STATE FISCAL STUDIES — TAMIL NADU

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National Institute of Public Finance & Policy
New Delhi

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PREFACE

The National Institute of Public Finance and Policy undertook this study in consultation with the State authorities and on a local consultancy assignment from the World Bank. It is a part of the series of **Fiscal Studies of the States** undertaken at the Institute.

The study team consists of Drs. J V M Sarma, G Naresh and O P Bohra. Opinions expressed here are those of the authors. The Members of the Governing body of the National Institute of Public Finance and Policy are in no way responsible for these.

A K Lahiri
Director

New Delhi
March 30, 1999

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J V M Sarma
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New Delhi
March 30, 1999

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1. The growth performance of Tamil Nadu has been impressive despite the modest natural resource base. Agriculture being the main stay of the economy employing over 65 percent of people and contributing only 20 percent to the GSDP has always been the focus of economic policies. Although the share of direct government expenditure itself has come down, the sector receives substantial indirect subsidies in the form of free power, low irrigation charges, and so on.

2. Tamil Nadu is among the most industrialized States in India. However, over the last one-and-a-half decades, there has been a considerable deceleration in the industrial growth because of inadequate infrastructure, under- or mis-utilization of industrial incentives, procedural bottlenecks, and lack of a stable medium-term tax policy.

3. In terms of social development, Tamil Nadu compares favorably with other States. The proportion of population below the poverty line in Tamil Nadu has come down since the 80s, but it is still high.

4. Tamil Nadu has sustained the fourth highest growth rate among all major States during 1980-96. It has also ranked third among all major States in terms of infrastructure and literacy. Maintenance of this impressive performance has been possible because of a relatively well managed public finances and policy. In recent years, however, there are signs of progressive erosion in the prudent stance of policies. For example, the expenditure shares of infra-structural sectors and public health are falling. These signs need to be reversed to maintain the relative position of the State in terms of growth performance and social indicators.

State Finances

5. There is room for selective fiscal correction in Tamil Nadu although the finances are relatively well managed. The ratio of total expenditure to GSDP is contained within limits, but there is need for reprioritization towards specific areas, particularly infrastructure – both in terms of creation of assets and maintenance. During the period under study, there was a significant rise in revenue expenditure, particularly, in employee compensation, subsidies and interest payments. The rise in these components has cut into the growth of capital expenditure. With the exception of education, the pattern of government expenditure has not been exactly in line with the socio-economic needs. The expenditure shares of agriculture, irrigation as also infra-structural sectors and public health are falling. There is also a need for better control and monitoring of current expenditure.

6. In financing the expenditure, the revenue raising effort has so far been concentrated only on tax revenue and attempts to augment non-tax revenues through cost recoveries has been a neglected area. The dependence on own sources, particularly, sales tax, State excises, stamp duties and registration fees, and motor vehicles tax has been high. Yet, there are certain factors that hamper the productivity of the State taxes. The problem areas in sales taxation have been high tax rates, ineffective tax incentives, regressiveness, and the cascading effect arising from taxation of intermediates and inputs.

7. Besides, there is scope for improving the buoyancy of stamp duties and registration fees, motor vehicles tax, land revenue and agricultural income tax. In the case of stamp duties and registration fees, there is considerable under-reporting of sale values and, consequently, substantial tax leakage. Although this has been tackled through the adoption of normative values and through coordination with valuations arrived at by the income tax authorities, there is need to strengthen these systems. In the case of motor vehicle tax, the scope for sizeable increases in the revenue through rate revisions is limited.

8. The ratios of non-tax revenues and Central transfers have been either stagnant or falling. As for cost recoveries, it is clearly necessary to contain the growth of unrecovered costs and to improve recoveries from services provided by the State government. Studies show that on the whole, the recoveries come to about only 12 percent of net State expenditure. The cost recovery rate is particularly low for social sector services, and varies from 2 percent to 3 percent.

9. Fiscal balance for the most part of the study period was negative and also on the decline because of fast growth of revenue expenditure and the signs of improvement in recent years have not proved to be long lasting.

Power

10. The performance of entities in the power and transport sectors leaves much to be desired. Like many States in India, Tamil Nadu has also been experiencing severe shortage of energy in recent years. The gap between supply and demand is considerably higher than the all-India average and has been widening. Until recently, there seems to be laxity in providing the required additional investment. The installed capacity has picked up pace only from the Sixth Plan onwards. Yet, the additional investment required to meet the State's energy demand by the year 2002 would be much more than the outlay provided in the Ninth Plan.

11. Notwithstanding the operational efficiency, there have been continual increases in costs. Yet, institutional factors have prevented charging of remunerative tariffs. Consequently, the financial position of Tamil Nadu Electricity Board (TNEB) has been precarious. The tariff subsidy for agriculture has particularly serious impact on TNEB revenues as agricultural consumption constitutes over a quarter of the electricity sales. In addition to the capital transfers, every year TNEB receives direct budgetary subsidy to make up for the net operating loss.

Irrigation

12. Tamil Nadu's endowed irrigation potential is less than half of the all-India average. Except for river Cauvery the State has no perennial water resources. The unsettled riparian issues with Karnataka have an adverse impact on more than half of the canal-irrigated area in the State. Most of the water potential is already exploited. Tamil Nadu is one of the few States that meets the O&M norms lay down by the Ninth and Tenth Finance Commissions.

13. As regards cost recoveries in the irrigation sector, water charges are based on the classification of land and dependability of the source. The plethora of charges and cesses by crop, soil type and season result in several effective rates. Yet, the receipts add up to only a negligible proportion of the total current expenditure on irrigation and these proportions have come down over the years.

Roads and Bridges

14. Road network in Tamil Nadu has increased five-fold since Independence and almost all the villages and hamlets are now accessible by roads. There has been a corresponding increase in the road density. Yet, total expenditure on the road sector, as a ratio to GSDP, has come down during the last 15 years. Although three-fourths of the roads are surfaced, the maintenance of the roads has not been receiving adequate attention. Financial constraints prevent renewal of riding surfaces as frequently as needed, and consequently, expenditure on maintenance is far below the normative requirement. The deficiency in maintenance is reflected in the premature ageing of roads. If the negligence continues at the same rate, it is likely that instead of repairs fresh roads would be required to be built up.

Education

15. Literacy level in Tamil Nadu is better than the all-India average, and the State ranks only below Kerala and Maharashtra. Projections show that if the decline in the birth rate as well as the efforts of the government continue, gross enrolment may cover all the children of 6-11 years age group by the turn of the century itself. In secondary education, schemes such as free bus pass, free hostel facilities, free supply of books and equipment have helped to arrest the dropout rate.

16. The flip side effect of this improvement is the increased demand for more schools and more teachers at the middle and secondary level. In addition, up-gradation of present level schools to one stage up is also being contemplated. Yet, the allocation on this account by the Government in the current year is far below the requirement.

17. Although there has been a considerable increase in expenditure on education, most of it is in the nature of the current expenditure. About 80 percent of the expenditure are met from non-Plan resources and the remaining from State, Central and shared plan schemes.

18. The introduction of the noon-meal scheme in 1982, coupled with the declining birthrate, has been successful in increasing the literacy and enrolment in primary education in the State. Over the years, however, there has been considerable escalation in the cost of implementing the scheme.

Health

19. Tamil Nadu seems to have achieved most of the targets set in the National Health Policy. General health indicators such as the total fertility rate (TFR), the infant mortality rate (IMR) and the crude birth rate (CBR) have improved and are better than the all-India averages. Yet, government expenditure on health as a ratio to GSDP in Tamil Nadu is declining over the years. The decline is particularly sharp in the share of capital expenditure during the 90s.

20. Considerable progress has been made in the last several decades in expanding the public health system and in reducing the incidence of diseases. Smallpox has been eradicated. Prevention of a range of diseases such as measles, poliomyelitis, diphtheria and tuberculosis has greatly reduced child mortality. An extensive infrastructure has been developed during the last few years. There have also been schemes to partially privatise the hospital services. Yet, there remains certain area such as child and maternal morbidity and communicable diseases where the government needs to pay more attention.

Public Sector Undertakings

21. As in the case of many States, the performance of PSUs in Tamil Nadu has been a cause for concern. Except for the development finance corporations, the financial performance of the 67 PSUs has been poor with no significant contribution to the State. Not only the return on the investment by way of dividends and interest is nil or negative, they block roughly over Rs 5,000 crore (of which 38 percent or roughly Rs 2,000 crore invested by the government of Tamil Nadu) from being put to more productive alternative uses. The GSDP originating from the PSUs at Rs 1,500 crore is an insignificant proportion of the total GSDP. Thus, the PSUs in Tamil Nadu have not had a great impact on the economy of the State except for direct employment of 1.6 lakh persons.

22. In view of the non-viable operations of the PSUs radical measures of restructuring does seem necessary. The question of restructuring of PSUs in Tamil Nadu was examined earlier by several committees, the latest being the Raghavan Committee (whose report is yet to be made public).

Public Sector Road Transport Undertakings

23. The twenty-one State Road Transport Corporations (SRTCs) in Tamil Nadu together owns the third strongest fleet in the country and their operational efficiency and professional management is comparable to the better performing States. Overall, financial performance however, is seriously

impaired in an environment of rising costs, uneconomic fares, concessional travel, operation of uneconomic routes and above all, a high level of taxation. Periodic increases in the prices of essential inputs have pushed up the production cost of vehicles, the burden of which has been passed on to the corporations. Further, the fare revisions made so far, have provided only short respites from losses and have not been strong enough to sustain financial viability, particularly, with escalating costs of inputs. Thus, there is a need for tariff revisions at regular intervals.

Public Sector Development Finance Companies

24. Eight of the eleven development finance companies have succeeded in fulfilling the objective of mobilizing extra-budgetary resources such as term lending institutions and public deposits to finance the developmental activities. Perhaps, this is one of the reasons why the budget allocations for capital expenditure is lower (in terms of GSDP) than in other States. Among these companies, the five companies have the objective of developing the industry in general, two companies cater to specific industries – textiles and electronics, and three companies cater to the infrastructure development. The financial performance of PSUs in this group has been encouraging and most of the companies in this group make positive profits with reasonable and growing rates of return on equity. However, the existence of as many as 11 companies with more or less similar objectives creates confusion and perhaps it will be useful to merge those companies with similar areas of operation.

Fiscal Prospects

25. Though the fiscal management seems comparatively better, yet there is scope for and need to strengthen its revenue-effort and restructuring of expenditure for sustainability. If the same fiscal trends follow, the fiscal deficit is likely to assume disquieting proportion due to increasing component of revenue deficit. In addition, capital expenditure is shrinking, use of borrowings in consumption, and O&M expenditure is also not getting its due.

26. A simulated fiscal scenario, with a set of reform package, if implemented to set right the upward rising trends of fiscal/ revenue deficits, emerges in which, the fiscal balance turns into surpluses. To follow the path of growth-inducement through Government capital expenditure, this surplus can be ploughed back into the economy resulting in income-augmentation, rise in capital expenditure and better asset maintenance, particularly infrastructure sectors. The fiscal may be capped within a tolerable limit, say, at 2.5 percent of GSDP to reduce the need for high revenue receipts and high expenditure.

Recommendations

27. The review shows that there are areas that still need prior attention of the government. The aspect that needs immediate government attention is infrastructure –power, roads and bridges, and transport. It is also imperative that expenditure on social sectors such as education and health are stepped up and preferably targeted so that vulnerable sections benefit rapidly and can participate in the development process. In order to do this; the authorities have to step up revenue efforts including adequate cost recoveries in public utilities and effect economy in spending programs.

28. Creation of fiscal space for this purpose should comprise augmentation of the revenue efforts along with growth-inducing rationalization of the tax system in the State. Simultaneously, the spending pattern shall also be restructured with emphasis on productive sectors including human capital. Specifically, the measures shall include:

- Strict restriction on recruitment to government services,
- Pruning and improved targeting of welfare schemes to help achieving better results,
- Revamping of cost recovery policies in roads, irrigation and power sector,
- Harmonizing sales tax rate-structure in conjunction with neighboring States,
- Scraping of tax deferral scheme and simplifying the industrial incentive schemes,
- Preparing an agenda for the gradual introduction of VAT,

- Revamping of excise rate structure by integrating vend fees into the rate, and
- In the case of stamp duties and registration fees, strengthening the system of normative valuation and coordination with income tax authorities.

29. In the **power sector**, top of the agenda should be the progressive adjustment of the power tariffs to cover costs and gradual elimination of the cross-subsidization. Particularly, the subsidy to agriculture needs to be done away with. There is a need to narrow down the demand-supply gap as quickly as possible by enhancing the installed capacity by public investment and encouraging private sector participation. At the same time, it is important to realistically plan for additional capacity taking into consideration the limitations on hydel potential and supply of lignite and fossil fuel. In addition, there is need to speed up the administrative procedures to facilitate early completion of the on-going projects, renovation and modernization of the existing plants, reduction of transmission and distribution losses, and undertaking measures to conserve energy. It will be useful to bifurcate the generation and distribution activities of TNEB and entrust them with subsidiary companies created for the purpose, if necessary, with private participation. The TNEB can be transformed into a regulatory body.

30. In the **irrigation** sector, the government policy should focus on modernization of the existing facilities and provision for adequate maintenance of the system. Considering that water conservation is of utmost importance, the water rate should convey the scarcity value of this precious resource to the users and foster a sense of economy in water use. So far, the cost recovery policy does not reflect this value. The recovery rate could be as close as possible to the cost of annual maintenance and operation charges and a part of the fixed costs. It would be better to introduce volumetric charging as recommended by several expert committees. Water rates may be differentiated considering the farm size and crop-wise intensity of water requirement. There is also a need to periodically review and adjust the rates over time in tune with the service costs.

31. In the **roads and bridges** sector, the main problem is not laying of new roads but of maintenance, upgradation of the existing roads, widening of the congested roads, augmenting the carrying capacity to cope up with the heavy loads. In this endeavor, private participation on the BOT basis can be encouraged.

32. In the field of primary **education**, there is a need to plan for construction of additional classrooms, provision of drinking water facilities, electrification of all the primary schools, and supply of reading and play material to the students. Although it may not be feasible to significantly increase the cost recovery rate for all the social categories, there is a strong case for doing so in universities, colleges and technical institutes and, to some extent, in secondary education.

33. In the **health** sector there remains an unfinished agenda for addressing childhood and maternal morbidity and mortality, and communicable diseases. The leading sources of mortality and morbidity continue to be maternal and pre-natal causes, respiratory infections, diarrhoeal diseases and tuberculosis. Expenditure policy in the health sector should be prioritised to deal with those problems that have a high incidence in the State. In addition, the risk of infection from communicable diseases, such as malaria and leprosy, remains. The authorities shall focus on expenditure augmentation and reorientation to deal with these major causes of morbidity and mortality and reduce the risk from new communicable diseases such as AIDS and drug resistant diseases including malaria, filaria and tuberculosis. Private participation in some form should also be encouraged in maintenance of the primary health centres as well as capital investment in referral hospitals.

34. Directions for future reforms of **PSUs** in the State basically rests on the role of this sector in its economy for which it was created and expanded and the future role of this sector should be assigned to this sector. The charge of inefficiency is due to, apart from public ownership, monopoly power, organizational structure, bureaucratic regulation, political interference and price control. Therefore it is recommended that The undertakings be given freedom to function as a corporate and political and beaurucratic control be relaxed and the head of the undertakings be appointed with professional accuemenship and technical knowledge. Further, those manufacturing units running in red may be

privatized with ample of disinvestment of its equity. Private participation should be adequate to nullify non-commercial governmental approach.

35. In the **transport** sector, there is a need to evolve a mechanism for periodic revision of passenger fares to compensate for the increases in the input costs (as being attempted in the case of irrigation tariffs). In addition, with a view to making the public transport corporations compete with the private counterparts, it is necessary to compensate them for tariff concessions and losses due to plying on uneconomic routes, particularly in metro areas. At the same time, it is necessary to improve the operational efficiency by computerization, upgradation of the fleet, modernization of the fleet maintenance facilities as also bringing down the bus-staff ratio. Further, to improve administrative efficiency, merger of those transport corporations whose area of operations overlap should be considered.

36. The existence of as many as eleven **development finance** companies with more or less similar objectives creates confusion and perhaps it will be useful to merge those companies with similar areas of operation. The six companies – TIDCO, SIPCOT, SIDCO, TACID, TIIC, and ELCOT – can be merged into a single development finance company, e.g., Tamil Nadu Industrial Development Finance company. Similarly, the TDFC, POWERFIN, and TUFIDCO can be consolidated into a single Tamil Nadu Infrastructure Development Finance Corporation.

37. The **reform strategy** to achieve fiscal sustainability aims at restructuring expenditure to make it more productive, and at strengthening the revenue-raising machinery to maximize the yield from the existing revenue sources. It relies on improving cost-recoveries on existing assets, broadening the tax base and rationalizing the tax structure to make it more revenue productive. More specifically, the reform strategy could comprise the following:

- On the expenditure side to reduce current expenditure, fiscal reforms should aim at reducing the rate of growth of government employment. The reforms should aim at bringing the current elasticity of government employment with respect to population from the existing 2.25 to unity.
- Secondly, the annual growth rate of subsidies be brought down to 1.3 percent from current 29 percent so that the expenditure on subsidies grows exactly in tandem with the size of population. This will be achieved by phasing out subsidies to PSUs, TNEB and the Road Transport Undertakings. Particularly the latter two will be allowed to revise their tariffs for breaking even and reduce their dependence on the government.
- Thirdly, the reform scenario takes care of the recommendations of the First State Finance Commission in raising the current level of transfers to local bodies of about 2 percent to 8 percent and gradually increasing to 12 percent by 2001-02.
- Fourthly, step up the O&M expenditure for replacement of aged, and worn out assets particularly, in the irrigation and roads sectors. The low elasticity of O&M expenditure at around 0.62, say, be gradually doubled by 2005-06. This will considerably reduce the spending gap in respect of maintenance of roads and bridges.
- Fifthly, on the revenue side, the buoyancy of the State taxes should be improved. Agricultural income tax should be stepped up from the present 0.71 to unity level. Similarly, revenue yield is likely to improve with the introduction of VAT in case of commodity taxes because of improved transparency leading to better compliance. With these reforms, it is assumed that the commodity tax buoyancy will be raised up from 1.05 to 1.2. Tax base-broadening and rate-structure rationalization will be supplemented by administrative tightening to improve their productivity and curb evasion.
- Lastly, but not the least, there is a dire need to improve upon non-tax revenue sources. The cost-recovery strategies should be revamped such that the buoyancy with respect to GSDP is gradually raised to unity.

Chapter 1 Economy: A Macro Perspective

General

1.1 Tamil Nadu is the southernmost State in the Indian subcontinent covering about 4 percent of the India's geographical area. In terms of population, it is the seventh largest in the country and one of the most densely populated States in India (Table 1). The modest natural resource base makes economic development an arduous task[1]. Yet, the overall growth performance of Tamil Nadu has not been unimpressive during the last one-and-a-half decades. The headway in the sphere of infrastructure already achieved during the British rule, particularly in the irrigation and agricultural sector, partly explains the fast growth. In recent years, however, the growth performance seems to have been confined to only tertiary sectors such as trade, transport, banking and public administration (Table A. 4 and Table A. 5). The Ninth Plan aims at achieving 7 percent growth and the resource requirement is estimated to be at Rs 25,000 crore. The State government share is put at Rs 16,000 crore, the remaining being expected from private sector and foreign direct investment.

Table 1 Tamil Nadu: Basic characteristics

Area	130,000 sq. km	eleventh largest	4% of India's geographical area
Population (1996-97)			
Size	6.07 crore	seventh largest	
Growth	1.3% per annum	second lowest	
Density	467 persons/ sq. km	high	
Natural Resources			
Cultivable land	45% geographical area		
Forest cover	17% geographical area	normal	
Minerals	Negligible contribution to GSDP	2% of national mineral resources.	Main products – Lignite, magnesite, limestone, bauxite, gypsum
Water resources	Modest		Moderate rainfall - two rivers, Cauvery and Pennaiyar
GSDP (at 1980-81 prices)			
Level	Rs 19,439 crore		
Growth 1980-96	5.7%	fourth fastest	
Per capita	Rs 3,204	fifth highest	
Development indicators			
Infrastructure index	144	third highest	
Literacy	63%	third highest	
Infant mortality	5.7%		Lower than all India

Source: CMIE various issues
Government of Tamil Nadu, Directorate of Evaluation and Applied Research, Chennai.
Government of Tamil Nadu, Directorate of Economics & Statistics, Chennai

Agriculture

1.2 As in many other States in India, agriculture is the main stay of the Tamil Nadu's economy, and over 65 percent of people earn their livelihood from agriculture. About 20 percent of the Gross State domestic product (GSDP) originate in agriculture and allied activities (Figure 1 and Table A. 6). Food grains production dominates the agricultural sector with over 36 percent of the total gross cropped area under it. Among the commercial crops, sugarcane, groundnut and cotton are significant.

1.3 In view of its importance in the State's economy, agriculture has always been the focus of economic policies. Although, the share of direct government expenditure itself has come down from about 10.4 percent in 1980-81 to 7.8 percent in 1996-97 and is budgeted to about 5.7 percent by 1998-99 (Table A. 17), the sector receives substantial indirect subsidies in the form of free power, low irrigation charges, and so on. However, these are largely absorbed by affluent sections of farmers.

1.4 There are certain aspects of the agricultural sector that need government attention. First, an important feature of agriculture in Tamil Nadu is the growing pressure on land. Although the proportion of the net sown area in total geographical area is more or less the same as the all-India average, the irrigation intensity and cropping intensity are higher in the State. The shortage of water resources results, on an average, in about 12 to 16 percent (Table A. 3) of the gross cropped area remaining fallow every year for want of sufficient water. With judicious government investments in the irrigation sector there is scope for bringing some of these fallow lands under cultivation. Second, the State often suffers from cyclonic storms and other adverse weather conditions. Mitigating the weather-related risks in farming should receive priority attention. Third, despite the moderately high rate of growth in agriculture, there are indications that the distribution of the fruits of development has been quite uneven. The fact that agriculture provides employment to over 65 percent of the population while its share of income is only 20 percent shows that a large number of people below poverty are in this sector. Thus, there is a clear need to revamp government expenditure policy in agriculture with better targeting of the small and marginal beneficiary groups.

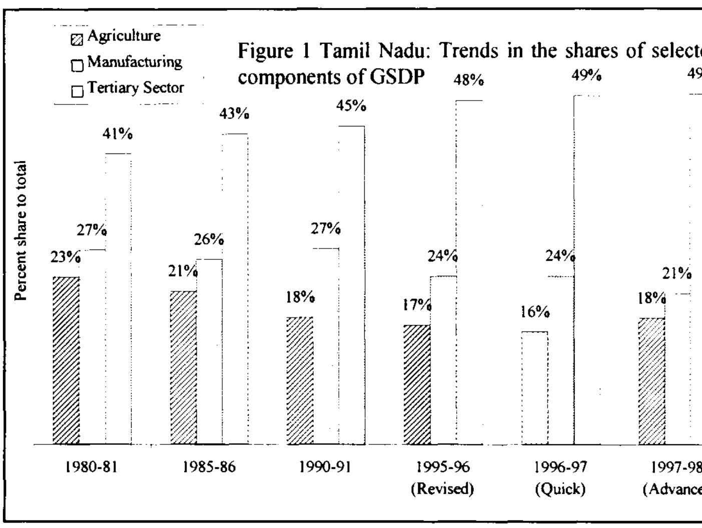


Figure 1 Tamil Nadu: Trends in the shares of selected components of GSDP

Industry

1.5 Tamil Nadu is among the most industrialized States in India today. The State ranks second after Maharashtra in terms of the manufacturing sector's contribution to GSDP. The major industries are cotton textiles and products, rubber, food products, machinery, and transport equipment and leather and leather goods (Table A. 10). Within the public sector, important areas of manufacturing are cotton textiles, engineering, cement, and transport equipment. Besides, a number of Central government undertakings are located in the State.

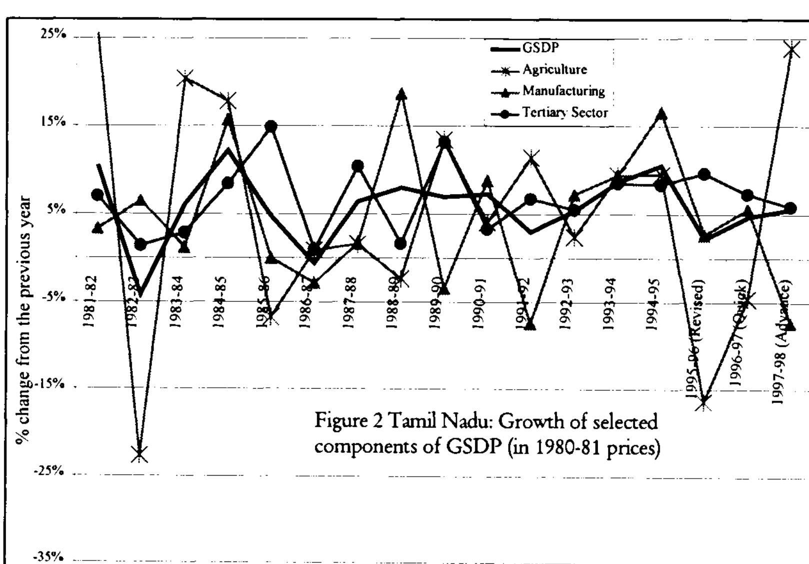


Figure 2 Tamil Nadu: Growth of selected components of GSDP (in 1980-81 prices)

1.6 Over the last fifteen years, however, there has been considerable deceleration in the industrial sector. The growth rate of GSDP (percent change over the previous year) originating in manufacturing sector that was 3.3% in 1981-82 went up to 15.7% in 1984-85 but thereafter became 0 in the next year and further declined to –2.8% in 86-87. Although it picked up to 18.7% in the next two years, it declined to –7.4% by 1991-92. It revived somewhat to 16.6% by 1994-95. However, in recent years, the growth rate has come down to 5.6% and it is expected to be even negative in the 1997-98, and further to 3.8 percent during the period 1991-97 and is expected to be even negative during 1997-98. Consequently, the share of manufacturing in GSDP has also come down (Table A. 7). The slowdown of industrial growth in recent years is because of inadequate infrastructure, under- or mis-utilization of industrial incentives, slow clearance of new proposals and procedural bottlenecks, and lack of a stable medium-term tax policy. Besides, the industrial performance (Table A. 11), as gauged by output per worker, output per unit of capital and profit to output ratio, has started to lag behind that in several States and the all-India average.

1.7 Following major reforms at the national level in July 1991, the State government announced certain supportive policy reforms to accelerate industrial growth. They included the establishment of the Tamil Nadu Corporation for Industrial Infrastructure Development (TACID), encouraging private sector participation and adopting measures to attract capital inflows into the State[2] (Table A. 20). According to a CMIE survey, Tamil Nadu stands third in the terms of approvals for Foreign Direct Investment, and second in terms of 100 percent Export Orientated Units. It has also been ranked third in terms of infrastructural development and therefore is one of the most attractive State for investment. The most attractive sectors are automobile and software development. As regards loss-making public sector undertakings, disinvestment is resorted to only when restructuring does not succeed[3].

Infrastructure

1.8 As noted above, Tamil Nadu is only modestly endowed with water resources, and has already exploited almost all the surface water potential. It is now left with the tasks of water conservation, and modernization of canal and tank irrigation system. Despite the water shortage, cost recoveries through water rates have been very low. Government policy should therefore focus on better cost recoveries, creation of awareness among public of the economic value of water, modernization of the existing facilities and provision for adequate maintenance of the system.

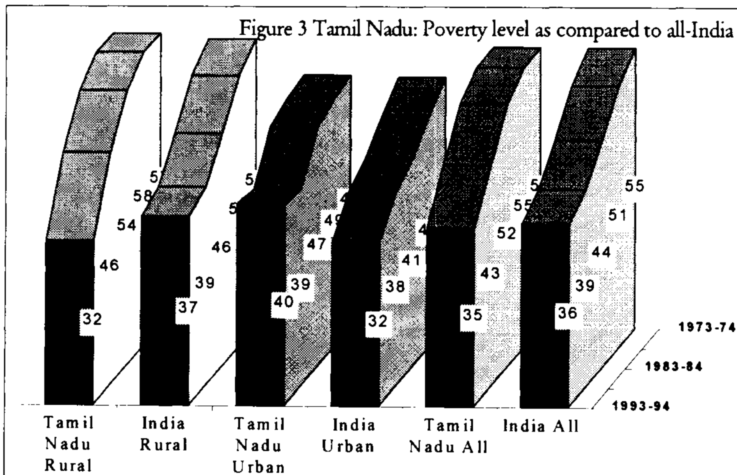
1.9 As regards power, Tamil Nadu, like many States in India, has been experiencing shortage of energy. Added to that, the financial position of TNEB has been unsteady, and institutional factors prevent charging of remunerative tariffs. As a result, financing of power generation and distribution in Tamil Nadu has become a source of imbalance of the State's fiscal position. With the setting up of the Tamil Nadu Power Finance Corporation (POWERFIN), the capital needs of the power sector are taken care of by resources raised through it to some extent. Along with restructuring of the tariffs, the scope for improving power sector management through privatization needs to be examined.

1.10 Tamil Nadu has an well-integrated road network with a road length density of about 107 km per 100 Sq. km, which is higher than the all-India average. About 80 percent of the roads are surfaced. Therefore, the main problem is not so much of laying new roads but of maintenance and upgradation of the existing roads.

Social Development

1.11 In terms of social development, Tamil Nadu compares favorably with other States. Literacy level is better than the all-India average, and the State ranks only below Kerala and Maharashtra in India. However, much needs to be done in the field of education, like providing infrastructure facilities –construction of additional classrooms, provision of drinking water facilities, electrification of the remaining primary schools, and supply of reading and play material. General health indicators such as the

Figure 3 Tamil Nadu: Poverty level as compared to all-India



total fertility rate (TFR), the infant mortality rate (IMR) and the crude birth rate (CBR) are also better than in India as a whole. In respect of education, there has been a steady growth in the enrolment of children in the age group 6-11. As regards poverty, official estimates[4] show that although the proportion of population below the poverty line in Tamil Nadu has come down since 1972-73, it is still quite high (Figure 3 and Table A. 12).

Tasks Ahead

1.12 The review shows that although Tamil Nadu's economic performance has been quite impressive by all-India standards, there are areas that need urgent attention of the government. For example, the most important factor hampering agricultural growth is the lack of irrigation potential and exhaustion of the available water sources yet; water is priced far below its scarcity value. Developmental gains have accrued in a skewed fashion and need to be more equitably distributed by providing both education and health opportunities to the poor. These tasks still remaining, there appears to be a need to step up government expenditure and to finance it by raising additional resources commensurate with it. Simultaneously, in infrastructure and social sectors there is some scope to restructure expenditure to minimize wastage and improve the productivity of government expenditure.

Chapter 2 State Finances

Overview[5]

2.1. Although on the face of it Tamil Nadu appears to be a relatively well managed State, there is room for selective fiscal correction. The ratio of total expenditure to GSDP is within prudent limits, but there is a need for reprioritization towards specific areas, particularly infrastructure – both in terms of creation of assets and maintenance. The revenue raising effort has so far been concentrated only on tax revenue, and the potential for higher non-tax revenues through better-cost recoveries has been a neglected area.

Size and Growth of Government Expenditure

2.2. In Tamil Nadu, the size of government, as measured by the proportion of government expenditure to GSDP, at around 20 percent compares well with other States (Table 9) and has also been fairly stable over the period 1980-97 (Table 2). The only exception was the year 1991-92 when it crossed 25 percent, but quickly reverted to the earlier trend. It is clear from Table 2 that in Tamil Nadu opted for large current expenditure at the expense of capital outlays. To some extent, this could be because of the lack of ready investment potential in the irrigation sector. Although this paucity of investment opportunities in irrigation could have resulted in more funds that are investible to the other infra-structural sectors such as power, this did not happen. However, it is also true that in recent years, significant amounts are raised and allocated for capital needs outside the government budget through the development finance corporations.

Table 2 Tamil Nadu: Major turning points in the trends of government expenditure during 1980-99

(Percent to GSDP)

	1980-81	1982-83	1984-85	1985-86	1991-92	1992-93	1995-96	1996-97	1997-98	1998-99 (BE)
Total expenditure	20.1	21.8	20.5	19.9	25.6	22.2	18.1	19.3	19.4	20.4
Revenue expenditure	14.3	15.7	16.2	15.7	23.5	19.9	16.1	16.7	17.1	18.3
Capital expenditure	5.8	6.0	4.4	4.2	2.1	2.3	2.0	2.6	2.3	2.1
Outlays	1.1	1.5	1.2	1.0	0.8	0.7	0.9	1.2	1.7	1.6
Transfers	4.8	4.5	3.1	3.2	1.3	1.6	1.1	1.4	0.6	0.5

Sources: Government of Tamil Nadu, *Budget Documents*, various years, and, *10 Years Accounts, 1987-88 to 1996-97*, Finance Department, Chennai.

Functional Classification

2.3. The sectoral (functional) distribution of government spending shows that, over the years, there has been a marked decline in the ratios of the expenditure components related to social and economic services. In the case of the social services including education, medical, public health and welfare activities, the ratios showed an upward trend until 1990-91 but thereafter, a falling trend. As regards economic services, the descent started even earlier, that is from 1980-81. We have already noted the drop in the ratio of direct expenditure on agriculture to GSDP. Ratios of expenditures on irrigation, energy and transport have also declined. As regard general services the increase in the aggregate ratio was mainly due to the interest payments and pensions (Table 3). It should be noted here that with the setting up of development finance corporations by the State Government such as Tamil Nadu Power Finance & Infrastructure Development Corporation (POWERFIN) and the Tamil Nadu Transport Development Finance Corporation (TNTDFC), the direct budgetary capital expenditures on these functions have considerably come down. Tamil Nadu seems to have pioneered the practice of setting up such corporations and financing public services by means of extra-budgetary sources by raising public deposits through them. The extent of public deposits raised by these public sector corporations is also a reflection of prudent management of the government. Thus, the pattern of budgetary expenditure in Tamil Nadu does not always reflect the sectoral priorities of the government.

Table 3 Tamil Nadu: Trends in the government expenditure during 1980-99
(Percent to GSDP)

	1980-81	1985-86	1990-91	1995-96	1996-97	1997-98	1998-99 (BE)
Total expenditure	20.1	19.9	20.2	18.1	19.3	19.4	20.4
I. Social services	**5.7**	**7.8**	**8.2**	**6.8**	**6.9**	**6.7**	**6.7**
Education, sports, art & culture	3.0	3.6	4.1	3.3	3.2	3.3	3.6
Medical, public health & family welfare	1.4	1.8	1.2	1.1	1.0	1.1	1.1
Water supply, sanitation, housing and UD	0.2	0.3	0.9	0.8	0.8	0.6	0.4
Welfare activities	0.8	1.0	0.4	0.5	0.5	0.5	0.4
Others	0.3	1.2	1.5	1.2	1.3	1.2	1.2
II. Economic services	**10.4**	**7.7**	**7.0**	**5.9**	**6.7**	**6.3**	**5.4**
Agriculture and allied	2.1	1.4	1.8	1.5	1.5	1.5	1.2
Irrigation & flood control	0.7	0.7	0.5	0.4	0.4	0.4	0.6
Energy	1.8	1.8	0.9	0.4	0.5	0.7	0.3
Transport & communications	1.0	0.6	0.6	0.7	0.9	0.9	1.0
Others	4.8	3.2	3.2	2.9	3.4	2.8	2.4
III. General services	**3.7**	**3.8**	**4.7**	**5.1**	**5.3**	**5.4**	**7.1**
Organs of State	0.2	0.1	0.1	0.2	0.2	0.2	0.2
Fiscal services	0.2	0.3	0.3	0.3	0.3	0.3	0.3
Interest payments and servicing of debt	1.4	1.2	1.5	2.1	2.1	2.1	2.1
Administrative services	1.5	1.5	1.5	1.4	1.3	1.4	1.4
Pensions and miscellaneous	0.4	0.6	1.2	1.2	1.4	1.5	3.1
IV. Compensation and assignment to local bodies & *Panchayat Raj* institution	0.4	0.6	0.3	0.3	0.4	1.0	1.1

Sources: as in Table 2.

Economic Composition of Expenditure

2.4. While the major thrust of government expenditure can be seen from the trends in its functional pattern, its efficiency and productivity can be assessed only from its economic composition. The declining ratio of government capital expenditure could be, as seen above, due to the increasing role played by the public sector development finance companies. Thus, the budgetary allocations may not reflect the entire capital expenditure.

Table 4 Tamil Nadu: Trends in the economic composition of expenditure during 1980-99
(Percent to GSDP)

	1980-81	1985-86	1990-91	1995-96	1996-97
Current expenditure	*12.0*	*12.9*	*15.9*	*14.7*	*15.8*
Consumption	*6.0*	*8.3*	*9.4*	*9.2*	*10.1*
Employee compensation	4.0	6.0	7.8	8.3	9.4
Wages and salaries	3.7	5.4	6.9	7.6	8.8
Pensions	0.4	0.6	0.9	0.6	0.6
Net purchases (non-wage O&M)	2.0	2.3	1.6	0.9	0.7
Transfer payments	*6.0*	*4.6*	*6.5*	*5.5*	*5.7*
Subsidies	0.3	1.0	2.4	2.0	1.9
Current transfers	4.7	2.7	2.7	1.5	1.4

Source: Government of Tamil Nadu, *An Economic and Functional Classification of the Tamil Nadu Government Budgetary Transaction*, Various issues, Evaluation and Applied Research Department, Chennai.

2.5. Among the components of economic classification of the government expenditure, the growing items have been compensation to employees (salaries, wages, pensions, allowances and establishment costs), subsidies and interest payments (Table 4). Together, these three components account for over half of total expenditure and about 80 percent of current expenditure (Table 5). The growth of these components has clearly been at the cost of capital expenditure, operation and maintenance expenditure (goods and services) as also grants to co-operatives, local bodies etc.

Table 5 Tamil Nadu: Trends in the shares of major economic components of government expenditure during 1980-97
(Percent to total)

	1980-81	1985-86	1990-91	1995-96	1996-97
Current expenditure	59.0	64.4	78.0	82.0	82.4
Employee compensation	19.7	29.8	38.3	36.2	36.5
Goods & services	9.9	11.7	7.7	5.6	5.4
Interest payments	4.8	4.4	6.7	8.1	9.0
Subsidies	1.6	5.1	11.9	9.5	9.2
Grants	20.2	10.7	9.6	5.6	5.3
Current transfers other than grants	2.8	2.8	3.8	16.9	16.9
Capital expenditure	41.0	35.6	22.0	18.0	17.6

Source: as in Table 4

Structure of Financing of Government Expenditure

2.6. Non-debt revenue sources financed 80 to 90 percent of government expenditure. Own revenues financed as much as 60 percent of the expenditure with own tax revenues alone accounting for over 50 percent (Table 6). The high dependence on own sources was partly because Tamil Nadu could not qualify for a higher share in Central grants under the prevailing system of Central transfers due to prudent fiscal management. The own-tax to GSDP ratio hovered around 10 percent during most of the study period (Table 7) which is one of the highest among Indian States. But the decline in the ratio of own non-tax revenue from about 3 percent in the early 80s to 1.3 percent in 1997-98 should be a cause for concern. During the two years, 1990-92, there was a significant improvement in revenue generation owing to a spate of repayment of loans, and interest recoveries. Nevertheless, this is apparently the result of conversion of loans to Tamil Nadu Electricity Board (TNEB) into equity to face-lift its finances. The rise in expenditure also was caused by a large jump in the subsidy component, a substantial part of which went to the power sector. On the whole, although the own tax effort is higher than the average of 14 major States, the low non-tax revenue growth and the inability to qualify for higher Central transfers appear to have come in the way of maintaining the revenue raising efforts.

Table 6 Tamil Nadu: Pattern of financing government expenditure during 1980-99
(Percent to total)

	1980-81	1985-86	1990-91	1995-96	1996-97	1997-98	1998-99 (BE)
Total receipts	**87**	**88**	**82**	**90**	**81**	**84**	**76**
Revenue	79	85	80	86	77	81	75
Own	54	58	55	65	57	60	55
Tax	39	50	49	58	51	55	50
Non-tax	14	8	6	7	6	6	5
Central transfers	25	27	25	21	20	21	20
Share taxes	18	17	16	15	14	15	15
Grants	7	11	9	6	6	6	5
Capital receipts	8	3	2	3	4	2	1
Net finance requirements	**13**	**12**	**18**	**10**	**19**	**16**	**24**
Public debt (net)	8	8	11	10	9	11	13
Borrowings from Center	7	6	8	6	6	6	8
Internal debt	1	2	3	4	3	5	4
Public accounts (net)	5	4	7	1	9	5	11

Sources: as in Table 2.

Table 7 Tamil Nadu: Major turning points in the government receipts and its components during 1980-99
(Percent to GSDP)

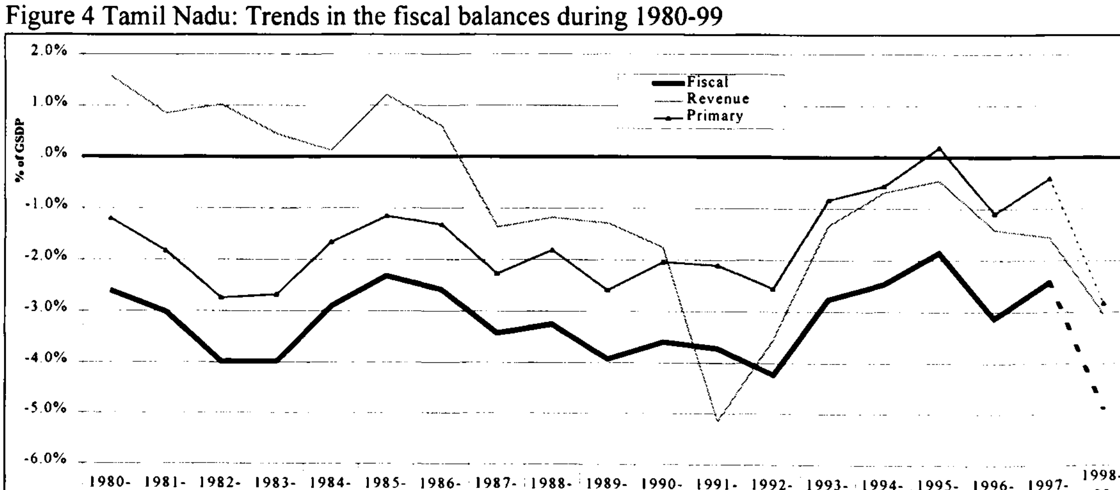
	1980-81	1981-82	1982-83	1984-85	1985-86	1991-92	1992-93	1995-96	1996-97	1997-98	1998-99 BE
Total receipts	**17.5**	**16.9**	**17.8**	**17.6**	**17.5**	**21.8**	**18.0**	**16.3**	**16.2**	**16.9**	**15.5**
Revenue	**15.8**	**14.8**	**16.7**	**16.3**	**16.9**	**18.3**	**16.3**	**15.7**	**15.3**	**15.5**	**15.2**
Tax revenue	11.5	12.1	13.6	12.8	13.2	13.3	13.0	13.3	13.0	13.1	13.1
Own-tax revenue	7.9	8.7	10.1	9.5	9.9	10.1	9.7	10.6	10.2	9.9	10.2
Agricultural income tax	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Land revenue	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0
Stamps and registration fees	0.6	0.6	0.6	0.6	0.6	0.8	0.7	0.9	0.8	0.7	0.7
Sales taxes	5.7	5.6	6.5	6.0	6.3	6.6	6.4	6.9	6.8	6.4	6.6
Tax on motor vehicles	1.0	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5
Entertainment tax	0.4	0.4	0.0	0.4	0.0	0.2	0.2	0.1	0.1	0.1	0.1
State excise duty	0.2	1.1	1.5	1.5	1.5	1.3	1.3	1.4	1.4	1.5	1.6
Share in Central taxes	3.6	3.4	3.6	3.3	3.3	3.2	3.3	2.7	2.8	3.1	3.0
Income tax	1.0	0.8	0.9	0.7	0.9	1.1	1.1	1.1	1.1	1.6	1.4
Union excise duty	2.6	2.5	2.6	2.5	2.4	2.1	2.2	1.6	1.6	1.5	1.6
Non-tax revenue	4.3	2.8	3.1	3.6	3.7	5.0	3.3	2.4	2.3	2.5	2.1
Own non-tax revenue	2.9	1.5	1.7	1.6	1.5	3.0	1.4	1.3	1.1	1.3	1.0
Interest receipts	1.7	0.5	0.5	0.4	0.4	2.1	0.5	0.5	0.4	0.6	0.3
General services	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2
Social services	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Economic services	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.4	0.3	0.3	0.3
Grants from Center	1.4	1.3	1.4	2.0	2.1	2.0	1.9	1.2	1.2	1.2	1.1
Capital receipts other than debt	1.6	2.0	1.0	1.3	0.7	3.5	1.6	0.6	0.8	1.4	0.3

Sources: as in Table 2.

Fiscal Balances

2.7. Over all, three distinct phases of fiscal developments can be observed during the period 1980-96: 1980-85, 1985-92 and 1992-96 (Figure 4 and Table 2). The slight improvement in the first half of 80s in the ratio of fiscal balance to GSDP was because of the faster decline in the expenditure to GSDP ratio than that of receipts. Unfortunately, the expenditure decline was confined to only the capital component and the revenue expenditure to GSDP ratio continued to rise owing to a step up in the subsidy expenditure on agriculture and allied sectors and interest payments during this period. The fall in the revenue to GSDP ratio was largely due to the fall in the own tax to GSDP ratio. The ratio of central transfers to GSDP went up during this phase.

Figure 4 Tamil Nadu: Trends in the fiscal balances during 1980-99



	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
Fiscal	-2.6%	-3.0%	-4.0%	-4.0%	-2.9%	-2.3%	-2.6%	-3.4%	-3.3%	-3.9%	-3.6%	-3.7%	-4.2%	-2.8%	-2.5%	-1.9%	-3.1%	-2.4%	-4.9%
Revenue	1.6%	0.8%	1.0%	0.4%	0.1%	1.2%	0.6%	-1.4%	-1.2%	-1.3%	-1.8%	-5.2%	-3.5%	-1.3%	-0.7%	-0.5%	-1.4%	-1.6%	-3.0%
Primary	-1.2%	-1.8%	-2.7%	-2.7%	-1.7%	-1.2%	-1.3%	-2.3%	-1.8%	-2.6%	-2.1%	-2.1%	-2.6%	-0.8%	-0.6%	0.2%	-1.1%	-0.4%	-2.8%

2.8. The downtrend in the fiscal situation was more discernible from 1985-86 to 1991-92. Although there was a significant improvement in the ratio of own tax receipts to GSDP, the rising current expenditure to GSDP ratio neutralized the revenue growth and resulted in the worsening of the fiscal balances. In particular, there was a steep rise in the wage bill, subsidies to power sector, education and social welfare activities and interest payments. The revenue balance that used to be a significant surplus and had a moderating effect on the fiscal deficit in the early 80s turned negative in 1987-88 and has been worrisome ever since. The capital expenditure continued to decline. In addition, there was also a noticeable decline in the ratio of central transfers.

2.9. Between 1992-93 and 1995-96, there were signs of fiscal consolidation with the fiscal balance improving from around (–) 4 percent to (–) 2 percent. There was a marked decline in the expenditure as a percent of GSDP, this time unlike in the earlier two phases, more on the revenue side and particularly in subsidy expenditure. On the receipt side, the only notable increase was with respect to own tax revenues, obviously due to several tax reforms initiated during this period. However, the ratios in respect of capital receipts, Central transfers and non-tax revenues continued to decline.

2.10. Thus, the improvement in the fiscal balance in recent years was because of a marked decline in the revenue expenditure to GSDP ratio and increase in the own tax efforts. Nevertheless, the improvement proved to be short-lived with the fiscal balance again slumping in 1996-97 to over –3 percent. In fact, revenue deficit still accounts for about half of the fiscal deficit. If the current budget estimate is any indication, it may worsen in 1998-99. The widening gap between the primary and fiscal deficits is indicative of the growing burden of debt on the government's finances.

Debt Management

2.11. Long-term loans such as those from the Central government and internal debt sources finance about two-thirds of the fiscal deficit. The rest is financed through public account balances including small savings and State provident funds. A quarter of the borrowing from Center is rolled over. During 1980-97 the stock of debt has grown five-fold from Rs 2,798 crore to Rs 14,089 crore (Table 8 and Table A. 19). Yet, there is a notable decline in the ratio of outstanding debt to GSDP. It is a little intriguing that while the ratio of outstanding debt to GSDP is falling that of the interest and debt-servicing expenditure shows an upward trend (Table 3 and Table A. 19). This could be primarily because the new debts contracted are at higher nominal interest rates. In fact, the interest and debt-servicing expenditure as a ratio to outstanding debt has steadily risen from 4% in 1980-81 to 12.4% in 1997-98. Interest and debt-servicing expenditure forms about 13 percent of the revenue and 10 percent of the total expenditure.

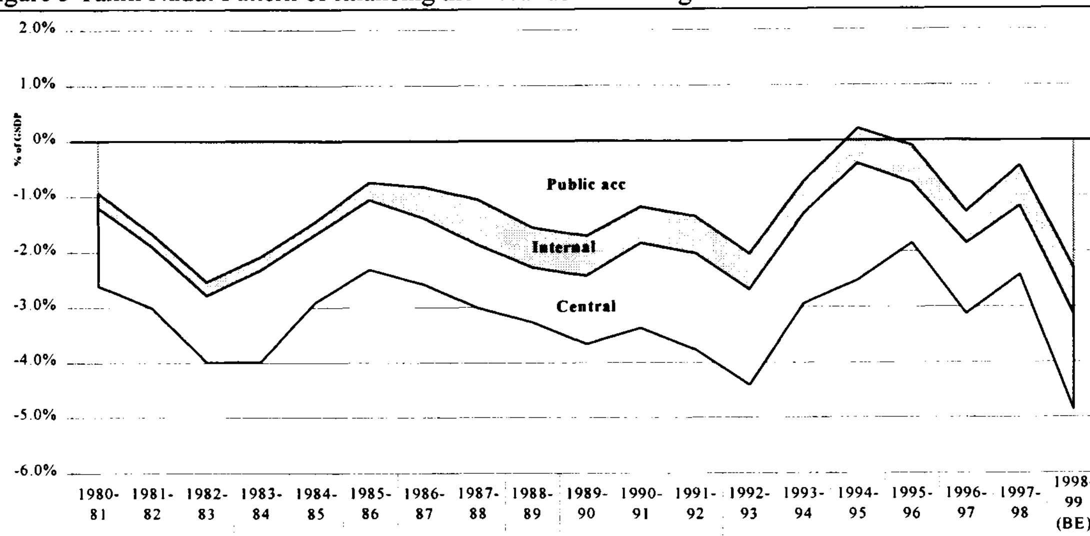
Table 8 Tamil Nadu: Trends in the structure of financing the fiscal deficit in different sources during 1980-98

(Percent to total)

	1980-81	1985-86	1990-91	1995-96	1996-97	1997-98
Stock of outstanding debt (Rs crore)	2,798	3,671	5,880	11,202	14,089	14,732
As ratio to GSDP (%)	25.2	19.3	17.9	18.9	19.4	16.3
Net financing requirements(Rs crore)	210	363	1,126	1,255	2,894	2,683
Interest bearing new debt (net) (% to total)	64.3	67.8	61.1	94.9	49.8	67.5
Borrowings from Center (% to total)	54.3	54.0	42.6	58.8	34.3	39.6
Internal debt (% to total)	10.0	13.8	18.4	36.1	15.5	27.9
Public accounts (net) (% to total)	35.7	32.2	38.9	5.1	50.2	32.5
Net borrowing / Gross borrowing from Center	74	55	64	75	76	76
Interest payment/ revenue	8.8	6.9	9.5	13.0	13.3	13.0
Interest payment/ expenditure	7.0	5.9	7.6	11.3	10.5	10.4
Value of outstanding guarantees (Rs crore)			696	3,778	4,141	3,703

Sources: as in Table 2.

Figure 5 Tamil Nadu: Pattern of financing the fiscal deficit during 1980-99



	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
Central	-1.4%	-1.1%	-1.2%	-1.7%	-1.2%	-1.3%	-1.2%	-1.1%	-1.0%	-1.2%	-1.5%	-1.7%	-1.7%	-1.6%	-2.1%	-1.1%	-1.3%	-1.2%	-1.7%
Internal	-0.3%	-0.2%	-0.2%	-0.2%	-0.2%	-0.3%	-0.6%	-0.8%	-0.7%	-0.7%	-0.7%	-0.7%	-0.6%	-0.6%	-0.6%	-0.7%	-0.6%	-0.7%	-0.8%
Public acc	-0.9%	-1.7%	-2.5%	-2.1%	-1.4%	-0.7%	-0.8%	-1.1%	-1.6%	-1.7%	-1.2%	-1.4%	-2.0%	-0.7%	0.2%	-0.1%	-1.3%	-0.5%	-2.3%

Government Guarantees to PSU Borrowings

2.12. In addition to the direct borrowings, the State government also provides guarantees to the loans raised by various State public sector undertakings and cooperatives[6] although these do not involve budgetary outflows except in cases of defaults. The outstanding value of these borrowings currently is about Rs 3,703 crore. Over a half of the outstanding guarantee amount – Rs 1,882 crore – is in respect of borrowings raised by the TNEB. So far, the budgetary burden due to these guarantees has been zero as there are no defaults. In the unlikely event of defaults, the government has set up a fund by charging an annual guarantee commission equal to half a percent of the respective outstanding amount of guarantee from each of the PSUs.

The Comparative Fiscal Situation

2.13. Table 9 compares the fiscal aggregates of Tamil Nadu with the average of the fourteen major States and that of the six fastest-growing States in India[7]. Tamil Nadu belongs to the middle income group of States and also to the group of the six fast growing States. Yet, the size of government expenditure in Tamil Nadu is smaller than the average of both the groups to which it belongs. In fact, capital expenditure to GSDP ratio is smaller than the average of any other group.

Table 9 Tamil Nadu: A comparative picture of fiscal performance during 1992-96
(Percent to GSDP)

	Tamil Nadu	Fourteen major States	High income States	Middle income States	Low income States	Six fast-growing States
Total expenditure	19.7	18.5	21.5	20.2	14.9	23.3
Revenue expenditure	18.1	16.1	18.4	17.5	13.1	20.0
Capital expenditure	1.6	2.5	3.1	2.7	1.8	3.3
Total revenue	17.0	15.3	17.7	16.9	12.1	19.5
Own revenue	11.6	9.6	13.2	10.9	5.7	14.1
Own tax revenue	10.4	7.3	10.0	8.8	3.9	10.7
Own non-tax revenue	1.3	2.3	3.2	2.2	1.7	3.4
Central transfers	4.7	5.3	4.1	5.5	6.2	4.8
Share in Central taxes	3.1	3.2	2.4	3.3	3.8	2.8
Central grants	1.6	2.1	1.7	2.2	2.4	2.0
Capital receipts other than debt	0.7	0.4	0.4	0.5	0.2	0.5
Balances						
Fiscal balance	-2.6	-3.3	-3.8	-3.3	-2.8	-3.8
Current revenue balance	-1.1	-0.8	-0.7	-0.6	-1.1	-0.5

Notes:
High Income States - Gujarat, Haryana, Maharashtra, Punjab and West Bengal; Middle-income States - Andhra Pradesh, Karnataka, Kerala, Rajasthan and Tamil Nadu; and Low-income States - Bihar, Madhya Pradesh, Orissa and Uttar Pradesh. The six fast growing States identified based on average annual growth in real GSDP during the period 1980-96 are Maharashtra, Rajasthan, Haryana, Tamil Nadu, Karnataka and Gujarat.

Expenditure Growth

2.14. As noted above, the expenditure growth is basically due to employee compensation, interest payments and subsidies (Table 4).

Employee Compensation

2.15. At the end of the financial year 1996-97 there were 12.9 lakh government employees in the State of which 6.9 lakh were direct State government employees. This number continued to swell from 3.7 lakh in end-March 1981 to 6.9 lakh in end-March 1997 (Table 10). The growth rate at around 2.6 percent until the 90s that was already higher than the population growth rate of 1.4 percent in the State, has gone up in recent years, to 3.3 percent.

Table 10 Tamil Nadu: Growth of employee compensation and underlined factors during1985-97

	1985-86	1990-91	1995-96	1996-97
Compensation of employees (Rs lakh)	9,35,03	24,47,87	53,75,38	70,02,00
Wage bill growth (%age annual)	22	23	14	30
No of State government employees (lakh)	5.3	6.1	6.6	6.9
Sources of Growth (Average of preceding five years)				
Wage bill growth (%)	24	22	17	20
Employment growth (%)	8	3	2	3
Price rise (%)	8	9	10	9
Real wage growth rate (%)	8	8	5	8

Source: as in Table 4

2.16. In part, this growth is related to the sectoral shift of expenditure toward social services (*for example,* education, public health and nutrition), which are employment-intensive. Presently, the annual rate of growth of wage bill averages around 20 percent with inflation at 9 percent and real wage rate rising at about 8 percent per year. If these rates of price rise and real wage increase were to continue, the rate of growth of the wage bill is likely to surpass the rate of growth of GSDP. With the implementation of the Fifth Pay Commission's recommendations, the share of employee compensation in total current expenditure is likely to go up further. Thus, with the State government having little control over inflation and wages, the growth of the wage bill can be contained in the medium-term only by bringing down the rate of growth of employment in the public sector. At the same time, the existing level of employment in the social sectors needs to be strengthened by redeployment.

Subsidies

2.17. Direct subsidies are another fast growing item of expenditure. In the early 80s, such subsidies amounted to be than 2 percent of GSDP, but by 1995-96, their share turned out to be a sizable 12 percent. Currently, such subsidies constitute about 9.5 percent of GSDP.

Table 11 Tamil Nadu: Sectoral distribution of direct subsidies during 1980-96
(Percent to total)

	1980-81	1985-86	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
General services	3.4	2.2	0.3	0.1	0.1	0.2	0.2	0.2
Social & community services	30.9	31.3	49.0	14.3	37.4	49.9	51.0	51.0
Education	0.0	2.3	0.5	0.6	1.8	2.6	2.6	2.6
Medical, family welfare, public health, water supply and sanitation	0.2	15.6	0.0	0.0	0.0	0.0	0.0	0.0
Social security and welfare	30.6	13.4	44.3	12.6	34.2	44.3	45.5	45.5
Housing & urban development	0.1	0.0	4.2	1.1	1.4	3.0	2.9	2.9
Economic services	65.7	66.5	50.6	85.6	62.4	49.9	48.8	48.8
Agriculture and allied activities	20.3	41.5	32.2	18.4	49.3	35.7	36.2	36.2
Water and power development	0.0	0.0	1.4	62.1	0.0	0.6	0.0	0.0
Industry & minerals	36.0	24.5	12.8	3.1	7.1	11.4	11.6	11.6

Source: as in Table 4

2.18. About half of the subsidies go to social sectors and social welfare programs, particularly, the noon-meal and nutrition schemes (Table 11). Of the remaining half, about 36 percent are directed towards agriculture and allied activities. Given the constraints on additional taxation, it is necessary to prune the growth in direct subsidies and improve their targeting and cost- effectiveness.

Revenue Performance

2.19. Near-stagnant own-source revenues and dwindling non-tax revenues (as ratios of GSDP) characterize the State's revenue developments (Table 7).

Own Source Revenues

2.20. As in other States, taxes on commodities and services account for the most part of the own tax revenue while taxes on other bases such as income and property – account for less than 10 percent (Table 12). The major individual own tax sources are sales tax (66.9 percent), State excise duties (13.3 percent), motor vehicle taxes (5.3 percent), stamp duties and registration fees (7.4 percent) and entertainment tax (1.5 percent), which together account for 92.1 percent of total own tax revenues. This being the case, the buoyancy of the commodity taxes is crucial for the growth of own tax revenues. The buoyancy with respect to GSDP of individual taxes presents a mixed picture of their growth performance.

Sales Tax

2.21. The proportion of sales tax in own-tax revenue is significantly higher in Tamil Nadu than in many States. In view of this high dependence on sales tax (Table 12), the growth of this tax is crucial for revenue augmentation. However, until recently, the tax system remained highly complex with several components of the tax applicable on the same base[8]. There was a multiplicity of rates. Apart from the exempted goods and 'declared goods', for which the maximum rate cannot exceed the Central sales tax (CST) rate (4 percent), commodities were subject to rates ranging from 2 percent to 60 percent, with items such as liquor and aviation fuel attracting higher rates. Apart from the general sales tax (GST) and the CST, an additional sales tax was also levied on a turnover basis that was not supposed to be passed on to consumers. The rate of additional tax went up to 3 percent of taxable turnover beyond Rs 300 crore. The levy faced considerable resistance as it affected the manufacturing or trading profits and threatened to provoke capital flight from the State. In addition, a surcharge and an additional surcharge were in force. The former was applicable to notified local areas and the latter was levied as a percentage of the basic levy. The motor spirit tax is on the retail sale of motor spirit on volumetric basis. The main problem areas in the sales tax regime have been high and differentiated tax rates, ineffective tax incentives and exemptions, regressiveness, and the cascading effect arising from taxation of intermediates.

Table 12 Tamil Nadu: Contribution of individual taxes to total revenue and their buoyancy with respect to GSDP

	Average share in total (1980-96)	Income buoyancy (1980-96)
Taxes on income	**0.2**	
Agricultural income tax	0.2	-1.97
Taxes on property and capital transactions	**7.8**	
Land revenue	0.2	-1.75
Stamp duties and registration fees	7.4	1.34
Urban immovable property taxes	0.1	1.25
Taxes on commodities and services	**92.1**	
Total sales tax	66.9	1.08
Tax on vehicles	5.3	0.94
Entertainment tax	1.5	0.57
State excise duty	13.3	1.17
Electricity duty	1.9	0.68

Source: as in Table 2

2.22. Major steps have been taken in recent years towards rationalization of the sales tax structure. The number of rates has been reduced to five: 4, 8, 11, 16 and 20. Certain special rates apply on commodities like bullion, diesel, petrol and liquor. From July 1996, the surcharge and additional surcharge were abolished. The turnover limit for additional sales tax was enhanced to Rs 25 crore with a view to reduce the number of payers. Also, in accordance with the 46th Amendment to the Constitution of India, the State government has started levying the sales tax on 21 items of works contracts (ranging from 5 percent to 15 percent) and leases of goods.

2.23. Along with other States, Tamil Nadu also offers various industrial incentives that take the form of capital subsidies, sales tax waivers, tax deferral and so on (Table A. 20). The working of these incentives leaves much to be desired. Although some steps have been taken to simplify the incentive system, more steps such as scrapping of tax deferral are needed. Further, several studies have shown that tax incentives cannot substitute better infra-structural facilities in promoting industrial growth.

2.24. Harmonization of sales tax rates among the States and Union Territories is badly needed. The rates adopted in Tamil Nadu for several commodities are in general on par with the floor rates recommended in the Finance Ministers' Conference, but in certain cases, such as electronic goods, they are lower. Ultimately, the State should move towards a VAT along with its neighbors. In this context, perhaps it is advisable that Tamil Nadu should refrain from any *ad hoc* steps such as bringing the services into the tax net as such a move might complicate the introduction of VAT and create further distortions in the tax regime. It is necessary to strengthen the tax collection machinery through computerization, proper training and severe deterrents for tax evasion before introducing VAT.

2.25. Although these tax reforms can be expected to yield significant additional yields, it is difficult to estimate the revenue gains with precision. Nevertheless, it is more than likely that the ratio of sales tax to GSDP can rise by 0.5 percent as a result of scrapping of tax incentives, aligning rates with floor rates recommended by the Finance Minister's Conference and improvements in tax administration.

State Excise Duty

2.26. Excise revenue, which is the next important source of own tax revenue, has been volatile because of changes in prohibition policy in the past[9]. Excise levies include the basic excise duty, vend fees and additional vend fee on 25 dutiable goods such as the Indian-made foreign liquors (IMFL) – wine, malt liquor, beer, *arrack*, rum and so on, and on medicinal and toilet preparations containing alcohol. The excise duty including the vend fees and additional vend fee is collected based on bulk litres (BL) and proof litres (PL)[10]. The basic duty ranges from Rs 2 to Rs 18 per bulk litre in the case of malt liquor, beer exported to other States and country liquor, and from Rs 30 to Rs 60 per proof litre in the case of IMFL. The vend fee ranges from 50 *paise* to Rs 2 per bulk litre, and the additional vend fee between Re 1 and Rs 6.70. License fee for manufacture, supply, selling by wholesale and possession of IMFL and beer is of the order of Rs 12 lakh and Rs 4 lakh per license. Besides license fee, application fees and privilege fee are also collected from the licensees. Bulk of the excise revenue (over 85 percent) comes from IMFL.

2.27. The government took certain major steps in 1989 to mobilize additional excise revenue and to plug leakage and loopholes in excise administration. Liquor shops that were given licenses for a modest fee of Rs 25,000 were let out on auction, fetching substantial rental revenue. In 1990, when the ban on arrack was lifted, a government monopoly was introduced in blending and distribution of arrack, a reform of significant importance in curbing illicit manufacture and sale. At present, toddy continues to be banned, and the main sources of revenue consist of excise duties and vend fees on IMFL and on arrack, as well as revenue from the auction-sale of IMFL and arrack shops. Although with the relaxation of prohibition, excise revenues have steadily increased in absolute terms. The lifting of the ban on arrack and introduction of government monopoly have helped the rise. Nevertheless, as a proportion of GSDP, excise revenue declined over the years.

Stamp Duties and Registration Fees

2.28. The bulk of revenue from stamp duties and registration fees comes from non-judicial stamp duties and registration fees linked to transactions of immovable properties such as land and buildings. Although these levies are not designed to be progressive, they have been found to be elastic with respect to increases in property values and growth of transactions. However, the considerable under-reporting of sale values results in substantial tax evasion. This has been tackled through the adoption of normative values and through coordination with valuations arrived at by the income tax authorities. These measures have resulted in good revenue growth. For additional resources, checking of evasion instead of rate increases appears to be the feasible course of action.

Agricultural Taxes

2.29. In Tamil Nadu, the major taxes on agriculture are land revenue and agricultural income tax. For a revenue source with negligible contribution to the exchequer and serving no purpose except maintaining the land records, the rate structure of land revenue is remarkably complex. The tax is basically levied on wet lands but includes several other levies like (a) irrigation levy; (b) additional assessment and additional water cess; (c) special rates of water cess; (d) betterment levy; (e) local cess and local cess surcharge; (f) normal water cess for flow irrigation, and (g) other levies. From 1971, land revenue component of the consolidated wet assessment has been waived in respect of individual holding of 5 acres or less of wet land.

2.30. The agricultural income tax, introduced in 1955, initially covered only plantations (coffee, tea, rubber, cardamom and cinchona), but was extended to agricultural income derived from all plantations in 1958. The tax is levied on two alternative bases: (1) the income-based system where the agricultural income is assessed after making certain allowances, and (2) the holding-based system or the compounding system under which the tax depends on the extent of land held by the assessee. No tax is leviable if the holdings are below 8 acres. The tax system underwent major changes in 1991-92, and these changes aimed at giving relief to farmers and simplifying the tax structure.

2.31. In principle, the agricultural income tax is supposed to be progressive and responsive to increases in output, but over the years these features have been eroded through numerous exemptions, compounding facilities, liberalization in the definition of standard acres, and avoidance through partitions. Thus, in effect, agricultural taxes are very low, regressive and unresponsive to the growth of agricultural incomes and account for less than 0.2 percent of GSDP.

Motor Vehicles Tax

2.32. Growth of receipts from motor vehicles tax (MVT) depends on increase in the number of vehicles and their occupancy[11]. The bulk of this levy falls on public transport, that is, trucks and buses. With increases in the prices of diesel and petrol, profits in the public transport sector have been squeezed. Increased taxation in future through rate increases is likely to encounter resistance from commuters unless outlays on roads are increased and maintenance of roads improves. If the MVT can be considered a recovery from road users rather than a tax, this recovery already exceeds outlays on the roads sector. However, expenditure allocations on maintenance of the roads have been low. Thus, with an expected rise in the efforts at improving the maintenance of roads and building and upgradation of the road net work in the State, there is a need to explore the possibility of increasing the MVT.

Entertainment Tax

2.33. Entertainment tax constitutes an important source of revenue to the State because of the popularity of cinema in Tamil Nadu. Since 1989 the *ad valorem* levy on the price of cinema tickets and specific rates per show have been consolidated and modified into a 'compounded' levy which is a percentage of the gross admission (*ie* seating capacity) in cinema theatres. This system is now applicable to all areas other than Chennai, Madurai, and Coimbatore, in which *ad valorem* taxes continue. The compounding system sacrifices elasticity arising from increases in ticket prices and from higher attendance in theatres but serves as a means of preventing evasion (as well as corruption and harassment).

Own Non-tax Revenue

2.34. As already noted, Tamil Nadu's own non-tax revenues constituted barely 3 percent of GSDP in 1980-81 and that their contribution has steadily declined over the years to about 1 percent. Table 13 shows that interest receipts account for about 29 percent of the non-tax revenue, while recoveries on public services account for over two-thirds, the contribution of PSUs being negligible.

Table 13 Tamil Nadu: Composition of own non-tax revenue during 1980-96
(Percent to total)

	1980-81	1985-86	1990-91	1995-96
Own Non-tax revenue	100.0	100.0	100.0	100.0
Interest receipts	27.7	27.8	23.5	28.8
Dividends	0.5	0.9	0.9	3.5
Public services	71.8	71.3	75.6	67.7
General services	8.9	12.3	19.6	15.5
Social and community services	11.5	18.2	4.0	14.7
Economic services	21.3	40.8	51.9	37.4

Source: as in Table 2.

Unrecovered Costs or Indirect Subsidies

2.35. Given the constraints in raising tax resources, it is imperative to improve the cost recoveries from services provided by the State government. Guhan (1995) estimates that, on the whole, the recoveries came to about only 12 percent of net State expenditure during 1980-92. In the case of social services, the cost recoveries covered only 3 to 4 percent of outlays, while in the case of economic services (including forests) they were 10 to 12 percent. Public goods, merit goods and pure transfers together account for about 32 percent of the total recoveries, with merit goods accounting for over 20 percent. It may not be feasible to significantly increase the cost recovery rate for these categories, but there is a strong case for doing so in university and higher education and, to some extent, in secondary education. Economic and social infrastructure and production services together account for about 30 percent of unrecovered costs. The scope for enhanced cost recovery is much greater in this category, particularly in irrigation.

2.36. As for the government commercial undertakings, available information reveals that the overall recovery rate for total non-departmental public enterprises and PSUs was 0.98 percent in Tamil Nadu against the highest (0.34 percent) recorded by Andhra Pradesh and the lowest (0.17 percent) by Bihar. A lower percentage of recovery has been recorded by Haryana (0.57 percent), Goa (0.64) and Orissa (0.51 percent).

Central Revenue Transfers

2.37. Central transfers on the revenue account contributed about one-third of total revenue receipts in 1995-96. Shared taxes constitute about two-thirds of all revenue transfers, with the balance being central grants for plan and non-plan purposes. As far as income tax is concerned, there has been a gradual drop in the share due to lower weight for the collection factor in income tax sharing in recent awards.

2.38. The share of Tamil Nadu in basic union excise duties reached a peak of 7.6 percent in the shareable pool of union excise duties under the seventh Finance Commission (1979-1984). Subsequently the Eighth and Ninth Finance Commissions segmented the pool into two parts, one component available to all States and another confined to post-devolution deficit States. Since Tamil Nadu is not such a 'deficit' State, it benefited only from the component available to all States. This was 40 percent in 1984-89 (Eighth Commission), but the component was reduced to 37.6 percent in 1990-95 (Final award of the Ninth Commission). Consequently, Tamil Nadu's share in the overall divisible pool (including the component available only to deficit States) has dropped from 7.6 percent for the period 1979-84 to 6.6 percent for 1995-2000.

2.39. As for the Central grants to Tamil Nadu, about 85 percent have been Plan grants, of which 60 percent are accounted for by grants for Central and Centrally sponsored plan schemes. As for the non-Plan grants, Tamil Nadu could not qualify for the 'gap' grants and received only some up-gradation grants under Article 275, grant *in lieu* of the repealed railway passenger fare tax, and margin money grants. The grants for the relief of natural calamities and other non-Plan purposes have not been significant.

State Budgets and Local Finances

2.40. The local public sector in Tamil Nadu, both urban and rural, has distinct features. The urban sector consists of 6 municipal Corporations, 102 municipalities in 4 grades and 636 town Panchayats in 4 grades. The rural local sector consists of three tiers of Panchayat administration – the first tier is Village Panchayats (12,593 in 6 grades), the second tier is the Panchayat Unions (385)[12], the third-tier is the District Panchayat (38).

2.41. Compensation and assignment of taxes and grants (both statutory and specific grants for entrusted functions) to local bodies accounts for 2 percent of revenue expenditure in 1995-96. Of total assignments and grants, the local share of entertainment tax accounted for 38 percent, the local cess matching grant to Panchayat Unions for 27 percent, and other important statutory grants (like the house tax matching grant, local irrigation grant and local roads grant) for 12 percent. Specific grants, mostly for education, public health, family welfare and water supply, make up the balance of 23 percent. The low level of fiscal support to local bodies was related to the fact that in Tamil Nadu, the State government directly met the salaries of teachers in local body schools. Besides, basic needs and rural infrastructure programs are being mostly implemented through State government departments rather than through local bodies and hence are directly funded from the State exchequer.

2.42. The First State Finance Commission[13] has recommended devolution of 8 percent of State's own tax revenues net of collection costs to local bodies for 1997-98, gradually increasing by one percent annually to 12 percent in 2001-02. The amount is to be spent on maintenance of core civic service sector assets on revenue account, namely, drinking water, roads, street lighting, sanitation/ sewerage, solid waste management and storm water drains. The State Government has accepted the scheme but the percentage will be decided on year to year basis. Out of this, 15 percent would be earmarked as equalization and incentive fund and the rest 85 percent would be shared in a ratio of 55:45 between rural and urban bodies against the recommended share of 60:40. (Details of Resource Allocation Mechanism is given in Annexure I). This devolution is in addition to 90 percent share in entertainment tax collections, maintenance grants for maternity centers, dispensaries and irrigation. However, grants for maintenance of street lights, water supply, dustless surfacing and local road grants would be subsumed in the overall devolution and also no DA reimbursement grant would be released to the local bodies. The State Government has also decided that the revenue from minor minerals will be credited directly into the local body account and the revenue received from the black granite will also be shared with the local bodies. Royalty from major minerals will not be shared with the local bodies. Further, the capital grants as per recommendations of the Tenth Union Finance Commission will be decided every year. In 1997-98, total devolution was 8.23 percent and for 1998-99, it was budgeted at 9.51 percent of the State own tax revenues while in 1996-97 it was only 3.74 percent.

Summary

2.43. Thus, during the period under study, there was a significant rise in the revenue expenditure, particularly, subsidies and interest payments. Whatever expenditure compression has taken place they have been only on the capital side. The growth on the revenue side was mostly dependent on own taxes particularly, sales tax, State excise, stamp duties and registration fees, and motor vehicles tax. The ratios of non-tax revenues and Central transfers have been either stagnant or falling. Fiscal balance for the most part of the study period was negative and declining and the signs of improvement in recent years have not proved to be long lasting.

Recommendations

Any attempt to restore fiscal balance should comprise augmentation of the revenue efforts along with growth-inducing rationalization of the tax system in the State and, restructuring of the spending pattern with emphasis on productive sectors including human capital. Specifically, the measures shall include:

- Strict restriction on recruitment to government services,
- Pruning and improved targeting of welfare schemes to help achieving better results,
- Revamping of cost recovery policies in roads, irrigation and power sector,
- Harmonizing sales tax rate-structure in conjunction with neighboring States,
- Scraping of tax deferral scheme and simplifying the industrial incentive schemes,
- Preparing an agenda for the gradual introduction of VAT,
- Revamping of excise rate structure by integrating vend fees into the rate,
- In the case of stamp duties and registration fees, strengthening the system of normative valuation and coordination with income tax authorities,
- Revenue structures of the local bodies need to be rationalized and their administration is modernized, and
- In this context, government should consider setting up of a permanent training institute to cater to the training needs of the local bodies in the technical, financial and administrative aspects of the local management.

2.44. In what follows, the role and contribution of government in specific sectors is analyzed. Four sectors, power, irrigation, roads and bridges and road transport representing the economic infrastructure and two, education and health representing the social development are chosen for the purpose. The aspects investigated are, (a) adequacy and efficiency of government expenditure, (b) financing of the creation of the new capital assets, operation and maintenance, up-gradation and rehabilitation of existing capital assets, and (c) examining the options to remove some of the financial and institutional constraints.

Chapter 3 Infra-structural Sectors

Power

3.1. Like many States in India, Tamil Nadu has been experiencing shortage of energy in recent years. In fact, it is the sixth most Power-deficit State in the country[14]. Until recently, there seems to have been little additional investment in this sector. Added to that, the efficiency of generation and distribution has also been not up to the mark. Further, the financial position of TNEB has been precarious and institutional factors have prevented the charging of remunerative tariffs.

Demand - Supply Position

3.2. Until 1995-96, the energy supply shortfall[15] as a ratio of the requirement in the State at around 4 percent was below the 7.7 percent gap at the all-India level (Table 14). However, since 1995-96, the gap has been widening and by the end of the Eighth Plan (1996-97) became 18.7 percent, considerably higher than the all-India gap of 9 percent[16]. The Ninth Plan document observes that the total energy requirement is likely to grow from the present (1997-98) 40,343 mu to 58,575 mu by 2001-02 while the supply with the proposed outlay will be only 36,953 mu[17].

Table 14 Tamil Nadu: Power supply/deficit position as compared to all-India average and neighboring States
(Percent to total requirements)

	Average 1990-95	1995-96	1996-97
Tamil Nadu	-3.9	-10.9	-18.7
Andhra Pradesh	-6.8	-20.2	-26.5
Karnataka	-22.3	-20.7	-26.9
Kerala	-2.0	-14.3	-18.9
All-India	-7.7	-9.8	-9.0

Source: Government of India (1997) *Annual Report on the Working of State Electricity Boards and Electricity Departments*, Planning Commission, February.

Supply-side: Capacity, Generation, etc.

3.3. As regards investment in the power sector, although the outlay has increased from Rs 30 crore in the First Five-year Plan to Rs 4,430 crore in the Eighth Plan, the State's share in all-India power outlay came down considerably until the Fifth Plan (Table 15). It was only from the Sixth Plan onwards that the need to step up the outlay was realized, and there was a rise in the share. The Ninth Plan proposes an outlay of Rs 6,000 crore during 1997-2002.Yet, the power supply deficit is expected to go up from 6,929 mu to 21,622 mu by the year 2002. The additional investment required to meet the State's energy demand by the year 2002 is much more than the planned outlay of Rs 6,000 crore.

Table 15 Tamil Nadu: Plan-wise outlay on power sector relative to all-India outlays

	Period	Outlay on Power sector in Tamil Nadu (Rs crore)	Share in all-India (%)
First Plan	1951-56	30	8
Second Plan	1956-61	79	19
Third Plan	1961-66	119	12
Fourth Plan	1969-74	214	9
Fifth Plan	1974-79	258	4
Sixth Plan	1980-85	954	5
Seventh Plan	1985-90	2115	6
Eighth Plan	1992-97	4430	6

Source: as in Table 14 and Tamil Nadu Electricity Board (1997) *Statistics at a Glance*, Chennai.

3.4. The installed capacity has also picked up pace only from the Sixth Plan onwards. In addition, there was a shift from the hydro- and wind-based capacity to the thermal capacity owing to the limited water resources in the State (Table 16).

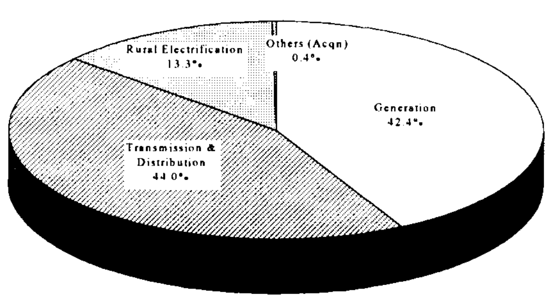
Table 16 Tamil Nadu: Trends in the installed capacity and its composition in the power sector during 1980-97
(Percent share)

	1980-81	1985-86	1990-91	1995-96	1996-97
Installed capacity (MW)	2,929	3,668	5,744	6,908	6,908
Hydro + wind	47	38	34	29	29
Thermal + gas	53	53	60	66	66
Nuclear	0	9	6	5	5

Source: State Planning Commission (1998) Ninth five-year Plan 1997-2002, Government of Tamil Nadu, Chennai.

3.5. About 42 percent of the outlay on installed capacity have been towards generation; another 44 percent towards transmission; about 13 percent towards rural electrification and the rest has been towards acquisition, renovation and other purposes.

Figure 6 Tamil Nadu: Trends in the composition of outlay on power sector during Eighth Five Year Plan, (1992-97)
(Percent share)



Availability of Power

3.6. Power generation has picked up from 1980-81 and increased three-fold during 1980-97 (Table 17). Currently, own generation accounts for 70 percent of the availability. The rest is purchased from the Central sector. As regards the efficient utilization of existing capacity, the plant load factor (PLF) of thermal stations in Tamil Nadu has been slightly lower than Andhra Pradesh has, but better than in Karnataka and the national average. About 16 to 18 percent of the power is lost in transmission and distribution (T&D), and another 5 percent as the auxiliary consumption. Thus, only 78-79 percent of available power is reaching the final consumers. The T&D losses are lower than not only the all-India average but also that of the three southern neighboring States. Fuel efficiency parameters of TNEB in respect of coal and oil consumption (0.75 per kwh and 1.21 per kwh, respectively) compare favorably with all-India averages.

Table 17 Tamil Nadu: Trends in the availability of power during 1980-97
(Percent to gross availability)

	1980-81	1985-86	1990-91	1995-96	1996-97
Generation	67	64	63	71	70
Thermal	22	42	44	55	57
Hydro	45	22	19	15	13
Others	0.0	0.0	0.1	0.1	0.3
Purchase	23	35	36	29	30
Import	10	1	0	0	0
Gross available (mu)	10,928	13,488	20,823	31,162	32,803

Source: Same as Table 16.

Table 18 Tamil Nadu: Plant load factor in neighboring States and all-India during 1990-96
(Percent)

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Andhra Pradesh	65.8	62.1	65.0	68.7	70.2	77.4
Karnataka	76.2	59.1	49.4	66.9	64.9	67.7
Tamil Nadu	58.3	55.7	65.2	69.0	68.1	76.1
All-India	51.3	50.6	54.1	56.6	55.0	58.0

Source: Same as Table 14.

Table 19 Tamil Nadu: Pattern of power consumption during 1980-97
(Percent to total consumption)

	1980-81	1985-86	1990-91	1995-96	1996-97
Auxiliary consumption	3	4	4	5	5
Line loss	18	18	18	16	16
Sales within State	76	75	77	78	78
Sales to other States	3	3	1	1	1

Source: Same as Table 14.

Costs of Generation and Distribution

3.7. Notwithstanding the operational efficiency, there have been continual increases in costs. In addition, there have been increases in the price of purchased electric power from the Central sources. Expenses on wages and salaries also have increased. Interest charges constitute another important cost item. In the absence of internal funds, TNEB has to borrow heavily to finance its capital investments, and the interest costs have been steadily rising. Overall, the average cost per unit (including, generated as well as purchased) has risen from Re 0.76 in 1985-86 to Rs 1.89 in 1996-97, or by nearly 21 percent per year. The unit cost in Tamil Nadu, although lower than the all-India average, has been consistently higher than in the neighboring States (Table 20).

Table 20 Tamil Nadu: Cost of power supply compared to neighboring States during 1980-97
(Paise/ kwh).

	1980-81	1985-86	1990-91	1995-96	1996-97
Andhra Pradesh	38	53	79	150	176
Karnataka	26	64	83	164	179
Kerala	22	36	68	128	146
Tamil Nadu	44	76	114	173	189
All-India Average	44	78	117	179	196

Source: Same as Table 14.

Power Tariffs

3.8. Tariff revisions have fallen far short of escalating costs. The cost of supply of one unit for high-tension (HT) consumers is 179.52 paise and for low-tension (LT) consumers, 228.78 paise. The effective rates charged, although higher than the all-State average (Table 21), are generally lower than the cost per unit particularly from the non-industrial and non-commercial consumers.

Table 21 Tamil Nadu: Average power tariff on different types of consumers in 1996-97
(Paise/ kwh)

	Domestic	Commercial	Agriculture/ irrigation	Industrial	Railway	Outside State	Overall
Andhra Pradesh	112.30	224.30	5.60	248.41	265.00	8.00	142.58
Karnataka	86.71	396.72	1.80	229.79	304.21	-	130.43
Kerala	64.30	150.00	22.00	112.25	-	-	106.46
Tamil Nadu	111.04	281.73	-	265.78	272.00	85.15	165.15
All-States	91.73	223.29	21.42	233.95	291.60	121.10	169.16

Source: Same as Table 14.

3.9. The effective tariff in Tamil Nadu is 280 paise for HT, 270 paise to 170 paise for LT industrial, 320 paise to 370 paise for LT commercial, 65 paise to 250 paise for LT domestic and free for agricultural consumers. Thus, industrial and commercial consumers who account for about half of the consumption are being charged tariffs well above costs while agricultural consumers accounting for over a quarter of the total consumption and domestic consumers accounting for 16 percent, are being heavily subsidized.

3.10. Despite the heavy cross-subsidization, TNEB has been suffering overall losses. The tariff subsidy for agriculture has particularly serious impact on TNEB's revenues because agricultural consumption constitutes over a quarter of the electricity sales. The subsidy to agricultural farmers has many drawbacks. Apart from being a major drain on the finances of the electricity board, it necessitates continuous increases in tariffs to non-agricultural consumers. It is also regressive because the main beneficiaries appear to be the rich farmers who own most of the pumpsets. Further, the subsidy removes the motivation to economize on the use of lift irrigation by making it artificially cheaper. The only way out seems to be a radical reversal in the policy of subsidization of agricultural consumers.

Financial Operations of Tamil Nadu Electricity Board

3.11. Uneconomic tariffs and possibly lack of sufficient improvements in operational efficiency has consistently resulted in a net operating deficit for the TNEB (Table 23). At the end of 1995-96, TNEB's total assets of about Rs 9,633 crore were largely financed by loans, ways and means advances, and grants from the government. Some of the long-term loans to TNEB are of a permanent nature in the sense that the principal does not have to be repaid, and only interest is payable. In addition to the capital transfers, and arrears on account of government debt, every year TNEB receives direct budgetary subsidy to make up for the net operating losses. Gross income, excluding government subsidies, has not been adequate even to cover the operating expenses. In order to avert large and increasing losses, tariff increases are essential.

Table 22 Tamil Nadu: Pattern of consumption by categories of consumers during 1980-97
(Percent to total)

	1980-81	1985-86	1990-91	1995-96	1996-97
Domestic	9	9	16	17	16
Commercial	6	7	7	7	7
Industrial	48	47	43	40	41
Agriculture	28	27	24	27	27
Others	7	6	9	8	8
Sales within the State	98	96	99	99	99
Sales to other States	2	4	1	1	1
Total	100	100	100	100	100

Source: Same as Table 14.

Table 23 Tamil Nadu: Financial performance of TNEB during 1990-97

(Rs crore)

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Revenue receipts	1,932	2,027	2,575	3,162	3,858	4,544	4,795
Sale of power	1,407	1,650	2,049	2,604	3,469	4,082	4,377
Miscellaneous	41	27	69	31	40	46	59
Subsidy	483	350	457	527	350	416	358
Revenue expenditure	1,537	1,497	1,961	2,500	2,996	3,605	3,972
Fuel	648	686	993	1,237	1,377	1,860	2,082
Power purchase	448	513	525	661	823	870	970
O&M	83	55	66	101	117	163	129
Establishment and administration	357	363	412	516	640	685	825
Others (prior period expenses)		-119	-34	-14	39	27	-34
Gross operating surplus/ loss	393	530	614	661	862	940	823
Other expenses							
Interest on institutional creditors	135	168	179	228	286	339	381
Interest on government loans	92		92	72	54	41	53
Contributions to DRF	94	109	119	136	174	221	325
Net balance	72	253	225	226	348	339	64
Net balance without subsidy	-411	-97	-232	-302	-2	-77	-294

Source: Same as Table 17.

Privatization Process

3.12. Power policies at the Central and State level visualize an increasing role for the private sector in generation. In Tamil Nadu, during the Ninth Plan, private investment worth Rs 32,000 crore is expected. The government has identified 14 independent power projects (IPPs) for the private sector. Also about 20 short-gestation liquid fuel-based private proposals involving about 3000 MW capacity are under process. However, so far, only one of the 20 short-gestation projects could obtain the government clearance. The successful implementation of the IPPs depends upon the allocation and uninterrupted supply of fuel.

Recommendations

Overall, there is an urgent need for restructuring power policy and administration to eliminate power shortage in the State and to make the power generation and distribution financially viable.

- Tariff should be progressively adjusted to cover costs and gradually eliminate the cross-subsidization. Particularly, the subsidy to agriculture accounting for over a quarter of the power consumption needs to be done away with. The eventual elimination of cross-subsidy will reduce the burden on industry and promote investment in the sector.
- There is a need to narrow down the demand-supply gap as quickly as possible by enhancing the installed capacity. At the same time, it is important to realistically plan for additional capacity. With the given water resources, the hydel potential in the State is limited. Besides, lignite is the only source of fossil fuel, and for coal supplies for thermal power generation, the State is heavily dependent on Andhra Pradesh, West Bengal, Bihar and Orissa. Thus, the power generation strategy should take these input limitations and carefully design the sourcing of inputs with a view to minimize the cost.
- In addition, there is need to speed up the administrative procedures to facilitate speedy completion of the on-going projects, renovation and modernization of the existing plants, reduction of transmission and distribution losses, and undertaking measures to conserve energy.
- Power policies at the Centre and State's level visualize an increasing role for the private sector in generation. Also, with a view to improving efficiency and cost recoveries, it will be useful to split the generation and distribution activities and entrust them with autonomous companies created for the purpose, with private participation.

Irrigation

Irrigation Potential and Harnessing

3.13. Tamil Nadu's endowed irrigation potential is meagre and in per capita terms it is only 0.08 ha – less than half of the all-India average of 0.17 ha. With regard to the availability of water for irrigation, the State with 0.03 million cubic feet (mcft) is not comfortably placed in relation to Kerala (0.10 mcft), Karnataka (0.09 mcft), Andhra Pradesh (0.09 mcft) and all-India average (0.09 mcft). The timing, quantum and spread of rainfall are uneven and unpredictable. By and large, during the last two decades the State had received deficit rainfall once in every two years.

3.14. The northern plains of the State are irrigated by the rivers Palar and Pennaiyar and their tributaries and branches, and by numerous tanks as supplementary sources. The west and south of northern plains are irrigated by Cauvery, along with numerous wells. During the last fifteen years, the number of wells has increased resulting in a decline of per well area irrigated from 0.65 ha in the 60s to 0.60 ha in the 80s due to rate of drawl exceeding the rate of recharge. However, out of total net irrigated area 46 percent is irrigated through wells (Table 24).

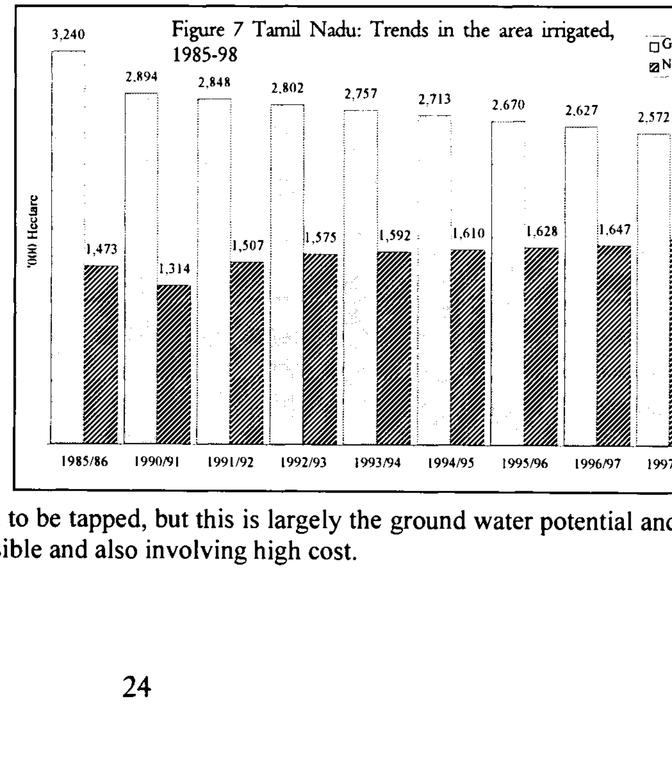
Table 24 Tamil Nadu: Pattern of source-wise net area irrigated
(Hectares)

	Net area irrigated (lakh hectares)	Percent share
Canals	8.25	31
Tanks	6.16	23
Wells	12.18	46
Others	0.16	0.6
Total	26.75	100
Area irrigated more than once	6.58	
Gross area irrigated	33.33	
Irrigation intensity (%)	119.1	

Source: Government of Tamil Nadu, *Tamil Nadu -Economic Appraisal*, Directorate of Evaluation and Applied Research, Chennai.

3.15. The State has no perennial water resources except the river Cauvery. Its delta area, irrigated by the deltaic branches is the most fertile in the State. It also has been the most affected area due to the prolonged confrontation with Karnataka on the distribution of the river waters. The unsettled riparian issues with Karnataka till recently, had an adverse impact on the growth of area under crops, production and income in the delta economy which covers more than 50 percent of the canal irrigated area in the State. The South-eastern arid plains, though partly irrigated through Periyar-Vaigai and the Tamraparni, however depend largely on rainfall and storage tanks.

Figure 7 Tamil Nadu: Trends in the area irrigated, 1985-98



3.16. Most of the surface water potential and half of the ground water is already exploited. Over all, only about 30 percent of the potential are yet to be tapped, but this is largely the ground water potential and is of a lower dependability, being inaccessible and also involving high cost.

Financing and Cost Recoveries of the Irrigation

3.17. Total accumulated investment in irrigation until the Eighth Plan (1995-96) was Rs 1,422 crore and an additional Rs 1,300 crore worth of investment is in the pipeline under the Ninth Plan. The annual accumulated capital is as in Table 25. The O&M expenditure has steadily but marginally improved over the years and currently is about 9 percent of the capital employed. Tamil Nadu is one of the few States that meets the norms laid down by the Ninth and Tenth Finance Commissions for the O&M expenditure in the irrigation sector. Yet, the norms laid down by these Commissions do not seem to have taken into account the age of the assets. Also, it is likely that most of it is frittered away on administration.

Table 25 Tamil Nadu: Financing and cost recoveries in irrigation sector during 1985-97
(Rs lakh)

	1985-86	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Capital employed	50,825	72,698	76,483	82,263	88,371	95,006	102,213	110,044
O&M expenditure	1,969	6,386	3,790	6,325	6,212	7,290	8,580	10,125
O&M as percent of capital (%)	3.9	8.8	5.0	7.7	7.0	7.7	8.4	9.2
Interest and depreciation provision	3,054	3,033	6,432	7,132	8,057	9,102	10,285	11,623
Receipts	319	396	438	422	443	465	489	516
Rate of return (%)								
Before depreciation and interest	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5
After depreciation and interest	-5.4	-3.6	-7.8	-8.2	-8.6	-9.1	-9.6	-10.1

Source: Government of Tamil Nadu (1994) Information on the Subsidiary Points for the Ninth and Tenth Finance Commissions.

3.18. As regards the cost recoveries, the rate of return works out to be about half a percent on the capital employed and about 5 percent of the expenditure on operations and maintenance which is grossly inadequate. Irrigation water cess assessment in Tamil Nadu is on the basis of the classification of land and dependability of the source. The lands are classified as 'wet' and 'dry', and rates vary over a large range in both the cases. Water charges are made up of (i) a basic rate, (ii) irrigation levy calculated as a multiple of the basic rate (iii) additional water cess that is also a multiple of the basic rate, (iv) special rates of water cess, (v) betterment levy, (vi) local cess and local cess surcharge; and (vii) normal water cess for flow irrigation. The ensuing overall water charge calculated by crop, soil type and season results in several effective rates. The complexity of the rate structure has been one reason for the low recoveries.

3.19. The Eighth Plan strategy was to conserve, manage and optimise available water resources. The Ninth Plan aims at decentralisation of maintenance and water management with schemes like Participatory Irrigation Management Scheme (PIMS) and System Improvement and Farmer Turnover (SIFT).

3.20. Irrigation system improvement is also under way through Water Resource Consolidation Projects involving an investment of Rs 1,140 crore with the World Bank's assistance. The Project contemplates introducing multi-sectoral water planning, involving farmers in water management, strengthening the State's institutional and technical capability in development and management and planning of water resources. The Project envisaged the rehabilitation and modernisation of all irrigation systems (except Cauvery Delta System) and early completion of all on-going minor irrigation projects. The Project is expected to enhance agricultural production on 0.7 million ha, directly benefiting 4 million farmers in the State.

Recommendations

- There is an immediate need to sufficiently increase the expenditure on operation and maintenance to maintain the productivity of the capital assets. In fact, what is needed is complete replacement, as most of the assets have become too old.
- Considering that water conservation is of utmost importance in the State, the water rate should be such that it conveys the scarcity value of the resource to the users and fosters a sense of economy in water use. The recovery rate should be as close as possible to the cost of annual maintenance and operation charges and a part of the fixed costs.
- It would be better to introduce volumetric charging as recommended by several expert committees. Betterment levies for improvement to works should be collected effectively.
- There is a need to periodically review the costs of water services and the revenue received. Rates should be adjusted over time in tune with the service costs.

Roads and Bridges

3.21. The road network in Tamil Nadu has increased about 4.5 times from 32,307 km in 1951 to 1,43,543 km by the end of the Eighth Plan (1997-98). Almost all the villages and hamlets are now accessible by roads. The corresponding increase in the road density was from 29.7 km/ 100 sq km to 107.3. About 79 percent of the roads are surfaced; yet, the maintenance of the roads has not been receiving adequate attention.

Shortfall in Operation and Maintenance

3.22. Total expenditure on the road sector, as a ratio to GSDP, has come down from 1.04 percent of GSDP in 1980-81 to 0.73 percent in 1996-97. The share of expenditure has also been falling. During the period 1980-81 to 1996-97, about one-third of the expenditure is in the nature of capital and the rest on maintenance.

3.23. The State government maintains all roads excluding those falling under local bodies' jurisdiction and including National Highways (NH) on a reimbursement basis from the Central Government. Financial constraints prevent renewal of riding surfaces as frequently as needed, and the expenditure on maintenance is significantly lower than the normative requirement[18] (Table 26). The deficiency in maintenance is reflected in the premature ageing of roads. If the negligence continues at the same rate, it is likely that instead of repairs fresh roads would be required to be built.

Table 26 Tamil Nadu: Deficiency of funds for maintenance of roads and bridges during 1993-99

	Road Length (km)	Requirement as per norms (Rs cr)	Allocation by Govt. (Rs cr)	Shortfall		Per km requirement (Rs)
				Actual (Rs cr)	As percent to requirement	
1993-94	51144	182.79	140.00	42.79	23.41	35740
1994-95	52587	201.58	156.00	45.58	22.61	38333
1995-96	53868	217.30	175.00	42.30	19.47	40339
1996-97	53868	297.68	185.00	112.68	37.85	55261
1997-98	58756	474.12	225.00	249.12	52.54	80693
1998-99	58756	557.35	344.45	212.90	38.20	94858

Private Participation

3.24. The National Highways Amendment Act 1990 facilitates private participation on a Build-Operate-Transfer (BOT) basis. During the Ninth Plan period, initially a few road patches have been proposed to be privatised. The sum involved is Rs 3,390 crore, or 4.2 percent of total Private Sector Ninth Plan outlay of Rs 79,516 crore. The legal modalities, incentives to private sector and guidelines for participation, transport and quality-based administration set-up are under formulation. The recent amendments in the Indian Toll Act, 1851 provide for the levy of tolls to recover the amount by investors including the private ones in building roads bridges.

Recommendations

It is essential to maintain the roads and bridges in a satisfactory manner to avoid higher transportation costs, uneconomical operations, and inconvenience and dissatisfaction to users. Keeping these factors in view, we recommend the following:

- Augment operation and maintenance outlay by 38-40 percent.
- Upgrade the road net work to increase the carrying capacity in selected places.
- Augmenting the available funds for the road development.
- Promote private sector investment in roads and bridges development under BOT scheme.
- The total financial requirement for this during the Ninth Plan period is estimated at Rs 3,192 crore. As against this, the Plan outlay has been fixed only at Rs 1,700 crore leaving a 50 percent gap. A possible source of financing the additional requirement could be to set up a State Road Fund on the lines of the Central Road Fund. This Fund could be created, from the receipts from motor vehicle tax, sales taxes on petroleum fuel, road tolls and other road user charges.

Chapter 4 Social Sectors

Education

4.1. Between 1981 and 1991, both by region and gender there was a marked improvement in the literacy rate in Tamil Nadu (Table 27). At 63 percent of population, the literacy level in Tamil Nadu in 1991 was better than the all-India average of 52 percent and ranked only below Kerala and Maharashtra.

Table 27 Tamil Nadu: Change in the literacy level between 1981 and 1991
(Percent to total population)

	Rural		Urban		Total	
	1981	1991	1981	1991	1981	1991
Male	51	67	73	86	58	74
Female	26	42	54	70	35	51
Total	39	55	64	78	47	63

4.2. Before 1982, primary education in the State was beset with a number of problems such as high dropout ratio, repeats and irregular attendance. The State Government, with a view to increasing the demand for primary education, pioneered the noon-meal scheme in 1982. Since then, there has been a consistent fall in the dropout rate.

4.3. Over the years, however, the noon meal program has been extended to other sections of the society and has been transformed into another social welfare program[19]. This has caused considerable escalation in the cost of the scheme to the exchequer. In 1996-97, the expenditure was about Rs 370 crore.

4.4. Besides the noon meal scheme, the Government of Tamil Nadu has been running several other welfare schemes directed towards stepping up the enrolment of children, especially from the weaker sections of society. These include free education, reimbursement of tuition fees for English medium students, free supply of text books and equipment, provision of free hostel facilities, free bus passes and award of scholarships. There is also a plan of introducing more of informal teaching at the school level to enroll those students who cannot attend classes at normal hours. Presently the scheme is being experimented with to cover child labor engaged in *bidi* production, but in course of time, it is expected to cover other trades as well.

4.5. As far as primary education is concerned, projections (Table 28) show that the State government seems to be on the right track. If the decline in the birth rate as well as the efforts of the government continue, gross enrolment is likely to cover all the children in the 6-11 years age group by the turn of the century. Further, the fall in the dropout rate will also improve net enrolment so that over 93 percent of the child population are likely to remain in schools to complete their primary education.

4.6. The dropout rate up to middle-stage education (*ie* 1st to 8th standards) was more than double the corresponding rate at the primary level. Schemes, such as free bus passes, free hostel facilities, free supply of books and equipment, have helped to arrest the dropout rate from 48.2 percent in 1987-88 to 30 percent in 1997-98[20]. The flip side effect of this improvement in the net enrolment ratio has been a rise in demand for more schools and more teachers at the middle and secondary level.

4.7. The government is aiming at provision of multi-skilled training through well-structured vocational courses to improve the quality of secondary education. There is a plan to introduce computer teaching in about 1,000 of the total 1,800 middle schools. Additional funds required for the purchase of the necessary equipment and employing the additional teachers are estimated at about Rs 25 crore.

Table 28 Tamil Nadu: Projection for universalisation of primary education till 2007-08

	Population of children of 6-11 years (lakh)	Gross enrolment (lakh)	Drop-out ratio (%)	Net enrolment (lakh)	Gross enrolment rate (%)	Net enrolment rate (%)
1991-92	69.3	56.2	19.3	45.3	81	65
1995-96	65.9	58.1	15.6	49.0	88	74
1996-97	64.8	58.7	14.7	50.1	91	77
1997-98	63.4	59.4	13.8	51.1	94	81
1998/99	62.1	60.1	13.0	52.3	97	84
1999-00	60.8	60.9	12.2	53.4	100	88
2000-01	59.4	59.4	11.5	52.6		89
2001-02	58.9	58.9	10.7	52.6		89
2002-03	58.9	58.9	10.0	53.0		90
2003-04	57.9	57.9	9.2	52.5		91
2004-05	56.9	56.9	8.6	52.0		91
2005-06	55.9	55.9	7.9	51.5		92
2006-07	55.1	55.1	7.3	51.1		93
2007-08	54.3	54.3	6.7	50.6		93

Notes: Shaded figures represent extrapolation of past trends in the three series: population of children in the age group of 6-11 years from 2003-04 onwards (estimates up to 2002-03 being available in NIPFP, 1995), gross enrolment and dropout ratio. The gross enrolment and dropout ratio are projected from 1995-96 onwards, based on data given in Policy Note on the Budgetary Demands of Government of Tamil Nadu (Government of Tamil Nadu, 1997-98). As per the data sources, the 'gross' enrolment figures might also include children beyond 6-11 years age groups. We derived net enrolment series by subtracting dropouts from gross enrolment figures.

Financing of Education

4.8. There has been a considerable increase in the education expenditure in the State, and this has been mostly on account of current expenditure (Table 29). Expenditure on primary education accounts for most of the total educational expenditure with higher education accounting for only 8 percent (Table 30). The shares of primary and secondary educational expenditure are even higher if the expenditure on the noon meal scheme is factored in. About 80 percent of the expenditure are met from non-Plan resources with the remaining coming from State, Central and shared plan schemes.

Suggestions for Improvement

- Although performance of Tamil Nadu has been quite creditable in the field of education, there continues to be a need for increasing the number of middle and secondary schools. This requirement becomes even more urgent if the drop out rate were to be arrested more rapidly.
- According to one estimate, an amount of Rs 200 crore is required to employ additional teachers while the allocation by the Government in the current year is only Rs 25 crore on this account.
- The up-gradation of the schools from their present level to one stage up is also necessary. The State is contemplating to impart basic technical skills at class IX and X. This exercise will entail an amount of Rs 600 crore for the entire Ninth Plan period, and an amount of Rs 125 crore per annum is needed.

Table 29 Tamil Nadu: Trends in government expenditure on education during 1980-95

(Percent to GSDP)

Year	Current	Capital	Total
1980-81	2.71	0.17	2.89
1985-86	3.49	0.07	3.56
1990-91	4.90	0.09	4.99
1994-95	4.09	0.04	4.14

Source: Economic & Functional Classification of Budget, Government of Tamil Nadu, Various issues

Table 30 Tamil Nadu: Pattern of government expenditure on education in 1996-97

	Percent of total educational expenditure
General	95.7
Primary	40.1
Secondary	31.4
Higher	8.1
Noon-meal scheme	13.0
Technical	2.6
Miscellaneous	1.8
Total	100.0

Source: Budget of Government of Tamil Nadu, 1998-99

Health

4.9. Health is a critical investment for human resource development and poverty alleviation. Tamil Nadu seems to have already achieved most of the targets set in the National Health Policy. The infant mortality rate was about 5.8 percent in 1991-92 and the State ranked third in this respect after Kerala and Punjab. The crude birth rate came down from 2.8 percent in 1981-82 to 1.95 percent in 1991-92 and the State stood second next only to Kerala. Although the crude death rate has came down from 11.7 percent in 1981-82 to 8.2 percent in 1991-92, Tamil Nadu still ranks high (eighth) in this respect among the major States. Overall population growth rate in the State shows a decline from 2.5 percent in 1981 to about 1.3 percent by 1993.

4.10. The credible achievements in the area of health were the result of adhering to the policy of 'Health for All by the Year 2000'[21]. The specific objectives of the State government in this respect include: increasing public awareness regarding the prevailing health problems; immunisation against infectious diseases and control of endemic diseases; expansion of the hospital network to improve public accessibility for appropriate treatment of common diseases and injuries; up-gradation of the facilities in the hospitals; provision of modern equipment and upgrading the skills of medical officers; provision of essential drugs; provision of maternal and child health care, including family planning; upgrading the medical colleges and improving the standard of medical education; and encouraging the indigenous systems of medicine.

4.11. To achieve these goals, government of Tamil Nadu has adopted the primary health care approach to provide free curative and preventive health services to a large section of the population. It has initiated several programmes in this respect[22]. As regards the provision of minimum basic health facilities for the people in the rural areas, the Government has taken several steps to strengthen the services available in the Primary Health Centres (PHCs). In addition to the basic facilities available in all PHCs, all the block level PHCs are provided with ophthalmic equipment for the detection of cataract cases and correction of refractive errors as well as treatment of minor eye ailments to make the State a cataract-free zone.

4.12. In 1996, it was decided to provide the necessary infrastructure facilities, such as own buildings to all the PHCs, up-gradation of block level PHCs to 24-hour PHCs, and additional medical and para-medical staff and ambulances and laboratory equipment. The Government has also undertaken the strengthening of the district headquarters, *taluk* and non-*taluk* hospitals in a phased manner to make referral units to provide emergency and essential services round the clock.

Financing of Health Expenditure

4.13. About 50 percent of funds for health expenditure in Tamil Nadu come from the Center. Table 31 shows that government expenditure as a ratio to GSDP in Tamil Nadu is declining over the years. In addition, the share of capital expenditure, like many other States in India, has been going down especially during the 90s. Despite this declining expenditure, the objective of achieving national health policy norms seems to have been largely fulfilled.

Table 31 Tamil Nadu: Government expenditure on health sector during 1980-99

	1980-81	1985-86	1990-91	1995-96	1996-97	1997-98	1998-99 (BE)
As % of GSDP							
Current	1.30	1.68	1.21	1.03	0.99	1.03	1.01
Capital	0.07	0.07	0.03	0.03	0.03	0.05	0.05
Total	1.37	1.75	1.24	1.06	1.02	1.07	1.06
As % of total expenditure on health sector							
Current	95	96	97	97	97	96	96
Capital	5	4	3	3	3	4	4
Per capita (Rs)							
Current	21.48	50.29	67.80	116.56	127.49	146.27	160.84
Capital	1.20	2.19	1.88	3.36	3.40	6.42	7.47
Total	22.68	52.49	69.68	119.92	130.89	152.69	168.31

Source: as in Table 2

Privatisation

4.14. Recently, on November 1, 1997, a scheme has been announced under which requests of interested industrialists to adopt and maintain PHCs and government hospitals would be processed. The suggested three models of adoption are:

- Total adoption by meeting full cost of running PHC/ *taluk* hospital/ district hospital, viz., staff, cost of drugs, purchase of equipment, civil works and maintenance, repairs and construction of staff quarters.
- Partial adoption involving meeting of all cost except staff cost of PHC/ *taluk* hospital/ district hospital.
- Limited adoption involving provision of civil work, maintenance and repairs and provision of equipment if needed.

4.15. The scheme has elicited a positive response from the industrialist community. CT Scan Centres at six places have been set up. These centres, charging a nominal fee, which just meets the cost of operation, have received considerable public appreciation. They also provide free services to up to 20 percent of the patients, who are poor. Similar facility of *Master Health Check-up* with a moderate charge of Rs.250 has been started at Government General Hospital, Chennai. All the necessary diagnostic tests are conducted on the patient. These tests otherwise would have cost a considerable amount in private hospitals. This scheme has also been well received by the public. Such schemes with private participation on cost recovery basis may be attempted at other hospitals too. In such schemes, the Government may provide the space free.

4.16. As there is no information about private participation in the area of health, the Government is contemplating to register the clinics in the State. Presently, only the doctors have to get themselves registered as registered practitioners on a one-time basis. After this one-time registration, no statistics are available whether they are practicing in the State or have migrated. Similarly, no information is available on doctors migrating into the State from outside. An Act to register medical clinics was legislated in 1997, but is still awaiting promulgation. The formulation of the law will provide up to date information on the number of doctors practicing in the private sector, the number of clinics and number of beds available, and allow the estimation of shortfall in the health facilities.

4.17. Considerable progress has been made in the last several decades in expanding its public health system and in reducing the incidence of diseases. Smallpox has been eradicated. Prevention of a range of diseases such as measles, poliomyelitis, diphtheria and tuberculosis has greatly reduced child mortality. An extensive infrastructure has been developed during the last few years.

Unfinished Tasks

4.18. There remains an unfinished agenda for addressing childhood and maternal morbidity and mortality, and communicable diseases. The leading sources of mortality and morbidity continue to be maternal and pre-natal causes, respiratory infections, diarrhoeal diseases and tuberculosis. In addition, the risk of infection from communicable diseases, such as malaria and leprosy, remain. New health problems such as AIDS and drug resistant forms of several communicable diseases, including malaria, filaria and tuberculosis, have emerged. The State must deal with a rising incidence of non-communicable diseases, such as cardiovascular diseases and cancers. According to some departmental assessment, efficient provision of infrastructural medical facilities would require additional funds to the extent of Rs 1,500 crore to Rs 2,000 crore during the next three years.

Chapter 5 State Public Sector Undertakings

General

5.1. As in the case of many States, the performance of State Public Sector Undertakings (PSUs) in Tamil Nadu has been a cause for concern. Except for eight development finance corporations, the financial performance of the 67 PSUs has been in general poor with no significant contribution to the State. Not only the return on the investment by way of dividends and interest is nil or negative, they block roughly over Rs 5,000 crore (of which 38 percent is invested by the government of Tamil Nadu) from being put to more productive alternative uses. The GSDP originating from the PSUs at Rs 1,500 crore forms an insignificant proportion of the total GSDP. Thus, the PSUs in Tamil Nadu have not had a great impact on the economy of the State except for direct employment of 1.6 lakh persons.

Table 32 Tamil Nadu: Summary of financial performance of PSUs during 1991-97

	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Number of PSUs (number)	60	62	64	67	67	68
Total capital (Rs crore)	2,379	2,530	3,027	3,935	4,547	5,339
Government share in total (%)	38%	39%	41%	39%	39%	38%
Equity (%)	20%	20%	17%	14%	13%	16%
Loans (%)	19%	19%	24%	25%	26%	22%
Others share in total (%)	62%	61%	59%	61%	61%	62%
Gross income (Rs crore)	4,043	4,390	4,943	5,908	6,933	8,301
Net surplus/profit (+/-) (Rs crore)	35	22	54	23	-115	-257
Dividend (Rs crore)	14	12	16	18	16	16
Number of employees (lakh)	1.5	1.6	1.6	1.6	1.6	1.6

Source: Government of Tamil Nadu, Review of State Public Sector Enterprises and Statutory Boards in Tamil Nadu, various issues.

5.2. As many as 20 out of 67 PSUs are in the transport sector. Other important areas of operation are development finance and manufacturing. The 20 passenger transport companies also account for the largest employment (1.15 lakh out of the total PSU employment of 1.61 lakh) while development finance companies account for the largest share in terms of size of capital (Table 33).

Table 33 Tamil Nadu: Distribution of PSUs by major groups in 1996-97

	Number	Total Capital (Rs crore)	Government financing (Rs crore)	Number of Employees ('000)
Agriculture & allied	5	47	28	11
Construction	3	79	57	1
Development finance	11	2,780	1,036	3
Development non-financial	9	102	89	3
Goods transport	1	121	21	0.184
Manufacturing	10	841	357	12
Mining	2	33	31	4
Passenger transport	20	609	210	115
Trading	1	43	31	12
Miscellaneous	5	11	7	1
All PSUs	67	4,667	1,865	161

Source: as in Table 32

5.3. During the financial year 1996-97, of the 67 PSUs, only 27 showed a positive profit of Rs 84 crore and the remaining 40 incurred a loss of Rs 340 crore. The biggest loss-making group is the transport companies. Of the overall net loss of Rs 257 crore, over 80 percent is accounted by the 20 transport undertakings. In contrast, development finance companies show a net overall profit of Rs 34.5 crore. Among the 10 manufacturing PSUs, 5 companies showed profit.

Table 34 Tamil Nadu: Profitability of the PSUs by major groups in 1996-97
(Rs crore)

	No.	Profit	No.	Loss	Total No.	Overall Profit/ loss
Agriculture & allied	2	7.8	3	-2.9	5	5.0
Construction	1	0.2	2	-3.2	3	-3.0
Development finance	8	36.9	3	-2.3	11	34.5
Development non-financial	4	1.1	5	-2.2	9	-1.1
Goods transport	0	0.0	1	-4.2	1	-4.2
Manufacturing	5	32.0	5	-16.1	10	15.9
Mining	2	3.6	0	0.0	2	3.6
Passenger transport	0	0.0	20	-309.7	20	-309.7
Trading	0	0.0	1	0.0	1	0.0
Miscellaneous	5	2.5	0	0.0	5	2.5
All PSUs	27	84.1	40	-340.7	67	-256.6

Need for Restructuring PSUs

5.4. The major cause of the poor performance of some of the PSUs is not difficult to understand. First, these PSUs are being managed more as State government departments than as business entities. The government influence is all pervading in the management of the PSUs. Thus, there is a clear need for divestment of the controlling equity and eliminating the need for their accountability to the Legislative Assembly. Second, the decision-making at present is very much dominated by the government. At present even in some of the PSUs with less than 51 percent government equity, the government dominates the decision-making process[23]. Thus, there is also a need to induct professional management experts outside the government, to improve efficiency.

5.5. Directions for future reform of PSUs in the State basically rests on the role of this sector in its economy for which it was created and expanded. In view of the non-viable operations of the PSUs radical measures of restructuring does seem necessary. Depending upon the profit-making capability, we have grouped the 67 PSUs into four categories as in Table 35. The list of PSUs in each group is as in the Appendix Table A. 29. The PSUs under category A can be retained in the present form, and those under categories B and C should be considered for partial disinvestment and restructuring while PSUs under category D are obvious candidates for winding up.

Table 35 Tamil Nadu: Classification of PSUs on the basis of their profit/ loss-making behavior during 1990-96

	Profit category	Number of PSUs
A	Consistently making profits in recent years (that is, since 1990)	16
B	Showed profits most of the time but not every year	15
C	Showed losses most of the time but did make profits in some years	25
D	Habitually incurring losses	11

5.6. The question of restructuring of PSUs in Tamil Nadu was examined earlier by the Venkataraman Committee in 1977, Ramanathan Committee in 1988[24] and more recently, by the Raghavan Committee (whose report is yet to be made public). It appears[25] that The Raghavan Committee has recommended (a) retention of 14 enterprises in the present form, (b) restructuring and disinvestment of 34 enterprises (including the 19 transport undertakings) and (c) winding up of 18 enterprises. It also recommended setting up of a Tamil Nadu Public Sector Disinvestment Commission to work out the modalities and undertake the restructuring.

Recommendations

- Depending upon the profit-making capability, we have grouped all the PSUs into four categories as in Table 35. The list of PSUs and other details are as in the Appendix Table A. 29. The PSUs under category A can be retained in the present form, and those under categories B and C should be considered for partial disinvestment and restructuring while PSUs under category D are obvious candidates for winding up.
- Those undertakings that are recommended for restructuring should be given freedom to function as corporate entities. Political and beauracratic control should be relaxed and the head of the undertakings should be appointed with professional accuemenship and technical knowledge.

5.7. Among the PSUs, the two groups – road transport undertakings and development finance companies merit a more detailed study.

Road Transport

5.8. Twenty-one State-owned Road Transport Corporations (SRTCs) in Tamil Nadu has the third strongest fleet in the country with 17,227 buses. Their operational efficiency and professional management is comparable to the better performing States such as Andhra Pradesh, Haryana, Kerala, Maharashtra and Rajasthan (Table 36). For example, vehicle productivity in Tamil Nadu is the highest in India, cost is next only to that in Orissa, number of passenger-kilometers operated per bus per day is the highest and fleet utilization is fairly high. However, in some areas like breakdown and accident rate, optimum utilization and fuel consumption[26] there is room for improvement.

Table 36 Tamil Nadu: Performance of transport undertakings in 1993-94

Parameters of performance	Tamil Nadu	Best State	Value	All India
Size				
Total number of buses in public sector in 1994	14,949	Maharashtra	16,422	102,143
Ratio of public sector buses to total (%)	46.79	Maharashtra	58.90	27.13
Buses/ lakh population	57.22	Kerala	104.37	47.36
Capital productivity				
Vehicle productivity (km/ bus/ day)	384	Tamil Nadu	384	266
Fleet utilization (of buses on road to the fleet)	92	Andhra Pradesh, Punjab	96	87
Over-aged buses (to total fleet)	26.1	Andhra Pradesh	0	16.8
Passenger kilometers operated per bus/ day	18,819	Tamil Nadu	18,819	10,804
Load factor (actual traffic earnings/ estimated traffic earnings with full capacity,)	76	Haryana	85	72
Worker productivity				
Staff productivity (km covered in a day / worker)	47.0	Haryana	56.7	37.5
Bus-staff ratio on fleet operated	7.51	Punjab	5.5	7.95
Staff cost per worker/ day (Rs)	129.46	Orissa	62.81	117.34
Fuel efficiency				
Fuel cost/ revenue earning bus km (Paise)	182.13	Rajasthan	150.02	172.12
Fuel efficiency (km/litre)	4.23	Andhra Pradesh, Gujarat	5.01	4.48
Total cost/ bus/ km (Paise)	711.44	Orissa	706.46	816.83

Source: Government of India (1995) A Study on the Performance of the State Road Transport Undertakings, Planning Commission, September.

Financial Performance

5.9. Overall, financial performance however, has not been satisfactory. In Tamil Nadu, SRTCs depend on the government for about 16-17 percent of their financial resource availability (Table 37). The rest is financed through bank borrowings, internal resources and others such as the Tamil Nadu Transport Development Finance Corporation (TDFC). The total operating loss is projected to further deepen to Rs 3,105 crore during the Ninth Plan period.

State Subsidies in lieu of Tariff Concessions

5.10. In 1991-92 the amount of State subsidies *in lieu* of tariff concessions was Rs 11.47 crore, and in 1995-96 it grew to Rs 41.16 crore. Out of the 19 SRTCs, only Thiruvalluvar Transport Corporation and Rajiv Gandhi Transport Corporation operating on inter-State and express bus service routes did not receive any subsidy. The highest taker has been Pallavan Transport Corporation, operating in Chennai Metropolitan Area (CMA), and it was the sole recipient of subsidy in 1990-91. Nevertheless, the share of this corporation went down to 25 percent in 1995-96. Subsequently, Dr Ambedkar Transport Corporation also joined Pallavan to serve CMA and the combined share of subsidy of these two corporations constituted roughly half in 1993-94.

Table 37 Tamil Nadu: Structure of financing in the road transport corporations during 1990-96
(Percent to total)

	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
a) Paid up capital (Government)	4.45	4.13	3.83	3.99	3.66	2.86
b) Borrowings	33.94	33.97	35.92	34.33	37.48	46.61
Government	8.43	8.09	11.59	7.63	6.66	14.19
Commercial Banks	0.00	0.00	0.00	1.11	0.34	0.23
Others	25.50	25.88	24.32	25.59	30.48	32.19
c) Internal resources	61.61	61.90	60.24	61.69	58.86	50.53
Free reserves	0.00	0.00	0.00	0.01	0.02	0.02
Other reserves	0.47	0.46	0.45	0.46	0.47	0.39
Depreciation	61.14	61.44	59.67	61.03	58.29	50.09
Deferred payments liability	0.01	0.00	0.12	0.19	0.08	0.03
Total resources	100.00	100.00	100.00	100.00	100.00	100.00

Source: Government of Tamil Nadu, Review of State Public Sector Enterprises in Tamil Nadu, State Bureau of Public Enterprises, Chennai.

Table 38 Tamil Nadu: Financial status of the road transport corporations

Period	No of years	Loss (Rs crore)
1972-73 to 1994-95	22	326
1995-96 to 1996-97	2	500
1997-98 to 1999-2000	3	2,279
Total accumulated losses		3,105

Source: Government of Tamil Nadu, Annual Plan, 1998-99, Contribution of Road Transport Corporations, Chennai.

Fare Structure and Tariff Concessions

5.11. The financial viability of SRTCs is seriously impaired in an environment of rising costs, uneconomic fares, concessional travel, operation of uneconomic routes and above all, a high level of taxation. Periodic increases in the prices of essential inputs have pushed up the production cost of vehicles, the burden of which has been passed on to the corporations. There is a need to have a mechanism for automatic increase in passenger fare linked with any increase in input costs particularly staff, fuel/ diesel, tyres and tubes.

5.12. In Tamil Nadu, despite the last two revisions in the fare structure in 1993, 1997, and 1998 the weighted average rate is just 18 paise per km, and is still one of the lowest in the country and not adequate to break-even financially. To have an idea of the required fare revision, it can be noted that the average tariff rate in Rajasthan where the transport undertakings are run profitably, is 38 paise per km.

5.13. Further, the intermittent fare revisions have provided only short respites from losses and have not been strong enough to sustain financial viability, particularly, with escalating costs of inputs. For example, after the fare revision in 1993, there was a turn around and indications of profit in 1994. However, this profit could not be sustained and there was a net loss in 1995-96. Hence, the need for tariff revisions at regular intervals should be recognized and backed up by suitable action.

Recommendations

- A mechanism should be evolved to facilitate automatic revision of passenger fare to compensate for the increase in the costs of inputs (as being attempted in the case of power and irrigation sectors). This would help to make road transport more competitive with increased private sector participation, preferably with sharing of the routes.
- Operational efficiency and financial performance can be improved by bringing down the bus-staff ratio, enlarging the areas of operation, computerization, modernization of the maintenance facilities, and upgradation of the fleet.
- To improve administrative efficiency, corporations with substantial overlapping in the area of operation can be considered for merging.
- Similarly, financially weaker undertakings can be considered for merging with stronger ones to break even.
- The SRTCs should be duly compensated for tariff concessions and losses due to plying on uneconomic routes, particularly in metro areas and uneconomic routes.

Development Finance

5.14. The development finance corporations are created with a view to mobilize resources from extra-budgetary sources such as term-lending institutions and public deposits to finance the developmental activities. The other objectives of setting up these companies are to provide necessary technical and administrative guidance and facilities necessary to the companies in the areas of infrastructure and capital development. In Tamil Nadu eight of the eleven development finance companies have succeeded in fulfilling this objective. Perhaps, this is one of the reasons why the budget allocations for capital expenditure are lower than in other States.

5.15. Among these companies, the following five companies have the objective of developing the industry in general:

1. Tamil Nadu Industrial Development Corporation (TIDCO),
2. State Industries Promotion Corporation of Tamil Nadu (SIPCOT),
3. Tamil Nadu Small Industries Development Corporation (SIDCO),
4. Tamil Nadu Corporation for Industrial Infrastructure Development (TACID),
5. Tamil Nadu Industrial Investment Corporation (TIIC) and

The remaining two companies cater to specific industries – textiles and electronics. These are

6. Tamil Nadu Handloom Development Corporation (TNHDC)
7. Tamil Nadu Textile Corporation (TNTC)
8. Electronics Corporation of Tamil Nadu (ELCOT)

And the following three companies cater to the infrastructure development:

9. Tamil Nadu Transport Development Finance Corporation (TDFC)
10. Tamil Nadu Power Finance and Infrastructure Development Corporation (POWERFIN)
11. Tamil Nadu Urban Finance and Infrastructure Development Corporation (TUFIDCO)

5.16. Except for the TNHDC and TNTC, the financial performance of PSUs in this group has been encouraging. The group accounts for a capital investment of Rs 2,780 crore of which government funding is about 37 percent (Table 39). About 90 percent of the equity capital and a third of the borrowings come from the government. The notable feature of this group is that most of the companies in this group make positive profits with reasonable and growing rates of return on equity.

Table 39 Tamil Nadu: Financial aggregates of the development finance group of PSUs during 1991-96
(Rs crore)

	1991-92	1992-93	1993-94	1994-95	1995-96
Total capital	1330.35	1622.05	1999.65	2383.57	2779.85
Share capital	240.56	253.04	300.75	232.57	237.15
Term loans	1,089.79	1,369.01	1,698.90	2,151.00	2,542.70
Total Government investment		550.01	679.49	889.51	1036.13
Government equity		190.33	189.29	207.96	212.49
Government loans		359.68	490.20	681.55	823.64
Share of the Government in the funds		33.9%	34.0%	37.3%	37.3%
Equity		75.2%	62.9%	89.4%	89.6%
Loans		26.3%	28.9%	31.7%	32.4%
Net profits	8.68	8.01	29.30	12.12	20.87
Rate of return on equity	3.6%	3.2%	9.7%	5.2%	8.8%

Source: as in Table 32

Recommendations

- The existence of as many as 11 companies with more or less similar objectives creates confusion and perhaps it will be useful to merge those companies with similar areas of operation. For example, the first six companies – TIDCO, SIPCOT, SIDCO, TACID, TIIC, and ELCOT – can be merged into a single development finance company, say, Tamil Nadu Industrial Development Finance company.
- Similarly, the TDFC, POWERFIN, and TUFIDCO can be consolidated into a single Tamil Nadu Infrastructure Development Finance Corporation.

Chapter 6 Reform Scenarios: Fiscal Prospects

General

6.1 From the above review of the Tamil Nadu finances, it is clear that so far the government finances are relatively well managed in Tamil Nadu as compared to many other States. Yet, there exists room for strengthening the fiscal sustainability. First, our review shows that although the fiscal deficit appears to be under control the fact that about half of it is due to the revenue deficit is somewhat disquieting. Second, the low level of capital expenditure indicates that most of the borrowings are frittered away in current spending. Third, the asset maintenance is far from satisfactory. In the roads sector there is a noticeable spending gap in the O&M expenditure. In the case of irrigation, although the operation and maintenance expenditure has been in line with the norms prescribed by the successive Finance Commissions, most of the assets need replacement rather than maintenance. Fourth, there exists room for improving the revenue effort by rationalizing certain taxes and stepping up non-tax revenues through better-cost recoveries and restructuring of the PSUs. In this chapter, an attempt is made to examine policy options available to the government and quantify their impact for the period 1998-2006.

The Macro Forecast Model

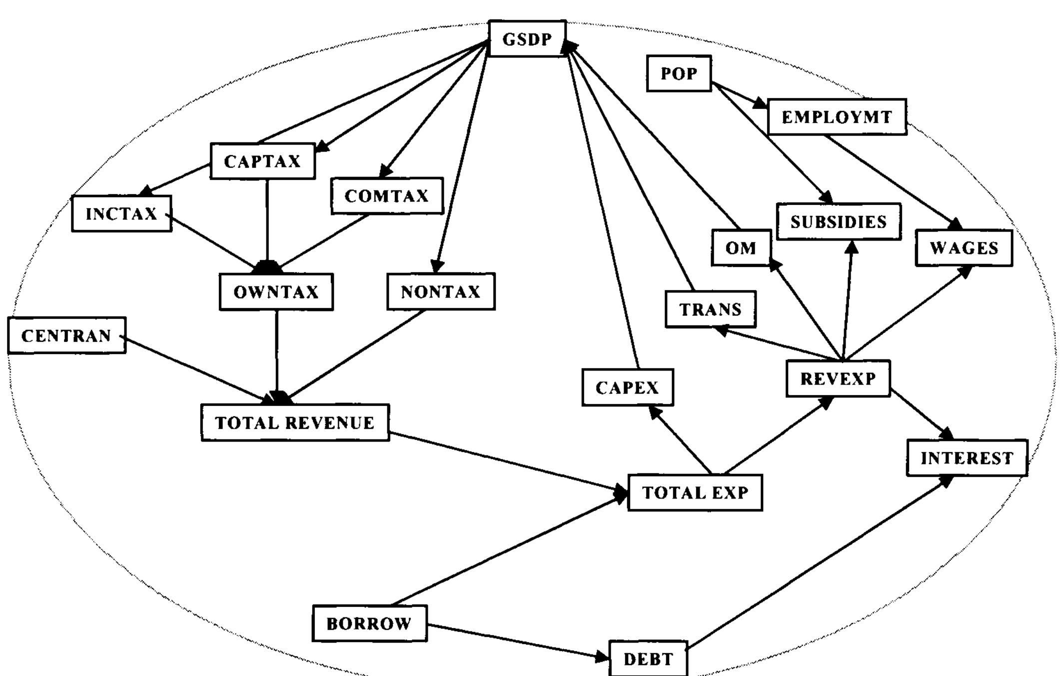
6.2 We set up a simple recursive macroeconomic model with the twin objective of forecasting and policy simulations. The assumed mechanism underlying the model is as follows. GSDP is endogenously determined on the basis of government expenditure – capital expenditure (CAPEX) and also certain components of revenue expenditure such as that on human development, broadly proxied as non-interest expenditure. For the base-line or status-quo simulations, capital expenditure of the government (CAPEX) is assumed to be driven by the aggregate demand within the State as proxied by GSDP. However, for the reform scenario government capital expenditure is assumed to be guided basically by the availability of resources as also government policy regarding the role of private sector. Since expenditure restructuring involves reduction in employee compensation (WAGES), subsidies (SUBSIDIES) and transfers (TRANS), and stepping up expenditure on operation and maintenance (OM), it is imperative to examine their responsiveness to increases in population (POP) representing the growth in demand for public goods and services. Own tax revenue [comprising revenue from taxes on income (INCTAX), taxes on capital transactions (CAPTAX) such as stamp duties and registration fees and taxes on commodities (COMTAX) such as sales tax and state excise], and non tax revenues (NONTAX) including net lending are assumed to move with the GSDP. Transfers from the Center are in accordance with the Tenth Finance Commission award. New borrowings (BORROW) including public account balances are assumed to be equal to the fiscal deficit or the difference between total revenue and total expenditure. The stock of debt outstanding (DEBT) is basically an accumulation of past borrowings. However, the debt-stock function is not an identity as the stock includes the public account balances. Interest and debt-servicing expenditure moves with the accumulated debt. The macro fiscal mechanism is as depicted in figure 8.

6.3 The model is estimated by Generalized Least Squares (GLS) procedures with necessary adjustments for possible auto-regressive error structures. Several alternative specifications with other possible independent variables are experimented with. The model retained for forecasting and simulations is as in Table 40. The data and other details are given in Annexure II.

Table 40 Tamil Nadu: Estimated parameters of the macro-fiscal model

Ln (GSDP)	= 8.34 + 0.08 ln (CAPEX (t-1)) + 0.14 ln (TRD)
Ln (INCTAX)	= -4.91 + 0.72 ln (GSDP)
Ln (CAPTAX)	= -6.06 + 1.12 ln (GSDP)
Ln (COMTAX)	= -2.89 + 1.04 ln (GSDP)
Ln (NONTAX)	= -0.86 + 0.74 ln (GSDP)
Ln (WAGES)	= 20.99 + 4.48 ln (EMPLOYMT)
Ln (EMPLOYMT)	= -6.69 + 2.23 ln (POP)
Ln (OM)	= -0.19 + 0.63 ln (GSDP)
Ln (SUBSIDIES)	= -26.91+19.10 ln (POP)
Ln (TRANS)	= -5.75 + 7.23 ln (POP)
DEBT	= 119.73 + 0.79 DEBT (t-1) + 1.77 BORROW
INTEREST	= 0.11 DEBT (t-1)
BORROW	= WAGES + [redacted] OM + SUBSIDIES + INTEREST + TRANS + CAPEX – INCTAX – CAPTAX – COMTAX – NONTAX + CENTRAN

Figure 8 Tamil Nadu: Macro Fiscal Flows



Status-quo Scenario

6.4 The broad consequences of allowing the revenues, the expenditure and the debt to grow at the same pace as in the past without any major policy changes during the next five years (1998-99 to 2005-06) are as shown in Table 41. In particular, the income buoyancy of major taxes is assumed to remain the same as in the past (Table 12). Own non-taxes will grow at the historical pace. Transfers from the Center will be in accordance with the Tenth Finance Commission award. The State government salary bill will grow at the average rate of growth observed in the recent past. Also, the growth of the other expenditure components will be the same as in the past[27].

6.5 The base line scenario shows that during the next eight years, total expenditure as a ratio to GSDP is likely to rise from 20.3 percent to 22.4 percent of GSDP. This will be basically due to steep rise in the interest and debt-servicing expenditure and subsidies. The O&M expenditure ratio is likely to be negligible. Current transfers including grants to local bodies are likely to fall. Capital expenditure is going to fall below 1.3 percent of GSDP. The total receipts to GSDP ratio is likely to come down from 16.2 percent to 15.7 percent basically owing to the likely fall in the non-tax revenues and Central transfers. Own tax – GSDP ratio is likely to remain at 10.2 percent. Consequently, there will be a steep deterioration in the fiscal balance. The fiscal deficit will reach a high 6.7 per cent of GSDP by 2005-06, most of it being accounted by the revenue deficit. Because of the steady rise in the new borrowing, the debt-stock is likely to show a rising trend.

Table 41 Tamil Nadu: Summary results of the *status quo* projections during 1998-2006
(Percent to GSDP)

	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Gross State Domestic Product (Rs crore)	103,036	118,959	137,431	158,637	183,119	211,373	243,986	281,630
Total receipts	16.2	16.1	16.0	15.9	15.8	15.8	15.8	15.7
Own	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Tax	10.2	10.2	10.3	10.4	10.5	10.5	10.6	10.7
Nontax	2.2	2.1	2.0	1.9	1.9	1.8	1.7	1.7
Central transfers	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.4
Total expenditure	20.3	20.5	20.7	20.9	21.1	21.5	21.9	22.4
Revenue expenditure	18.2	18.5	18.8	19.2	19.5	20.0	20.5	21.1
Interest and debt servicing	1.5	1.7	2.0	2.1	2.3	2.5	2.7	2.9
Other revenue expenditure	16.7	16.8	16.9	17.0	17.2	17.5	17.8	18.2
Employee compensation	10.8	10.7	10.5	10.4	10.3	10.2	10.0	9.9
O&M	1.2	1.2	1.1	1.1	1.0	1.0	0.9	0.9
Subsidies	3.0	3.3	3.7	4.1	4.5	5.0	5.6	6.2
Transfers	1.7	1.6	1.6	1.5	1.4	1.3	1.3	1.2
Capital expenditure	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3
			Balances					
Fiscal balance	-4.1	-4.4	-4.7	-5.0	-5.3	-5.7	-6.1	-6.7
Revenue balance	-2.3	-2.7	-3.1	-3.5	-3.9	-4.4	-4.9	-5.5
Primary balance	-2.6	-2.7	-2.7	-2.8	-3.0	-3.2	-3.5	-3.8
Debt outstanding	18.4	20.6	22.5	24.3	26.1	28.1	30.2	32.7
Debt servicing/ revenue (%)	8	9	10	11	12	12	13	14

Note: Projections based on actualize for 1997-98.

The Reform Strategy

6.6 The reform strategy to achieve fiscal sustainability aims at restructuring expenditure to make it more productive, and at strengthening the revenue-raising machinery to maximize the yield from the existing revenue sources. It relies on improving cost-recoveries on existing assets, broadening the tax base and rationalizing the tax structure to make it more revenue productive. More specifically, the reform strategy could comprise the following:

6.7 The most important source of rising current expenditure has been wages and salaries. Fiscal reforms should aim at reducing the rate of growth of government employment to at least the same level as the rate of growth of population. Currently, the rate of growth of government employees in Tamil Nadu is over 3 per cent per annum while population growth rate is just 1.37. The reforms will aim at bringing the current elasticity of government employment with respect to population from the existing 2.25 to unity.

6.8 The second important source of growth of current expenditure has been the numerous direct subsidies. Expenditure on subsidies grew over 29 percent per annum during 1980-81 to 1996-97. In recent years, that is, from 1993-94 onwards however, the rate of growth has been only about 6 percent per annum. Under the reform scenario, the annual growth rate of subsidies is to be brought down to 1.3 percent so that the expenditure on subsidies grows exactly in tandem with the size of population. This will be achieved by phasing out subsidies to PSUs, TNEB and the Road Transport Undertakings.

Particularly the latter two will be allowed to revise their tariffs for breaking even and reduce their dependence on the government.

6.9 As regards transfers, over 70 percent of current transfers other than subsidies and other transfers are grants to local bodies. Even so, compensation and assignments to local bodies formed less than 2 percent until 1996-97. The First State Finance Commission has recommended devolution of 8 percent of State's own tax revenues net of collection costs to local bodies for 1997-98, gradually increasing by one percent annually to 12 percent in 2001-02. The reform scenario is worked out on the assumption that these recommendations will be adhered to.

6.10 There is also a need to step up the O&M expenditure for replacement of aged, and worn out assets particularly, in the irrigation and roads sectors. It is assumed that one of the reforms will be to see that the present low elasticity of O&M expenditure at around 0.62 will be gradually doubled by 2005-06. This will considerably reduce the spending gap in respect of maintenance of roads and bridges.

6.11 On the revenue side, the buoyancy of the taxes on agricultural sector will be stepped up from the present 0.71 to unity level. As regards the commodity taxes (sales tax and state excise), without widening the base and adopting the VAT system applicable to goods as well as services, it may not be possible to raise more revenue. Revenue yield is likely to improve with the introduction of VAT because of improved transparency leading to better compliance. With these reforms, it is assumed that the commodity tax buoyancy will be raised up from 1.05 to 1.2. Tax base-broadening and rate-structure rationalization will be supplemented by administrative tightening to improve their productivity and curb evasion.

6.12 As regards non-tax revenue, the cost-recovery strategies will be revamped such that the buoyancy with respect to GSDP is gradually raised to unity. For example, in the irrigation sector the recoveries could be made to equal the expenditure on O&M along with a one- percent additional return. The reform strategy is as depicted in Table 42.

Table 42 Tamil Nadu: Assumed strategy for fiscal reforms during 1998-99 - 2005-06

	O&M elasticity w r t GSDP	Subsidies (Elasticity w r t population)	Transfers (mainly to local bodies) as percent to own revenue	Taxes on income (Buoyancy w r t GSDP)	Taxes on commodities (Buoyancy w r t GSDP)	Nontax revenue (Buoyancy w .r .t GSDP)	Government employment (elasticity w r t population)
1999	0.62	5.1	9%	0.71	1.05	0.82	2.25
2000	0.70	5.0	10%	0.75	1.07	0.90	2.00
2001	0.80	4.0	11%	0.80	1.09	1.00	1.75
2002	0.90	4.0	12%	0.85	1.10	1.00	1.50
2003	1.00	3.0	12%	0.90	1.10	1.00	1.25
2004	1.10	2.0	12%	0.95	1.15	1.00	1.00
2005	1.20	1.0	12%	1.00	1.20	1.00	1.00
2006	1.25	1.0	12%	1.00	1.20	1.00	1.00

Reform Scenarios

6.13 The impact of the reform process can be divided into two stages. In the first stage, we tried to quantify to what extent the fiscal restructuring can improve the fiscal balance. In the event of the fiscal balance turning out to be a surplus, we attempted in the second stage, to examine two of the available options of using the fiscal surplus. The first option is to divert the fiscal surplus to step up capital expenditure in the government sector. The second option is to retain the government capital expenditure to grow at the present trend and downsize the tax revenue to match the compressed government expenditure by revamping the tax system with a view to lowering the tax burden on the society. The lower tax burden will help boosting up private savings and private sector investment that could result in higher economic growth.

Stage I: Reform and Fiscal Balance

6.14 The summary results of the first stage of reform scenario are shown in Table 43. The simulation shows that with the suggested reforms, the revenue deficit is going to turn positive from 2001-02 itself. Consequently, fiscal deficit is likely to come down and will indeed, turn into a surplus by the year 2002-03. The decline in outstanding debt will also be considerably faster than in the base-line scenario.

6.15 With expenditure restructuring, the ratio of expenditure to GSDP will be fast declining from 19 per cent to as low as 12.5 percent. by 2005-06. With restraints on new recruitment, employee compensation is likely to be below 9 percent of GSDP by 2002-03. Similarly, the ratio of direct subsidies will also be restricted to a modest level of 2 percent. With fiscal deficit under control, the need for new borrowings will be less and the interest liability will be lower than that under the no-reform scenario. In fact, the fiscal balance will turn into a surplus by 2001-02. Consequently, the outstanding debt will be nil.

Table 43 Tamil Nadu: Reform scenario – Summary of projections during 1998-99 - 2005-06
(Percent to GSDP)

	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Gross State Domestic Product (Rs crore)	103,036	118,959	137,431	158,637	183,119	211,373	243,986	281,630
Total receipts	16.3	16.3	16.3	16.4	16.4	16.6	16.8	17.0
Own	12.5	12.5	12.6	12.8	12.9	13.1	13.4	13.7
Tax	9.9	10.0	10.1	10.3	10.4	10.6	10.9	11.1
Nontax	2.6	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Central transfers	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.4
Total expenditure	19.0	18.6	18.0	17.3	16.2	15.0	13.7	12.5
Revenue expenditure	16.9	16.6	16.2	15.6	14.7	13.5	12.4	11.2
Interest and debt servicing	1.5	1.5	1.4	1.3	1.0	0.7	0.2	
Other revenue expenditure	15.4	15.1	14.8	14.3	13.6	12.8	12.1	11.5
Employee compensation	9.9	9.7	9.3	8.8	8.3	7.6	7.0	6.5
O&M	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.2
Subsidies	2.5	2.3	2.1	1.9	1.7	1.5	1.3	1.2
Transfers	1.8	2.0	2.2	2.5	2.5	2.5	2.6	2.7
Capital expenditure	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3
			Balances					
Fiscal balance	-2.6	-2.3	-1.7	-1.0	0.2	1.6	3.1	4.6
Revenue balance	-0.8	-0.6	-0.1	0.5	1.6	2.9	4.3	5.7
Primary balance	-1.1	-0.8	-0.3	0.3	1.2	2.3	3.3	4.2
Debt outstanding	15.8	15.0	13.4	11.0	7.3	2.3		
Debt servicing/ revenue	9	9	9	8	7	5	2	

Stage II: Growth through Government Capital Expenditure.

6.16 The fiscal surplus can be gainfully utilized for additional capital expenditure to improve the over all economic growth. As a first option we examined the consequences of diverting the fiscal surplus to finance additional capital expenditure that will result in higher GSDP. We simulated the model by deriving capital expenditure as a residual after pegging fiscal deficit at 2.5 per cent of GSDP. The results of this simulation are as given in Table 44. The cap on the fiscal deficit of 2.5 percent of GSDP is likely to reduce the need for high revenue receipts and high expenditure. The diversion of additional resources to capital formation results in higher GSDP growth of about 17 percent per annum. On the whole, the suggested macro fiscal correction along with sectoral reforms suggested in the earlier sections can put the State financial position on a stronger track.

Table 44 Tamil Nadu: Simulation results of pegging fiscal deficit at a specified level along with the fiscal reforms.
(Percent of GSDP)

	1998-99 (BE)	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Gross State Domestic Product (Rs crore)	103,036	118,294	138,332	162,907	191,945	226,944	267,883	315,173
Total receipts	16.3	16.4	16.2	16.0	15.7	15.5	15.4	15.4
Own	12.5	12.6	12.6	12.5	12.4	12.3	12.3	12.3
Tax	9.9	10.1	10.1	10.0	10.0	9.9	10.0	10.1
Nontax	2.6	2.5	2.5	2.5	2.4	2.3	2.3	2.2
Central transfers	3.9	3.8	3.7	3.5	3.4	3.2	3.1	3.0
Total expenditure	18.8	18.9	18.7	18.5	18.2	18.0	17.9	17.9
Revenue expenditure	16.9	16.7	16.2	15.4	14.4	13.4	12.5	11.5
Interest and debt servicing	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3
Other revenue expenditure	15.4	15.3	14.7	14.0	13.1	12.1	11.2	10.2
Employee compensation	9.9	9.7	9.3	8.6	7.9	7.1	6.4	5.8
O&M	1.2	1.2	1.2	1.2	1.1	1.1	1.2	1.0
Subsidies	2.5	2.3	2.1	1.9	1.6	1.4	1.2	1.1
Transfers	1.8	2.0	2.2	2.4	2.4	2.4	2.4	2.4
Capital expenditure	1.9	2.1	2.6	3.1	3.8	4.6	5.4	6.3
Balances								
Fiscal balance	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5
Revenue balance	-0.8	-0.6	-0.2	0.3	1.1	2.0	2.8	3.7
Primary balance	-1.0	-1.0	-1.1	-1.1	-1.1	-1.2	-1.2	-1.2
Debt outstanding	15.5	15.3	14.9	14.5	14.3	14.1	13.9	13.9
Debt servicing/ revenue	9	9	9	9	9	10	10	11

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APPENDIX FURTHER STATISTICAL INFORMATION

Table A. 1 Tamil Nadu: Growth of real GSDP and its components as compared to major States in India during 1980-96

(Average percent per annum)

State	Agriculture	Manufacturing	Services	Total	Rank
1 Andhra Pradesh	2.67	4.84	5.58	4.24	11
2 Assam	2.22	3.68	5.13	3.67	13
3 Bihar	1.89	4.51	4.90	3.47	14
4 Gujarat	1.25	7.34	6.85	5.23	6
5 Haryana	4.29	7.50	6.86	5.77	3
6 Karnataka	3.26	6.43	7.12	5.45	5
7 Kerala	3.21	5.22	5.65	4.76	8
8 Madhya Pradesh	3.02	6.84	5.95	4.74	9
9 Maharashtra	3.53	6.74	7.81	6.45	1
10 Orissa	1.40	5.83	5.87	3.76	12
11 Punjab	4.39	7.15	4.27	4.99	7
12 Rajasthan	4.57	7.85	7.81	6.26	2
13 Tamil Nadu	**4.41**	**5.18**	**6.74**	**5.66**	4
14 Uttar Pradesh	2.75	6.47	5.72	4.50	10

Table A. 2 Tamil Nadu: Growth of real GSDP and its components during 1980-97

(Average percent per annum)

Industry	1980-86	1986-91	1991-97	1980-97
GSDP	5.8	5.6	5.5	5.6
Primary sector	**6.5**	**4.0**	**3.3**	**4.5**
Agriculture	6.9	3.5	3.4	4.5
Fishing	-2.0	0.6	5.3	1.6
Mining & quarrying	5.7	9.9	4.8	6.7
Secondary sector	**5.0**	**6.9**	**4.6**	**5.4**
Manufacturing	5.3	4.6	4.2	4.7
Construction	0.4	18.5	4.8	7.7
Electricity, gas & water supply	12.3	11.1	5.8	9.5
Tertiary sector	**6.9**	**5.8**	**7.4**	**6.8**
Transport, storage & communication	10.3	1.9	10.1	7.6
Trade, hotels and restaurants	6.4	4.8	6.1	5.8
Banking & Insurance	12.2	12.7	8.8	11.1
Real estate, etc.	4.5	8.9	4.5	5.9
Public administration	5.0	10.8	9.0	8.3
Other services	4.6	5.2	7.8	6.0

Table A. 3 Tamil Nadu: Land utilization
(Area in thousand hectare)

Classification of Area		1992-93		1993-94		1994-95		1995-96		1996-97 (P)	
		Area	(%)	Area	(%)	Area	(%)	Area	(%)	Area	(%)
I	Total geographical area	15,025	100.0	14,928	100.0	15,035	100.0	15,427	100.0	15,254	100.0
II	Land utilization										
	1 Forests	2,151	14.3	2,144	14.4	2,144	14.3	2,143	13.9	2,141	14.0
	2 Barren & uncultivable	510	3.4	515	3.4	498	3.3	490	3.2	481	3.2
	3 Land put to non-agricultural use	1,868	12.4	1,884	12.6	1,895	12.6	1,912	12.4	1,937	12.7
	4 Cultivable waste	304	2.0	307	2.1	303	2.0	348	2.3	345	2.3
	5 Permanent pastures & other grazing lands	121	0.8	122	0.8	124	0.8	125	0.8	125	0.8
	6 Land under miscellaneous tree crops & groves not included in the net area sown	231	1.5	241	1.6	219	1.5	221	1.4	225	1.5
	7 Total fellows	2,013	13.4	1,907	12.8	2,031	13.5	2,423	15.7	2,257	14.8
	- Current	962	6.4	933	6.3	1,001	6.7	1,293	8.4	1,028	6.7
	- Other fellow	1,051	7.0	974	6.5	1,030	6.9	1,130	7.3	1,229	8.1
	8 Net area sown	5,814	38.7	5,901	39.5	5,790	38.5	5,342	34.6	5,486	36.0
III	Area sown more than once	1,253		1,257		1,236		925		970	
IV	Gross cropped area	7,067	100.0	7,158	100.0	7,026	100.0	6,267	100.0	6,457	100.0
	1 Area under food crops	4,749	67.2	4,901	68.5	4,801	68.3	4,258	67.9	4,443	68.8
	2 Area under non-food crops	2,318	32.8	2,257	31.5	2,225	31.7	2,009	32.1	2,014	31.2
V	Cropping intensity (%)	121.6		121.3		121.3		117.3		117.7	

Source: Government of Tamil Nadu, Directorate of Evaluation and Applied Research, Chennai

Table A. 4 Tamil Nadu: GSDP at factor cost by industry of origin during 1980-97: At current prices
(Rs crore)

	Industry	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 (Revised)	1996-97 (Quick)	1997-98 (Advance)
1.	Agriculture	1,894	2,403	1,930	2,759	3,189	3,364	3,627	4,583	4,154	5,224	5,588	7,030	8,608	10,972	11,697	11,289	12,345	15,458
2.	Forestry & logging	20	23	29	23	29	34	41	45	271	296	155	284	280	297	317	268	273	279
3.	Fishing	52	67	81	89	93	79	82	79	106	121	154	220	315	449	545	671	991	1,026
4.	Mining & quarrying	42	57	69	71	87	94	100	119	150	193	234	291	346	401	496	475	524	603
	Primary sector	*2,008*	*2,548*	*2,108*	*2,941*	*3,397*	*3,571*	*3,851*	*4,826*	*4,682*	*5,834*	*6,131*	*7,825*	*9,549*	*12,120*	*13,056*	*12,704*	*14,132*	*17,365*
5.	Manufacturing	2,201	2,531	2,863	3,055	3,701	4,053	4,512	5,003	6,192	6,942	8,584	8,971	10,322	12,014	14,702	15,936	18,424	18,466
5.1	Registered	1,228	1,395	1,692	1,693	2,151	2,484	2,803	2,970	4,132	4,888	5,790	6,236	7,278	8,562	10,501	11,481	13,274	13,303
5.2	Unregistered	973	1,135	1,172	1,362	1,550	1,569	1,709	2,033	2,060	2,054	2,794	2,735	3,045	3,452	4,200	4,455	5,150	5,163
6.	Construction	431	512	553	625	695	783	836	1,026	1,309	1,513	1,736	2,024	2,347	2,923	3,626	4,339	5,142	6,129
7.	Electricity, gas & water supply	155	179	218	239	292	447	401	510	705	794	937	820	1,167	1,290	1,804	2,116	2,360	2,639
	Secondary sector	*2,787*	*3,222*	*3,634*	*3,919*	*4,689*	*5,283*	*5,749*	*6,539*	*8,206*	*9,248*	*11,257*	*11,815*	*13,836*	*16,227*	*20,132*	*22,391*	*25,926*	*27,234*
8.	Transport, storage & communication	584	700	806	918	1,104	1,485	1,675	2,051	2,102	2,436	2,951	3,787	4,785	5,388	6,614	7,504	8,667	9,915
8.1	Railways	63	88	106	113	124	149	165	212	239	261	285	312	357	388	398	454	476	499
8.2	Transport by other means	422	491	556	633	801	1,134	1,290	1,476	1,441	1,715	2,125	2,840	3,618	4,070	5,025	5,596	6,497	7,443
8.3	Storage	10	12	13	15	18	18	20	21	23	24	28	31	34	37	41	48	54	61
8.4	Communication	89	108	132	156	162	184	199	342	399	436	513	604	777	893	1,151	1,406	1,640	1,912
9.	Trade, hotels and restaurants	1,247	1,512	1,560	1,712	1,876	2,401	2,941	3,187	3,646	4,112	4,895	5,878	6,324	8,396	9,586	10,656	12,099	12,676
10.	Banking & insurance	239	367	381	426	549	636	663	957	1,005	1,255	1,529	2,436	2,574	3,236	4,023	5,573	6,474	7,521
11.	Real estate, etc.	456	516	589	656	749	832	1,001	1,177	1,265	1,417	1,386	1,546	1,677	1,847	2,070	2,406	2,711	2,990
12.	Public administration	290	299	337	366	483	558	655	865	980	1,195	1,445	1,587	1,952	2,045	2,349	2,834	3,464	4,500
13.	Other services	469	547	609	709	811	883	978	1,091	1,312	1,637	1,745	2,084	2,312	2,600	2,904	3,520	4,649	5,193
	Tertiary sector	*3,286*	*3,942*	*4,282*	*4,786*	*5,572*	*6,794*	*7,913*	*9,327*	*10,311*	*12,052*	*13,952*	*17,317*	*19,624*	*23,512*	*27,546*	*32,495*	*38,065*	*42,795*
14.	**GSDP**	**8,081**	**9,712**	**10,025**	**11,646**	**13,658**	**15,648**	**17,513**	**20,693**	**23,199**	**27,134**	**31,339**	**36,957**	**43,010**	**51,858**	**60,734**	**67,589**	**78,124**	**87,394**

Source: Government of Tamil Nadu, Directorate of Economics and Statistics, Chennai.

Table A. 5 Tamil Nadu: GSDP at factor cost by industry of origin during 1980-96: At 1980-81 prices
(Rs crore)

	Industry	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 (Revised)	1996-97 (Quick)	1997-98 (Advance)
1.	Agriculture	1,894	2,379	1,839	2,214	2,608	2,432	2,452	2,490	2,431	2,758	2,869	3,197	3,272	3,578	3,919	3,278	3,125	3,871
2.	Forestry & logging	20	22	25	18	21	21	26	19	103	102	96	93	92	90	89	86	85	83
3.	Fishing	52	53	54	54	54	46	46	45	46	47	48	53	56	58	62	63	69	71
4.	Mining & quarrying	42	47	47	47	53	54	55	70	71	77	86	96	103	96	101	106	106	114
	Primary sector	*2,008*	*2,500*	*1,965*	*2,332*	*2,736*	*2,554*	*2,579*	*2,624*	*2,651*	*2,984*	*3,098*	*3,439*	*3,522*	*3,823*	*4,171*	*3,533*	*3,384*	*4,139*
5.	Manufacturing	2,201	2,274	2,421	2,449	2,834	2,832	2,752	2,797	3,320	3,204	3,488	3,228	3,461	3,788	4,416	4,532	4,784	4,430
5.1	Registered	1,228	1,261	1,439	1,376	1,671	1,758	1,710	1,660	2,215	2,256	2,353	2,244	2,440	2,699	3,154	3,265	3,447	3,191
5.2	Unregistered	973	1,012	982	1,073	1,163	1,075	1,042	1,137	1,105	948	1,135	984	1,021	1,088	1,262	1,267	1,337	1,239
6.	Construction	431	472	421	437	429	435	414	453	633	565	896	876	904	979	1,080	1,150	1,203	1,261
7.	Electricity, gas & water supply	155	169	186	188	208	272	238	304	393	409	437	382	453	481	519	592	660	738
	Secondary sector	*2,787*	*2,915*	*3,027*	*3,074*	*3,470*	*3,539*	*3,405*	*3,555*	*4,345*	*4,178*	*4,821*	*4,486*	*4,818*	*5,247*	*6,015*	*6,274*	*6,647*	*6,429*
8.	Transport, storage & communication	584	627	646	661	741	939	997	972	884	1,033	1,012	1,130	1,239	1,316	1,450	1,608	1,705	1,813
8.1	Railways	63	72	71	72	79	82	81	83	85	89	92	95	97	96	96	107	111	114
8.2	Transport by other means	422	449	466	473	535	723	771	742	647	783	749	854	961	1,017	1,119	1,214	1,260	1,307
8.3	Storage	10	11	11	12	13	12	13	12	11	11	11	11	12	12	13	13	14	15
8.4	Communication	89	95	97	104	114	121	132	136	141	150	160	170	170	191	222	273	321	377
9.	Trade, hotels and restaurants	1,247	1,383	1,333	1,371	1,454	1,687	1,624	1,886	2,004	1,977	2,112	2,185	2,251	2,617	2,915	3,011	3,121	3,072
10.	Banking & insurance	239	271	304	312	345	421	408	534	523	634	741	892	979	1,051	1,164	1,453	1,626	1,818
11.	Real estate, etc.	456	471	487	504	521	566	588	616	601	864	818	861	873	919	949	1,033	1,094	1,198
12.	Public administration	290	266	277	269	332	361	389	468	482	561	602	582	654	637	666	729	815	912
13.	Other services	469	499	516	548	579	588	598	611	673	783	756	796	803	838	852	933	1,046	1,146
	Tertiary sector	*3,286*	*3,516*	*3,563*	*3,663*	*3,972*	*4,563*	*4,605*	*5,086*	*5,168*	*5,851*	*6,041*	*6,447*	*6,800*	*7,379*	*7,995*	*8,767*	*9,407*	*9,958*
14.	GSDP	8,081	8,931	8,555	9,069	10,178	10,656	10,588	11,264	12,164	13,013	13,960	14,373	15,140	16,449	18,181	18,574	19,439	20,526

Table A. 6 Tamil Nadu: Sectoral composition of GSDP at factor cost by industry of origin during 1980-97: At current prices
(Percent of total)

	Industry	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 (Revised)	1996-97 (Quick)	1997-98 (Advance)
1.	Agriculture	23.4	24.7	19.2	23.7	23.4	21.5	20.7	22.1	17.9	19.3	17.8	19.0	20.0	21.2	19.3	16.7	15.8	17.7
2.	Forestry & logging	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	1.2	1.1	0.5	0.8	0.7	0.6	0.5	0.4	0.3	0.3
3.	Fishing	0.6	0.7	0.8	0.8	0.7	0.5	0.5	0.4	0.5	0.4	0.5	0.6	0.7	0.9	0.9	1.0	1.3	1.2
4.	Mining & quarrying	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.7	0.7
	Primary sector	*24.8*	*26.2*	*21.0*	*25.3*	*24.9*	*22.8*	*22.0*	*23.3*	*20.2*	*21.5*	*19.6*	*21.2*	*22.2*	*23.4*	*21.5*	*18.8*	*18.1*	*19.9*
5.	Manufacturing	27.2	26.1	28.6	26.2	27.1	25.9	25.8	24.2	26.7	25.6	27.4	24.3	24.0	23.2	24.2	23.6	23.6	21.1
5.1	Registered	15.2	14.4	16.9	14.5	15.7	15.9	16.0	14.4	17.8	18.0	18.5	16.9	16.9	16.5	17.3	17.0	17.0	15.2
5.2	Unregistered	12.0	11.7	11.7	11.7	11.4	10.0	9.8	9.8	8.9	7.6	8.9	7.4	7.1	6.7	6.9	6.6	6.6	5.9
6.	Construction	5.3	5.3	5.5	5.4	5.1	5.0	4.8	5.0	5.6	5.6	5.5	5.5	5.5	5.6	6.0	6.4	6.6	7.0
7.	Electricity, gas & water supply	1.9	1.8	2.2	2.1	2.1	2.9	2.3	2.5	3.0	2.9	3.0	2.2	2.7	2.5	3.0	3.1	3.0	3.0
	Secondary sector	*34.5*	*33.2*	*36.3*	*33.7*	*34.3*	*33.8*	*32.8*	*31.6*	*35.4*	*34.1*	*35.9*	*32.0*	*32.2*	*31.3*	*33.1*	*33.1*	*33.2*	*31.2*
8.	Transport, storage & communication	7.2	7.2	8.0	7.9	8.1	9.5	9.6	9.9	9.1	9.0	9.4	10.2	11.1	10.4	10.9	11.1	11.1	11.3
8.1	Railways	0.8	0.9	1.1	1.0	0.9	1.0	0.9	1.0	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.6	0.6
8.2	Transport by other means	5.2	5.1	5.5	5.4	5.9	7.2	7.4	7.1	6.2	6.3	6.8	7.7	8.4	7.8	8.3	8.3	8.3	8.5
8.3	Storage	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
8.4	Communication	1.1	1.1	1.3	1.3	1.2	1.2	1.1	1.7	1.7	1.6	1.6	1.6	1.8	1.7	1.9	2.1	2.1	2.2
9.	Trade, hotels and restaurants	15.4	15.6	15.6	14.7	13.7	15.3	16.8	15.4	15.7	15.2	15.6	15.9	14.7	16.2	15.8	15.8	15.5	14.5
10.	Banking & insurance	3.0	3.8	3.8	3.7	4.0	4.1	3.8	4.6	4.3	4.6	4.9	6.6	6.0	6.2	6.6	8.2	8.3	8.6
11.	Real estate, etc.	5.6	5.3	5.9	5.6	5.5	5.3	5.7	5.7	5.5	5.2	4.4	4.2	3.9	3.6	3.4	3.6	3.5	3.4
12.	Public administration	3.6	3.1	3.4	3.1	3.5	3.6	3.7	4.2	4.2	4.4	4.6	4.3	4.5	3.9	3.9	4.2	4.4	5.1
13.	Other services	5.8	5.6	6.1	6.1	5.9	5.6	5.6	5.3	5.7	6.0	5.6	5.6	5.4	5.0	4.8	5.2	6.0	5.9
	Tertiary sector	*40.7*	*40.6*	*42.7*	*41.1*	*40.8*	*43.4*	*45.2*	*45.1*	*44.4*	*44.4*	*44.5*	*46.9*	*45.6*	*45.3*	*45.4*	*48.1*	*48.7*	*49.0*

Table A. 7 Tamil Nadu: Annual sectoral growth of GSDP in 1980-81 prices (% change over previous year)

	Industry	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 (Revised)	1996-97 (Quick)	1997-98 (Advance)
	GSDP	**10.5**	**-4.2**	**6.0**	**12.2**	**4.7**	**-0.6**	**6.4**	**8.0**	**7.0**	**7.3**	**3.0**	**5.3**	**8.6**	**10.5**	**2.2**	**4.7**	**5.6**
	Primary sector	24.5	-21.4	18.7	17.3	-6.6	1.0	1.7	1.1	12.6	3.8	11.0	2.4	8.5	9.1	-15.3	-4.2	22.3
1.	Agriculture	25.6	-22.7	20.4	17.8	-6.8	0.8	1.6	-2.4	13.4	4.0	11.4	2.3	9.4	9.5	-16.4	-4.7	23.9
2.	Forestry & logging	9.9	16.0	-29.9	17.0	2.8	22.2	-27.3	443.4	-1.1	-6.2	-2.7	-1.5	-1.9	-0.8	-3.7	-1.4	-1.4
3.	Fishing	1.6	2.8	-0.7	0.6	-14.2	-0.1	-3.6	3.3	1.6	2.1	11.6	4.5	4.5	5.5	2.6	8.9	2.5
4.	Mining & quarrying	12.0	1.1	-0.9	12.8	3.4	0.5	27.5	1.3	9.0	11.3	11.9	7.7	-6.7	4.8	4.5	0.5	7.0
	Secondary sector	4.6	3.9	1.5	12.9	2.0	-3.8	4.4	22.2	-3.9	15.4	-6.9	7.4	8.9	14.6	4.3	6.0	-3.3
5.	Manufacturing	3.3	6.5	1.2	15.7	0.0	-2.8	1.6	18.7	-3.5	8.8	-7.4	7.2	9.4	16.6	2.6	5.6	-7.4
5.1	Registered	2.7	14.1	-4.4	21.4	5.2	-2.7	-2.9	33.4	1.9	4.3	-4.6	8.7	10.6	16.9	3.5	5.6	-7.4
5.2	Unregistered	4.0	-3.0	9.3	8.4	-7.6	-3.0	9.0	-2.8	-14.2	19.7	-13.3	3.7	6.6	15.9	0.4	5.6	-7.4
6.	Construction	9.6	-10.9	3.9	-1.9	1.4	-4.6	9.4	39.6	-10.7	58.7	-2.3	3.2	8.3	10.3	6.5	4.6	4.8
7.	Electricity, gas & water supply	9.1	10.0	1.0	10.7	30.8	-12.5	27.9	29.1	4.0	7.0	-12.5	18.4	6.2	7.8	14.1	11.6	11.8
	Tertiary sector	7.0	1.3	2.8	8.4	14.9	0.9	10.4	1.6	13.2	3.3	6.7	5.5	8.5	8.4	9.7	7.3	5.9
8.	Transport, storage & communication	7.4	2.9	2.4	12.1	26.7	6.1	-2.4	-9.1	16.8	-2.0	11.7	9.6	6.2	10.2	10.9	6.0	6.3
9.	Trade, hotels and restaurants	10.8	-3.6	2.8	6.1	16.0	-3.8	16.1	6.3	-1.4	6.8	3.5	3.0	16.3	11.4	3.3	3.6	-1.6
10.	Banking & insurance	13.2	12.4	2.6	10.5	22.2	-3.1	30.8	-2.0	21.2	16.8	20.5	9.8	7.3	10.7	24.9	11.9	11.9
11.	Real estate, etc.	3.4	3.4	3.4	3.4	8.7	3.9	4.7	-2.5	43.7	-5.3	5.3	1.4	5.3	3.3	8.8	5.9	9.5
12.	Public administration	-8.4	4.3	-3.1	23.5	8.9	7.8	20.1	3.1	16.2	7.4	-3.4	12.3	-2.6	4.5	9.5	11.9	11.9
13.	Other services	6.4	3.4	6.2	5.8	1.4	1.9	2.0	10.2	16.4	-3.4	5.3	0.9	4.3	1.7	9.5	12.2	9.5

Table A. 8 Tamil Nadu: Per capita GSDP at factor cost at current prices during 1980-98

(Rs)

	Industry	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96 (Revised)	1996-97 (Quick)	1997-98 (Advance)
1.	Agriculture	388	481	366	435	505	465	462	463	446	499	514	564	569	614	663	547	515	630
2.	Forestry & logging	4	4	5	3	4	4	5	4	19	18	17	16	16	15	15	14	14	14
3.	Fishing	11	11	11	11	10	9	9	8	8	8	9	9	10	10	10	11	11	11
4.	Mining & quarrying	9	9	9	9	10	10	10	13	13	14	15	17	18	17	17	18	18	18
	Primary sector	*411*	*505*	*392*	*458*	*530*	*488*	*486*	*488*	*486*	*539*	*555*	*607*	*613*	*656*	*706*	*590*	*558*	*673*
5.	Manufacturing	451	459	482	481	549	541	519	520	609	579	624	570	602	650	748	756	789	721
5.1	Registered	252	255	287	270	324	336	322	309	406	408	421	396	425	463	534	545	568	519
5.2	Unregistered	199	205	196	211	225	205	196	211	202	171	203	174	178	187	214	211	220	201
6.	Construction	88	95	84	86	83	83	78	84	116	102	160	155	157	168	183	192	198	205
7.	Electricity, gas & water supply	32	34	37	37	40	52	45	57	72	74	78	68	79	83	88	99	109	120
	Secondary sector	*571*	*589*	*603*	*604*	*673*	*676*	*642*	*661*	*797*	*755*	*863*	*792*	*838*	*901*	*1018*	*1047*	*1096*	*1046*
8.	Transport, storage & communication	120	127	129	130	144	179	188	181	162	187	181	200	216	226	246	268	281	295
8.1	Railways	13	14	14	14	15	16	15	15	16	16	16	17	17	16	16	18	18	19
8.2	Transport by other means	86	91	93	93	104	138	145	138	119	141	134	151	167	174	190	203	208	213
8.3	Storage	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2
8.4	Communication	18	19	19	20	22	23	25	25	26	27	29	30	30	33	38	46	53	61
9.	Trade, hotels and restaurants	256	279	266	269	282	322	306	351	367	357	378	386	392	449	493	503	514	500
10.	Banking & insurance	49	55	61	61	67	81	77	99	96	115	133	157	170	180	197	243	268	296
11.	Real estate, etc.	93	95	97	99	101	108	111	115	110	156	146	152	152	158	161	172	180	195
12.	Public administration	60	54	55	53	64	69	73	87	88	101	108	103	114	109	113	122	134	148
13.	Other services	96	101	103	108	112	112	113	114	123	142	135	141	140	144	144	156	172	186
	Tertiary sector	*673*	*711*	*710*	*720*	*770*	*872*	*868*	*945*	*947*	*1058*	*1081*	*1138*	*1183*	*1266*	*1354*	*1463*	*1551*	*1620*
14.	GSDP	1656	1805	1705	1782	1973	2037	1996	2094	2230	2352	2499	2537	2635	2823	3078	3100	3204	3339

Table A. 9 Tamil Nadu: Area, production and yield per hectare of major crops during 1990-95

Crop	Gross Area ('000 ha)					Production ('000 tons)					Yield (kg/ha)				
	1990-91	1991-92	1992-93	1993-94	1994-95	1990-91	1991-92	1992-93	1993-94	1994-95	1990-91	1991-92	1992-93	1993-94	1994-95
Total foodgrains	3,901	4,007	3,945	4,027	4,477	7,435	8,245	8,358	8,258	9,541	1,910	2,060	2,120	2,050	2,130
Kharif foodgrains	3,465	3,628	3,635	3,331	3,223	6,258	7,182	7,587	7,045	7,742	1,800	1,980	2,090	2,114	2,400
Rabi foodgrains	433	379	310	696	1,255	1,180	1,063	771	1,213	1,800	2,730	2,810	2,490	1,743	1,430
Rice	1,856	2,118	2,184	2,306	2,337	5,782	6,596	6,806	6,750	7,686	3,120	3,110	3,120	2,930	3,290
Other pulses	742	685	626	571	866	273	271	275	220	338	370	400	439	385	390
Groundnuts	963	1,099	1,188	1,158	1,150	1,179	1,518	1,766	1,866	1,845	1,220	1,380	1,390	1,610	1,600
Sugar cane	233	238	216	249	309	23,480	24,887	23,064	27,992	35,236	100,820	104,570	106,976	112,236	113,920
Cotton $	239	264	267	229	296	409	437	454	426	591	290	281	289	316	339
Coconuts #	226	240	196	273	273	2,358	2,756	2,771	3,311	3,311	10,420	11,470	11,310	12,138	12,140

Source: Centre for Monitoring Indian Economy (1997) *Profiles of States*, Mumbai.
Notes: $ '000 bales of 170 kg each; # Million nuts/ nuts per ahs; * nuts/ha.

Table A. 10 Tamil Nadu: Performance indicators of major industries in 1989-90 and 1993-94

(Rs lakh)

Industry	No. of factories		Persons engaged		Emoluments		Fixed capital		Invested capital		Value of output		Net value added		Profits	
	1989-90	1993-94	1989-90	1993-94	1989-90	1993-94	1989-90	1993-94	1989-90	1993-94	1989-90	1993-94	1989-90	1993-94	1989-90	1993-94
Cotton textiles	1,816	2,535	175,177	201,771	32,720	55,147	73,096	206,893	143,001	373,047	346,313	699,724	77,309	155,341	25,856	54,586
Rub., plastic, petl.& coal	483	562	25,565	29,493	6,364	10,478	64,439	175,753	116,052	279,407	260,460	485,838	31,838	71,565	15,458	39,736
Food products	2,998	3,602	111,077	137,614	11,659	22,658	33,547	99,212	78,494	192,522	275,708	482,469	50,315	78,945	31,271	36,294
Machinery & equipment	1,396	1,649	98,545	101,190	24,644	36,411	54,842	94,900	143,829	183,926	243,981	424,746	58,729	106,900	17,828	44,529
Basic chemicals	1,088	1,607	106,958	117,249	14,896	23,020	108,831	214,239	174,457	317,228	228,858	416,085	39,941	84,418	4,698	21,429
Electricity	9	10	86,532	79,908	29,619	8,640	411,238	732,574	439,967	1,194,115	11,219	406,348	69,168	115,921	11,931	66,315
Transport equipment	491	548	80,247	86,057	27,128	36,567	46,640	98,190	95,963	169,642	79,391	344,777	49,231	80,433	7,804	22,633
Leather & its products	652	1,153	51,153	67,143	5,465	11,895	12,790	34,056	36,823	96,783	101,156	254,600	13,022	57,885	3,780	37,966
Textile products	728	1,616	37,827	99,824	2,834	11,470	6,162	32,741	14,207	73,323	48,024	216,030	8,726	43,136	3,981	23,682
Metal & alloys	511	581	27,333	28,765	5,740	8,246	30,956	71,127	69,795	119,678	119,142	189,052	9,563	20,380	-2,464	-399
Non-metallic mineral products	544	755	29,857	35,772	6,246	10,032	32,025	67,080	48,105	104,127	72,500	180,991	15,851	54,867	2,291	31,942
Paper & its prod. & publishing	908	1,078	39,446	41,898	6,600	11,384	34,407	75,378	48,111	98,476	83,039	171,347	20,698	58,133	8,244	35,476
Metal products	542	708	20,031	23,788	3,021	5,817	8,481	17,729	19,684	36,045	34,692	78,297	6,691	16,036	963	3,517
Other manufacturing	88	155	5,876	11,067	867	4,355	6,650	26,960	10,392	43,131	216,242	50,930	3,004	12 125	894	4,299
Wool, silk & man-made textiles	253	250	8,987	10,688	1,763	3,701	3,677	17,108	6,133	25,058	18,564	48,850	5,431	8	2,963	2,173
Beverages & tobacco	242	294	9,720	10,947	1,051	1,870	5,862	7,585	9,626	14,081	27,032	48,682	2,309	6,645	-931	2,973
Repair of capital goods	243	459	14,342	24,946	3,431	9,999	2,878	6,298	3,751	11,225	14,608	30,759	4,203	11,479	284	-135
Non-conventional energy		3		207		44		230		2,654	411	14,029		528		266
Wood & its products	300	362	4,251	5,309	279	584	423	1,415	1,154	3,586	2,828	9,278	565	1,186	80	159
Repair services	386	384	17,021	9,859	3,591	2,274	3,961	4,235	5,541	6,043	10,697	7,895	5,091	3,831	787	633
Total	13,800	18,522	952,701	1,127,161	188,082	274,998	941,362	1,984,274	1,465,606	3,344,882	2,406,664	4,563,447	471,906	988,312	135,754	428,079

Source: CMIE, 1997

Table A. 11 Tamil Nadu: Industrial performance as compared to all-India and the neighboring States in selected years

Ratio	Tamil Nadu			India			Andhra Pradesh			Kerala			Karnataka		
	1985-86	1989-90	1993-94	1985-86	1989-90	1993-94	1985-86	1989-90	1993-94	1985-86	1989-90	1993-94	1985-86	1989-90	1993-94
1. Per factory (Rs lakh)															
Fixed capital	41	68	107	59	99	185	28	47	146	51	67	95	42	70	122
Gross output	104	174	246	119	214	350	58	85	186	99	173	218	88	177	308
Value added	19	34	53	23	40	73	11	14	32	22	42	45	19	38	68
Persons engaged (No)	70	69	61	75	76	73	53	52	58	76	76	77	70	74	76
2. Per worker															
Gross output (Rs lakh)	1	3	4	2	3	5	1	2	3	1	2	3	1	2	4
Emoluments (Rs)	12,827	19,742	24,397	14,611	22,296	32,406	9,952	13,003	21,789	12,261	18,315	22,973	15,045	23,689	31,522
3. Technical ratios (%)															
Value added to output	18.5	19.6	21.7	19.4	18.8	20.8	17.2	16.0	17.3	21.9	24.2	20.6	24.5	21.6	22.0
Output to fixed capital	251.7	255.7	230.0	200.0	215.7	189.7	203.0	180.2	127.6	196.5	257.6	229.0	209.0	251.1	253.0
Wages to output	8.6	7.8	6.0	9.2	8.0	6.7	9.1	7.9	6.8	9.3	8.1	8.1	12.0	9.9	7.7
Value added to fixed capital	46.6	50.1	49.8	38.7	40.6	39.4	34.9	28.8	22.1	43.1	62.3	47.3	51.2	54.3	55.8
4. Profitability ratio (%)															
Profits to fixed capital	11.2	14.4	21.6	7.0	8.3	12.7	3.1	1.4	1.0	13.3	25.1	13.5	10.8	9.8	17.3
Profits to output	4.4	5.6	9.4	1.2	3.8	6.7	1.6	0.8	0.8	6.7	9.7	5.9	5.2	3.9	6.8

Source: CMIE, 1997

Table A. 12 Tamil Nadu: Proportion of people below the poverty line compared with other States in India in selected years
(Percent to total population)

	1973-74			1977-78			1983-84			1987-88			1993-94		
	Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined	Rural	Urban	Combined
Andhra Pradesh	48.4	50.6	48.9	38.1	43.6	39.3	26.5	36.3	28.9	20.9	40.1	25.9	15.9	38.3	22.2
Assam	52.7	36.9	51.2	59.8	32.7	57.2	42.6	21.7	40.5	39.4	9.9	36.2	45.0	7.7	40.9
Bihar	63.0	53.0	61.9	63.3	48.8	61.6	64.4	47.3	62.2	52.6	48.7	52.1	58.2	34.5	55.0
Gujarat	46.4	52.6	48.2	41.8	40.0	41.2	29.8	39.1	32.8	28.7	37.3	31.5	22.2	27.9	24.2
Haryana	34.2	40.2	35.4	27.7	36.6	29.6	20.6	24.2	21.4	16.2	18.0	16.6	28.0	16.4	25.1
Karnataka	55.1	52.5	54.5	48.2	50.4	48.8	36.3	42.8	38.2	32.8	48.4	37.5	29.9	40.1	33.2
Kerala	59.2	62.7	59.8	51.5	55.6	52.2	39.0	45.7	40.4	29.1	40.3	31.8	25.8	24.6	25.4
Madhya Pradesh	62.7	57.7	61.8	62.5	58.7	61.8	48.9	53.1	49.8	41.9	47.1	43.1	40.6	48.4	42.5
Maharashtra	57.7	43.9	53.2	64.0	40.1	55.9	45.2	40.3	43.4	40.8	39.8	40.4	37.9	35.2	36.9
Orissa	67.3	55.6	66.2	72.4	50.9	70.1	67.5	49.2	65.3	57.6	41.6	55.6	49.7	41.6	48.6
Punjab	28.2	28.0	28.2	16.4	27.3	19.3	13.2	23.8	16.2	12.6	14.7	13.2	12.0	11.4	11.8
Rajasthan	44.8	52.1	46.1	35.9	43.5	37.4	33.5	37.9	34.5	33.2	41.9	35.2	26.5	30.5	27.4
Tamil Nadu	**57.4**	**49.4**	**54.9**	**57.7**	**48.7**	**54.8**	**54.0**	47.0	**51.7**	**45.8**	**38.6**	**43.4**	**32.5**	**39.8**	**35.0**
Uttar Pradesh	56.5	60.1	57.1	47.6	56.2	49.1	46.5	49.8	47.1	41.1	43.0	41.5	42.3	35.4	40.9
West Bengal	73.2	34.7	63.4	68.3	38.2	60.5	63.1	32.3	54.9	48.3	35.1	44.7	40.8	22.4	35.7
All India	56.4	49.0	54.9	53.1	45.2	51.3	45.7	40.8	44.5	39.1	38.2	38.9	37.3	32.4	36.0

Source: Government of India (1993, 1997) Modified Estimates of Poverty Ratio by the Expert Group, Planning Commission, New Delhi.

Table A. 13 Tamil Nadu: Trends in the fiscal aggregates during 1980-99
(Rs lakh)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
Total receipts	141,124	163,793	178,065	213,842	240,740	274,358	298,913	334,331	375,237	444,477	521,569	807,082	772,175	840,285	969,231	1,100,581	1,261,956	1,480,385	1,529,699
Revenue	127,996	144,152	167,801	196,251	222,751	263,832	287,931	309,189	348,887	419,978	508,788	677,566	701,633	806,615	921,940	1,059,925	1,196,128	1,358,695	1,503,946
Own source	87,168	98,638	117,905	133,524	151,430	178,683	201,002	206,009	232,881	283,615	350,553	485,260	477,485	550,527	660,642	800,965	886,890	980,751	1,105,135
Tax	63,911	84,240	101,153	114,524	129,757	154,753	175,706	176,378	199,423	248,901	312,406	373,411	416,206	480,137	583,376	715,120	798,345	868,564	1,002,400
Non-tax	23,257	14,398	16,752	19,000	21,673	23,930	25,296	29,631	33,458	34,714	38,148	111,849	61,279	70,389	77,266	85,845	88,545	112,187	102,735
Central transfers	40,828	45,514	49,896	62,727	71,321	85,149	86,929	103,180	116,006	136,363	158,235	192,306	224,148	256,088	261,298	258,960	309,238	377,944	398,811
Share taxes	29,176	32,948	35,638	40,203	44,470	51,674	58,507	65,208	72,292	94,728	100,292	118,947	141,968	155,261	173,540	180,559	216,550	272,830	292,007
Grants	11,652	12,566	14,258	22,524	26,851	33,475	28,422	37,972	43,714	41,636	57,943	73,359	82,179	100,827	87,758	78,400	92,688	105,114	106,804
Capital receipts	13,128	19,641	10,264	17,591	17,989	10,526	10,982	25,141	26,351	24,498	12,780	129,517	70,543	33,670	47,291	40,656	65,828	121,690	25,752
Total expenditure	162,195	193,047	218,062	260,199	280,512	310,704	344,232	405,326	450,763	551,239	634,199	944,574	954,581	983,541	1,118,872	1,226,167	1,506,453	1,692,559	2,010,825
Revenue expenditure	115,225	135,989	157,608	191,080	221,034	244,975	277,570	337,482	376,304	455,009	564,129	867,952	854,253	875,801	963,495	1,091,057	1,306,488	1,495,085	1,804,804
Capital expenditure	46,970	57,058	60,454	69,119	59,478	65,729	66,662	67,845	74,459	96,230	70,070	76,622	100,329	107,739	155,377	135,110	199,964	197,473	206,021
Outlays	8,506	14,353	15,075	18,251	16,564	15,248	16,896	17,954	19,029	21,530	22,249	27,909	32,237	55,051	67,995	59,094	91,965	146,779	157,276
Transfers	38,464	42,705	45,379	50,868	42,914	50,481	49,766	49,890	55,431	74,700	47,821	48,713	68,092	52,688	87,382	76,016	108,000	50,694	48,745

Table A. 14 Tamil Nadu: Trends in the fiscal aggregates as ratios of GSDP during 1980-99
(Percent to GSDP)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
Total receipts	17.5	16.9	17.8	18.4	17.6	17.5	17.1	16.2	16.2	16.4	16.6	21.84	18.0	16.2	16.0	16.3	16.2	16.9	15.5
Revenue	15.8	14.8	16.7	16.9	16.3	16.9	16.4	14.9	15.0	15.5	16.2	18.3	16.3	15.6	15.2	15.7	15.3	15.5	15.2
Own source	10.8	10.2	11.8	11.5	11.1	11.4	11.5	10.0	10.0	10.5	11.2	13.1	11.1	10.6	10.9	11.9	11.4	11.2	11.2
Tax	7.9	8.7	10.1	9.8	9.5	9.9	10.0	8.5	8.6	9.2	10.0	10.1	9.7	9.3	9.6	10.6	10.2	9.9	10.2
Non-tax	2.9	1.5	1.7	1.6	1.6	1.5	1.4	1.4	1.4	1.3	1.2	3.0	1.4	1.4	1.3	1.3	1.1	1.3	1.0
Central transfers	5.1	4.7	5.0	5.4	5.2	5.4	5.0	5.0	5.0	5.0	5.0	5.2	5.2	4.9	4.3	3.8	4.0	4.3	4.0
Share taxes	3.6	3.4	3.6	3.5	3.3	3.3	3.3	3.2	3.1	3.5	3.2	3.2	3.3	3.0	2.9	2.7	2.8	3.1	3.0
Grants	1.4	1.3	1.4	1.9	2.0	2.1	1.6	1.8	1.9	1.5	1.8	2.0	1.9	1.9	1.4	1.2	1.2	1.2	1.1
Cap receipts	1.6	2.0	1.0	1.5	1.3	0.7	0.6	1.2	1.1	0.9	0.4	3.5	1.6	0.6	0.8	0.6	0.8	1.4	0.3
Total expenditure	20.1	19.9	21.8	22.3	20.5	19.9	19.7	19.6	19.4	20.3	20.2	25.6	22.2	19.0	18.4	18.1	19.3	19.4	20.4
Revenue expenditure	14.3	14.0	15.7	16.4	16.2	15.7	15.8	16.3	16.2	16.8	18.0	23.5	19.9	16.9	15.9	16.1	16.7	17.1	18.3
Capital expenditure	5.8	5.9	6.0	5.9	4.4	4.2	3.8	3.3	3.2	3.5	2.2	2.1	2.3	2.1	2.6	2.0	2.6	2.3	2.1
Outlays	1.1	1.5	1.5	1.6	1.2	1.0	1.0	0.9	0.8	0.8	0.7	0.8	0.7	1.1	1.1	0.9	1.2	1.7	1.6
Transfers	4.8	4.4	4.5	4.4	3.1	3.2	2.8	2.4	2.4	2.8	1.5	1.3	1.6	1.0	1.4	1.1	1.4	0.6	0.5

Table A. 15 Tamil Nadu: Trends in the Government receipts during 1980-99

(Rs lakh)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
Total receipts	141,124	163,796	178,066	213,842	240,740	274,358	298,913	334,331	375,237	444,477	521,569	807,082	772,175	840,285	969,231	1,100,581	1,261,956	1,480,385	1,529,699
Revenue	127,996	144,155	167,802	196,251	222,751	263,832	287,931	309,189	348,887	419,978	508,788	677,566	701,633	806,615	921,940	1,059,925	1,196,128	1,358,695	1,503,946
Tax revenue	93,087	117,188	136,791	154,727	174,227	206,427	234,213	241,586	271,715	343,629	412,697	492,358	558,174	635,399	756,916	895,679	1,014,895	1,141,394	1,294,407
Own tax revenue	63,911	84,240	101,153	114,524	129,757	154,753	175,706	176,378	199,423	248,901	312,406	373,411	416,206	480,137	583,376	715,120	798,345	868,564	1,002,400
Taxes on income	568	435	273	405	1,214	1,932	1,003	657	678	900	1,797	2,620	2,004	1,277	1,673	1,947	1,386	3,936	1,800
Agricultural income tax	568	435	273	405	1,214	1,932	1,003	657	678	900	1,797	2,620	2,004	1,277	1,673	1,947	1,386	3,936	1,800
Taxes on property transactions	4,333	6,639	7,586	7,674	11,065	11,290	13,578	16,216	18,110	22,476	24,415	32,623	31,530	42,289	55,264	64,870	61,934	70,281	72,200
Land revenue	-434	966	1,017	634	2,591	1,646	1,289	1,698	1,506	1,382	1,443	2,650	1,930	3,187	3,527	2,521	1,877	6,031	3,500
Stamps and registration fees	4,492	5,429	6,273	6,727	8,136	9,509	12,154	14,152	16,465	20,834	22,639	29,646	29,182	38,369	50,669	61,301	59,060	63,155	67,500
Urban immovable property taxes	275	244	296	313	338	135	135	365	138	260	333	327	418	732	1,069	1,048	997	1,096	1,200
Taxes on commodities and Services	59,010	77,166	93,294	106,445	117,478	141,531	161,125	159,505	180,635	225,525	286,193	338,168	382,672	436,571	526,439	648,303	735,025	794,347	928,400
Total sales taxes	45,963	54,733	65,549	70,152	82,410	99,239	110,506	124,245	141,436	165,498	206,595	244,187	274,312	320,999	391,384	468,927	534,107	560,379	651,700
General sales tax	34,264	44,622	55,218	58,317	69,334	84,528	93,555	105,727	120,175	141,902	178,785	211,260	238,470	275,807	335,705	398,793	467,359	513,550	602,127
Tax on vehicles	8,133	7,328	7,794	9,058	9,229	11,054	14,532	15,251	16,241	19,601	22,734	24,819	29,296	31,370	37,245	39,221	42,542	46,969	53,900
Entertainmen tax	3,369	3,715	0	4,488	5,048	0	6,239	6,075	6,357	6,941	6,989	6,981	7,721	8,375	8,959	9,999	11,716	11,423	12,675
State excise duty	1,257	11,038	15,213	21,988	20,053	24,184	28,656	12,016	14,803	30,182	43,486	48,312	56,486	56,882	61,464	93,466	106,307	135,000	159,700
Electricity duty	283	352	495	588	621	789	829	961	761	527	694	8,295	6,917	7,816	11,441	14,053	15,062	17,500	20,047
Share in central taxes	29,176	32,948	35,638	40,203	44,470	51,674	58,507	65,208	72,292	94,728	100,292	118,947	141,968	155,261	173,540	180,559	216,550	272,830	292,007
Income tax	8,067	8,198	9,106	9,432	9,913	13,968	16,339	19,504	20,743	29,950	32,680	40,473	48,119	61,373	67,888	75,339	89,753	140,178	138,635
Estate duty	34	214	132	103	157	159	110	0	0	0	0	0	0	0	0	0	0	0	
Union excise duty	21,075	24,536	26,400	30,668	34,400	37,547	42,058	45,704	51,549	64,778	67,612	78,474	93,849	93,888	105,652	105,220	126,797	132,652	153,372

Tamil Nadu: Trends in the Government receipts during 1980-99 (contd.)

(Rs lakh)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
Non-tax revenue	34,909	26,967	31,011	41,524	48,524	57,405	53,718	67,603	77,172	76,350	96,091	185,208	143,459	171,216	165,024	164,245	181,232	217,301	209,539
Own non-tax revenue	23,257	14,398	16,752	19,000	21,673	23,930	25,296	29,631	33,458	34,714	38,148	111,849	61,279	70,389	77,266	85,845	88,545	112,187	102,735
Interest receipts	13,419	4,829	4,836	5,194	5,899	6,643	7,444	8,250	7,869	3,704	8,970	77,067	21,120	27,524	27,879	34,283	34,901	48,625	33,095
Dividends & profits	118	77	120	159	193	218	226	239	274	125	353	1,316	1,769	1,441	786	2,838	2,220	1,845	1,822
General services	2,080	2,283	2,381	2,063	2,956	2,949	3,979	4,706	4,760	7,013	7,467	7,625	7,699	7,345	10,703	11,185	11,623	16,649	17,981
Social and community services	2,682	1,611	2,866	3,054	3,788	4,351	4,191	4,822	8,751	6,253	1,545	8,460	6,997	8,773	9,754	11,434	12,910	15,532	15,967
Non-tax, non-grant fiscal services	0	0	0	0	0	0	0	23	3	7	4	3	1	2	1	0	0	0	1
Economic services	4,958	5,598	6,549	8,530	8,837	9,769	9,456	11,592	11,802	17,611	19,810	17,378	23,695	25,304	28,144	26,105	26,891	29,536	33,870
Grants from Centre	11,652	12,566	14,258	22,524	26,851	33,475	28,422	37,972	43,714	41,636	57,943	73,359	82,179	100,827	87,758	78,400	92,688	105,114	106,804
Plan grants	10,380	11,101	12,368	18,380	22,833	26,236	24,529	33,756	36,257	35,360	50,729	55,737	67,153	84,808	79,576	65,706	76,421	76,421	82,455
Non-plan grants	1,272	1,465	1,890	4,144	4,018	7,239	3,893	4,216	7,456	6,868	7,214	17,622	15,027	16,019	8,182	12,695	15,000	15,000	15,488
Capital receipts (loan recoveries)	13,128	19,641	10,264	17,591	17,989	10,526	10,982	25,141	26,351	24,498	12,780	129,517	70,543	33,670	47,291	40,656	65,828	121,690	25,752

Table A. 16 Tamil Nadu: Trends in the Government receipts as percent of GSDP during 1980-99
(Percent of GSDP)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 BE
Total receipts	17.5	16.9	17.8	18.4	17.6	17.5	17.1	16.2	16.2	16.4	16.6	21.8	18.0	16.2	16.0	16.3	16.2	16.9	15.5
Revenue	15.8	14.8	16.7	16.9	16.3	16.9	16.4	14.9	15.0	15.5	16.2	18.3	16.3	15.6	15.2	15.7	15.3	15.5	15.2
Tax revenue	11.5	12.1	13.6	13.3	12.8	13.2	13.4	11.7	11.7	12.7	13.2	13.3	13.0	12.3	12.5	13.3	13.0	13.1	13.1
Own tax revenue	7.9	8.7	10.1	9.8	9.5	9.9	10.0	8.5	8.6	9.2	10.0	10.1	9.7	9.3	9.6	10.6	10.2	9.9	10.2
Taxes on income	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Agricultural income tax	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Profession tax	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Taxes on property and capital transactions	0.5	0.7	0.8	0.7	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.7	0.8	0.9	1.0	0.8	0.8	0.7
Land revenue	-0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0
Stamps and registration fees	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.7	0.8	0.7	0.7	0.8	0.9	0.8	0.7	0.7
Urban immovable property taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Taxes on commodities and services	7.3	7.9	9.3	9.1	8.6	9.0	9.2	7.7	7.8	8.3	9.1	9.2	8.9	8.4	8.7	9.6	9.4	9.1	9.4
Total sales taxes	5.7	5.6	6.5	6.0	6.0	6.3	6.3	6.0	6.1	6.1	6.6	6.6	6.4	6.2	6.4	6.9	6.8	6.4	6.6
Tax on vehicles	1.0	0.8	0.8	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5
Entertainmen tax	0.4	0.4	0.0	0.4	0.4	0.0	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1
State excise duty	0.2	1.1	1.5	1.9	1.5	1.5	1.6	0.6	0.6	1.1	1.4	1.3	1.3	1.1	1.0	1.4	1.4	1.5	1.6
Electricity duty	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Share in Central taxes	3.6	3.4	3.6	3.5	3.3	3.3	3.3	3.2	3.1	3.5	3.2	3.2	3.3	3.0	2.9	2.7	2.8	3.1	3.0
Income tax	1.0	0.8	0.9	0.8	0.7	0.9	0.9	0.9	0.9	1.1	1.0	1.1	1.1	1.2	1.1	1.1	1.1	1.6	1.4
Estate duty	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Union excises	2.6	2.5	2.6	2.6	2.5	2.4	2.4	2.2	2.2	2.4	2.2	2.1	2.2	1.8	1.7	1.6	1.6	1.5	1.6

Tamil Nadu: Trends in the Government receipts as percent of GSDP during 1980-99 (contd.)

(Percent of GSDP)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 BE
Non-tax revenue	4.3	2.8	3.1	3.6	3.6	3.7	3.1	3.3	3.3	2.8	3.1	5.0	3.3	3.3	2.7	2.4	2.3	2.5	2.1
Own non-tax Revenue	2.9	1.5	1.7	1.6	1.6	1.5	1.4	1.4	1.4	1.3	1.2	3.0	1.4	1.4	1.3	1.3	1.1	1.3	1.0
Interest receipts	1.7	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.1	0.3	2.1	0.5	0.5	0.5	0.5	0.4	0.6	0.3
Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
General services	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2
Social and community services	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.4	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Non-tax, non-grant fiscal services	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Economic services	0.6	0.6	0.7	0.7	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.4	0.3	0.3	0.3
Grants from Centre	1.4	1.3	1.4	1.9	2.0	2.1	1.6	1.8	1.9	1.5	1.8	2.0	1.9	1.9	1.4	1.2	1.2	1.2	1.1
Capital receipts other than borrowings	1.6	2.0	1.0	1.5	1.3	0.7	0.6	1.2	1.1	0.9	0.4	3.5	1.6	0.6	0.8	0.6	0.8	1.4	0.3

Table A. 17 Tamil Nadu: Trends in the functional components of Government expenditure during 1980-99
(Percent to total)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (BE)
I. Social services	28.2	29.3	34.4	34.0	33.0	39.5	38.3	36.0	35.6	38.0	40.4	31.6	34.3	37.6	35.7	37.6	35.8	34.8	33.1
Education, sports, art & culture	14.9	14.2	16.1	14.8	16.1	18.2	17.8	17.2	17.6	19.5	20.4	15.5	16.4	17.8	17.3	18.2	16.8	17.3	17.9
Medical, public health & family welfare	6.8	8.2	8.9	10.8	8.4	8.8	5.8	5.9	6.0	5.9	6.1	4.6	5.3	5.7	5.7	5.9	5.3	5.3	5.3
Water supply, sanitation, housing and UD	1.1	1.0	1.4	1.0	0.8	1.3	4.8	4.2	3.6	4.2	4.3	4.2	3.9	5.2	4.3	4.3	4.4	3.2	2.0
Welfare activities	4.0	3.8	6.2	5.0	5.2	5.2	3.0	2.1	2.0	2.2	2.2	1.8	2.1	2.0	2.2	2.7	2.5	2.4	2.2
Others	1.4	2.1	1.8	2.5	2.4	6.0	6.9	6.6	6.5	6.3	7.3	5.4	6.7	6.8	6.3	6.5	6.8	6.4	5.7
II. Economic services	51.6	48.2	44.5	43.0	46.1	38.7	39.1	41.2	39.1	35.3	34.8	47.2	40.7	34.9	37.3	32.6	34.6	32.4	26.6
Agriculture and allied	10.4	12.2	14.0	14.7	19.9	7.1	7.0	7.6	6.6	7.3	8.9	9.7	15.5	11.4	11.3	8.3	7.8	7.8	5.7
Irrigation & flood control	3.5	4.2	3.6	4.1	3.3	3.5	3.8	3.5	3.0	1.6	2.7	2.0	2.5	2.6	2.6	2.3	1.9	2.3	3.0
Energy	9.0	8.0	9.2	7.3	9.0	9.0	10.2	12.2	11.2	9.1	4.4	20.2	1.3	3.6	3.8	2.0	2.5	3.4	1.3
Transport & Communications	4.9	4.5	4.3	3.9	3.1	3.1	3.6	2.9	2.9	2.5	2.8	2.5	2.9	3.1	3.5	3.9	4.9	4.6	4.8
Others	23.9	19.3	13.4	12.9	10.9	16.0	14.5	15.0	15.3	14.9	16.0	12.8	18.4	14.2	16.1	16.2	17.6	14.2	11.8
III. General services	18.4	17.3	17.0	17.2	18.2	18.9	20.5	19.8	21.4	21.3	23.1	18.3	21.2	25.4	25.8	28.1	27.4	27.9	34.8
Organs of State	0.8	0.6	0.6	0.7	1.0	0.7	0.7	0.7	0.9	0.9	0.7	0.7	0.6	0.7	0.7	0.9	1.1	0.9	0.8
Fiscal services	1.2	1.2	1.4	2.4	1.5	1.6	1.7	1.4	1.5	1.4	1.6	1.2	1.4	1.5	1.6	1.6	1.4	1.4	1.4
Interest payments and servicing of debt	7.0	5.9	5.7	5.8	6.1	5.9	6.4	6.5	7.4	6.6	7.6	6.3	7.6	10.2	10.3	11.3	10.5	10.4	10.0
Administrative services	7.3	7.1	6.5	5.7	6.8	7.5	7.5	6.8	7.1	7.0	7.3	5.6	6.3	7.1	7.1	7.4	6.8	7.1	7.0
pensions and miscellaneous	2.0	2.0	2.3	2.3	2.5	2.9	3.8	4.1	4.4	5.1	5.7	4.4	5.1	5.7	5.9	6.6	7.3	7.8	15.3
Others	0.2	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.3	0.2	0.3	0.2	0.3	0.3
IV. Compensation and assignment to local bodies & *panchayat raj* institution	1.8	1.1	1.0	1.9	2.7	2.9	2.2	1.7	1.7	0.8	1.7	2.1	3.1	1.3	1.2	1.7	2.2	4.9	5.4
V. Appropriation for contingency fund	0.0	4.1	3.2	3.8	0.0	0.0	0.0	1.2	2.2	4.5	0.0	0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.0

Table A. 18 Tamil Nadu: Trends in the functional components of Government expenditure during 1980-99
(Percent to GSDP)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98 (RE)	1998-99 (BE)
I. Social services	**5.7**	**5.8**	**7.5**	**7.6**	**6.8**	**7.8**	**7.5**	**7.0**	**6.9**	**7.7**	**8.2**	**8.1**	**7.6**	**7.1**	**6.7**	**7.2**	**7.8**	**7.1**	**6.8**
Education, sports, art & culture	3.0	2.8	3.5	3.3	3.3	3.6	3.5	3.4	3.4	4.0	4.1	4.0	3.7	3.4	3.2	3.4	3.4	3.6	3.7
Medical, public health & family welfare	1.4	1.6	1.9	2.4	1.7	1.8	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1
Water supply, sanitation, housing and UD	0.2	0.2	0.3	0.2	0.2	0.3	0.9	0.8	0.7	0.8	0.9	1.1	0.9	1.0	0.8	1.0	0.9	0.6	0.4
Welfare activities	0.8	0.8	1.3	1.1	1.1	1.0	0.6	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.5
Others	0.3	0.4	0.4	0.6	0.5	1.2	1.4	1.3	1.3	1.3	1.5	1.4	1.5	1.3	1.2	1.2	2.0	1.3	1.1
II. Economic services	**10.4**	**9.6**	**9.7**	**9.6**	**9.5**	**7.7**	**7.7**	**8.1**	**7.6**	**7.5**	**7.0**	**12.1**	**9.0**	**6.6**	**7.0**	**6.0**	**6.5**	**5.1**	**5.0**
Agriculture and allied	2.1	2.4	3.0	3.3	4.1	1.4	1.4	1.5	1.3	1.5	1.8	2.5	3.5	2.2	2.1	1.6	1.6	1.2	1.2
Irrigation & flood control	0.7	0.8	0.8	0.9	0.7	0.7	0.7	0.7	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.5	0.6
Energy	1.8	1.6	2.0	1.6	1.8	1.8	2.0	2.4	2.2	1.8	0.9	5.2	0.3	0.7	0.7	0.4	0.5	0.3	0.3
Transport & communications	1.0	0.9	0.9	0.9	0.6	0.6	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.6	0.7	0.7	1.0	0.8	1.0
Others	4.8	3.8	2.9	2.9	2.2	3.2	2.9	2.9	3.0	3.1	3.2	3.3	4.1	2.7	3.0	2.9	3.1	2.2	1.9
III. General services	**3.7**	**3.4**	**3.7**	**3.8**	**3.7**	**3.8**	**4.0**	**3.9**	**4.2**	**4.4**	**4.7**	**4.7**	**4.7**	**4.8**	**4.8**	**5.3**	**6.0**	**6.1**	**7.7**
Organs of State	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Fiscal services	0.2	0.2	0.3	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Interest payments and servicing of debt	1.4	1.2	1.2	1.3	1.2	1.2	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.9	1.9	2.1	2.1	2.1	2.1
Administrative services	1.5	1.4	1.4	1.3	1.4	1.5	1.5	1.3	1.4	1.4	1.5	1.4	1.4	1.3	1.3	1.4	1.4	1.4	1.4
pensions and miscellaneous	0.4	0.4	0.5	0.5	0.5	0.6	0.8	0.8	0.9	1.0	1.2	1.1	1.1	1.0	1.1	1.2	1.5	1.5	3.1
IV. Compensation and assignment to local bodies	0.4	0.2	0.2	0.4	0.6	0.6	0.4	0.3	0.3	0.4	0.3	0.5	0.7	0.3	0.2	0.3	0.4	1.0	1.1

Table A. 19 Tamil Nadu: Trends in the stock of outstanding public debt during 1980-98
(Rs crore)

	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98 (RE)
Stock of outstanding debt	2,040	2,259	2,496	2,705	2,860	3,026	3,361	3,838	4,378	5,013	5,606	8,374	9,698	10,250	11,359	12,744	15,146	14,265
Debt stock/ GSDP (%)	25.2	23.3	24.9	23.2	20.9	19.3	19.2	18.5	18.9	18.5	17.9	22.7	22.5	19.8	18.7	18.9	19.4	16.3
Public debt (net)	1,964	2,095	2,240	2,461	2,661	2,907	3,215	3,619	4,017	4,548	5,235	7,874	8,818	9,862	11,488	12,680	14,123	13,861
Borrowings from Centre	1,024	1,131	1,252	1,444	1,613	1,809	2,018	2,252	2,481	2,814	3,293	3,937	4,682	5,523	6,801	7,540	8,533	8,533
Internal debt	940	963	988	1,016	1,048	1,098	1,197	1,367	1,537	1,734	1,942	3,937	4,135	4,339	4,687	5,141	5,590	5,328
Market loans	302	318	335	356	381	420	511	664	822	991	1,176	1,409	1,665	1,940	2,289	2,692	3,136	3,141
Other internal debt	638	646	653	661	667	678	686	702	715	743	766	783	802	823	857	906	967	2,188
Public accounts (net)	76	164	256	244	200	119	147	219	361	465	371	501	880	388	-129	63	1,024	404
Interest and debt servicing expenditure	113	115	125	151	170	183	221	263	333	363	483	594	725	999	1,153	1,380	1,588	1,763
Ratio to stock of debt (%)		5.8	6.0	6.7	6.9	6.9	7.6	8.2	9.2	9.0	10.6	11.3	9.2	11.3	11.7	12.0	12.5	12.5

Table A. 20 Tamil Nadu: Sales tax concessions for industry

(a) Location-based incentives

Eligible units	Sales tax waiver/ deferral (period of years)	
	New units	Existing units
71 most backward blocks, select SIPCOT Industrial complexes and other areas	5 (Waiver), or 9 (deferral, up to the total investment made in fixed assets)	5 (Waiver), or 9 (deferral, up to the total investment made in fixed assets)
216 backward blocks, select SIPCOT Industrial complexes and other areas	9 (deferral, up to the total investment made in fixed assets)	9 (deferral, up to 80 of investment made in fixed assets)
Other areas	5 (deferral, up to a maximum of 60 of total investment made in fixed assets)	5 (deferral, up to a maximum of 50 of additional investment made in fixed assets)

(b) Incentives for Mega Projects.

Available to industries set up anywhere regardless of its location. The limit will be the value of the fixed assets

Investment range of project	Sales tax concession period	
	Waiver	Deferral
Between Rs 50 - 100 crore	5	10
Between Rs 100 - 300 crore	6	12
Above Rs 300 crore	7	14

(c) Incentives for super Mega Projects.

Investment exceeding Rs 1,500 crore (Rs 1,000 in the case of automobile projects the waiver period would be 14 years.

Table A. 21 Tamil Nadu: Finances and cost recoveries of the irrigation sector during 1985-97

(Rs lakh)

	1985-86	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Major & medium								
Commercial								
Receipts from irrigation projects	89	93	175	162	177	194	212	232
Water rates	27	44	43	44	47	51	54	58
Land revenue attributable to irrigation								
Betterment levy	2							
Sale of land								
Revenue levied and collected by local bodies								
Other receipts	60	49	132	118	130	143	158	174
Operation & maintenance	858	4,488	1,826	2,260	2,631	3,070	3,591	4,209
Operation and maintenance and repairs (including to local bodies)	547	4,121	1,051	1,863	2,219	2,644	3,150	3,753
Other working expenses	311	367	775	397	411	426	441	456
Net receipts (excluding depreciation and interest on capital)	-769	-4,395	-1,651	-2,098	-2,453	-2,876	-3,379	-3,977
Interest on capital	2,903	2,829	6,165	6,917	7,830	8,864	10,035	11,360
Depreciation provision	0	0	0	0	0	0	0	0
Net receipts (including depreciation and interest on capital)	-3,672	-7,224	-7,816	-9,015	-10,284	-11,740	-13,414	-15,338
Capital upto the year	38,783	57,985	61,421	66,692	72,062	77,865	84,134	90,909
Rate of return								
Excluding interest and depreciation	-2.0%	-7.6%	-2.7%	-3.1%	-3.4%	-3.7%	-4.0%	-4.4%
Including interest and depreciation	-9.5%	-12.5%	-12.7%	-13.5%	-14.3%	-15.1%	-15.9%	-16.9%
Irrigation (thousand hectares)								
Irrigation potential created	7	7	4					
Gross area irrigated	3,240	2,894	2,848	2,802	2,757	2,713	2,670	2,627
Net area irrigated	1,473	1,314	1,507	1,575	1,592	1,610	1,628	1,647
Canals	774	769	882	922	945	969	994	1,019
Tube wells in command area	699	545	625	653	647	640	634	628
Non-commercial								
Receipts from irrigation projects	28	80	52	49	53	57	62	67
Water rates	3	1	21	22				
Land revenue attributable to irrigation								
Betterment levy	15	20						
Sale of land								
Revenue levied and collected by local bodies								
Other receipts	10	59	31	27				
Operation & maintenance	551	351	490	837	889	943	1,001	1,063
Operation and maintenance and repairs (including to local bodies)	551	351	490	837	889	943	1,001	1,063
Other working expenses								
Net receipts (excluding depreciation and interest on capital)	-523	-271	-438	-788	-835	-886	-939	-995
Interest on capital								
Depreciation provision	0	0	0	0	0	0	0	0
Net receipts (including depreciation and interest on capital)	-523	-271	-438	-788	-835	-886	-939	-995
Capital upto the year	9,517	9,748	9,748	9,748	9,748	9,748	9,748	9,748
Rate of return								
Excluding interest and depreciation	-5.5%	-2.8%	-4.5%	-8.1%	-8.6%	-9.1%	-9.6%	-10.2%
Including interest and depreciation	-5.5%	-2.8%	-4.5%	-8.1%	-8.6%	-9.1%	-9.6%	-10.2%

Tamil Nadu: Finances and cost recoveries of the irrigation sector during 1985-97 (contd.)
(Rs lakh)

	1985-86	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Flood Control								
Receipts								
Expenditure on O&M and repair				1,015				
Net receipts	0	0	0	-1,015	0	0	0	0
Interest on capital	151	204	267	215	226	238	250	263
Depreciation								
Net receipts including interest and depreciation	-151	-204	-267	-1,230	-226	-238	-250	-263
Total capital employed	1,319	2,764	2,879	3,035	3,419	3,851	4,338	4,886
Rate of return								
Excluding interest and depreciation	0.0%	0.0%	0.0%	-33.4%	0.0%	0.0%	0.0%	0.0%
Including interest and depreciation	-11.4%	-7.4%	-9.3%	-40.5%	-6.6%	-6.2%	-5.8%	-5.4%
Minor Irrigation (excluding flood control)								
Other receipts	202	223	211	211	212	214	215	216
O&M (including grants to local bodies)	560	1,547	1,474	2,213	2,693	3,277	3,988	4,853
Net receipts	-358	-1,324	-1,263	-2,002	-2,481	-3,063	-3,773	-4,637
Total capital employed	1,206	2,201	2,435	2,788	3,143	3,542	3,993	4,501
Rate of return	-29.7%	-60.2%	-51.9%	-71.8%	-78.9%	-86.5%	-94.5%	-103.0%

Table A. 22 Tamil Nadu: Water rates for irrigation

	Crop	Present Water Rates (Rs/h)
1	Wet Crops in Registered Wet Lands	Rs 7 to Rs 54/ha as wet assessment upto 30.6.1962 and 45 percent or 30 percent there on according to the clans of irrigation source as additional assessment.
2	Wet Crops in Registered Wet Lands under New Project	Rs 37 per ha
3	Wet Crops in Registered Dry Lands under old irrigation source. Standard Water cess.	Rs 3.70 to Rs 9.88/ha and an additional Water cess of 75 percent or 37.5 percent thereon according to the clan of the irrigation source.
4	Canal irrigation in special projects with crop restriction.	Wet Crops : Rs 61.78/ha Dry Crops : Rs 37.00/ha

Note: On the above rate of wet assessment of water cess local cess and surcharge on local cess at the rate of Rs 0.45 per rupee and Rs 2.50 per rupee are also payable.

Date of Enforcement of Present Water Rates: For items 1 and 3 - From 02-07-1962; For items 2 and 4 - From commencement of benefit of irrigation of new projects.

Table A. 23 Tamil Nadu: Composition of road network in 1996

Road Length		Roads by Nature
Km	Ratio (%)	
Total Road Network		
2,002	*1.39*	*National highways (NH)*
(154)		- Single lane
(1816)		- Double lane
(32)		- Multi lane
2,012	*1.4*	*State highways (SH)*
(180)		- Single lane
(1712)		- Double lane
(120)		- Multi lane
14,002	*9.75*	*Major district roads (MDR)*
(7772)		- Single lane
(5768)		- Double lane
(462)		- Multi lane
40,740	*28.38*	*Other district roads (ODR)*
(39,956)		- Single lane
(750)		- Double lane
(34)		- Multi lane
84,787	*59.07*	*Village roads and other category roads*
84,787	*99.990*	*Total road length*
Total Government roads byelanes		
48,062	*81.91*	Single lane
10,064	*17.15*	Double lane
548	*0.93*	Multiple lane
58,674	*99.99.0*	*Total road length*
Total Government roads by surface		
78	*0.13*	Cement roads
58490	*99.55*	Bitumen roads
188	*0.32*	Metalled roads
58756	*100.0*	*Total road length*

Table A. 24 Tamil Nadu: Trends of financing of road sector

Particulars	1980-81	1985-86	1990-91	1995-96	1996-97
Expenditure: Total	84.07	90.54	173.51	457.92	544.26
Plan	37.92	27.02	63.23	201.00	231.35
Share of plan expenditure in total (%)	*45*	*30*	*36*	*44*	*43*
Non-plan	46.15	63.52	110.28	256.92	312.91
Revenue: Total	*65.54*	*72.01*	*137.93*	*297.76*	*343.20*
Share of revenue expenditure in total (%)	*78*	*80*	*79*	*65*	*63*
Plan	19.39	8.49	27.65	40.49	30.29
Non-plan	46.15	63.52	110.28	257.27	312.91
Capital: Total	18.53	18.53	35.58	160.16	201.06
Share of capital expenditure in total (%)	*22*	*20*	*21*	*35*	*37*
Plan	18.53	18.53	35.58	160.51	201.06
Non-plan	0.00	0.00	0.00	-0.35	0.00
Receipts: Total	81.33	110.54	249.91	554.20	612.68
Taxes on vehicles	81.33	110.54	227.34	392.21	425.42
Taxes on goods and passengers	0.00	0.00	22.57	161.99	187.26
Difference (Receipts-Expenditure) Total	-2.74	20.00	76.40	96.28	68.42
Difference as of Receipts	*-3*	*18*	*31*	*17*	*11*
Difference (Receipts-Expenditure) Revenue	15.79	38.53	111.98	256.44	269.48
Difference as of Receipts	*19*	*35*	*45*	*46*	*44*

Table A. 25 Tamil Nadu: Trends of financing of road sector during 1980-97
(Ratio with aggregate)

Particulars	1980-81	1985-86	1990-91	1995-96	1996-97
Expenditure: Total	6.79	3.48	2.96	3.98	3.89
Revenue: Total	4.01	2.59	1.95	2.35	2.40
Capital: Total	22.80	5.57	12.43	6.85	3.29

Table A. 26 Tamil Nadu: Sector-wise capital investment of PSUs, 1991-96
(Rs crore)

	1991-92	1992-93	1993-94	1994-95	1995-96
Share capital					
Agriculture & allied	13.81	14.11	14.33	14.47	15.06
Construction	27.83	31.87	40.48	45.66	51.41
Development finance	240.56	253.04	300.75	232.57	237.15
Development others	17.14	24.92	37.47	48.38	76.25
Goods transport	10.80	20.53	20.53	20.53	20.53
Manufacturing	154.25	156.25	159.75	183.66	171.22
Mining	14.27	19.27	24.52	24.52	24.52
Passenger transport	32.10	33.35	34.41	34.89	35.19
Trading	26.44	26.94	27.44	28.91	30.92
Miscellaneous	7.86	8.42	8.37	9.37	10.37
Total	545.06	588.70	668.05	642.96	672.62
Term loans					
Agriculture & allied	21.68	20.33	22.72	30.86	32.10
Construction	5.36	7.89	14.98	22.62	27.77
Development finance	1,089.79	1,369.01	1,698.90	2,151.00	2,542.70
Development others	9.89	11.28	10.84	27.90	25.52
Goods transport	138.65	111.04	82.07	114.05	100.90
Manufacturing	127.13	99.97	177.79	589.98	669.95
Mining	10.99	5.76	5.09	12.53	8.74
Passenger transport	263.84	312.60	340.22	358.00	573.32
Trading	2.80	1.07	1.04	5.76	12.29
Miscellaneous	3.18	2.58	1.09	0.47	0.89
Total	1,673.31	1,941.53	2,354.74	3,313.17	3,994.18
Total investment					
Agriculture & allied	35.49	34.44	37.05	45.33	47.16
Construction	33.19	39.76	55.46	68.28	79.18
Development finance	1330.35	1622.05	1999.65	2383.57	2779.85
Development others	27.03	36.20	48.31	76.28	101.77
Goods transport	149.45	131.57	102.60	134.58	121.43
Manufacturing	281.38	256.22	337.54	773.64	841.17
Mining	25.26	25.03	29.61	37.05	33.26
Passenger transport	295.94	345.95	374.63	392.89	608.51
Trading	29.24	28.01	28.48	34.67	43.21
Miscellaneous	11.04	11.00	9.46	9.84	11.26
Total	2218.37	2530.23	3022.79	3956.13	4666.80

Source: Government of Tamil Nadu, *Review of State Public Sector Enterprises in Tamil Nadu*, various years, State Bureau of Public Enterprises (Finance Department), Chennai.

Table A. 27 Tamil Nadu: Sector-wise Government funding of PSUs during 1991-96

(Rs crore)

	1992-93	1993-94	1994-95	1995-96
Govt. Equity				
Agriculture & allied	14.02	14.17	14.17	15.06
Construction	31.87	27.57	45.66	51.41
Development finance	190.33	189.29	207.96	212.49
Development others	17.20	33.79	47.67	76.25
Goods transport	20.55	20.53	20.53	20.53
Manufacturing	100.75	105.85	129.76	129.22
Mining	19.27	24.52	24.52	24.52
Passenger transport	33.35	34.41	34.89	35.19
Trading	26.94	27.44	28.91	30.92
Miscellaneous	4.30	4.30	5.30	6.56
Total	458.58	481.87	559.37	602.15
Govt. Loans				
Agriculture & allied	8.91	5.47	10.93	12.58
Construction	3.91	2.12	3.56	5.84
Development finance	359.68	490.20	681.55	823.64
Development others	11.16	10.81	11.31	12.36
Goods transport	0.00	0.00	0.00	0.00
Manufacturing	38.78	17.52	72.46	227.64
Mining	0.08	0.06	3.89	6.27
Passenger transport	118.60	87.35	65.28	174.42
Trading	0.00	1.04	0.01	0.01
Miscellaneous	0.00	0.00	0.00	0.00
Total	541.12	614.57	848.99	1262.76
Total Govt. investment				
Agriculture & allied	22.93	19.64	25.10	27.64
Construction	35.78	29.69	49.22	57.25
Development finance	550.01	679.49	889.51	1036.13
Development others	28.36	44.60	58.98	88.61
Goods transport	20.55	20.53	20.53	20.53
Manufacturing	139.53	123.37	202.22	356.86
Mining	19.35	24.58	28.41	30.79
Passenger transport	151.95	121.76	100.17	209.61
Trading	26.94	28.48	28.92	30.93
Miscellaneous	4.30	4.30	5.30	6.56
Total	999.70	1096.44	1408.36	1864.91

Table A. 28 Tamil Nadu: Employment and wage emoluments of PSUs during 1991-96
(Rs crore)

	1991-92	1992-93	1993-94	1994-95	1995-96
Employees					
Agriculture & allied	10,177	11,544	10,859	10,067	10,605
Construction	974	1,155	1,202	1,153	1,190
Development finance	3,024	3,047	2,961	3,051	2,984
Development others	2,764	2,660	2,721	2,854	2,786
Goods transport	153	153	184	184	184
Manufacturing	8,891	8,448	7,965	10,482	11,627
Mining	4,401	4,396	3,655	3,755	3,643
Passenger transport	108,573	111,440	114,936	113,224	114,589
Trading	11,937	11,615	10,976	10,910	12,350
Miscellaneous	1,600	2,140	2,797	849	838
Total ('000)	152,494	156,598	158,256	156,529	160,796
Share of PSU empl in total state	25.34%	26.46%	25.34%	24.35%	24.22%
Share of PSU empl in total quasi & local	20.98%	21.22%	21.54%	21.21%	21.97%
Share of PSU emp in total State	11.48%	11.77%	11.64%	11.34%	11.52%
Emoluments					
Agriculture & allied	10.87	16.14	23.59	24.40	27.78
Construction	2.48	3.01	24.69	6.13	6.74
Development finance	11.07	12.83	15.44	16.89	18.22
Development others	9.63	10.55	11.93	13.66	15.78
Goods transport	1.85	2.19	2.36	1.24	1.40
Manufacturing	32.44	36.09	36.95	62.21	72.87
Mining	11.72	14.02	17.82	18.40	17.17
Passenger transport	386.95	473.74	530.60	587.64	750.16
Trading	36.94	42.21	47.51	55.32	59.94
Miscellaneous	2.21	2.54	2.84	3.44	4.50
Total	506.16	613.32	713.73	789.33	974.56
Per employee emoluments (Rs)					
Agriculture & allied	10,681	13,981	21,724	24,238	26,195
Construction	25,462	26,061	205,408	53,166	56,639
Development finance	36,607	42,107	52,145	55,359	61,059
Development others	34,841	39,662	43,844	47,863	56,640
Goods transport	120,915	143,137	128,261	67,391	76,087
Manufacturing	36,486	42,720	46,390	59,349	62,673
Mining	26,630	31,893	48,755	49,001	47,131
Passenger transport	35,640	42,511	46,165	51,901	65,465
Trading	30,946	36,341	43,285	50,706	48,534
Miscellaneous	13,813	11,869	10,154	40,518	53,699
Total	33,192	39,165	45,100	50,427	60,608

Table A. 29 Tamil Nadu: Company-wise trends in the profit / losses during 1990-96
(Rs lakh)

A. PSUs that are consistently making profits

	Public Sector Undertaking	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
I	Mining Group (1)	881	1511	1788	1952	1360	154
	1 TN Minerals Ltd.	881	1511	1788	1952	1360	154
II	Manufacturing Group (3)	3678	4374	4300	5440	5671	7983
	2 TN Zari Ltd.	0	5	2	11	33	28
	3 TN Salt Corp Ltd.	33	87	46	24	6	131
	4 TN Newsprint & Papers Ltd.	3644	4281	4252	5405	5631	7824
III	Construction Group (1)	0	0	1	8	3	2
	5 TN Police Housing Corp	0	0	1	8	3	2
IV	Development (Finance) Group (6)	505	923	792	2989	1326	2680
	6 TN Industrial Investt Corp	154	206	157	2005	587	975
	7 State Industries Promotion Corp of TN	17	154	210	350	440	424
	8 TN Industrial Dev Corp	322	516	341	391	67	358
	9 TN Tpt Dev Finance Corp	12	17	8	127	52	283
	10 TN Power & Infra Dev Corp	0	14	40	115	177	635
	11 TN Urban Fin & Infra Dev Corp	0	17	35	1	2	5
V	Development (Other) Group (2)	13	60	55	15	15	47
	12 TN Handicrafts Dev Corp	12	55	51	14	4	35
	13 Dharmapuri Dt. Dev Corp	1	4	5	1	11	12
VI	Miscellaneous Group (3)	41	90	180	219	194	213
	14 TN Warehousing Corp	41	90	180	219	187	204
	15 Pallavan Tpt Consultancy Services	0	0	0	0	1	1
	16 TN Medical Services Corp	0	0	0	0	7	8
	ALL PSUs (16)	8796	11331	11417	16063	14239	19062

B. PSUs that are usually but not consistently making profits

	Public Sector Undertaking	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
I	Mining Group (1)	133	-237	136	-452	-570	317
	1 TN Magnesites Ltd.	133	-237	136	-452	-570	317
II	Manufacturing Group (3)	-659	-946	-219	-168	-490	878
	2 TN Small Industries Corp	-681	-967	-240	-182	-224	21
	3 Electronics Corp of TN	23	21	21	14	-69	32
	4 TN Cements Ltd.	0	0	0	0	-197	825
III	Trading Group (2)	-1496	-63	-7	-246	29	8
	5 TN Civil Supplies Corp	-1497	-18	-14	-265	0	0
	6 TN State Mktg. Corp	2	-45	7	20	29	8
IV	Agriculture and Allied Group (3)	-165	-329	52	-120	125	372
	7 TN Agro Industries Corp	-198	-163	8	-132	-174	14
	8 TN Forest Plantation Corp	-22	45	186	-30	132	27
	9 Arusu Rubber Corp	56	-212	-141	42	167	331
V	Development (Finance) Group (1)	14	-64	-6	-79	82	116
	10 TN Textiles Corp	14	-64	-6	-79	82	116
VI	Development (Other) Group (4)	-10	55	9	39	-32	171
	11 TN Fisheries Corp	-26	42	25	3	-36	62
	12 TN Backward Class Eco Dev Corp	4	1	-3	17	20	77
	13 TN Corp for Dev of Women	12	12	-1	1	1	0
	14 TN Corp FOR Industrial Infra Dev	0	0	-13	17	-16	32
VII	Miscellaneous Group (1)	-5	1	16	5	4	2
	15 Overseas Manpower Corp	-5	1	16	5	4	2
	ALL PSUs (15)	-2845	-2530	-239	-1189	-1343	2743

C. PSUs that are usually but not consistently making losses

	Public Sector Undertaking	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
I	Passenger Transport Group (10)	-1442	-709	-2389	-1311	604	-6626
	1 Anna Tpt Corp	-111	-16	-140	40	34	-1106
	2 Cheran Tpt Corp	-529	-384	-1210	-528	236	-927
	3 Dheeran Chinnamalai Tpt Corp	-85	-50	-74	-153	123	-591
	4 Jeeva Tpt Corp	-114	-36	-134	-46	108	-595
	5 Pandiyan Roadways Corp	-140	37	356	17	-416	-1467
	6 Pattukkottai Azhagiri Tpt Corp	-202	-216	-473	-229	62	-345
	7 Thanthai Periyar Tpt Corp	80	81	-271	33	18	-624
	8 Rani Mangammai Tpt Corp	-228	-9	-172	-191	142	-310
	9 Annai Sathya Tpt Corp	-113	-115	-270	-108	287	-140
	10 Rajiv Gandhi Tpt Corp	0	0	0	-145	9	-520
II	Goods Transport Group (1)	790	1190	1236	2117	1240	-1398
	11 Poompuhar Shipping Corp	790	1190	1236	2117	1240	-1398
III	Manufacturing Group (3)	115	198	-181	143	-373	-788
	12 TN Sugar Corp Ltd.	-349	-279	51	248	-276	-676
	13 Cheran Engineering Corp	1	3	-8	1	0	-14
	14 TN Spirit Corp	463	474	-224	-106	-98	-98
IV	Agriculture and Allied Group (2)	135	-304	-221	98	-606	-156
	15 TN Tea Plantation Corp	134	-289	-218	93	-611	-149
	16 TN Medicinal Plant Farms & Herbal Med. Corp	1	-15	-3	4	5	-7
V	Construction Group (2)	6	212	219	-162	-350	-469
	17 TN State Constn Corp	6	7	-85	-282	-247	-215
	18 TN Adi Dravidar Housing & Development Corp	0	206	304	119	-104	-255
VI	Development (Finance) Group (3)	13	9	15	19	-196	-710
	19 TN Small Ind. Dev Corp	10	13	17	29	19	-426
	20 TN Handloom Dev Corp	2	-5	-4	-10	-13	-20
	21 TN Film Dev Corp	0	1	2	0	-202	-264
VII	Development (Other) Group (3)	-10	88	45	23	-103	-378
	22 TN Tourism Dev Corp	33	42	62	28	-63	-90
	23 TN Poultry Dev Corp	12	-3	-39	-50	-49	-129
	24 TN Leather Dev Corp	-55	49	21	44	9	-159
VIII	Miscellaneous Group (1)	-2	-1	2	-4	-23	-8
	25 TN Ex-Servicemen Corp	-2	-1	2	-4	-23	-8
	ALL PSUs (25)	-280	883	-1457	1065	-182	-11321

D. PSUs that are consistently making losses

	Public Sector Undertaking	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
I	Passenger Transport Group (9)	-2752	-1797	-2777	-4676	-4560	-12925
	1 Cholan Roadways Corp	-254	-256	-52	-737	-977	-1330
	2 Kattabommen Tpt Corp	-338	-234	-393	-1098	-886	-2175
	3 Marudhu Pandiyar Tpt Corp	-202	-11	-97	-396	-586	-1174
	4 Nesamony Tpt Corp	-332	-237	-361	-434	-319	-1132
	5 Pallavan Tpt Corp	-1547	-987	-727	-842	-183	-1834
	6 Thiruvalluvar Tpt Corp	-81	-72	-876	-717	-847	-1909
	7 PT MGR Tpt Corp	0	0	-272	-348	-193	-939
	8 Dr. Ambedkar Tpt Corp	0	0	0	-51	-20	-1580
	9 Mahakavi Bharathiyar Tpt Corp	0	0	0	-52	-549	-852
II	Manufacturing Group (2)	-829	-756	-872	-823	-1151	-768
	10 Southern Structurals Ltd.	-829	-756	-872	-823	-962	-177
	11 TN Steel Corp Ltd.	0	0	0	0	-189	-591
IV	Development (Other) Group (1)	-10	-3	0	0	0	0
	13 TN Meat Corp	-10	-3	0	0	0	0
	ALL PSUs (13)	-4419	-3311	-4520	-6321	-6861	-14461

Table A. 30 Tamil Nadu: State subsidies to road transport corporations during 1990-96

(Rs lakh)

Undertaking	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Passenger Transport Group	1,147	2,273	3,243	4,067	4,049	4,116
1 Anna Tpt Corp	0	94	146	327	160	164
2 Cheran Tpt Corp	0	216	259	306	263	281
3 Cholan Roadways Corp	0	93	219	296	145	156
4 Dheeran Chinnamalai Tpt Corp	0	0	0	325	204	202
5 Jeeva Tpt Corp	0	85	116	226	115	136
6 Kattabommen Tpt Corp	0	100	0	250	140	112
7 Marudhu Pandiyar Tpt Corp	0	0	80	183	121	119
8 Nesamony Tpt Corp	0	0	102	72	158	155
9 Pandiyan Roadways Corp	0	8	378	372	193	218
10 Pallavan Tpt Corp	1,147	1,489	1,650	1,002	1,043	1,020
11 Pattukkottai Azhagiri Tpt Corp	0	94	184	89	93	100
12 Thanthai Periyar Tpt Corp	0	0	0	154	177	202
13 Rani Mangammai Tpt Corp	0	93	109	109	131	133
14 Annai Sathya Tpt Corp	0	0	0	114	129	120
15 POINT MGR Tpt Corp	0	0	0	72	129	124
16 Dr. Ambedkar Tpt Corp	0	0	0	169	825	849
17 Mahakavi Bharathiyar Tpt Corp	0	0	0	0	24	25
Total of CMA	1,147	1,489	1,650	1,172	1,867	1,869
Share of subsidy to CMA transport (%)	100.00	65.50	50.89	28.81	46.12	45.42

Table A. 31 Tamil Nadu: Road transport fare structure and concessions during 1992-98

(Paise/ km)

Particulars	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
1 Ordinary	12.50	14.00	14.00	14.00	14.00	20.00
2 Express	12.50	14.50	14.50	14.50	14.50	23.00
Deluxe	14.50	17.00	17.00	17.00	17.00	28.00
Super-Deluxe	-	-	-	-	-	33.00
Super-Deluxe A/C	-	-	-	-	-	50.00
3 Ghat/Hills	14.45	14.50	14.50	14.50	14.50	21.00
	45 paise for every block of 30 kms.					
4 City/Town	12.71	13.02	14.64	14.76	14.76	21.28
5 Weighted Average	13.26	15.51	14.92	14.92	14.92	21.07
6 Date of effectiveness	1.11.91	1.11.93	1.12.93	1.12.93	1.12.93	9.9.97
7 A. Concessions/free travel facilities						
i. Students: (Number in 000)				1,569	1,778	1,893
Amount (Rs crore)				48.54	65.46	99.35
ii. Physical handicapped: Number				5,977	6,422	7,177
Amount (Rs crore)				0.71	1.00	1.38
iii. Freedom fighter: Number				7,643	8,637	8,837
Amount (Rs crore)				1.97	2.19	2.20
iv. Journalists: Number				1,070	1,219	1,373
Amount (Rs crore)				0.15	0.20	0.20
v. Language stir: Number				2,486	2,797	2,814
Amount (Rs crore)				0.55	0.60	0.60
vi. Cancer Patients: Number				364	495	134
Amount (Rs crore)				0.01	0.01	
Vii. MLAs/ MPs: Number				234	234	234
Amount (Rs crore)				2.50	2.50	2.50
Viii. Drama Artists: Number				83	183	103
Amount (Rs crore)				0.00	0.00	0.00
Total: (Number in 000)				1,587	1,797	1,914
Total: Amount (Rs crore)				54.44	71.95	106.23
B. Reimbursement by Government, if any (Rs crore)				36.19	54.90	42.66
C. Balance (Uncovered loss due to concessions - Rs crore)				18.25	17.05	63.56
D. Balance as percent to total concession				33.53	23.70	59.84

Source: Govt. of Tamil Nadu, Finance Department, Resources for Annual Plan 1998-99, Contribution of Road Transport Corporations, December 1997.

Table A. 32 Tamil Nadu: State road transport corporations as on 31.5.1998

	Name of the Corporation	Date of operation	Principal area of operation	Fleet (31.5.98)
1	Metropolitan Transport Corporation Ltd., (Chennai Dn I), Chennai *(Pallavan Tpt Corpn Ltd., PTC)*	01.01.1972	Chennai Metropolitan Area (South)	1,523
2	Metropolitan Transport Corporation Ltd., (Chennai Dn II), Chennai *(Dr. Ambedkar Tpt Corpn Ltd., DATC)*	19.01.1994	Chennai Metropolitan Area (North)	1,337
3	State Express Transport Corporation Ltd., (Tamil Nadu Dn I), Chennai *(Thiruvalluvar Tpt Corопn Ltd. TTC)*	01.04.1980	Entire State of Tamil Nadu	829
4	State Express Transport Corporation Ltd., (Tamil Nadu Dn II), Chennai *(Rajiv Gandhi Tpt Corpn Ltd. RGTC)*	27.01.1994	Inter State service	255
5	Tamil Nadu State Transport Corporation Ltd., (Villupuram Dn I), Villupuram *(Thanthai Periyar Tpt Corpn Ltd. TPTC)*	16.01.1975	Villupuram and Cuddalore Districts	1,007
6	Tamil Nadu State Transport Corporation Ltd., (Villupuram Dn II), Vellore *(Pattukkottai Azhagiri Tpt Corpon Ltd. PATC)*	01.12.1982	Vellore and Thiruvannamalai Districts	830
7	Tamil Nadu State Transport Corporation Ltd., (Villupuram Dn II, Kanchipuram *(Puratchi Thalaivar MGR Tpt Corpn Ltd.)*	01.04.1992	Kanchipuram and Thiruvallur Districts	749
8	Tamil Nadu State Transport Corporation Ltd., (Salem Dn I), Salem *(Anna Tpt Corpn Ltd. ATC)*	15.02.1973	Salem and Dharmapuri Districts	957
9	Tamil Nadu State Transport Corporation Ltd., (Salem Dn II), Dharmapuri *(Annai Sathia Tpt Corpn Ltd. ASTC)*	01.04.1987	Dharmapuri Districts	692
10	Tamil Nadu State Transport Corporation Ltd., (Coimbatore Dn I), Coimbatore *(Cheran Tpt Corpn Ltd. CTC)*	01.03.1972	Coimbatore Districts	1,210
11	Tamil Nadu State Transport Corporation Ltd., (Coimbatore Dn II), Erode *(Mahakavi Bharathiyar Tpt Corpn Ltd. JTC)*	01.04.1983	Erode District	915
12	Tamil Nadu State Transport Corporation Ltd., (Coimbatore Dn III), Ooty *(Mahakavi Bharathiyar Tpt Corpn Ltd. MKBTC)*	18.02.1994	The Nilgiris District	409
13	Tamil Nadu State Transport Corporation Ltd., (Kumbakonam Dn I), Kumbakonam *(Cholan Roadways Corpn Ltd. CRC)*	01.02.1972	Thanjavur, Nagapattinam and Thiruvarur Districts	952
14	Tamil Nadu State Transport Corporation Ltd., (Kumbakonam Dn II), Trichy *(Marudhu Pandiyar Tpt Corpn Ltd. DCTC)*	01.04.1985	Thiruchirapalli, Karur and Perambalur Districts	971
15	Tamil Nadu State Transport Corporation Ltd., Kumbakonam Dn III), Karikudi *(Marudhu Pandiyar Tpt Corpn Ltd. MPTC)*	01.04.1983	Sivaganga and Ramanathapuram Districts	593

Tamil Nadu: State road transport corporations as on 31.5.1998 (contd.)

16 Tamil Nadu State Transport Corporation Ltd., (Kumbakonm Dn IV), Pudukottai *(Veeran Alagumuthu Tpt Corpn Ltd. VATC)*	16.03.1996	Pudukottai Districts	348
17 Tamil Nadu State Transport Corporation Ltd., (Madurai Dn I), Madurai *(Pandiyan Roadways Corpn Ltd. PRC)*	17.01.1972	Madurai District	962
18 Tamil Nadu State Transport Corporation Ltd., (Madurai Dn II), Thirunelvell *(Kottabomman Tpt Corpn Ltd. KTC)*	01.01.1974	Tirunelveli and Toothukudi Districts	877
19 Tamil Nadu State Transport Corporation Ltd., (Madurai Dn III), Negerkoil *(Nesamony Tpt Corpn Ltd. NTC)*	01.04.1983	Kanyakumari District	674
20 Tamil Nadu State Transport Corporation Ltd., (Madurai Dn IV), Dindigui *(Rani Mangammai Tpt Corpn Ltd. RMTC)*	01.04.1986	Dindigul District	755
21 Tamil Nadu State Transport Corporation Ltd., (Madurai Dn V), Virudhunagar *(Veeran Sundaralingam Tpt Corpn Ltd. VSTC)*	01.05.1997	Virudhunagar District	382
Total			17,227

ANNEXURE I: TAMIL NADU: DESIGN OF FISCAL TRANSFERS RECOMMENDED BY THE FIRST STATE FINANCE COMMISSION AND ACCEPTED BY THE GOVERNMENT

While devising the Resource Allocation Mechanism (RAM), the First State Finance Commission (SFC) proceeded from the needs angle – not only those needs that are currently being attended to but the ones emerging in the coming years on account of growing aspirations of the people. The Commission made detailed studies of the norms and standards for the following six core services: Drinking water, roads, street lighting, sanitation/ sewerage, solid waste management, and storm water drains. The financial implications of O&M expenditure and the spending gaps relating to these six core civic services have been worked out.

To cover the resource gaps, the State Finance Commission considered the following steps:

(i) Full exploitation of revenue potential of the existing local taxes. This would imply reforming of the property tax, the main source of revenue for the local bodies by proper assessment of property, easy procedure for appeal, revision of rates on both residential and commercial properties, review of exempted cases. As regards other taxes, reforms would mainly be in the form of revision of rates. In addition, optimum adoption of user charges will strengthen the mobilization of internal resources.

(ii) Assignment of additional taxes, subject to the efficiency of local bodies to collect them, and piggybacking on certain elastic resources of the State government such as excise duty, sales tax and motor vehicles tax.

(iii) Sharing through a formula based on factors such as revenue collection efficiency, population and expenditure needs. Grant distribution policy should satisfy the principle of equalization of expenditure, i.e., the transfer should be made in such a way as to reduce the imbalances and equalize the financial status and service levels of the local bodies.

(iv) The feasibility of privatizing those services where non-Governmental organization (NGOs) can provide efficient services at competitive cost depending on the nature and type of service should be explored.

Fiscal Devolution from Government

The suggestions incorporated a percentage of general sharing from the State taxes as indicated in the Pool A and B below in which the SFC divides all the State taxes:

Pool A: This contains taxes which rightly belong to the local bodies but collected by Government, i.e., surcharge on stamp duty, local cess and local cess surcharge (due as per the basic land revenue computed by Damodaran Committee), and entertainment tax.

Pool B: This forms the nucleus for general devolution from net tax revenue of the State to the local bodies from other State taxes as sales tax, motor vehicle tax, State excise duty, and all others.

The need for filling up the gap over and above the additional tax and non-tax revenues of the local bodies have been considered with reference to the fiscal gap of individual units.

Distribution

Quantum of devolution from the net tax revenue of the State has been proposed after considering the devolution that would be feasible due to constraints on State fiscal conditions. It is also a point whether the local bodies would have built the capability to absorb any sudden jump in devolution in the very first year itself, because they will have to get properly equipped to manage the funds provided. In this context, the SFC considered whether the devolution could be in a phased manner to reach the target percentages at least during the last year, i.e., 2001-02. Accordingly, SFC fixed the overall percentage for devolution in a phased manner. The devolution proposed for each year with gradual increase is as follows:

Table A. 33 Tamil Nadu: Proposed phasing of the devolution to local bodies by the SFC

Year	Share in State's own net tax revenue
1997-98	8%
1998-99	9%
1999-2000	10%
2000-01	11%
2001-02	12%

Special Reserve from Global Sharing

The SFC recommends that the quantum of general allocation based on 8, 9, 10, 11, and 12 percentages for the respective years from the divisible Pool B. Out of the total net allocation available for general distribution, 15 percent will be earmarked for Equalization and Incentive Fund (EIF), with a view to correcting possible deficiencies arising in the implementation of the devolution formula as also continuing with the practice of the incentive grants presently available for local revenue efforts such as the house tax-matching grant and local cess surcharge-matching grant. In this context, the SFC also noted that the exact quantum needed cannot be decided at this state and hence an *ad hoc* provision of 15 percent has been suggested. With the experience gained during the first year of distribution, the amount for the future years can be suitably modified. If any sum is left un-disbursed out of the Equalization Fund, it can be redistributed to all the local bodies on the principles as formulated for general distribution.

The SFC recommends the distribution of the remaining 85% of the Pool B resources in three steps:

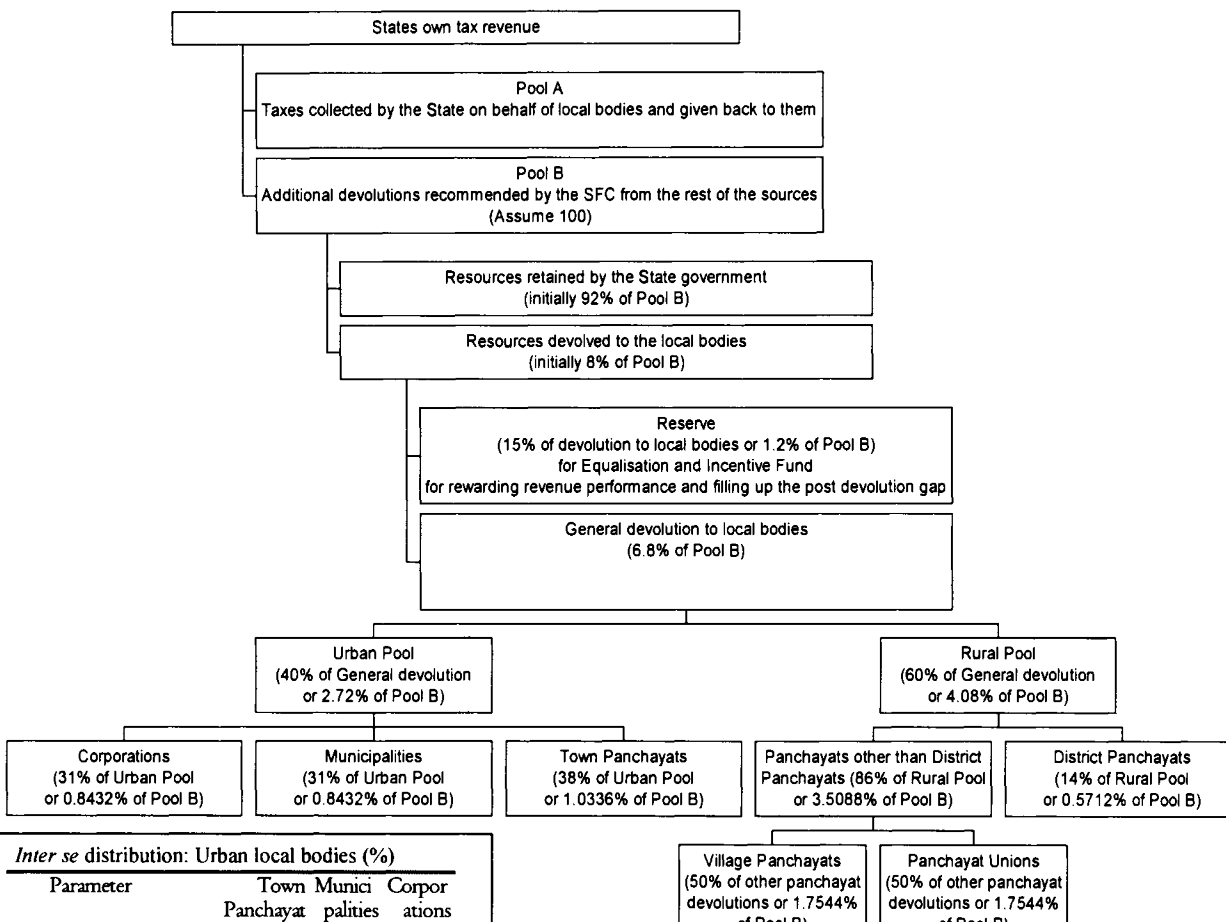
Step I (Vertical): Allocation of funds earmarked by the State for transfer to local bodies: rural local bodies and urban local bodies.

Step II (Vertical): Distribution of allocations earmarked to rural/ urban local bodies in Step I to the respective tiers of District *Panchayats*, *Panchayat* Unions, Village Panchayats, *Panchayats* under rural and town *Panchayats*, Municipalities and Municipal Corporations under urban areas.

Step III (Horizontal): Inter se distribution of funds allocated to the respective tiers, viz., allocation among Village *Panchayats*/ *Panchayat* Unions/ District *Panchayats* and Town *Panchayats* / Municipalities/ Municipal Corporations.

The scheme of RAM and also norms of inter se distribution for horizontal distribution is charted in Figure 8.

Figure 8 Tamil Nadu : Devolution mechanism recommended by the First State Finance Commission



Inter se distribution: Urban local bodies (%)

	Parameter	Town Panchayat	Municipalities	Corporations
(I)	Total Population(1991)	45	45	40
(ii)	Total SC/ST Population(1991)	20	10	10
(iii)	Financial Indicator: Per capita receipt under own Resources (Average for the last 3 years ending With 31.3.1994)	15	15	15
(iv)	Service Indicator: (Existing per capita expenditure on core civic services for the last 3 years ending With 31.3.1994)	20	30	35
	Total	100	100	100

Inter se distribution: Village Panchayats (%)

	Parameter	Weightage
(I)	Weightage on total population (1991 Census)	50
(ii)	Weightage on SC/ST population (1991 Census)	15
	Sub total	65
(I)	Per capita house tax Collection performance	15
(ii)	Core civic services infrastructure maintenance deficiency (with reference to physical assets available in the Village Panchayats area)	20
	Total	100

Inter se distribution: Panchayat Unions (%)

	Parameter	SFC	Government
(I)	Weightage on total population (1991 census)	50	50
(ii)	Weightage on SC & ST Population	25	15
(iii)	Weightage for financial viability of Panchayat Unions (Average per capital land revenue)	25	15
(iv)	Core civic series infrastructure deficiencies	-	20
	Total	100	100

The Government has decided for the devolution of 8% of all taxes other than entertainment tax to the local bodies.

List of local taxes accepted by the Government for levying by urban local bodies as per recommendations of the First State Finance Commission:

Property tax; profession tax; toll compensation; advertisement tax; user charges; specific service charges from private markets, additional charges for water supply; license fees & other charges; improvement & income from properties; development charges under town planning; land use with respect to urban local bodies; parking fees; penalties and fines; local cess surcharge; local cess; house tax; remunerative schemes; development grant; and distribution and credit of surcharge on stamp duty.

Recommended local taxes not accepted by the Government

Vehicle tax; tax on timber; cable TV; surcharge on bus tickets on floating population; calculation of LCS based on average land revenue; reduction in local cess and local cess surcharge based on remission and waiver in land revenue; house tax; tax on agricultural land for specific purposes; water tax; and fairs and festivals.

Consequent on this devolution some of the earlier grants being made to *Panchayats* and *Panchayats* Unions will no longer be available. The grants that will not be available from 1.4.1997 are:

Panchayats:

Maintenance of hand pumps; Maintenance of power pumps; Grants for *Panchayat* Assistants' salary; Provision of street lights to weaker *Panchayats*; Compensation grant in lieu of surcharge on sales tax to Village *Panchayats*; and House tax-matching grant.

Panchayat *Unions:*

Local cess surcharge matching grant; Local roads grant; The expenditure so far incurred from the above grants will now have to be incurred by the respective local bodies from out of the grants being devolved from the SFC recommendations; and Other grants will continue.

The SFC devolution grants must therefore be utilized only for the following purposes:

Panchayats:

Salaries and wages of the approved staff; Maintenance of drinking water facilities including hand pumps and power pumps; Maintenance of street lights and payment of electricity charges; Statutory obligations like public health, hygiene, sanitation, sewerage etc. which are required to be taken care of by the *Panchayats* under the various sections of the Tamil Nadu Panchayats Act (1994); and Office maintenance and expense including stationery.

Panchayat *Unions:*

Salaries and wages of the approved *Panchayat* Unions staff ; Pension fund, provident fund TA/DA and other related expenses of the *Panchayat* Unions; Office maintenance and expenses including stationery, electricity charges, telephone charges etc.; Maintenance of all *Panchayat* Union buildings and buildings vested with the *Panchayat* Unions; Maintenance of *Panchayat* Union roads; and Maintenance of minor irrigation tanks vested with the *Panchayat* Unions.

The following instructions are for strict compliance by all local bodies:

- Staff salary, pension contribution and provident fund contribution, office expenses will be first charges on these grants.
- In respect of Village *Panchayats* the next priority should be: Maintenance of drinking water facilities including open wells, hand pumps and power pumps; street lights; public health hygiene and sanitation; and any other statutory item of works.

- In respect of *Panchayat* Unions, the next priority should be the maintenance of all buildings. However, maintenance of roads, minor irrigation tanks etc. should be taken only after providing for the above commitments.
- Except as provided for by Government Orders, no fresh appointment on-part time/ NMR/ full time/ temporary basis of any category of staff should be made by any of the local bodies.
- The District Collector, as Inspector of *Panchayats* and *Panchayat* Union will ensure strict compliance with tense instructions.
- Instructions regarding taking up capital works with the surplus, if any available under these grants, will be issued separately by the Director of Rural Development.
- Apart from the SFC grants, the *Panchayats* will have their own resources in the form of house tax, profession tax, license fees etc. Apart from this, they will also be eligible for continuing devolution on local cess, stamp duty surcharge, share of entertainment tax, fees under mines and minerals etc.
- *Panchayat* Unions will continue to be eligible for local cess surcharge, surcharge on stamp duty, proportion of entertainment tax etc.

ANNEXURE II: TAMIL NADU: DETAILED ESTIMATION OF THE FISCAL FORECAST MODEL AND SIMULATION RESULTS

Data used for estimating the model

Rs crore

	GSDP	OREVEX	WAGES	OM	SUBSIDIES	TRANS	INTEREST	CAPEX
1980-81	8080.51	1039.03	378.20	189.34	31.00	440.50	113.22	469.70
1981-82	9712.35	1245.22	562.16	261.55	152.12	269.38	114.67	570.58
1982-83	10025.08	1451.28	698.52	371.47	59.90	321.38	124.80	604.54
1983-84	11645.86	1760.11	839.90	398.59	145.00	376.63	150.69	691.19
1984-85	13657.58	2040.21	927.87	381.21	276.97	454.17	170.13	594.78
1985-86	15648.37	2267.11	1125.07	440.67	193.29	508.08	182.64	657.29
1986-87	17512.60	2554.85	1286.96	496.26	241.57	530.06	220.85	666.62
1987-88	20692.50	3112.31	1435.43	487.69	641.59	547.61	262.50	678.45
1988-89	23198.88	3430.38	1698.34	445.53	616.76	669.75	332.66	744.59
1989-90	27133.72	4186.61	2071.89	573.64	807.01	734.06	363.48	962.30
1990-91	31339.38	5157.98	2772.04	558.05	857.62	970.27	483.31	700.70
1991-92	36956.74	8085.58	3064.71	686.56	3298.65	1035.65	593.94	766.22
1992-93	43009.87	7817.42	3613.12	793.59	2391.34	1019.36	725.11	1003.29
1993-94	51858.40	7758.76	4192.02	1028.05	1408.24	1130.44	999.25	1077.39
1994-95	60734.16	8482.33	5092.23	843.98	1434.11	1112.01	1152.62	1553.77
1995-96	67589.15	9530.57	5721.52	948.28	1611.33	1249.43	1380.00	1351.10
1996-97	78123.66	11476.86	0.00	0.00	0.00	0.00	1588.03	1999.64
1997-98	87394.43	13187.50	0.00	0.00	0.00	0.00	1763.35	1974.73
1998-99	98756.00	14929.98	0.00	0.00	0.00	0.00	2073.02	2173.17
1999-00	111594.61	16931.69	0.00	0.00	0.00	0.00	2437.06	2403.05
2000-01	125680.63	19237.55	0.00	0.00	0.00	0.00	2865.04	2670.49
2001-02	141861.24	21901.72	0.00	0.00	0.00	0.00	3368.17	2982.93
2002-03	160065.45	24989.75	0.00	0.00	0.00	0.00	3959.66	3349.57
2003-04	180516.09	28581.35	0.00	0.00	0.00	0.00	4655.02	3781.74
2004-05	203672.22	32773.80	0.00	0.00	0.00	0.00	5472.50	4293.48
2005-06	229767.09	37686.30	0.00	0.00	0.00	0.00	6433.53	4902.22

Contd.....

Data used for estimating the model (Contd...)

Rs crore

	TAXREV	INCTAX	CAPTAX	COMTAX	NONTAXREV	BORROW	DEBT	POP	CENTRAN	SEMPLOYMT
1980-81	639.11	5.68	43.33	590.10	363.85	211.05	2039.90	4.88	407.94	0.0375
1981-82	842.40	4.35	66.39	771.66	340.39	294.68	2259.07	4.95	453.00	0.0378
1982-83	1011.53	2.73	75.86	932.94	270.16	401.29	2495.95	5.02	497.64	0.0483
1983-84	1145.24	4.05	76.74	1064.45	365.91	464.60	2704.91	5.09	626.24	0.0510
1984-85	1297.57	12.14	110.65	1174.78	396.62	399.29	2860.17	5.16	711.64	0.0534
1985-86	1547.53	19.32	112.90	1415.31	344.56	365.05	3025.71	5.23	849.90	0.0534
1986-87	1757.06	10.03	135.78	1611.25	362.78	454.29	3361.48	5.31	868.19	0.0546
1987-88	1763.78	6.57	162.16	1595.05	547.73	709.95	3837.93	5.38	1031.80	0.0559
1988-89	1994.23	6.78	181.10	1806.35	598.09	755.26	4378.15	5.46	1160.06	0.0575
1989-90	2489.01	9.00	224.76	2255.25	592.12	1067.62	5012.96	5.53	1363.63	0.0591
1990-91	3124.06	17.97	244.15	2861.93	509.28	1126.30	5606.03	5.59	1582.35	0.0606
1991-92	3734.11	26.20	326.23	3381.68	2413.65	1374.91	8374.31	5.67	1923.06	0.0602
1992-93	4162.06	20.04	315.30	3826.72	1318.22	1824.06	9697.81	5.75	2241.48	0.0592
1993-94	4801.37	12.77	422.89	4365.71	1040.59	1432.55	10250.09	5.83	2560.88	0.0625
1994-95	5833.76	16.73	552.64	5264.39	1245.57	1496.41	11358.62	5.91	2612.98	0.0643
1995-96	7151.20	19.47	648.70	6483.03	1265.01	1255.86	12743.78	5.99	2589.60	0.0664
1996-97	7983.45	13.86	619.34	7350.25	1543.73	2465.86	15146.35	6.07	3092.38	0.0685
1997-98	8685.64	39.36	702.81	7943.47	2338.77	2128.86	14264.86	6.15	3779.44	0.0708
1998-99	10024.00	18.00	722.00	9284.00	1284.88	3879.18	17116.74	6.23	3988.11	0.0731
1999-00	11583.95	19.85	823.13	10740.97	1516.97	4248.88	19070.40	6.31	4482.23	
2000-01	13340.91	21.91	938.55	12380.44	1797.73	4730.17	21066.25	6.40	5049.83	
2001-02	15427.89	24.17	1070.30	14333.41	2139.12	5247.00	23144.92	6.48	5703.47	
2002-03	17932.00	26.67	1220.72	16684.62	2556.44	5781.57	25322.87	6.57	6458.06	
2003-04	20971.94	29.42	1392.47	19550.05	3069.31	6299.79	27584.40	6.65	7331.27	
2004-05	24711.70	32.46	1588.64	23090.61	3703.03	6741.31	29865.80	6.74	8344.10	
2005-06	29380.67	35.80	1812.72	27532.14	4490.25	7004.30	32028.67	6.83	9521.52	

RATS Program for Forecasting Tamil Nadu Finances
J V M Sarma

Variables involved:

GSDP	: Gross State domestic product
OREVEX	: Revenue expenditure other than interest (debt-servicing) expenditure
WAGES	: Employees compensation
OM	: Operation and maintenance (expenditure on goods and services)
SUBSIDIES	: Direct subsidies
TRANS	: Current transfers including grants to local bodies
INTEREST	: Debt servicing expenditure
CAPEX	: Capital expenditure
TAXREV	: Tax revenue
INCTAX	: Taxes on income such as agricultural income tax
CAPTAX	: Taxes on capital transactions such as stamp duties
COMTAX	: Taxes on commodities such as sales tax and excises
NONTAXREV	: Nontax revenue including loan recoveries
BORROW	: New borrowings (fiscal deficit)
DEBT	: Stock of outstanding debt including public account balances
POP	: Population
CENTRAN	: Central transfers
SEMPLOYMENT	: State Government employee's number

Sample period 1980-81 to 1997-98
Estimation

GSDP (Gross State Domestic Product) equation

Dependent Variable GSDP - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 18 Degrees of Freedom 15
Centered R**2 0.998010 R Bar **2 0.997744
Uncentered R**2 0.999989 T x R**2 18.000
Mean of Dependent Variable 10.170998440
Std Error of Dependent Variable 0.766380988
Standard Error of Estimate 0.036397153
Sum of Squared Residuals 0.0198712915
Regression F(2,15) 3761.0435
Significance Level of F 0.00000000
Durbin-Watson Statistic 1.092521
Q(4-0) 3.532745
Significance Level of Q 0.47291695

	Variable	Coeff	Std Error	T-Stat	Signif
1	Constant	8.340406081	0.316989448	26.31131	0
2	CAPEX	0.077373824	0.052283228	1.4799	0.15959591
3	TRD	0.137647641	0.004219445	32.62222	0

Revenue side

INCTAX (Taxes on income such as agricultural income tax) equation

Dependent Variable INCTAX - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 18 Degrees of Freedom 16
Centered R**2 0.593929 R Bar **2 0.568550
Uncentered R**2 0.968601 T x R**2 17.435
Mean of Dependent Variable 2.3974418520
Std Error of Dependent Variable 0.7141572320
Standard Error of Estimate 0.4690933455
Sum of Squared Residuals 3.5207770688
Regression F(1,16) 23.4020
Significance Level of F 0.00018187
Durbin-Watson Statistic 1.279133
Q(4-0) 17.152616
Significance Level of Q 0.00180532

Variable Coeff Std Error T-Stat Signif
****
1 Constant-4.906881414 1.513961885-3.241090.00511607
2 GSDP0.718152039 0.148453384.83756 0.00018187

CAPTAX (Taxes on capital transactions such as stamp duties) equation

Dependent Variable CAPTAX - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 18 Degrees of Freedom 16
Centered R**2 0.988382 R Bar **2 0.987656
Uncentered R**2 0.999718 T x R**2 17.995
Mean of Dependent Variable 5.3077626302
Std Error of Dependent Variable 0.8618649562
Standard Error of Estimate 0.0957570522
Sum of Squared Residuals 0.1467106087
Regression F(1,16) 1361.1645
Significance Level of F 0.00000000
Durbin-Watson Statistic 1.773198
Q(4-0) 0.689191
Significance Level of Q 0.95265521

Variable Coeff Std Error T-Stat Signif
****
1 Constant-6.063808843 0.309048356-19.62091 0
2 GSDP1.118038857 0.030304114 36.89396 0

COMTAX (Taxes on commodities such as sales tax and excises) equation

Dependent Variable COMTAX - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 18 Degrees of Freedom 16
Centered R**2 0.992308 R Bar **2 0.991827
Uncentered R**2 0.999922 T x R**2 17.999
Mean of Dependent Variable 7.7269876174
Std Error of Dependent Variable 0.8031599068

Standard Error of Estimate 0.0726097644
Sum of Squared Residuals 0.0843548463
Regression F(1,16) 2063.9980
Significance Level of F 0.00000000
Durbin-Watson Statistic 1.186373
Q(4-0) 7.543509
Significance Level of Q 0.10980598

Variable		Coeff	Std Error	T-Stat	Signif
1	Constant	-2.891045203	0.234342305	-12.33685	0
2	GSDP	1.043951868	0.022978721	45.43124	0

NONTAXREV (Nontax revenue including loan recoveries) equation

Dependent Variable NONTAXREV - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 18 Degrees of Freedom 16
Centered R**2 0.805342 R Bar **2 0.793176
Uncentered R**2 0.997846 T x R**2 17.961
Mean of Dependent Variable 6.5307503650
Std Error of Dependent Variable 0.7109220796
Standard Error of Estimate 0.3233123876
Sum of Squared Residuals 1.6724943997
Regression F(1,16) 66.1955
Significance Level of F 0.00000045
Durbin-Watson Statistic 1.914320
Q(4-0) 1.744046
Significance Level of Q 0.78270192

Variable		Coeff	Std Error	T-Stat	Signif
1	Constant	-0.86279747	1.043465307	-1.85562	0.08202346
2	GSDP	0.742467939	0.102318264	8.13606	0.00000045

Expenditure side
WAGES (Employees' compensation) equation

Dependent Variable WAGES - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 16 Degrees of Freedom 14
Total Observations 18 Skipped/Missing 2
Centered R**2 0.831665 R Bar **2 0.819641
Uncentered R**2 0.998090 T x R**2 15.969
Mean of Dependent Variable 7.4116626842
Std Error of Dependent Variable 0.8200966577
Standard Error of Estimate 0.3482843538
Sum of Squared Residuals 1.6982278752
Regression F(1,14) 69.1675
Significance Level of F 0.00000087
Durbin-Watson Statistic 0.641688
Q(4-0) 10.474793
Significance Level of Q 0.03314598

Variable Coeff Std Error T-Stat Signif
****
1 Constant20.98993334 1.571338794 13.0207 0
2 SEMPLOYMT 4.4922136790.5389415388.3167 0.00000087

SEMPLOYMT (State Government employees' number) equation

Dependent Variable SEMPLOYMT - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 18 Degrees of Freedom 16
Centered R**2 0.848249 R Bar **2 0.838764
Uncentered R**2 0.999468 T x R**2 17.990
Mean of Dependent Variable -2.883679359
Std Error of Dependent Variable 0.175998959
Standard Error of Estimate 0.070670914
Sum of Squared Residuals 0.0799100498
Regression F(1,16) 89.4357
Significance Level of F 0.00000006
Durbin-Watson Statistic 0.661209
Q(4-0) 7.117104
Significance Level of Q 0.12982774

Variable Coeff Std Error T-Stat Signif
****
1 Constant-6.687069193 0.402520092-16.613010
2 POP2.2348504860.2363159369.45705 0.00000006

OM ((Operation and maintenance (expenditure on goods and services)) equation

Dependent Variable OM - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 16 Degrees of Freedom 14
Total Observations 18 Skipped/Missing 2
Centered R**2 0.899438 R Bar **2 0.892255
Uncentered R**2 0.999492 T x R**2 15.992

Mean of Dependent Variable 6.2285114195
Std Error of Dependent Variable 0.4583399118
Standard Error of Estimate 0.1504479403
Sum of Squared Residuals 0.3168841582
Regression F(1,14) 125.2176
Significance Level of F 0.00000002
Durbin-Watson Statistic 1.206444
Q(4-0) 3.073332
Significance Level of Q 0.54562929

Variable Coeff Std Error T-Stat Signif
****
1 Constant-0.193190584 0.571539554-0.268030.79258381
2 GSDP0.63644489 0.0568758811.19007 0.00000002

SUBSIDIES (Direct subsidies) equation

Dependent Variable SUBSIDIES - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 16 Degrees of Freedom 14
Total Observations 18 Skipped/Missing 2
Centered R**2 0.850998 R Bar **2 0.840355
Uncentered R**2 0.993583 T x R**2 15.897
Mean of Dependent Variable 6.1264564443
Std Error of Dependent Variable 1.3423151169
Standard Error of Estimate 0.5363297199
Sum of Squared Residuals 4.0270939588
Regression F(1,14) 79.9586
Significance Level of F 0.00000037
Durbin-Watson Statistic 1.723605
Q(4-0) 0.459924
Significance Level of Q 0.97728327

Variable Coeff Std Error T-Stat Signif
****
1 Constant-26.91298851 3.6079051 -7.237710.00000431
2 POP19.095261882.135467938.94196 0.00000037

TRANS (Current transfers including grants to local bodies) equation

Dependent Variable TRANS - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 16 Degrees of Freedom 14
Total Observations 18 Skipped/Missing 2
Centered R**2 0.917194 R Bar **2 0.911279
Uncentered R**2 0.999557 T x R**2 15.993
Mean of Dependent Variable 6.4589430909
Std Error of Dependent Variable 0.4894465336
Standard Error of Estimate 0.1457870276
Sum of Squared Residuals 0.2975540038
Regression F(1,14) 155.0690
Significance Level of F 0.00000001
Durbin-Watson Statistic 1.532284
Q(4-0) 1.571830

Significance Level of Q 0.81384604

Variable	Coeff	Std Error	T-Stat	Signif
**				
1 Constant	-5.745122022	0.980713432	-5.8581	0.0000416
2 POP	7.228406683	0.580470391	2.45267	0.00000001

CAPEX (Capital expenditure) equation

Dependent Variable CAPEX - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 17 Degrees of Freedom 15
Total Observations 18 Skipped/Missing 1
Centered R**2 0.843707 R Bar **2 0.833288
Uncentered R**2 0.999451 T x R**2 16.991
Mean of Dependent Variable 6.7942911838
Std Error of Dependent Variable 0.4157882334
Standard Error of Estimate 0.1697679362
Sum of Squared Residuals 0.4323172825
Regression F(1,15) 80.9739
Significance Level of F 0.00000020
Durbin-Watson Statistic 1.265288
Q(4-0) 3.716494
Significance Level of Q 0.44573146

Variable	Coeff	Std Error	T-Stat	Signif
**				
1 Constant	1.683823913	0.591581739	2.50823	0.02411073
2 GSDP{1}	0.525789497	0.058430479	8.99855	0.0000002

CAPEX is guided by availability of borrowings. Nontax revenue is not a factor for capital expenditure. Tax revenue is not relevant.

Debt management

DEBT (Stock of outstanding debt including public account balances) equation

The constant represents the discrepancy due to public account balance.

Dependent Variable DEBT - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 17 Degrees of Freedom 14
Total Observations 18 Skipped/Missing 1
Centered R**2 0.975983 R Bar **2 0.972552
Uncentered R**2 0.993189 T x R**2 16.884
Mean of Dependent Variable 6904.5981235
Std Error of Dependent Variable 4478.0866461
Standard Error of Estimate 741.9009194
Sum of Squared Residuals 7705837.6392
Regression F(2,14) 284.4628
Significance Level of F 0.00000000
Durbin-Watson Statistic 1.720010
Q(4-0) 3.886723
Significance Level of Q 0.42155320

Variable Coeff Std Error T-Stat Signif
****
1 Constant119.7256872 346.6805886 0.34535 0.7349662
2 DEBT{1} 0.79373085 0.1058129 7.50127 0.00000287
3 BORROW 1.76942613 0.66869748 2.64608 0.01917536

Current debt moves over 80% with past debt and barely 20% with current borrowings
INTEREST (Debt servicing expenditure) equation

Dependent Variable INTEREST - Estimation by Least Squares
Annual Data From 1981:01 To 1998:01
Usable Observations 17 Degrees of Freedom 16
Total Observations 18 Skipped/Missing 1
Centered R**2 0.951916 R Bar **2 0.951916
Uncentered R**2 0.979717 T x R**2 16.655
Mean of Dependent Variable 624.00190000
Std Error of Dependent Variable 549.40779950
Standard Error of Estimate 120.47424505
Sum of Squared Residuals 232224.69954
Durbin-Watson Statistic 0.359567
Q(4-0) 12.603649
Significance Level of Q 0.01338393

Variable Coeff Std Error T-Stat Signif
****
1 DEBT{1} 0.109706376 0.003946315 27.7997 0
****

Tamil Nadu: Growth rates of fiscal variables: 1981-98

	Variable	Growth per unit per annum
1	GSDP	0.15418
2	OREVEX	0.16314
3	WAGES	0.18724
4	OM	0.09616
5	SUBSIDIES	0.29685
6	TRANS	0.10363
7	INTEREST	0.19444
8	CAPEX	0.07707
9	TAXREV	0.16241
10	INCTAX	0.10899
11	CAPTAX	0.17414
12	COMTAX	0.16172
13	NONTAXREV	0.12621
14	BORROW	0.14226
15	DEBT	0.13659
16	POP	0.01368
17	CENTRAN	0.14068
18	SEMPLOYMT	0.03075

NOTES

[1] In fact, the sharing of water resources of the two main rivers Cauvery and Pennaiyar with the neighboring States has been a constant source of strife.

[2] Investment subsidy for new industries in industrially backward areas, higher rate of investment subsidy to electronics and leather industries, additional subsidy for employing more than 30 percent women workers, offering several tax concessions are some of the measures.

[3] In this context, it should be noted that the 10[h] Finance Commission has recommended the linking of debt-relief to the disinvestment program. Under this program, those States that disinvested up to 20 percent of the equity of the State level PSUs and used the funds for retirement of Central debt are given some relief. So far only Tamil Nadu has availed this additional debt relief to the tune of Rs 10.39 crore.

[4] Government of India (1993) Report of the Expert Group on Estimation of Proportion and number of poor, Perspective Planning Division, New Delhi.

[5] The fiscal analysis is primarily based on the budgetary data supplemented with compositional information reported in the Tamil Nadu Economic & Functional Classification of the Budget.

[6] The guidelines for providing guarantees are well laid out in Tamil Nadu. The criteria for giving guarantees as suggested by the Public Accounts Committee for 1969-70 (*GO Ms No 101, dated January 29, 1974*) are that the proposal should be (a) justified by the public interest - for approved developmental purpose or for working capital needs; (b) in line with the credit worthiness of the borrower in relation to the risk involved; (c) in line with the Reserve Bank of India guidelines; and (d) follow the other conditions of the government regarding the period of levy, levy of a fee to cover the risk, representation for the government to be on the Board of management, mortgage or lien on the assets, submission of the accounts periodically to the government would be taken. Also, a guarantee commission of half a percent per annum on the outstanding guaranteed amounts is charged with some exceptions (*GO Ms No 1227, dated December, 18, 1976, GO Ms No 580 dated July 14, 1995*). In 1998, the guidelines and procedures for issue of guarantees are revised. Earlier, guarantees were issued by the concerned administrative departments in consultation with the Finance department. However, under that practice, it was difficult to monitor or review the performance of the organizations on whether the loans are being repaid promptly and the guarantee commission paid on time. Consequently, the power of processing, issuing and administration of guarantees is vested in the Finance Department.

[7] The six fastest growing States are Haryana, Karnataka, Maharashtra, Gujarat, Rajasthan and Tamil Nadu.

[8] Tamil Nadu is the first State to introduce the sales tax in India in 1939. Over the years, there has been a structural shift away from multi-point levies and by 1990, it became a single-point levy, generally at the point of first sale.

[9] Prohibition of alcoholic liquors in Tamil Nadu was first introduced in one district (Salem) in 1937 but was withdrawn in 1945. It was reintroduced and was extended to the entire State in 1948 and remained so until 1971, when it was lifted by the DMK government. The same government reintroduced prohibition in stages in 1973 and 1974. The AIADMK government relaxed prohibition in 1981 but banned the sale and consumption of country spirits (arrack) with effect from lst January 1987. In 1990 the ban on arrack consumption was lifted.

[10] Bulk litre is roughly equivalent to the ordinary litre and proof content is the strength of the liquor added so that proof litre = bulk litre × proof content of the spirit ÷ 100.

[11] In 1989 there was an increase due to the levy of a "one-time" tax on new two-wheelers.

[12] co-terminus with that of the Development Blocks established under the Community Development Programme

[13] State Finance Commission (1997) *Summary of Recommendations*, Government of Tamil Nadu, Chennai.

[14] Bihar experienced the largest deficit of 30 percent of the requirement.

[15] Supply of energy includes generation, purchases and possible imports.

[16] Government of India (1997) *Annual Report on the Working of State Electricity Boards & Electricity Departments*, Power & Energy Division, February, p74

[17] Government of Tamil Nadu (1997) *Ninth Five-year Plan, Tamil Nadu*, State Planning Commission, September, Chennai, p186.

[18] Government of India (1993) *Report of the Committee on Norms for Maintenance of Roads*, Ministry of Surface Transport, New Delhi

[19] In fact, the noon-meal scheme of Tamil Nadu has made other States such as the Andhra Pradesh and even the Centre to start similar campaigns.

[20] Government of Tamil Nadu (1998) Policy Note on Demand No 17 – Education, School Education Department, 1998-99, Chennai

[21] These policy aims at attainment of a level of health that will permit all to lead a socially and economically productive life as declared by the World Health Assembly in 1977.

[22] They include Child Survival and Safe Motherhood, Universal Immunisation Programme, Pulse-Polio Immunisation, Maternal and Child Welfare, Reproductive and Child Health, Integrated Child Development Services, National Iodine Deficiency Disorder (IDD) Control Programme, School Health Programme, Control of Communicable Diseases, Industrial Hygiene and Health, Prevention of Food Adulteration, Vector-Borne Diseases Control Programme (for Malaria, Filariasis, Guinea Worm and Japanese Encephalitis).

[23] Tamil Nadu Newsprint and Papers Ltd is an example as to how a PSU should not be run.

[24] The Ramanathan Committee (1977) reiterated that the role of government should confine to three types of activities: (i) where the activity is specifically reserved for the public sector under government policy and it will not be possible for the private sector to undertake the activity (ii) where the private sector is unwilling to take up the activity because of large capital needs with no immediate return, and (iii) where the private sector is reluctant to involve in the development of backward areas.

[25] Although the Raghavan Committee report is yet to be made public, an article appeared in The Hindu by V Jayant summarizing its main findings. Our observations are based on the article.

[26] The government of Tamil Nadu has entered the transport business as early as in 1947 and serviced the Madras City. In 1967, the government took over all routes from Madras and Kanyakumari districts. It was in 1971 major legislation for taking over the bus operators holding more than 50 buses, was passed. Originally, four regional transport companies were formed to have a closer management and efficient supervision. The nationalization did result in providing better access for the farmers to the markets in urban areas, easy access to the educational institutions and bringing long-distance travel within the reach of rural poor. Over the years, however, the financial performance has become dismal an offshoot of which has been the unhampered growth of two and three wheelers and illegal operations of truckers.

[27] The additional expenditure due to the recommendations of the Pay Commission, and the State Finance Commission are borne by the State government in a phased manner and therefore, is subsumed in the trends.