants from Centre

Own deficit (unadjusted) as percentage of NSDP in the case of Orissa has increased from 6.65 percent in 1970-71 to 15.11 percent in 1994-95, which is more than that of all States average of 7.18 percent in that year (Table 6.26). Leaving States like Assam and J&K, the own deficit for Orissa has been the highest; in 1994-95 barring J & K, Orissa has the highest deficit-SDP ratio. Even after adjusting the own deficits with statutory transfers from Centre, the position of Orissa has not changed. The own deficit (adjusted) as percentage of NSDP has gone up from 1.45 percent in 1970-71 to 7.47 percent in 1994-95 for the State (Table 6.27). Leaving J & K, this percentage for Orissa is the highest among major States and is more than that of all India average of 3.64 percent. The gross fiscal deficit as proportion of NSDP, in the case of Orissa has gone up from 3.85 percent in 1970-71 to 6.89 percent in 1994-95 (Table 6.28). Once again the gross fiscal deficit for Orissa is on a higher side. In 1970-71, leaving Assam, J&K and Rajasthan, Orissa has the highest deficit-NSDP ratio. In 1994-95, the percentage of gross fiscal deficit in NSDP for Orissa works out to be 6.89 percent which happens to be the highest among the States.

Share of Gross Fiscal deficit (GFD) in NSDP of Orissa State for the period, 1970-71 to 199-95, along with all States GFD is shown in Figure 6.3. it can be seen that, during the period 1970, 1980, GFD share of Orissa as well as that of all States in India has increased. Between 1980-1990, this share for Orissa, has very steeply increased in comparison to that of all States average. Since 1990 onwards, while all States average GFD has declined, it is noticed that GFD share in NSDP of Orissa has increased sharply. this is mater of serious concern because after liberalisation, the Union Government has been insisting that the fiscal deficit as a percent of State income should be reduced. This did not happen as far as Orissa State is concerned.

The increase in gross fiscal deficit in terms of percentage of NSDP, points out the dependence of the State to borrowing so as to manage such a large fiscal deficit. The

outstanding debts of the States has been presented at three points of time in Table (6.29). From the outstanding debt of States at 1975. 1985 and 1994, it could be seen that, a major part of it comes from Centre. States like Assam, Bihar, J&K, Orissa, Punjab and Rajasthan have more outstanding debt than other States. In the case of Orissa, the outstanding debt has gone up from 34.65 percent of NSDP in 1975 to 40.38 percent in 1994. Except Rajasthan, Orissa has the highest outstanding debt in terms of its percentage in NSDP, in 1975, 1985 and in 1994, it has the highest debt-NSDP ratio. The outstanding debt of Orissa State and the All States average have been plotted in Figure 6.4. From the figure, it could be seen that, the outstanding debt of Orissa has been much higher than that of All States average. Such a high percentage of outstanding debt is very unhealthy for the State to manage as it has got future payment of interest and liabilities. Another aspect in the debt situation of Orissa is regarding decreasing share of Central loans to the State as is evident from the outstanding loans from the Centre. This implies the share of high cost borrowing (i.e., from other sources) in the debt of State has gone up over the years.

As a matter of fact, the plan financing in recent times in the State shows that a major portion of plan has been financed by borrowed funds from various sources. From Table 6.31, it is observed that, in the plan financing, the contribution from 'Balances from Current Resources' has declined; in 1995-96 it has become negative. More than 70 percent of the resources for the plan has been coming from borrowing. The decline in Central assistance has been due to reduction in loan components of plan assistance to the State. The State has resorted to more of market borrowing and other types of borrowing to finance the budget.

6.9 Conclusions

Government expenditure of Orissa State has been studied in terms of functional pattern of expenditure; trends as well as the relationship with income and revenue receipts of the State.

Figure 6.3

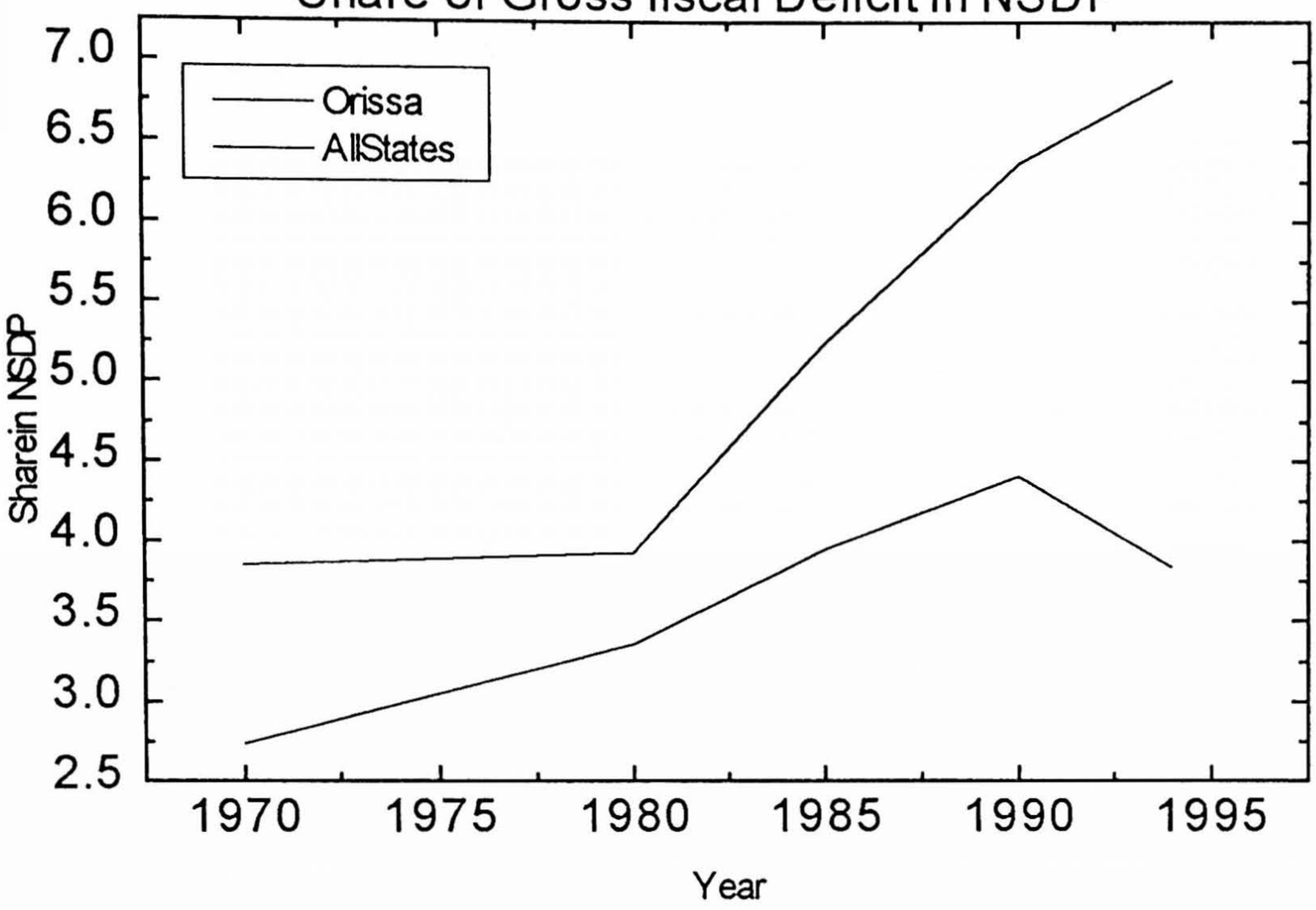
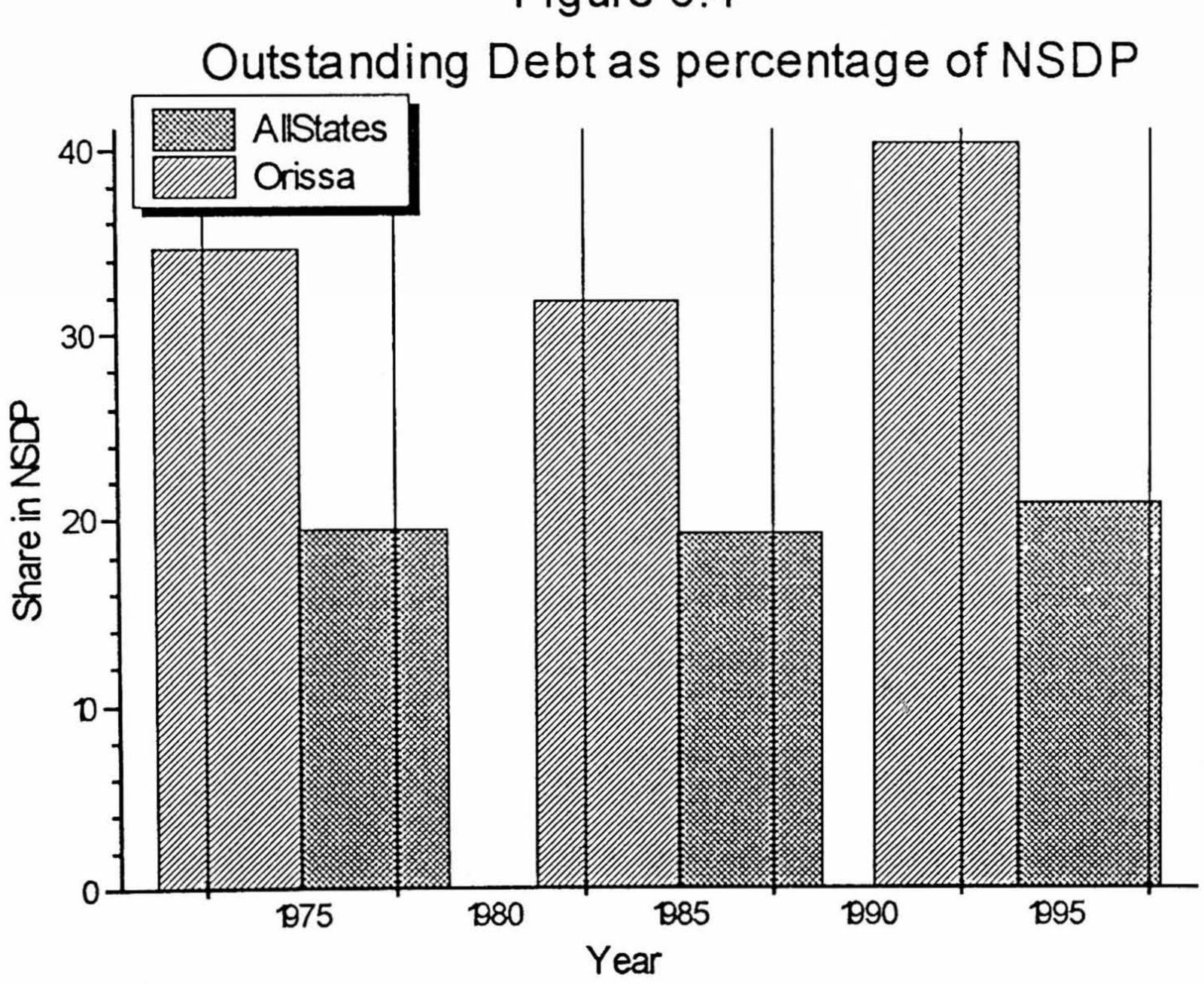


Figure 6.4



The total expenditure in the State has shown an increasing trend during the period covered by the study. Two phases of expenditure trend has been observed; one for the years 1970-71 to 1982-83 and second, for 1982-83 to 1994-95. Growth rates of expenditure in the second period are higher than the earlier period. During the eighties Government expenditure has grown at a faster rate.

The growth of revenue expenditure in the State seems to be higher than that of capital expenditure in both periods and the gap has widened in the second period. The share of revenue expenditure in total expenditure has increased by nearly 80 percent over the time period. An increasing share of capital expenditure in total allocation of resources is essential for the State in order to improve infrastructural and transport and communication services and also to maintain the existing capital assets. Capital expenditure is not only lower in the State, but it has been declining as a percentage of total expenditure over the years. Its share has come down to nearly 20 percent of total expenditure in recent times.

In the revenue expenditure, though the major expenditure head is social and community services its share has been declining over the years. The shares of other heads of expenditure like, economic and general services have grown compared to the social services. From the growth rate of functional types of expenditures, it is seen that, in the second period (1982-83 to 1994-95), the growth rate of social services has been the lowest while the growth rate of general services is the highest. The fast growing general services in revenue account. includes administrative services, reserves and interest payments, salaries and pensions etc.. The growth of this sector has been responsible for increasing sharply the revenue expenditure in the State.

From the trends of functional categories of expenditures, it is observed that, education, health and social security measures are the major heads of expenditure in social

and community services. The agriculture and water and power development are the main expenditure items in the economic services. In the general services, the expenditure on payment of interest and other administrative expenditures are the major items. As a percentage of total revenue expenditure, the expenditure with respect to social and community services has not shown much improvement in the second period. Interest payments and administrative expenditures in general services have shown higher growth. Overall rise of general services in the State has resulted in rising revenue expenditure which does not help in the development process. In the capital expenditures, the share of economic services is higher, which is natural as it is related with creating assets. Due to decline in the share of capital expenditures, the scope for further economic development seems to have suffered.

The percentage of total expenditure in the NSDP of Orissa is one of the highest among the States in the country. At the same time, the per capital expenditure is one of the lowest. Such situation implies that the expenditure side of the budget operates at a lower level and does not meet the requirement of the growing population. The requirement of the State in terms of providing basic facilities to the people and improving the investments in crucial areas may not be possible with the present level of State expenditure.

Looking at some individual heads of expenditure, it is seen that three type of expenditures have shown higher share in the total expenditure as well as NSDP. Expenditure on education, interest payments and administrative expenditures emerged as the most important items in the expenditure pattern of the State. Other expenditure items include health, social security, agriculture, irrigation, repayment of loans and advances, to Centre, and transport.

The Government expenditure in Orissa seems to be elastic with respect to NSDP, thus subscribing to Wagner's law of increasing State activities. State income has been influencing the expenditure as seen from the causality analysis. But a definite causal link between revenue receipts and expenditure could not be established due to difference in results involving Granger and Sims tests. When the per capita income is regressed with per capita expenditure, the coefficients have shown lower than unity value indicating lower impact of expenditure on the State income.

The deficit in the State budget seems to be substantial and more so in revenue account. Own deficit unadjusted for Central transfers was 15.11 percent of NSDP in 1994-95, which was one of the highest in the country (except State like Assam and J&K). Also, after adjusting for the Central transfers, the own deficit for Orissa remains very high. The gross fiscal deficit of the State, which takes borrowings into account, was 6.89 percent of the NSDP in 1994-95, which happens to be the highest among the States in India.

Looking to the debt position of the State, the situation seems very grim. The outstanding debt of the State as percentage of NSDP was 40.38 percent against 20.86 percent for all States taken together. Except Rajasthan, Orissa has the highest debt-NSDP ratio. Due to decline in Central loans to the State, the share of high cost borrowing in total debt has been increasing. The high debt burden of Orissa has been evident from the plan financing in the State. More than 70 percent of the resources for the plan have been coming from borrowings from various sources.

Table 6.1

Revenue and Capital Expenditure

Year	Current Prices			Constant Prices		
	Revenue	Capital	Total	Revenue	Capital	Total
1970-71	123.70	65.92	189.62	308.45	164.39	472.87
1971-72	158.71	81.62	239.87	356.65	182.38	539.03
1972-73	192.78	90.73	283.51	385.56	181.46	567.02
1973-74	212.47	86.23	298.70	365.70	148.42	514.11
1974-75	223.51	77.63	301.14	319.30	110.90	430.20
1975-76	276.18	105.78	381.45	447.62	170.62	618.23
1976-77	308.16	126.95	435.11	483.77	199.29	683.06
1977-.78	341.03	147.01	488.04	505.98	218.12	724.10
1978-79	402.34	174.98	577.32	605.02	263.13	868.15
1979-80	448.91	175.26	624.17	56.96	220.18	784.13
1980-81	540.52	336.08	876.60 *	540.52	336.08	876.60
1981-82	573.56	240.42	813.98	513.02	215.05	728.07
1982-83	824.60	366.58	1191.18	654.96	291.17	946.13
1983-84	782.71	214.14	996.85	578.93	158.39	737.32
1984-85	896.87	384.10	1280.97	639.31	273.77	913.02
1985-86	1000.93	409.51	1410.44	663.31	271.38	934.69
1986-87	1247.96	482.06	1730.02	773.69	298.86	1072.55
1987-88	1407.59	582.03	1989.62	832.89	344.40	1177.29
1988-89	1658.70	602.11	2260.81	937.65	340.37	1278.02
1989-90	1846.11	629.31	2475.42	974.20	332.09	1306.29
1990-91	2190.53	860.72	3051.25	984.95	387.01	1371.96
1991-92	2635.02	1005.35	3640.37	1031.72	393.64	1425.36
1992-93	3048.88	865.87	3914.75	1093.96	310.68	1404.65
1993-94	3482.21	973.29	4455.50	1157.65	323.57	1481.22
1994-95	4582.05	949.98	5532.03	1404.68	291.23	1695.90

Source: Finances State Governments, RBI Bulletins Various Issues and State Budgets, Various Issues and State Budgets, Various Issues

Table 6.2

Per capita Revenue and Capital Expenditure

Year	Current Prices			Constant Prices		
	Revenue	Capital	Total	Revenue	Capital	Total
1970-71	56.94	30.34	87.28	141.99	75.67	217.66
1971-72	71.52	36.57	108.09	160.71	82.18	242.90
1972-73	85.05	40.03	125.08	170.10	80.05	250.15
1973-74	91.81	37.26	129.07	158.02	64.13	222.16
1974-75	94.66	32.88	127.53	135.22	46.97	182.19
1975-76	114.71	43.72	158.43	185.91	70.86	256.77
1976-77	125.62	51.75	177.36	197.20	81.24	278.44
1977-.78	136.54	58.86	195.40	202.58	87.33	289.91
1978-79	158.36	68.87	227.23	238.13	103.57	341.70
1979-80	173.87	67.88	241.75	218.43	85.28	303.70
1980-81	206.23	128.23	334.45	206.23	128.23	334.45
1981-82	215.32	90.25	305.57	192.59	80.73	273.32
1982-83	304.11	135.20	439.31	241.55	107.38	348.93
1983-84	283.44	77.54	360.98	209.64	57.36	270.00
1984-85	318.84	136.55	455.39	227.26	97.33	324.58
1985-86	349.43	142.96	492.39	231.56	94.74	326.30
1986-87	427.97	165.32	593.29	265.33	103.50	367.82
1987-88	474.32	196.13	670.45	280.66	116.05	396.71
1988-89	549.40	199.43	748.84	310.57	112.74	423.31
1989-90	601.18	204.93	806.12	317.25	108.14	425.39
1990-91	701.49	275.63	977.12	315.42	123.94	439.35
1991-92	830.01	316.68	1146.68	324.98	123.99	448.98
1992-93	947.30	269.03	1216.33	339.90	96.53	436.43
1993-94	1064.60	297.56	1362.16	353.92	98.92	452.85
1994-95	1378.97	285.90	1664.87	422.74	87.64	510.38

Source: Finances State Governments, RBI Bulletins Various Issues and State Budgets, Various Issues and State Budgets, Various Issues

Table 6.3

Compound Average Growth rates(%), (1970-71 to 1994-95)

Expenditure Categories	Current Prices		Constant Prices	
	Total	Per capita	Total	Per capita
1. Total revenue Expenditure	14.20	12.44	5.67	3.92
2. Social and Community Services (Rev A/C)	14.54	12.79	6.01	4.26
3. Economic Services (Rev A/C)	14.61	12.86	6.09	4.33
4. General Services (Rev A/C)	13.74	11.98	5.20	3.46
5. Capital Expenditure	12.21	10.45	3.68	1.93
6. Total expenditure on Social and Community Services (Rev+Cap)	14.59	12.83	6.06	4.31
7 Total Expenditure on Economic Services (Rev+Cap)	14.57	12.91	6.04	4.29
8. Total Expenditure on General Services (Rev+Cap)	13.69	11.93	5.16	3.41
9. Total Expenditure (Rev+Cap)	13.67	11.92	5.14	3.39

Table 6.4

Kinked Exponential Growth Rate of Expenditure Variables

	1970-71 to 1982-83				1982-83 to 1994-95			
	Current Prices		Constant Prices		Current Prices		Constant Prices	
Expenditure Variables	Total	Per capita	Total	Per capita	Total	Per capita	Total	Per capita
1 Revenue Expenditure	8.19	7.14	3.10	2.05	18.42	16.22	7.55	5.35
2 Capital Expenditure	8.12	7.08	3.03	1.99	14.80	12.59	3.93	1.73
3 Total Expenditure	8.14	7.10	3.05	2.02	17.48	15.28	6.62	4.41
4 Rev General Expenditure	5.58	4.33	0.48	-0.55	20.17	17.96	9.31	7.10
5 Rev Social Services	10.18	8.14	5.09	4.04	17.27	15.07	6.41	4.20
6 Rev Economic Services	8.22	7.18	3.13	2.09	18.64	16.44	7.98	5.58
7 Total General Services	5.53	4.49	0.44	-0.22	20.11	17.90	9.25	6.70
8 Total social Services	10.36	9.31	5.26	3.84	16.81	14.61	5.94	3.86
9 Total Expenditure	8.27	7.22	3.18	3.22	18.71	16.51	7.85	4.81

Note: Constant prices relates to 1980-81 prices

Total general, social and economic services include both revenue and capital expenditure

Table 6.5

Share of Expenditure Variables in NSDP and Total Expenditure

Year	Share in Total Expenditure		Share in NSDP		
	Rev. Exp	Cap. Exp	Rev. Exp	Rev. Exp	Total Exp
1970-71	65.24	34.76	11.93	6.36	18.29
1971-72	66.17	33.83	15.14	7.74	22.89
1972-73	68.00	32.00	14.86	7.00	21.86
1973-74	71.13	28.87	13.22	5.37	18.59
1974-75	74.22	25.78	13.36	4.64	18.00
1975-76	72.40	27.60	15.88	6.05	21.94
1976-77	70.82	29.18	18.41	7.58	25.99
1977-.78	69.88	30.12	16.32	7.03	23.35
1978-79	69.69	30.31	18.30	7.96	26.25
1979-80	71.92	28.08	20.65	8.06	28.71
1980-81	61.66	38.34	15.74	9.79	25.53
1981-82	70.46	29.54	14.92	6.25	21.17
1982-83	69.23	30.77	20.26	9.01	29.27
1983-84	78.52	21.48	14.90	4.08	18.98
1984-85	70.01	29.99	17.28	7.40	24.68
1985-86	70.97	29.03	16.08	6.58	22.65
1986-87	72.14	27.86	18.49	7.14	25.64
1987-88	70.75	29.25	20.54	8.49	29.03
1988-89	73.37	26.63	19.11	6.94	26.04
1989-90	74.58	25.42	18.62	6.35	24.96
1990-91	71.79	28.21	22.67	8.90	31.57
1991-92	72.38	27.62	21.07	8.04	29.11
1992-93	77.88	22.12	22.73	6.45	29.18
1993-94	78.16	21.84	22.60	6.32	28.92
1994-95	82.83	17.17	26.77	5.45	31.72
1995-96	84.51	15.49			

Source: Source: Finances State Governments, RBI Bulletins Various Issues and State Budgets, Various Issues, State Budgets, Various Issues, Net State Domestic Product, CSO

Table 6.6

Share of Revenue and Capital Expenditure in Total Expenditure of States

(Figures are in Percentages)

States	1970-71		1980-81		1990-91		1994-95	
	Rev. Exp	Cap. Exp	Rev. Exp	Cap. Exp	Rev. Exp	Cap. Exp	Rev. Exp	Cap. Exp
1. AP	60.98	39.02	72.16	27.84	83.65	16.35	76.36	23.74
2. Assam	65.02	34.97	47.10	52.90	71.43	28.57	81.71	18.19
3. Bihar	69.44	30.55	51.87	48.13	78.62	21.38	90.38	9.62
4. Gujarat	66.03	33.97	62.61	37.38	74.63	25.37	79.43	20.57
5. Haryana	55.71	44.29	64.90	34.10	80.64	18.36	90.75	9.24
6. J&K	66.28	33.72	63.93	36.07	61.80	38.20	69.60	30.40
7. Karnataka	73.58	36.42	68.74	30.26	79.76	20.25	82.00	28.00
8. Kerala	69.13	33.87	78.04	21.96	83.65	16.35	85.46	14.54
9. MP	66.22	33.78	63.94	36.06	80.45	18.56	83.83	16.17
10. Maharastra	69.17	30.83	73.36	26.64	81.26	18.74	73.96	26.04
11. Orissa	65.26	34.74	61.69	38.31	71.78	28.21	82.83	17.17
12. Punjab	62.43	37.57	67.28	22.72	74.12	25.88	80.52	19.48
13. Rajasthan	58.97	41.03	61.43	37.57	73.60	26.40	80.11	29.89
14. TN	72.07	27.93	68.33	31.67	85.20	14.80	84.28	15.72
15. UP	58.96	41.04	64.32	35.68	67.92	22.07	73.10	26.90
16. WB	72.13	27.87	71.84	28.16	84.07	14.93	82.20	17.80
17. All States	65.62	34.48	65.34	34.65	78.80	21.20	79.40	20.60

Table 6.7

Share of Revenue and Capital Expenditure in NSDP of States

(Figures are in Percentages)

States	1070-71		1980-81		1990-91		1994-95	
	Rev. Exp	Cap. Exp	Rev. Exp	Cap. Exp	Rev. Exp	Cap. Exp	Rev. Exp	Cap. Exp
1. AP	10.34	6.62	15.85	6.12	17.66	3.45	18.77	5.81
2. Assam	15.33	7.30	15.54	17.45	20.21	8.08	23.76	5.28
3. Bihar	10.42	4.49	14.53	13.58	21.41	5.82	21.57	2.31
4. Gujarat	9.41	4.84	13.79	8.23	16.80	5.71	16.19	4.19
5. Haryana	8.98	7.13	13.19	6.82	14.79	3.79	28.98	2.95
6. J&K	22.80	11.60	26.00	14.66	45.20	26.94	54.50	23.80
7. Karnataka	11.46	6.57	16.03	7.28	19.30	4.89	18.91	4.15
8. Kerala	12.67	6.66	17.47	4.91	22.21	4.53	23.00	3.91
9. MP	9.94	5.07	14.41	8.12	17.88	1.34	18.78	3.62
10. Maharastra	11.17	4.98	12.64	4.59	15.20	5.51	13.34	4.70
11. Orissa	11.96	6 36	15.71	9.76	22.67	8.91	23.13	5.43
12. Punjab	8.32	4.94	12.34	6.00	15.01	4.24	19.62	4.74
13. Rajasthan	12.52	8.81	16.67	10.47	19.39	6.95	28.11	6.98
14. TN	12.19	4.72	15.96	7.40	20.03	3.48	18.62	3.47
15. UP	7.96	5.54	12.25	6.79	19.26	5.35	19.48	8.16
16. WB	9.31	3.60	11.62	4.55	16.15	2.82	15.32	3.32
17. All States	9.22	4.85	13.42	7.11	16.86	4.54	16.92	4.36

Table 6.8

Government Expenditure in States

	Expenditure-NSDP Ratio (%)				Per Capita Expenditure (Rs.)			
States	70-71	80-81	90-91	94-95	70-71	80-81	90-91	94-95
1. AP	16.91	21.98	21.12	21.95	79.39	303.12	1033.13	1598.26
2. Assam	23.72	32.99	28.31	29.88	123.57	386.83	1084.21	1720.94
3. Bihar	14.98	28.20	27.21	23.97	59.10	258.76	724.53	929.84
4. Gujarat	14.27	22.03	22.52	20.05	115.71	371.71	1343.94	2172.63
5. Haryana	16.12	20.03	19.58	26.98	137.14	478.27	1470.39	4625.36
6. J&K	34.58	40.71	73.14	78.31	187.93	724.57	2768.42	4072.30
7. Karanataka	18.02	23.30	24.19	24.14	113.13	353.79	1106.39	1965.32
8. Kerala	18.32	22.38	27.74	27.88	106.43	338.11	1129.24	2026.36
9. MP	14.99	22.54	22.22	23.89	70.71	307.45	926.02	1420.54
10. Maharastra	16.16	17.23	18.71	17.98	122.78	419.39	1440.65	2422.13
11. Orissa	18.29	25.53	31.57	31.72	85.41	334.58	977.96	1666.27
12. Punjab	13.18	18.36	20.25	24.78	138.18	429.10	1725.65	3650.25
13. Rajasthan	21.23	27.14	26.35	36.11	134.52	331.27	1072.04	1807.74
14. TN	16.88	23.36	23.51	21.64	96.23	349.84	1180.25	1934.27
15. UP	13.52	19.04	24.73	23.88	64.53	243.22	904.67	1277.01
16. WB	12.91	16.18	18.98	14.17	91.27	286.93	921.72	989.29
17. All States	14.99	20.54	21.40	21.20	93.32	333.89	1096.39	1803.91

Source: Finances State Governments, RBI Bulletins Various Issues and State Budgets, Various Issues, State Budgets, Various Issues, Net State Domestic Product, CSO

Table 6.9
Functional Categories of Expenditure Under Broad Heads & Shares in Revenue Expenditure

Year				Shares in Revenue Expenditure		
	General Services	Social Services	Economic Services	General Services	Social Services	Economic Services
1970-71	56.33	43.11	24.26	45.54	34.85	19.61
1971-72	78.89	50.86	28.96	49.71	32.92	17.37
1972-73	66.63	73.50	50.95	34.56	38.13	26.43
1973-74	73.68	77.92	59.59	34.68	36.67	28.05
1974-75	68.13	86.91	66.61	30.48	38.88	29.80
1975-76	86.97	109.83	77.37	31.49	39.77	28.01
1976-77	93.23	122.13	90.10	30.25	39.63	29.24
1977-.78	97.77	134.35	105.78	28.67	39.40	31.02
1978-79	102.41	148.51	148.09	25.45	36.91	36.81
1979-80	122.63	173.32	149.41	27.32	38.61	33.32
1980-81	136.04	241.16	159.67	25.17	44.62	29.54
1981-82	167.44	245.53	156.57	29.19	42.81	27.30
1982-83	194.71	456.04	169.74	23.61	55.30	20.58
1983-84	230.99	338.91	208.28	29.51	43.30	26.61
1984-85	257.98	385.13	248.97	28.76	42.94	27.76
1985-86	282.55	431.38	280.13	28.23	43.10	27.99
1986-87	383.84	516.40	341.45	30.76	41.38	27.36
1987-88	438.85	587.52	375.72	31.16	41.74	26.69
1988-89	567.40	646.20	437.60	34.21	38.96	26.38
1989-90	630.29	773.76	434.53	34.14	41.91	23.54
1990-91	681.97	842.20	648.12	31.13	38.45	29.59
1991-92	881.59	1040.17	698.23	33.45	39.46	26.49
1992-93	1013.24	1195.29	826.88	33.23	39.20	27.12
1993-94	1178.83	1324.66	958.84	33.85	38.04	27.54
1994-95	1481.90	1653.64	1432.86	32.34	36.09	31.27
1995-96	1812.40	1939.86	1348.19	35.44	37.92	26.36

Source: Finances State Governments, RBI Bulletins Various Issues and State

Table 6.10

Share of expenditures on Social and Community Services (Rev A/C)

Year	Share in Total Revenue expenditure							Share in Expenditure on Social Services						
	Edu	Med	Hous	Lab	Soc	Rel	OT	Edu	Med	Hous	Lab	Soc	Rel	OT
1970-71	19.11	8.70	0.28	0.45	7.04	4.58	0.81	54.84	24.96	0.81	1.30	20.20	13.15	2.32
1971-72	17.24	8.07	0.28	0.45	6.74	4.40	0.63	53.79	25.17	0.88	1.40	21.04	13.72	1.97
1972-73	15.55	8.08	0.31	0.41	5.21	7.58	0.99	40.78	21.20	0.80	1.09	13.66	19.88	2.60
1973-74	16.47	7.63	1.19	0.41	4.15	5.88	0.95	44.91	20.80	3.25	1.12	11.31	16.04	2.58
1974-75	21.06	8.13	0.81	0.45	5.33	1.72	1.38	54.17	20.91	2.07	1.15	13.72	4.43	3.56
1975-76	22.44	8.93	0.68	0.47	5.64	1.40	1.21	53.92	22.44	1.71	1.18	14.18	3.53	3.03
1976-77	21.26	9.33	0.85	0.48	5.11	1.20	1.41	53.63	23.55	2.14	1.21	12.90	3.02	3.55
1977-.78	21.22	8.81	0.93	0.45	5.48	1.20	1.30	53.81	22.37	2.35	1.13	13.92	3.04	3.31
1978-79	20.21	9.17	0.66	0.42	4.29	1.00	1.15	54.75	24.85	1.80	1.14	11.64	2.71	3.11
1979-80	19.49	10.07	0.82	0.45	4.44	1.94	1.40	50.49	26.09	2.12	1.15	11.50	5.03	3.62
1980-81	19.82	10.16	1.12	5.36	4.87	1.96	1.33	44.41	22.77	2.52	2.00	10.92	4.38	2.99
1981-82	20.18	11.09	1.38	0.44	5.78	2.58	1.36	47.15	25.91	3.21	1.02	13.51	6.03	3.17
1982-83	16.85	10.18	0.90	0.37	5.27	20.75	0.99	30.47	18.41	1.63	0.66	9.52	37.51	1.79
1983-84	20.03	12.54	1.00	0.43	5.84	2.30	1.16	46.25	28.96	2.32	0.99	13.50	5.31	2.68
1984-85	20.19	11.00	0.91	0.41	5.86	3.57	1.19	47.02	25.63	2.12	0.96	13.65	7.85	2.77
1985-86	20.03	11.30	1.67	0.74	5.74	3.06	0.55	46.41	26.22	3.86	1.72	13.32	7.11	1.28
1986-87	20.30	10.96	1.63	0.56	5.19	2.22	0.51	49.05	26.49	3.94	1.35	12.55	5.37	1.24
1987-88	20.50	11.36	1.39	2.17	4.75	1.03	0.53	49.12	27.22	3.34	5.19	11.39	2.47	1.27

Table 6.10 (Continued)

1988-89	20.45	10.42	1.36	0.47	4.62	1.09	0.55	52.50	26.75	3.49	1.20	11.85	2.79	1.41
1989-90	22.48	9.83	1.38	0.50	4.72	2.49	0.51	53.63	23.45	3.29	1.10	11.26	5.94	1.22
1990-91	20.62	8.59	1.15	0.42	5.01	2.17	0.49	53.64	22.33	2.99	1.04	13.02	5.63	1.29
1991-92	20.82	8.88	1.26	0.41	5.76	1.87	0.47	52.72	22.49	3.18	1.03	14.58	4.73	2.00
1992-93	20.34	9.15	1.03	0.41	6.31	1.54	0.43	51.88	23.33	2.64	1.03	16.09	3.92	1.11
1993-94	19.76	8.12	0.98	0.38	6.16	2.22	0.41	51.95	21.35	2.57	1.01	16.20	5.84	1.07
1994-95	19.73	7.42	0.95	0.36	6.14	1.10	0.39	54.66	20.55	2.63	1.00	1.02	3.04	1.11
1995-96	19.70	8.88	0.94	0.30	6.80	0.95	0.35	51.95	23.41	2.48	0.80	17.93	2.51	0.93

Note: Edu: Education, Art, Culture etc. Med: Medical, Health, sanitation etc. Hous: Housing Lab: Labour & Employment Soc: Social Security Rel: Relief on Calamities OT: others

Table 6.11

Share of expenditures on Economic Services (Rev. A/C)

Year	Share in Revenue Expenditure					Share in Economic Services				
	Ges	Agr	Ind	WPD	Trans	Ges	Agr	Ind	WPD	Trans
1970-71	0.46	13.17	0.86	5.58	3.52	2.35	67.15	4.41	28.44	17.93
1971-72	0.45	12.26	0.71	5.28	3.15	2.52	67.20	3.87	28.94	17.27
1972-73	0.47	14.78	0.76	7.11	3.31	1.77	55.92	2.89	26.99	12.52
1973-74	0.44	14.83	1.02	8.39	3.37	1.56	52.88	3.62	29.90	12.03
1974-75	0.77	14.25	0.90	10.48	3.48	2.58	47.80	3.02	34.90	11.69
1975-76	0.80	14.95	1.00	8.49	2.78	2.86	53.35	3.57	30.31	9.91
1976-77	0.76	14.86	0.93	9.89	2.79	2.61	50.82	3.19	33.04	9.54
1977-.78	0.79	17.20	0.91	9.59	2.54	2.53	55.46	2.92	30.91	8.19
1978-79	0.76	21.43	1.31	11.11	2.97	2.05	58.21	3.55	30.17	8.06
1979-80	0.84	22.80	1.14	4.64	3.85	2.54	68.50	3.43	13.95	11.58
1980-81	0.68	19.94	1.15	2.88	4.92	2.30	67.51	3.89	9.76	16.67
1981-82	0.70	19.91	1.30	2.61	2.78	2.55	72.92	4.78	9.55	10.20
1982-83	0.57	15.70	1.05	1.07	2.20	2.77	76.26	5.11	5.18	10.68
1983-84	0.72	20.81	1.55	1.43	2.11	2.69	78.19	5.81	5.39	7.91
1984-85	0.74	21.94	1.88	1.22	1.98	2.67	79.02	6.77	4.40	7.14
1985-86	0.80	18.56	2.79	3.17	2.68	2.87	66.30	9.96	11.34	9.56
1986-87	0.85	17.40	2.94	3.62	2.63	3.10	63.61	10.73	13.13	9.62
1987-88	0.90	17.79	2.27	3.33	2.40	3.38	66.66	8.51	12.44	8.99
1988-89	1.01	18.08	2.27	3.05	1.97	3.84	68.53	8.60	11.56	7.47
1989-90	1.10	14.83	3.01	2.59	2.01	4.68	63.00	12.77	11.02	8.53
1990-91	1.17	21.33	1.66	2.94	2.30	3.96	72.08	5.62	9.15	7.77
1991-92	0.96	16.57	1.96	4.29	2.72	3.62	62.52	7.41	16.19	10.25
1992-93	0.89	16.66	2.10	4.70	2.76	3.29	61.44	7.73	17.34	10.19
1993-94	0.83	17.20	1.57	5.36	2.57	3.02	62.46	5.60	19.45	9.35
1994-95	0.90	17.91	2.05	8.89	2.33	2.89	57.27	6.55	25.86	7.44
1995-96	1.26	15.21	1.88	5.79	2.22	4.79	57.69	7.15	21.97	8.41

Source: Finances State Governments, RBI Bulletins Various Issues and State Budgets, Various Issues, State Budgets, Various Issues

Table 6.12

Share of Expenditures on General Services (Rev A/C)

Year	Share in Revenue Expenditure					Share in Economic Services				
	Organ	Fisc	RInt	Admn	Pens	Organ	Fisc	RInt	Admn	Pens
1970-71	0.36	4.23	21.71	17.38	2.22	0.80	9.28	47.68	38.17	4.86
1971-72	0.56	3.72	20.16	24.01	1.81	1.13	7.49	40.56	48.30	3.65
1972-73	0.86	3.15	17.13	12.28	1.15	2.48	9.11	49.56	35.52	3.33
1973-74	1.11	3.47	16.95	12.21	0.94	3.20	10.02	48.87	35.21	2.70
1974-75	1.05	3.85	12.62	11.55	1.41	3.45	12.64	41.39	37.90	4.62
1975-76	1.08	4.00	12.75	12.27	1.39	3.41	12.71	40.50	38.97	4.42
1976-77	1.43	4.13	12.61	10.78	1.31	4.72	13.65	41.68	35.62	4.32
1977-.78	1.37	3.96	12.67	9.42	1.26	4.79	13.80	44.20	32.84	4.38
1978-79	0.86	3.69	11.42	8.60	0.87	3.38	14.48	44.86	33.81	3.43
1979-80	1.51	4.14	11.16	9.14	1.37	5.54	15.14	40.85	33.44	5.02
1980-81	1.31	3.67	9.32	9.22	1.65	5.21	14.54	37.06	36.63	6.56
1981-82	0.88	4.33	11.67	10.95	1.36	3.00	14.83	39.99	37.51	4.66
1982-83	0.71	3.38	9.66	8.43	1.44	3.00	14.31	40.92	35.68	6.08
1983-84	0.98	3.92	12.31	10.28	2.03	3.32	13.28	41.72	34.82	6.86
1984-85	1.93	3.81	11.30	9.53	2.21	6.69	13.24	39.27	33.11	7.68
1985-86	0.90	3.15	12.59	9.53	2.06	3.17	11.17	44.59	33.77	7.29
1986-87	0.87	3.07	13.78	8.24	2.39	2.84	9.98	41.82	26.79	7.76
1987-88	0.97	2.98	14.71	9.89	2.64	3.10	9.54	47.17	31.72	8.46
1988-89	0.88	2.76	18.31	8.86	3.40	2.56	8.08	53.54	25.89	9.93
1989-90	1.91	2.76	16.81	8.91	3.74	5.59	8.09	49.25	26.11	10.96
1990-91	0.79	2.59	16.65	7.70	3.40	2.54	8.31	53.48	24.74	10.93
1991-92	1.22	2.50	18.26	7.87	3.60	3.65	7.49	54.57	23.53	10.77
1992-93	0.79	2.41	17.78	8.23	4.02	2.39	7.25	53.51	24.77	12.08
1993-94	0.69	2.24	19.61	7.07	4.24	2.05	6.63	57.92	20.87	12.53
1994-95	2.03	2.20	17.28	6.86	3.96	6.29	6.81	53.44	21.22	12.24
1995-96	0.85	1.95	18.92	9.62	4.09	2.40	5.50	53.40	27.16	11.55

Source: Finances State Governments, RBI Bulletins Various Issues and State Budgets, Various Issues, State Budgets, Various Issues

Table 6.13

Share of Functional Categories in Capital Expenditure

Year	Share in Capital Expenditure					Share in NSDP				
	Dev	NDev	DID	RLC	Lab	Dev	NDev	DID	RLC	Lab
1970-71	40.25	0.53.	4.37	50.00	8.02	13.99	0.18	1.52	17.38	2.79
1971-72	36.78	1.23	4.25	37.06	21.91	12.44	0.42	1.44	12.54	7.41
1972-73	32.47	2.88	7.18	44.67	12.81	10.39	0.92	2.30	14.30	4.10
1973-74	44.24	0.12	1.46	44.71	9.47	12.7	0.03	0.42	12.91	2.74
1974-75	57.65	2.04	10.88	16.93	12.47	14.86	0.52	2.81	4.36	3.21
1975-76	52.63	1.39	1.50	29.41	15.27	14.52	0.38	0.41	8.12	4.21
1976-77	42.06	1.67	8.99	16.19	31.09	12.27	0.49	2.62	4.72	9.07
1977-.78	52.38	0.97	5.84	16.23	21.65	15.78	0.29	1.76	4.89	6.52
1978-79	59.50	1.57	4.35	14.76	19.81	18.03	0.48	1.32	4.47	6.00
1979-80	72.49	1.53	3.47	12.01	8.22	20.35	0.43	0.97	3.37	2.31
1980-81	55.00	0.87	1.90	26.57	12.68	21.09	0.34	0.73	10.19	4.86
1981-82	68.92	0.91	3.75	15.07	11.36	20.36	0.27	1.11	4.45	3.36
1982-83	49.25	0.50	3.96	13.39	8.35	15.16	0.15	1.22	4.12	2.57
1983-84	83.32	2.85	6.31	28.14	21.41	17.90	0.61	1.36	6.04	4.60
1984-85	59.96	1.42	6.95	18.99	12.68	17.98	0.43	2.08	5.69	3.80
1985-86	61.40	1.42	5.29	19.34	12.56	17.82	0.41	1.54	5.61	3.65
1986-87	65.39	1.61	4.67	16.63	11.70	18.22	0.45	1.30	4.63	3.26
1987-88	65.42	1.64	3.38	18.39	11.17	19.14	0.48	0.99	5.38	3.27
1988-89	67.11	2.11	3.06	19.75	7.97	17.87	0.56	1.82	5.26	2.12
1989-90	65.47	2.33	1.88	20.97	9.36	16.64	0.59	0.48	5.33	2.38
1990-91	63.02	1.01	1.10	25.75	9.13	17.78	0.28	0.31	7.26	2.58
1991-92	64.05	1.17	1.19	22.02	11.58	17.69	0.32	0.33	6.08	3.20
1992-93	66.71	1.13	2.45	19.08	10.64	14.75	0.25	0.54	4.22	2.35
1993-94	59.16	0.96	4.46	26.17	9.24	12.92	0.21	0.97	5.72	2.02
1994-95	65.14	1.23	1.72	18.26	13.65	11.19	0.21	0.29	3.14	2.34
1995-96	61.73	1.65	7.28	18.52	10.82	9.56	0.26	0.13	2.87	1.68

Table 6.14

Share of Development Expenditure on Capital Account

Year	Share in Dev. Exp			Share in Cap Exp		
	CGS	CEC	CSC	CGS	CEC	CSC
1970-71	5.65	82.13	5.65	2.28	33.06	2.28
1971-72	6.70	84.92	8.38	2.46	31.23	3.08
1972-73	8.86	94.98	5.02	2.88	30.84	1.63
1973-74	0.26	86.19	13.81	0.12	38.13	6.11
1974-75	3.53	93.99	6.01	2.04	54.18	3.47
1975-76	2.63	91.46	8.63	1.39	48.13	4.54
1976-77	3.97	89.64	10.36	1.67	37.71	4.36
1977-.78	1.84	91.55	8.46	0.97	47.96	4.43
1978-79	2.64	92.63	7.37	1.57	55.11	4.38
1979-80	2.11	92.65	7.35	1.53	67.16	5.33
1980-81	1.59	93.86	6.14	0.87	51.62	3.37
1981-82	1.32	94.19	5.81	0.91	64.92	4.00
1982-83	1.01	93.88	6.11	0.50	46.24	3.01
1983-84	3.42	92.48	7.52	2.85	77.05	6.27
1984-85	2.37	93.17	6.83	1.42	55.87	4.10
1985-86	2.31	91.47	8.53	1.42	56.16	5.24
1986-87	2.47	89.22	10.78	1.61	58.34	7.05
1987-88	2.50	91.84	8.16	1.64	60.08	5.33
1988-89	3.14	89.84	10.15	2.11	60.29	6.81
1989-90	3.56	89.61	10.39	2.33	58.67	6.80
1990-91	1.60	92.11	7.89	1.01	58.05	4.97
1991-92	1.83	92.07	7.93	1.17	58.97	5.08
1992-93	1.73	92.35	7.65	1.15	61.61	5.10
1993-94	1.63	90.78	9.22	0.96	53.70	5.46
1994-95	1.89	83.16	16.84	1.23	54.17	10.97
1995-96	2.68	89.96	10.04	1.65	55.53	6.20

Table 6.15

Growth Rate of Capital Expenditure Components

Expenditure variables	1970-71 to 1982-83	1982-83 to 1995-96	1970-71 to 1995-96
1. Development Expenditure	10.58	15.17	13.87
2. Non Development Expenditure	8.40	16.16	13.72
3. Discharge of Internal Debt	8.12	9.74	9.47
4. Repayment of Loans to Centre	3.54	12.25	9.96
5. Loans and Advances by the Centre	6.94	12.06	10.35

Table 6.16
Share of Functional Categories (Rev + Cap) in Total Expenditure and NSDP of Orissa

Year	Share in NSDP			Shares in TotalExpenditure		
	General Services	Econom Services	Social Services	General Services	Eco. Services	Social Services
1970-71	5.58	4.44	4.30	30.50	24.29	23.53
1971-72	7.72	5.18	5.09	33.72	22.64	22.24
1972-73	5.54	6.09	5.78	24.42	27.84	26.45
1973-74	4.59	5.75	5.18	24.70	30.96	27.85
1974-75	4.17	6.50	5.36	23.15	36.09	29.75
1975-76	5.09	7.36	6.59	23.15	33.57	30.05
1976-77	5.70	8.24	7.63	21.91	31.71	29.34
1977-.78	4.75	8.43	6.74	20.32	36.12	28.86
1978-79	4.78	11.12	7.10	18.22	42.36	27.05
1979-80	5.76	12.29	8.40	20.08	42.79	29.286
1980-81	4.05	9.70	7.35	15.85	38.01	28.80
1981-82	4.41	8.13	6.64	20.84	38.41	31.35
1982-83	4.83	8.34	11.48	16.50	28.48	39.21
1983-84	4.51	7.11	6.70	23.78	37.45	35.34
1984-85	5.07	8.93	7.72	20.56	36.19	31.29
1985-86	4.63	8.19	7.27	20.44	36.17	32.11
1986-87	5.80	8.19	8.16	22.64	35.99	31.81
1987-88	6.54	9.23	9.03	22.54	36.46	31.09
1988-89	6.68	10.59	7.92	25.66	35.41	30.40
1989-90	6.50	9.22	8.23	26.05	32.47	32.98
1990-91	7.15	8.10	9.16	22.63	37.61	29.00
1991-92	7.14	11.88	8.73	24.54	35.47	29.97
1992-93	7.62	10.32	9.24	26.14	34.75	31.66
1993-94	7.71	10.19	8.94	26.67	33.25	30.92
1994-95	8.56	9.62	9.08	27.00	35.20	31.78

Table 6.17

Some Important Head of Expenditure

(Share in Total Expenditure and NSDP)

	Share in Total Expenditure				Share in NSDP			
	70-71	80-81	90-91	94-95	70-71	80-81	90-91	94-95
Education	12.47	12.35	15.14	16.72	2.28	3.15	4.78	4.51
Health	5.67	6.70	6.35	7.68	1.04	1.71	2.00	1.88
Social Security	4.59	3.03	3.60	5.75	0.84	0.77	1.14	1.51
Agriculture	9.17	16.09	15.80	13.55	1.68	3.81	2.99	1.89
Interest Payment	14.17	5.75	11.95	15.99	2.59	1.47	3.77	4.43
Irrigation	3.34	7.25	9.39	6.52	0.61	1.85	2.96	1.97
RLA	17.38	10.19	7.26	2.87	3.18	2.60	2.29	1.65
Administration	7.50	5.68	6.63	8.13	2.07	1.82	3.47	3.34
Transport	2.51	3.80	4.33	4.46	0.46	1.17	1.36	1.36

Table 6.18

Plan and Non-Plan Expenditure (in Percentages)

	Revenue Expenditure		Capital Expenditure		Total Expenditure	
Year	Plan	Non-plan	Plan	Non-plan	Plan	Non-plan
1972-73	15.26	84.74	35.67	64.33	21.79	78.21
1973-74	14.09	85.91	36.30	63.70	20.50	79.50
1974-75	10.79	89.21	52.98	47.02	21.66	78.34
1975-76	12.19	87.81	47.96	52.04	22.07	77.93
1976-77	15.60	84.40	62.29	37.71	29.22	70.78
1977-.78	20.54	79.46	69.35	30.65	35.24	64.76
1978-79	24.42	75.58	71.99	28.01	38.84	61.16
1979-80	23.98	76.02	78.97	21.03	39.42	61.58
1980-81	26.27	73.73	56.24	43.76	37.76	62.24
1981-82	24.19	75.81	73.72	26.28	38.82	61.18
1982-83	20.67	79.33	52.92	47.08	30.60	69.40
1983-84	28.60	71.40	76.99	23.01	43.29	56.71
1984-85	30.26	69.74	67.99	32.01	41.58	58.42
1985-86	29.84	70.16	65.56	34.44	40.21	59.79
1986-87	27.57	72.43	75.96	24.04	41.05	58.95
1987-88	30.01	69.99	72.04	27.96	42.31	57.69
1988-89	30.02	69.98	75.77	24.23	42.20	57.80
1989-90	27.40	72.60	72.30	27.70	38.81	61.19
1990-91	34.45	65.55	68.42	31.58	44.02	55.98
1991-92	25.61	74.39	73.28	26.72	38.78	61.22
1992-93	24.54	75.46	70.99	29.01	34.82	65.18
1993-94	25.98	74.02	63.43	36.57	34.16	65.84
1994-95	29.02	70.98	72.08	27.92	36.41	63.59
1995-96	28.14	71.86	67.53	32.47	34.24	65.76

Table 6.19

Income Elasticity of Expenditure (1972-1994)

Expenditure Variables	Elasticity Coeficients					
	Type I			Type II		
	Plan	Non-plan	Total	Plan	Non-plan	Total
Revenue Expenditure	1.4527 (22.086)	1.0846 (29.824)	1.1615 (35.059)	1.5207 (19.455)	1.1017 (26.179)	1.1934 (30.789)
Capital Expenditure	1.1693 (15.508)	0.7967 (4.4907)	1.0090 (17.999)	1.1947 (13.337)	0.7623 (3.675)	1.1545 (19.861)
Total Expenditure	1.3103 (19.693)	1.0405 (26.587)	1.1227 (32.375)	1.3610 (17.147)	1.0504 (23.115)	1.1412 (28.019)

Table 6.20

Income Elasticity of Functional Ctaegories of Expenditure

	General Services		Economic Services		Social Services	
Expenditure Variables	I	II	I	II	I	II
Revenue Expenditure	1.1447 (35.750)	1.1708 (31.004)	1.1246 (22.494)	1.1471 (19.867)	1.1939 (26.319)	1.1938 (26.319)
Capital Expenditure	1.0925 (6.175)	1.1035 (5.322)	1.1437 (17.644)	1.1661 (15.046)	1.2748 (16.897)	1.3226 (15.052)
Plan Expenditure	1.0072 (7.367)	1.0057 (6.289)	1.3451 (18.452)	1.4011 (16.049)	1.3836 (24.459)	1.4496 (21.646)
Non-plan Expenditure	1.2049 (29.823)	1.2427 (26.322)	0.8411 (11.804)	0.7837 (9.930)	1.0853 (25.729)	1.1018 (22.164)
Total Expenditure	1.1968 (31.075)	1.2330 (27.385)	1.1361 (24.932)	1.1595 (21.614)	1.0410 (24.358)	1.0512 (21.679)

Note: Figure in parenthesis are t values

N.B.: Type I: Expenditure and income are measured in absolute terms

Type II: Expenditure and income are measured in per capita terms

Table 6.21

Granger Causality Test (Expenditure and SDP)

Direction	TE → SDP	SDP → TE	TPE → SDP	SDP → TPE	TNPE → SDP	SDP → TNPE
F - Values	0.3842	3.3823	0.0184	3.0244	0.4698	3.0515
Significance Level	0.5436	0.0834	0.8948	0.0767	0.5023	0.0987
Direction	PESS → SDP	SDP → PESS	NPESS → SDP	SDP → NPESS	TESS → SDP	SDP → TESS
F - Values	0.0018	2.1830	0.6226	3.6613	0.7412	4.2645
Significance Level	0.9664	0.1568	0.4409	0.0726	0.4012	0.0545
Direction	PEES → SDP	SDP → PEES	NPEES → SDP	SDP → NPEES	TEES → SDP	SDP →TEES
F - Values	0.0061	0.7905	0.1569	2.4739	0.0138	0.0522
Significance Level	0.9388	0.3858	0.6969	0.1341	0.9077	0.8219
Direction	PEGS → SDP	SDP →PEGS	NPEGS →	SDP → NPEGS	TEGS → SDP	SDP → TEGS
F - Values	0.3971	0.0961	SDP	0.0085	1.8249	0.0020
Significane Level	0.5370	0.7603	2.1728	0.9276	0.1944	0.9651
			0.1587			

Note: TE: Total Expenditure, TPE: Total Plan Expenditure, TNPE: Total Non-plan Expenditure, PESS: Plan Expenditure on Social Services, NPESS: Non-plan Expenditure on Social Services, TESS: Total Expenditure on Social Services, PEES: Plan Expendiure on Economic Services, NPEES: Non-plan Expenditure on Economic Services, TEES: Total Expenditure on Eonomic Services, PEGS: Plan Expenditure on General Services,

NPEGS: Non-plan Expenditure on General Services, TEGS: Total Expenditure on General Serivices

Table 6.22

Sims Causality Test (Expenditure and SDP)

Direction	TE → SDP	SDP → TE	TPE → SDP	SDP → TPE	TNPE → SDP	SDP → TNPE
F - Values	1.5338	0.1764	0.3718	0.2746	1.0521	0.1835
Significance Level	0.2585	0.8406	0.6978	0.7649	0.3818	0.8349
Direction	PESS → SDP	SDP → PESS	NPESS → SDP	SDP → NPESS	TESS → SDP	SDP → TESS
F - Values	0.0522	0.0177	2.1203	0.1698	1.6796	0.1894
Significance Level	0.9494	0.9825	0.1664	0.8460	0.2309	0.8300
Direction	PEES → SDP	SDP → PEES	NPEES → SDP	SDP → NPEES	TEES → SDP	SDP →TEES
F - Values	0.4221	0.0735	2.9149	0.7324	0.0764	0.0554
Significance Level	0.6659	0.9296	0.0964	0.5028	0.9269	0.9464
Direction	PEGS → SDP	SDP →PEGS	NPEGS →	SDP → NPEGS	TEGS → SDP	SDP → TEGS
F - Values	0.2663	2.5436	SDP	1.3765	0.5066	1.5761
Significane Level	0.7710	0.1236	0.4773	0.2927	0.6159	0.2501
			0.6327			

Note: TE: Total Expenditure, TPE: Total Plan Expenditure, TNPE: Total Non-plan Expenditure, PESS: Plan Expenditure on Social Services, NPESS: Non-plan Expenditure on Social Services, TESS: Total Expenditure on Social Services, PEES: Plan Expendiure on Economic Services, NPEES: Non-plan Expenditure on Economic Services, TEES: Total Expenditure on Eonomic Services, PEGS: Plan Expenditure on General Services,

NPEGS: Non-plan Expenditure on General Services, TEGS: Total Expenditure on General Serivices

Table 6.23

Causality between Total Receipts and Expenditure (Non-plan)

Granger Test									
Lag	TR → RNPE		RNPE → TR		Inference	TR → CNPE		CNPE → TR		Inference
	F	S.L.	F	S.L.		F	S.L.	F	S.L.	
(1 1)	1.0308	0.3227	0.2511	0.6220	Independent	12.5408	0.0022	0.0976	0.7581	TR → CNPE
(2 2)	0.8703	0.3632	0.3908	0.5397		9.9844	0.0054	0.3301	0.5727	
	TR → TNPE		TNPE → TR		Inference	TR → TE		TE → TR		Inference
	F	S.L.	F	S.L.		F	S.L.			
(1 1)	7.0631	0.0155	0.8188	0.3769	TR → TNPE	7.3222	0.0140	1.7713	0.1989	TR → TE
(2 2)	4.5866	0.0462	0.0694	0.7952		2.9063	0.1054	0.0004	0.9983	
Sims Test										
Lag	TR → RNPE		RNPE → TR		Inference	TR → CNPE		CNPE → TR		Inference
	F	S.L.	F	S.L.		F	S.L.	F	S.L.	
(-1 1)	0.1930	0.6671	0.1942	0.6662	Feedback	0.0031	0.9564	8.5485	0.0111	TR → CNPE
(-2 2)	0.1136	0.8937	0.9123	0.4326		0.8307	0.4637	6.6150	0.0148	
	TR → TNPE		TNPE → TR		Inference	TR → TE		TE → TR		Inference
	F	S.L.	F	S.L.		F	S.L.			
(-1 1)	0.0011	0.9736	0.9652	0.3426	Feedback	0.0107	0.9192	0.0016	0.9685	Feedback
(-2 2)	0.2548	0.7799	0.6780	0.5295		0.4920	0.6255	0.5705	0.5826	

Table 6.24

Causality between Total Receipts and Expenditure (Plan Expenditure)

Granger Test

Lag	TR → RPE		RPE → TR		Inference	TR → CPE		CPE → TR		Inference
	F	S.L.	F	S.L.		F	S.L.	F	S.L.	
(1 1)	0.0313	0.8617	0.4476	0.5725	Independent	1.2755	0.2744	0.0095	0.9235	Independent
(2 2)	0.2455	0.6267	0.0409	0.8419		0.1085	0.7456	0.1909	0.6674	
	TR → TPE		TPE → TR		Inference					
	F	S.L.	F	S.L.						
(1 1)	0.1712	0.8842	0.2274	0.6376	Independent					
(2 2)	0.6722	0.4230	0.0463	0.8269						

Sims Test

Lag	TR → RPE		RPE → TR		Inference	TR → CPE		CPE → TR		Inference
	F	S.L.	F	S.L.		F	S.L.	F	S.L.	
(-1 1)	0.2942	0.5964	1.0699	0.3185	Feedback	0.0255	0.8863	0.1216	0.7324	Feedback
(-2 2)	0.6760	0.5306	0.7801	0.4843		0.2870	0.7564	0.2825	0.7597	
	TR → TPE		TPE → TR		Inference					
	F	S.L.	F	S.L.						
(-1 1)	0.0513	0.8243	0.3704	0.5525	Feedback					
(-2 2)	0.4934	0.6246	1.1791	0.3468						

Table 6.25

Consolidated Budget of Orissa State

(Revenue and Capital Surplus/Deficits, Rs.)

Year	Revenue Account	Capital Account	Total
1970-71	-4.05	8.36	3.58
1971-72	-23.38	6.23	-18.89
1972-73	-24.65	41.33	7.83
1973-74	-37.85	32.01	-6.60
1974-75	3.86	-4.75	1.95
1975-76	1.28	-5.78	-2.38
1976-77	17.63	-32.79	-13.60
1977-78	27.83	-13.74	15.88
1978-79	45.10	-30.18	11.65
1979-80	18.68	-8.56	1.60
1980-81	80.81	-88.68	-6.21
1981-82	27.97	-30.21	-15.21
1982-83	-22.98	-7.40	-52.40
1983-84	0.36	124.89	112.34
1984-85	-74.03	-71.38	-136.27
1985-86	-60.09	123.24	46.82
1986-87	-19.74	-90.23	-111.22
1987-88	-74.51	88.75	15.35
1988-89	-107.77	173.21	53.83
1989-90	-105.39	-34.38	-123.75
1990-91	-19.59	142.17	127.93
1991-92	-187.71	121.40	-62.78
1992-93	-135.72	124.16	-11.56
1993-94	-274.43	341.74	67.31
1994-95	-507.38	507.38	0.00
1995-96	-987.60	942.45	-45.15

Table 6.26

Statewise Own deficit (Unadjusted for Statutory transfers)

States	1970-71	1980-81	1985-86	1990-91	1994-95
1. AP	110 (4.38)	569 (7.77)	1023 (7.63)	2168 (6.96)	3840 (7.58)
2. Assam	98 (12.64)	122 (5.31)	811 (15.67)	1341 (14.12)	2028 (14.74)
3. Bihar	148 (8.59)	807 (12.71)	1279 (10.34)	2944 (12.89)	3880 (10.87)
4. Gujarat	78 (3.56)	462 (7.06)	754 (6.23)	880 (3.62)	1718 (3.69)
5. Haryana	35 (4.03)	158 (5.21)	266 (4.60)	369 (3.02)	1090 (5.04)
6. J&K	37 (14.80	221 (21.05)	571 (29.60)	1417 (51.28)	2160 (50.65)
7. Karanataka	84 (4.52)	350 (6.26)	696 (6.81)	844 (4.10)	2673 (6.96)
8. Kerala	82 (6.53)	312 (8.16)	506 (7.78)	1010 (8.30)	1820 (8.26)
9. MP	68 (3.42)	701 (9.94)	1001 (8.28)	2010 (7.57)	3691 (8.88)
10. Maharastra	129 (3.33)	730 (4.81)	1337 (5.05)	1967 (3.42)	4647 (4.19)
11. Orissa	69 (6.65)	378 (11.01)	545 (8.75)	1367 (14.15)	2635 (15.11)
12. Punjab	24 (1.67)	200 (4.50)	698 (8.36)	1228 (7.32)	707 (2.30)
13. Rajasthan	13 (0.79)	445 (10.71)	802 (10.46)	1599 (8.91)	3037 (12.82)
14. TN	119 (5.02)	453 (7.44)	860 (6.29)	1883 (6.69)	3800 (7.34)
15. UP	194 (4.56)	1232 (8.79)	2442 (9.90)	5273 (10.65)	7929 (10.03)
16. WB	111 ?(3.50)	572 (5.96)	1016 (5.83)	2292 (7.22)	905 (1.82)
17. All States	1607 (4.66)	8085 (7.33)	17946 (8.65)	31613 (7.43)	54536 (7.18)

Table 6.27

Statewise Own deficit (Adjusted for Statutory Transfer)

States	1970-71	1980-81	1985-86	1990-91	1994-95
1. AP	38 (1.51)	0245 (3.35)	258 (2.67)	887 (2.85)	1831 (3.61)
2. Assam	60 (7.78)	25 (1.09)	544 (10.51)	725 (7.63)	1121 (8.15)
3. Bihar	63 (2.81)	250 (3.94)	726 (5.87)	893 (3.91)	747 (2.09)
4. Gujarat	40 (1.83)	192 (2.93)	393 (3.25)	584 (2.40)	652 (1.40)
5. Haryana	22 (2.53)	74 (2.44)	148 (2.56)	238 (1.94)	775 (3.58)
6. J&K	15 (6.00)	152 (14.48)	351 (18.20)	483 (17.48)	1284 (30.12)
7. Karanataka	41 (2.21)	111 (1.91)	421 (4.12)	421 (2.05)	1531 (3.99)
8. Kerala	42 (3.35)	82 (2.14)	88 (1.35)	449 (3.69)	916 (4.16)
9. MP	11 (0.55)	349 (4.95)	509 (4.21)	808 (3.04)	1843 (4.47)
10.Maharastra	48 (1.74)	338 (2.63)	815 (3.08)	1087 (1.89)	2891 (2.60)
11. Orissa	15 (1.45)	146 (4.25)	264 (4.24)	5 (7.77)	1303 (7.47)
12. Punjab	6 (0.42)	116 (2.61)	615 (7.37)	986 (5.87)	185 (0.60)
13. Rajasthan	85 (5.14)	255 (6.18)	465 (6.06)	492 (2.74)	1639 (6.42)
14. TN	56 (2.36)	165 (2.29)	290 (2.12)	868 (3.08)	2041 (3.94)
15. UP	66 (1.55)	510 (3.64)	1142 (4.63)	2577 (5.21)	3958 (3.01)
16. WB	29 (0.92)	222 (2.31)	151 (0.88)	1091 (3.44)	-870 (-1.75)
17. All States	703 (2.04)	332 (3.01)	8160 (3.93)	14878 (3.50)	27670 (3.64)

Table 6.28

Statewise Gross Fiscal Deficit

States	1970-71	1980-81	1985-86	1990-91	1994-95
1. AP	57.56 (2.28)	222 (3.03)	435 (3.24)	967 (3.10)	2122 (4.19)
2. Assam	43.85 (5.69)	28 (1.22)	154 (2.98)	567 (3.97)	496 (3.60)
3. Bihar	89.31 (3.98)	335 (3.28)	326 (2.64)	1595 (6.98)	1342 (3.76)
4. Gujarat	62.96 (2.88)	246 (3.77)	514 (4.25)	1798 (7.40)	1407 (3.02)
5. Haryana	31.46 (3.62)	112 (3.69)	230 (9.97)	385 (3.15)	674 (3.11)
6. J&K	30.40 (12.16)	144 (13.71)	247 (12.81)	661 (23.92)	-23 (-0.54)
7. Karanataka	62.91 (3.39)	226 (4.05)	550 (5.38)	558 (2.71)	1516 (3.95)
8. Kerala	47.97 (3.82)	179 (4.68)	323 (4.97)	799 (6.56)	1339 (6.08)
9. MP	18.95 (0.95)	337 (4.78)	516 (4.27)	1019 (3.84)	1485 (3.57)
10. Maharastra	129.91 (3.35)	464 (3.06)	1234 (4.66)	1611 (2.80)	3388 (3.05)
11. Orissa	39.97 (3.85)	135 (3.93)	326 (5.24)	616 (6.37)	1202 (6.89)
12. Punjab	8.62 (0.60)	160 (3.60)	566 (6.78)	1242 (7.40)	1566 (5.09)
13. Rajasthan	66.57 (4.02)	207 (5.02)	342 (4.47)	545 (3.04)	1830 (7.62)
14. TN	65.78 (2.77)	211 (3.47)	365 (2.67)	1126 (4.00)	1850 (3.58)
15. UP	57.46 (1.35)	551 (3.93)	1058 (4.29)	3068 (6.20)	4602 (5.82)
16. WB	92.67 (2.93)	290 (3.02)	259 (1.49)	1634 (5.15)	2366 (4.75)
17. All States	938.43 (2.74)	3712 (3.36)	8199 (3.95)	18787 (4.41)	29139 (3.84)

Table 6.29

Statewise Outstanding Debt (as on March 31)

	1975		1985		1994	
States	Total Debt	Loans From Centre	Total Debt	Loans From Centre	Total Debt	Loans From Centre
1. AP	965 (22.83)	35 (17.39)	2974 (22.17)	1999 (14.90)	10446 (20.61)	6405 (12.64)
2. Assam	495 (34.49)	421 (29.33)			4741 (34.44)	3750 (27.25)
3. Bihar	1017 (24.64)	764 (18.51)	3819 (30.88)	2891 (23.38)	13528 (37.91)	7885 (22.10)
4. Gujarat	603 (16.50)	382 (10.48)	2316 (19.14)	1653 (13.66)	8516 (18.28)	6498 (13.95)
5. Haryana	332 (19.82)	237 (14.75)	1219 (21.06)	723 (12.49)	4018 (18.57)	2230 (10.31)
6. J&K	406 (94.46)	364 (84.65)			3893 (91.30)	2752 (64.54)
7. Karanataka	652 (19.56)	463 (13.89)	1929 (18.87)	1275 (12.48)	7323 (19.06)	4704 (12.24)
8. Kerala	565 (24.01)	396 (16.83)	1858 (28.57)	955 (14.69)	7134 (32.39)	3279 (14.89)
9. MP	701 (18.84)	453 (12.17)	2820 (23.32)	1772 (14.65)	9169 (22.06)	4720 (11.35)
10. Maharastra	1136 (14.14)	719 (8.95)	4209 (15.90)	3171 (11.98)	13754 (12.38)	10586 (9.53)
11. Orissa	700 (34.65)	539 (26.67)	1979 (31.79)	1321 (21.22)	7041 (40.38)	3658 (20.98)
12. Punjab	375 (15.21)	241 (9.77)	1794 (21.49)	1109 (13.29)	10475 (34.01)	8786 (28.53)
13. Rajasthan	978 (38.41)	786 (30.87)	2758 (35.96)	1933 (25.21)	825 (37.44)	4765 (20.45)
14. TN	759 (17.31)	457 (10.42)	2305 (16.85)	1574 (11.50)	8940 (17.28)	5465 (10.56)
15. UP	1435 (20.58)	1007 (14.45)	6052 (24.53)	3948 (16.00)	23447 (29.67)	15466 (19.57)
16. WB	1091 (19.94)	889 (16.25)	3921 (22.52)	3106 (17.84)	11126 (22.35)	8158 (16.39)
17. All States	12566 (19.44)	9149 (14.16)	39951 (19.25)	27430 (13.22)	158393 (20.86)	102579 (13.51)

Table 6.30
Plan Financing in Orissa
(Share in Total Resources, %)

Items	1980.81	1985.86	1990.91	1995.96
1. BCR	33.51	17.85	17.15	-26.19
2. Upgradation/Special grants	0.00	0.00	5.20	4.09
3. Contribution of PSEs	1.64	0.53	2.10	7.81
4. Contribution of Local Bodies	0.00	0.00	1.97	0.00
5. Market Borrowing (Net)	8.19	14.98	18.69	25.58
6. Small Savings	4.27	8.88	18.18	18.59
7. Provident Fund	5.20	10.64	14.85	22.01
8. Misc. Capital Loan	-10.3	2.21	-26.38	4.07
9. Negotiated Loan	6.92	5.58	8.94	12.18
10. WFR/Overdraft/W&M	-8.90	0.00	0.00	0.00
A. Total State Resources	40.18	61.67	60.69	68.15
B. Central Assistance	59.82	38.33	39.31	31.85
C. Aggregate Resources	100.00	100.00	100.00	100.00
D. Central Transfers (Externally Aided Projects)	4.66	7.08	7.63	19.33

APPENDIX-B

B.1 Kinked Exponential Models for Growth Rate Estimation (Boyce, J.K., 1986)

In the usual technique for estimating growth rates in the sub periods of time series involving exponential trend line by OLS method may produce discontinuities. Discontinuities between segments of a piece-wise regression can be eliminated via the imposition of linear restrictions. In the case of log-linear models, such an approach yields kinked exponential functions. The kinked exponential models can be estimated using OLS regression method with one, two and multiple kink points.

Kinked Exponential Models

Considering a time series for the period t = 1,....., n is broken at point k, discontinuous growth rate estimates for the two resulting sub periods could be derived by estimating them separately or, equivalently, by fitting the single equation:

$$\ln Y_t = \alpha_1 D_1 + \alpha_2 D_2 + (\beta_1 D_1 + \beta_2 D_2)t + u_t \qquad (1)$$

where D_j is a dummy variable which takes the value 1 in the jth sub period and 0 otherwise.

Discontinuity between the two trend lines can be eliminated via a linear restriction such that they intersect at the break point k:

$$\alpha_1 + \beta_1 k = \alpha_2 \beta_2 k \qquad (2)$$

Substituting for α_2 (and noting that $\alpha_1 D_1 + \alpha_2 D_2 = \alpha_1$), we get the restricted form:

$$\ln Y_t = \alpha_1 + \beta_1 (D_1 t + D_2 k) + \beta_2 (D_2 t - D_2 k) + u_t \qquad (3)$$

The OlS estimates of β_1 and β_2 from (3) give the exponential growth rates for the two sub periods. There is a kink between the two trend lines whenever $\hat{\beta}_1 \neq \hat{\beta}_2$

The exponential growth rate for a time series can be estimated using Kink Model when the series is broken at two points k_1 and k_2 so as to create three sub periods.

B.2 Estimation of Causal Relations using Granger and Sims Tests

Regression analysis deals with the dependence of one variable on other variables, it does not necessarily imply causation. But considering the situation: suppose two variables, say, GNP and Public Expenditure EXP affect each other with (distributed) lags. From causal analysis, it may be possible to say that, it is Public Expenditure that "causes" GNP (EXP→GNP) or GNP that causes Public Expenditure (GNP→EXP) or there is feed back between the two (EXP→GNP and GNP→EXP). It means statistically one can

detect the direction of causality (cause and effect relation) when temporally there is a lead-lag relationship between two variables. In this study two test of causality, viz, Granger test and Sims test have been used to study the causal nexus between expenditure and State income of Orissa.

A: The Granger Test (1969)

The Granger Causality Test assumes that the information relevant to the prediction of the respective variables, SDP (Y) and Government Expenditure (X), is contained solely in the time series data on these variables. The test involves estimating the following regressions:

$$Y_t = \sum_{i=1}^{n} \alpha_i X_{t-i} + \sum_{j=1}^{n} \beta_j Y_{t-j} + u_{1t} \qquad (4)$$

$$X_t = \sum_{i=1}^{m} \lambda_i X_{t-i} + \sum_{j=1}^{n} \delta_j Y_{t-j} + u_{2t} \qquad (5)$$

Equation (4) postulates that current y is related to past values of Y itself as well as X and equation (5) postulates a similar behaviour for X.

(i) Unidirectional Causality from X to Y is indicated if the estimated coefficients on the lagged X in (4) are statistically different from zero as a group (i.e., $\sum\alpha_i \neq 0$) and the set of estimated coefficients on the lagged Y in (5) not statistically different from zero (i.e., $\sum\alpha_j = 0$)

(ii) Conversely, Unidirectional Causality from Y to X exists if

if $\sum\alpha_i = 0$ in equation (4)
and $\sum\delta_j \neq 0$ in equation (5)

(iii) Bi-directional causality (Feedback):

if $\sum\alpha_i \neq 0$ in equation (4)
and $\sum\delta_j \neq 0$ in equation (5)

which means the equations are significant in both cases.

(iv) Independence:

if $\sum\alpha_i = 0$ in equation (4)
and $\sum\alpha_j = 0$ in equation (5)

Statistically insignificant in both the cases.

B: Sims Causality Test (1972)

The Sims test follows the logic that future can not cause past. The causation between X_t and Y_t may be identified by estimating the following equations:

$$Y_t = \alpha + \sum_{i=-m}^{m} a_i X_{t-i} + v_{1t} \qquad (6)$$

$$X_t = \beta + \sum_{i=-n}^{n} b_j Y_{t-j} + v_{2t} \qquad (7)$$

where α, β, a_i and b_j are coefficients and v_{1t} and v_{2t} are mutually uncorrelated white noise series. Under the maintained hypothesis that X_t causes Y_t, we have

(i) $\sum a_i (i<0) = 0$ and

(ii) $\sum b_j (j<0) \neq 0$

for bi-directional causality (feedback) between the two variables, it is to be satisfied that

(iii) $\sum a_i (i<0) = 0$ and

(iv) $\sum b_j (j<0) = 0$

And the condition of independence between the two variables is that:

(v) $\sum a_i (i<0) \neq 0$ and

(vi) $\sum b_j (j<0) \neq 0$

CHAPTER VII

SUMMARY AND CONCLUSION

State finances of Orissa have been analysed in this study in view of the fiscal imbalance faced by the State in recent times and the continued backwardness of the State. The gap between revenue receipts and expenditure has been widening in the State budget for quite a long time, thus resulting in rising deficit. Orissa is one of the highest debt ridden States in the country. Steadily growing revenue expenditure, in fact, reduced the scope for providing adequate expenditure on development activities and also capital investment. Various studies relating to State finances have given more importance to the working of Centre-State financial relationship in the context of reducing vertical and horizontal disparity. But a comprehensive analysis of the States' finances have not been undertaken and it is more so for Orissa.

The liberalisation process, which has been introduced in the country in 1991, opened up many opportunities for the States to attract capital investments in the crucial sectors. To derive benefit from such opportunities, the States should have well developed infrastructural facilities and skilled manpower. A sound fiscal policy involving adequate generation of revenue and a well framed expenditure policy would go a long way in creating a conducive atmosphere for the development in a State. Three important aspects of State finances of Orissa have been analysed in the present study. First, whether the State has been successful in exploiting its revenue potential; second, the role of Central transfers to the State in the finances of Orissa State; and third, the expenditure pattern of the State is together with analysis of various types deficits.

Relative socio-economic indicators of the State have been presented in Chapter III as a prelude to the study. Relative backwardness of the State has been manifest not only

in low per capita income, but in other indicators as well. Orissa is rich with the natural resources and possesses large cultivable land. These natural advantages of Orissa State have not been exploited for the benefit of the State. More than 70 percent of the population depend upon agriculture as their livelihood. The crucial role of agriculture in Orissa's economy can also be seen from the fact that nearly half of the State Domestic Product is generated in this sector. But the agriculture sector of the State is an underdeveloped one due to lack of proper irrigation and low utilisation of modern inputs. The industrial sector of the State is dominated by a few Government owned units and the overall industrial activity in the State is also very low. Absence of proper infrastructure and energy stand in the way of any substantial private sector participation in the industry.

The per capita income of Orissa in 1994-95 was Rs.5157, which was one of the lowest among the major States in India, except only Jammu & Kashmir, Rajasthan and Bihar. The growth rate of NSDP of Orissa over the period covered by the study has been one of the lowest in the country. Other socio-economic indicators like urbanisation, poverty level, infant mortality rate, and life expectancy reflect the general backwardness of the State. In fact, a large percentage of population of the State (more than 40 percent) live below poverty line.

Finances of Orissa State reflects its economic condition. The State has an unenviable task of generating enough resources to meet the demand for improving social sector by providing educational, health and other services. In addition, long term investments in irrigation and infrastructure are necessary to lead the State on the growth path. Keeping all these factors in mind, State finances of Orissa has been analysed in terms of its receipts, expenditure pattern and devolution of resources from Centre over a period of more than two decades from 1970-71 to 1995-96. Major observations of the Study are given below.

7.1 Budgetary Trends in Orissa State

State Revenues

(I) Revenue receipts of the State include, own tax and non-tax receipts, Central transfer of resources through the Finance Commission in the form of tax shares and grants-in-aid. Total receipts of the State could be divided into revenue receipts and capital receipts in which loan from Centre is the major constituent. Central transfers play a major role in the State revenue receipts of Orissa. Total revenue receipts had shown a lower growth rate in the second period of the present study (1980-81 to 1995-96) compared to the earlier period (1970-71 to 1980-81). The growth rate of total revenue has come down from 16.36 percent during the first period to 13.73 percent in the second period. The growth rates of tax and non-tax revenues also have declined. Share of non-tax revenue (State non-tax plus grants) in total revenue has gone down to 39.66 percent (1995-96) from 46.74 percent in 1970-71 due to steep decline in its growth rate in the second period.

(II) Share of own tax revenue in the NSDP (tax ratio) has shown improvement over the years. The tax ratio for the State has increased from 3.21 percent in 1970-71 to 3.85 percent in 1980-81 and further to 5.54 percent in 1994-95. However, the tax ratio, after 1980-81, has not shown much improvement. It remained around 5 percent in the second period. The growth rate of own tax revenue has declined marginally from 14.66 percent in the first period to 14.61 percent in the second period. Among individual State taxes, the sales tax, which generates more than 60 percent of own tax revenue, has shown a decline in its growth rate. Stamps and registration fees, tax on vehicles and goods and excise duty have shown higher growth rates in the second period. But the growth rates of entertainment tax and electricity duty have suffered major decline in the second period.

Per capita tax revenue of the State was Rs.15.63 in 1971-72, which has increased to Rs.50.39 in 1980-81 and further to Rs.290.81 in 1994-95. Compared to other States in India, the per capita tax revenue (own tax) of Orissa has been one of the lowest. For instance, in 1994-95, except Assam and Bihar, per capita tax revenue of Orissa was the

lowest. When the States are ranked on the basis of per capita tax revenue, it is observed that, Orissa occupies 15th position in 1970-71 and 14th position in 1994-95. From the trend of own tax revenue in Orissa, it is observed that, the growth of tax revenue is rather modest.

(III) Responsiveness of the tax structure is another aspect of State finances. The responsiveness of own tax revenue is studied by measuring buoyancy and elasticity of own tax revenue. Regression analysis has been used to estimate the buoyancy and elasticity of State's taxes. While estimating elasticity of own tax revenue with respect to State income, the tax series has been reconstructed after adjusting for discretionary changes, i.e., the series has been cleaned.

From the buoyancy and elasticity coefficients of tax revenue of the State, a declining trend is observed over the period covered by the State. The buoyancy coefficient of tax revenue has gone down from 1.36 during 1970-71 to 1980-81 (first period) to 1.22 during 1980-81 to 1994-95 (second period). Similarly, the elasticity coefficient has declined from 0.94 to 0.77 over the same periods. So far as buoyancy and elasticity coefficients of individual taxes are concerned, except excise duty, other taxes have shown lower buoyancy and elasticity values in the second period (stamps and registration duty has a higher buoyancy, but lower elasticity coefficient in the second period).

The buoyancy coefficient of sales tax has declined from 1.47 during the first period to 1.23 percent during the second period. Taxes on vehicles and goods has shown a buoyancy coefficient of 1.22 during the first period compared to 1.23 during the earlier period. Similarly, for land revenue, electricity duty, and entertainment taxes also, lower buoyancy coefficients have been observed in the second period. Leaving excise duty and electricity tax, all other taxes have experienced lower elasticity values during the second

period compared to the earlier period. The elasticity coefficient of State taxes are less than one in both periods (except sales tax and land revenue and motor vehicle tax during the first period), suggesting their inelasticity nature. A sound fiscal policy depends upon an elastic tax structure which should respond automatically to the rise in State income without depending on ad hoc policy changes (such as rate changes) from time to time (i.e., additional resource mobilisation). The declining buoyancy and elasticity coefficients in the States imply that, the tax revenue has failed to rise with the rise of income in the State.

(IV) Keeping the slow growth of own taxes of the State in view, a tax effort analysis also has been carried out for 16 major States to assess the relative effort of Orissa in mobilising the revenue. Tax effort of a Government indicates relationship between yield of revenue from a tax structure and the potential base of the tax structure. Net State Domestic Product of the States have been taken as the potential base for State taxes. Tax effort of States has been estimated in this study employing Tax-Income Ratio (Tax Ratio) and Aggregate Regression Approach. From the inter-State comparison of tax ratio, it is found that, Orissa's performance has not been satisfactory. The tax ratio of Orissa works out to be 4.4 percent in the period 1980-81 to 1982-83, which has improved to 5.5 percent in the period 1991-92 to 1993-94. From the State wise ranking on the basis of tax ratios, Orissa's position was at 15th in the first period and 14th in the second period among the 16 major States in India.

In the Aggregate Regression Approach, to estimate the relative tax effort of the States, sectoral income of States are taken as the potential bases for State taxes, which indicate taxable capacity. Orissa has a tax effort index of 87 percent which is less than many other States in India, except, States like Assam, Bihar, Uttar Pradesh, West Bengal and J&K. Orissa occupies 11th position on the basis of tax effort index among major States in India in the period 1987-88 to 1989-90. From both the approaches, it can be

concluded that, the tax effort of Orissa has not been satisfactory and therefore, there is further scope to raise revenues in the State.

(V) Non-tax revenue constituted 14.20 percent of total revenue receipts in 1970-71 which has increased to 21.37 percent in 1980-81. However, this share has declined sharply to 14.15 percent in 1995-96. Its growth rate has also gone down steeply from 17.93 during the first period to only 11.78 percent during the second period. The declining share of non-tax revenue of the State has been due to (a) lower rate of user charges on the services provided by the Government, (b) loss making public sector enterprises and (c) decline in revenue from forests and mines. Investments incurred by the State government in various services like, irrigation, electricity and other services and public sector units have not yielded enough revenues. These are major hidden subsidies. Particularly, the rates of return from irrigation and transport have been very low and the rates of return on these services have been declining over the years. Recovery rates from services provides by the Government (social services, economic services) have declined steeply from 25.17 percent in 1977-78 to 9.85 percent in 1987-88.

Transfers from the Centre

(VI) The main conduits of transfer of resources from the Centre to the States are Finance Commission, Planning Commission and Other Ministries. In the Federal structure of India, the Central Government is the dominant partner in raising revenue due to the possession of revenue sources with wide base and buoyancy. In the process of transfer of resources to the State, it is observed that, though the Finance Commission is statutory body, a considerable amount of funds are being transferred through plan and non-plan sources, which are beyond the Finance Commission's purview. This has increased the element of discretion in favour of high income States.

Orissa has been one of the beneficiary States from the Central transfers, when seen from the per capita transfers to the State. Orissa receives relatively higher per capita transfers along with States like Rajasthan and J&K. Central transfer of resources play a major role in the finances of Orissa as more than 50 percent of State revenue receipts and expenditure are met from these sources. But in recent times, a declining trend of Central transfers to Orissa has been observed. This is serious concern as the State depends more on Central transfers.

Looking into individual categories of transfers to Orissa, it is the State's share in central taxes which has shown an increasing trend in terms of its share in total receipts of the State. But grants-in-aid, and loan transfers as percentage of total receipts have declined over the plan periods; the decline in loan transfer being very steep. As a result, the share of gross transfers, in the total receipts of the state has declined from 61.19 percent in 1970-71 to 56.07 percent in 1994-95. Orissa's share in total gross transfers to all States, has been 4 to 5 percent. Since Fourth Plan, Orissa's share in total gross transfers to all the States has come down from 4.98 percent to 4.35 percent. Aggregate transfers as percentage of aggregate expenditures of the State has also shown declining trend over the plan periods. Due to drop in Central loans, the State has to depend more on high cost borrowing to finance its deficits.

(VII) Declining transfers to Orissa would create severe problems in the process of fiscal adjustment in the State, as the dependence of the State on Central transfers is quite high. When the per capita transfer of resources has been regressed with per capita SDP of the State, it is observed that, in the second period (1980-81 to 1994-95), the coefficients have gone down compared to the earlier period. From the trends of transfers of resources to the State, it is found that, the transfers have failed to rise with the rise in the State income. The declining transfers to the State can not be termed as equitable.

Government Expenditure in Orissa

(VIII) The Government expenditure in Orissa has shown an increasing trend over the period covered by the Study. From the trend of expenditure, it is observed that, in the second period, i.e., 1982-83 to 1994-95, the growth rate of expenditure has been faster. The growth rate of public expenditure, in the second period was 18.71 percent at current prices, compared to the growth rate of 8.27 percent in the earlier period of 1970-71 to 1982-83. Eighties have been the decade of higher public expenditure growth in Orissa mainly due to rise in revenue expenditure. The share of revenue expenditure in the total expenditure has increased to 80 percent, thus restricting the capital expenditure. As a matter of fact, the rise in revenue expenditure in Orissa has been substantial among the States in India. The trend of expenditure suggests that the maintenance of existing assets in the form of more administrative services has been favoured, rather than creating new assets, which could have accelerated the growth in the State's economy. Public expenditure as percentage of NSDP for Orissa has been one of the highest (31 percent in 1994) in the country. But the per capita expenditure in the State is one of the lowest barring few low income States.

Among the functional categories of expenditure, the general services, which includes administrative services and interest payments have shown higher growth rate in the second period (1982-83 to 1994-95) than those of economic services and social services. The expenditure on social services (revenue account) has grown at the rate of 10.18 percent during the period 1970-71 to 1982-83, whereas, the growth rates for general and economic services were 5.58 percent and 8.27 percent respectively. But during the second period (i.e., 1982-83 to 1994-95), the growth rate of general services was higher than those of social and economic services. The growth rate of general services in the second period was 20.17 percent, while, the growth rates of social and economic services were 18.64 percent and 17.27 percent respectively. The growth rate of social services during the second period was the lowest. The share of social services in

the revenue expenditure has declined from 55.30 percent in 1982-83 to 36.04 percent in 1994-95, while the shares of general and economic services have increased in the same period.

Though in the social and economic services, components like, education, health, social security, agriculture and power and development are major heads of expenditures, they have not shown much improvement in the second period in terms of the relative allocation to these activities. On the other hand, components of general services like, administrative services and interest payments have increased at a faster rate. Such a expenditure pattern helped the revenue expenditure to rise faster in eighties which does not contribute much to the economic development.

Causality Analysis

(IX) Granger and Sims tests have been used for carrying out the causality analysis of public expenditure with the State income. From the causality analysis to establish the relationship between SDP and expenditure, it is observed that, the SDP has influenced the public expenditure over the years. But a causal link running from total expenditure to SDP has not been observed. From the Causality analysis between total receipts and expenditure of the State, a definite causal nexus between total receipts of the State and public expenditure could not be established, thus, implying exogeneity of Public expenditure in the system. In other words, public expenditure is dependent more on policy variables rather than endogenous variables.

(X) The mismatch between receipts and expenditure has been growing and more so in the revenue account, due to which the revenue deficit has increased faster. The revenue deficit, which stood at Rs.4.05 crores in 1970-71, has increased to Rs.22.98 crores in 1982-83 and further to Rs.987.60 crores in 1995-96. The gross fiscal deficit for Orissa, which takes into account loans also, has been one of the highest (6.89 percent of

NSDP) among the States in India. The deficit in the budget has been financed mostly by borrowing from various sources. The outstanding loan as percentage of NSDP has increased to 40.38 percent for Orissa in 1994, which was the highest among the States in the country. The level of borrowing of the State could be seen from the fact that, more than 70 percent of plan resources consists of borrowed funds only.

(XI) The fiscal imbalance faced by the State in recent times has its root in inadequate revenue effort and unbridled revenue expenditure. Consequently, the debt burden of the State has increased to great height which may not be manageable with the present fiscal policies. The fiscal adjustment in the State is the need of the hour which requires comprehensive budgetary reforms and reorientation of State finances.

7.2 Suggestions for Fiscal Adjustment in Orissa State

(I) The fiscal adjustment in the State requires committed effort by the Government to reduce the fiscal deficit and improve the fundamentals of State finances. The finances of the State can be improved by augmenting revenues through tax reforms and reinforcing non-tax revenues and restructuring expenditure pattern.

(II) The tax reforms in the State should concentrate on the changes in the tax structure itself rather than increasing the tax rates. The tax reforms should attempt at simplifying the rate structure, broadening the tax base and provide an effective and responsive tax administration. Various ad hoc policies from time to time for mobilisation of revenue should give way to tax reforms with long run perspective.

The sales tax, which accounts for more than 60 percent of own tax revenue of the State, should be streamlined keeping the objective of adopting Value Added Tax system (VAT) in the near future. In this context, the adoption of State VAT is considered to be more suitable. Other individual own taxes like excise duty, vehicles and goods tax, and

stamps and registration duty have shown higher growth rate in recent times. Strict administration to check any irregularities and simpler tax rules would enhance the revenue generating capacity of these taxes. The revenue mobilisation from entertainment tax in Orissa does not seem very bright looking at the small number of theatres and other entertainment places. However, the tax evasion in these places are quite rampant which could be checked. Tax reforms in the State should also give importance to mobilise revenues from agricultural income tax and profession tax.

(II) Own non-tax revenue of the State has shown major decline over the period covered by the study. The user charges particularly for irrigation and electricity should be revised . The State Road Transport Corporation, which has been earning negative net profit, needs effective management to enhance its revenues. Declining revenues from forest products is another area in which the Government should pay immediate attention.

There are a good number of loss making PSEs in the State. Effective disinvestment programme has to be chalked out to reduce Government participation in such industries. Undertaking of commercial nature should be handed over to private sector. Further development of mining sector with private and foreign investments would help generating substantial amount of revenues.

(III) Restructuring of public expenditure is very essential to overcome the present budgetary problems. Subsidies to targeted groups only, i.e., to disadvantaged sections of people will have to be considered. Expenditures on social sectors, infrastructure and transport and communication should be on priority basis. Administrative expenditures in the States have to be pruned.

Looking at the revenue constraint, any meaningful capital investment may not be possible by the State Government. Attracting capital investment from private and foreign

sources should be given top priority so as to develop crucial sectors of the State's economy. Full utilisation of existing resources and completion of ongoing projects could reduce the cost overruns in the future.

7.3 Further Studies

The above suggestions need individual in-depth studies. The present study has its own limitations, in the sense that it could analyse the revenue and expenditure aspects of the State budget. Micro level studies on individual taxes, such as the sales tax, state excise duty, etc., would be very useful and necessary. Similarly, on expenditure side also, study on 'subsidies'; 'use charges' etc. would be worth attempting.

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