

A MACRO FISCAL ADJUSTMENT MODEL FOR TAMIL NADU STATE IN INDIA

J V M Sarma*

G Naresh

NATIONAL INSTITUTE OF PUBLIC FINANCE AND POLICY, NEW DELHI (INDIA)

Abstract:

Although fiscal imbalance and its adverse effects on macro economic equilibrium in India have been receiving wide attention, the issue at States' level has not so far been adequately analyzed. In many respects, fiscal situation in States is more critical than that at the Centre as States have the Constitutional responsibility for providing basic social and economic services, yet, do not have independent power to borrow from the market or the central bank. Given these constraints, the burden has tended to fall on capital and maintenance expenditures with adverse implications. If the same trends continue, the fiscal deficit is likely to assume disquieting proportions. Since most of the issues are common to States, it is possible to have a common reform package. In this paper, an attempt has been made to suggest such a common package. A recursive model with the twin objectives of forecasting and policy simulations has been developed, and the impact of the suggested reform package has been estimated for the State of Tamil Nadu as an example.

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Address for correspondence:-

Dr JVM Sarma, Professor
National Institute of Public Finance and Policy
18/2, Satsang Vihar Marg
New Delhi – 110 067
(India)
E-mail: jvm_sarma@yahoo.com

Dr Gautam Naresh, Senior Economist
National Institute of Public Finance and Policy
18/2, Satsang Vihar Marg
New Delhi – 110 067
(India)
E-mail: gautam48@yahoo.com

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INTRODUCTION

GROWING fiscal imbalance and its adverse effects on macro economic equilibrium in the country has been receiving wide attention by policy makers as well as researchers. However, the issue of fiscal imbalance at the State level has not so far been adequately analyzed.

It is a fact that, just like the Centre, several States are also facing deteriorating budgetary positions, with serious implications on their developmental efforts. Insufficient revenue sources, uncontrolled growth of current expenditures, and failure of central transfers to grow as fast as the States' own revenues have been the sources of the imbalances. In many respects, the fiscal situation in the States is more critical than that at the Centre as the States have the primary Constitutional responsibility for providing basic social and economic services.

At the same time, while the elasticity of own revenues of the Centre and the States are broadly the same, the States' expenditures have been growing at rates faster than that of the Centre particularly in recent years. There is not only a shrinking of capital expenditure, but the maintenance of existing capital assets is also not getting its due. Other signs are rising trend of non-developmental consumption expenditure, high cost of government employees' especially after the implementation of the Fifth Central Pay Commission. At the State level, there is an increasing trend in the volume in government employment thereby burgeoning rise in wages and salary bill apart from rise in debt servicing. From the receipts angle, poor tax collections, poorly targeted cost recovery policy and lack of desired tax reforms adversely affect the income-buoyancy of the taxes that put constraints on expenditure needs from own revenue sources of the States. This leads to dependence on higher level governments for larger fiscal transfers and also on ways and means advances. Besides, public sector enterprises (PSEs) are largely in a financial mess requiring huge doses of budgetary support to sustain them. These are some of the worrisome factors among others. If the same fiscal trends follow, the fiscal deficit is likely to assume disquieting proportions due to an increasing component of revenue deficit to be financed from borrowings. Hence, there is need to strengthen the revenue-effort and restructuring of expenditure for sustainability. It is a tough challenge to all the governments. Therefore, a suitable fiscal correction at this level needs an integrated and concerted effort on all fronts of the economy with an iron-will.

Further, the States do not have the same ability to finance their growing fiscal imbalance. Unlike the Centre, the States do not have independent power to borrow from the market, nor can they take recourse to borrowing from the central bank because of the regulation of the overdrafts. Given these constraints on borrowings, the burden of adjusting to the imbalance has tended to fall mainly on capital and maintenance expenditures with adverse implications in terms of infrastructural constraints, declining productivity of public sector investment and deceleration in long-term growth of the economy.

These issues are persistent over the years as brought out by various studies such as Aiyar and Kurup (1992), Bajaj and Aggarwal (1992), Guhan (1992), Jetha (1992), Rajaraman, Mukhopadhyay and Amarnath (1998), Rao and Sen (1993), Sarma, Naresh and Bohra (1999), Sen and Rao (1998), Srivastava, Chattopadhyay and Jena (1998), Srivastava, Chattopadhyay and Rangamannar (1998), Rao and Sen (1993) pertaining to the States of Andhra Pradesh, Gujarat, Haryana, Kerala, Punjab, Tamil Nadu and Uttar Pradesh.

Since most of the issues are common to all States it is possible to have a common package of reforms. In this paper, an attempt has been made to suggest a plausible package of State level fiscal reforms using State finances of Tamil Nadu as an example, using a recursive model the impact of the suggested reform package on the future of the finances has been estimated. The paper is organized as follows: In section 1 a brief review of the fiscal imbalances and the suggested fiscal correction strategy pertaining to Tamil Nadu is given based on the study by Sarma, Naresh and Bohra (1999). In section 2, a simple recursive macroeconomic model with the twin objectives of forecasting and policy simulations has been developed. In section 3, fiscal forecasts for the period 1998-99 to 2001-05 based on this model have been presented with the *status quo* scenario depicting where the fiscal situation will be if no corrective measures are taken. In section 4 the results of the alternative scenario with the suggested fiscal reform strategy are presented. Finally section 5 gives a summary.

FINANCES OF TAMIL NADU STATE: AN OVERVIEW

Tamil Nadu is the southernmost seventh largest populated State in the Indian subcontinent covering about 4 percent of the India's geographical area and also one of the most densely populated States in India. The modest natural resource base makes economic development an arduous task. 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. 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.

The public finances of Tamil Nadu are relatively well managed but still there is room for selective fiscal correction. 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 and maintenance of assets. During 1990-98, there was a significant rise in revenue expenditure, particularly, in employees' 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.

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.

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. 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 1.2 percent of net State expenditure. The cost-recovery rate is particularly low for social sector services, and varies from 2 percent to 3 percent. Fiscal balance for the most part of the period of 1980-98 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.

The selected key sectors have played important role in the State's economy. Their performance has resulted in fiscal stress and strain. These sectors are power, irrigation, roads and bridges, education, health, transport and public sector enterprises.

1. Power: Until recently, there seems to be laxity in providing the required additional investment to meet the State's energy demand. By the year 2002 this requirement would be much more than the outlay provided in the Ninth Plan. 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. In addition to the capital transfers, every year TNEB receives direct budgetary subsidy to make-up for the net operating loss.

2. Irrigation: 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. Most of the water potential is already exploited. As regards cost recoveries in the irrigation sector, water charges are based on the classification of land and dependability of the source. 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.

3. Roads and Bridges: 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.

4. Education: 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. 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. 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.

5. Health and Family Welfare: 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 1990s. Though considerable progress has been made in the last several decades in expanding the public health system and in reducing the incidence of diseases. Yet, there remains certain area such as child and maternal morbidity and communicable diseases where the government needs to pay more attention.

6. Transport: The public transport sector is also severely sick financially like power sector. There is a prior 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.

7. Public Sector Enterprises (PSEs): As in the case of many States, the performance of PSEs in Tamil Nadu has been a cause for concern. Except for the development finance corporations, the financial performance of the 67 PSEs 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 Gross State Domestic Products (GSDP) originating from the PSEs at Rs 1,500 crore is an insignificant proportion of the total GSDP. Thus, the PSEs in Tamil Nadu have not had a great impact on the economy of the State, as expected, except for direct employment of 1.6 lakh persons.

The review brings out that although the fiscal deficit appears to be under control the fact that about half of it is due to the revenue deficit that is somewhat disquieting. The low level of capital expenditure indicates that most of the borrowings are frittered away in current spending. 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. There exists room for improving the revenue-effort by rationalizing certain taxes, stepping up non-tax revenues through better-cost recoveries, and restructuring of the PSEs. The aspect that needs immediate government attention is infrastructure – power, irrigation, 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.

In what follows, an attempt is made to examine policy options available to the government and quantify their impact for the period 1998-2006. 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,
- ⇒ Scrapping 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.

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.

From the review of the government finances of Tamil Nadu, it is clear that so far they are relatively well managed as compared to many other States. Yet, there exists room for strengthening the fiscal sustainability as

- ⇒ 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.
- ⇒ The low level of capital expenditure indicates that most of the borrowings are frittered away in current spending.
- ⇒ The asset maintenance is far from satisfactory. In the roads sector there is a noticeable spending gap in the operation and maintenance 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.
- ⇒ 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 PSEs. In this paper an attempt is made to examine policy options available to the Government and quantify their impact for the period 1998-2006.

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 operation and maintenance expenditure is also not getting its due.

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

deficit 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.

MACRO FORECAST MODEL

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: State income (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 employees' 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 structural model in equation form is as follows:

- | | | |
|----------------------------|---|---|
| 1. $\ln(\text{GSDP})$ | = | $\ln(\text{CAPEX}_{t-1}) + (\text{TRD})$ |
| 2. $\ln(\text{INCTAX})$ | = | $\ln(\text{GSDP})$ |
| 3. $\ln(\text{CAPTAX})$ | = | $\ln(\text{GSDP})$ |
| 4. $\ln(\text{COMTAX})$ | = | $\ln(\text{GSDP})$ |
| 5. $\ln(\text{NON-TAX})$ | = | $\ln(\text{GSDP})$ |
| 6. $\ln(\text{WAGES})$ | = | $\ln(\text{SEMPLOYMT})$ |
| 7. $\ln(\text{SEMPLOYMT})$ | = | $\ln(\text{POP})$ |
| 8. $\ln(\text{OM})$ | = | $\ln(\text{GSDP})$ |
| 9. $\ln(\text{SUBSIDIES})$ | = | $\ln(\text{POP})$ |
| 10. $\ln(\text{TRANS})$ | = | $\ln(\text{POP})$ |
| 11. $\ln(\text{CAPEX})$ | = | $\ln(\text{GSDP}_{t-1})$ |
| 12. DEBT | = | $\text{DEBT}_{t-1} + \text{BORROW}$ |
| 13. INTEREST | = | DEBT_{t-1} |
| 14. BORROW | = | $\text{WAGES} + \text{SEMPLOYMT} + \text{OM} + \text{SUBSIDIES} + \text{INTEREST}$
$+ \text{TRANS} + \text{CAPEX} - \text{INCTAX} - \text{CAPTAX} - \text{COMTAX}$
$- \text{NONTAX} + \text{CENTRAN}$ |

Key:

GSDP	:	Gross State Domestic Product
TD	:	Time trend
REVEX	:	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	: Non-tax revenue including interest receipts on loans and advances
BORROW	: New borrowings (fiscal deficit)
DEBT	: Stock of outstanding debt including public account balances
POP	: Population
CENTRAN	: Central transfers
SEMPLOYMENT	: State Government employees' number

The macro fiscal mechanism is as depicted in the Figure shown below. 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 along with trend growth rates of the variables employed are as in Table 1.

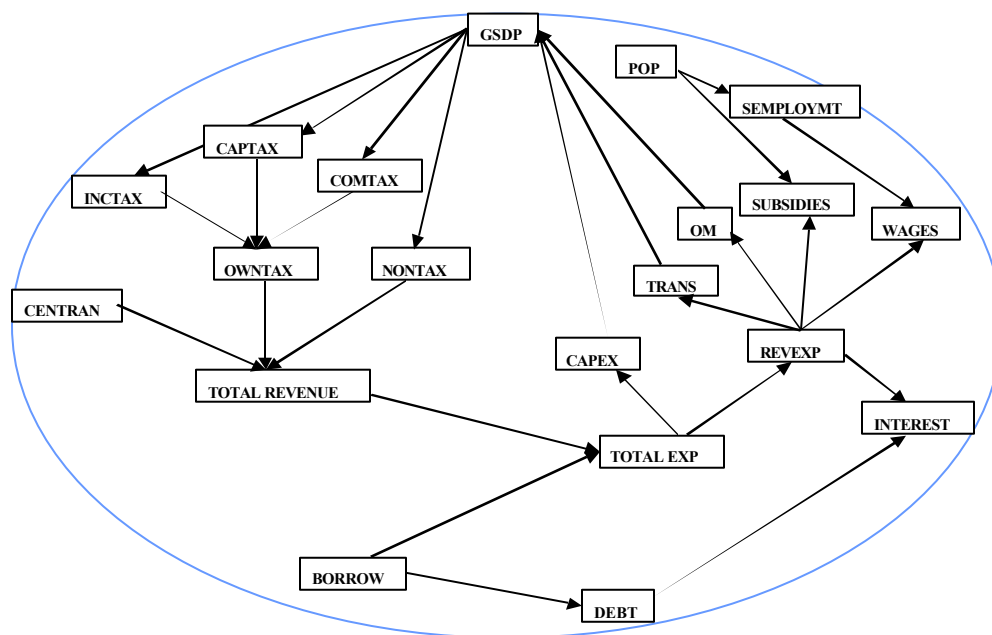


Figure: Macro fiscal flows

Table 1: Estimated parameters of the macro-fiscal model

<u>STATE INCOME</u>			
<u>Gross State Domestic Product</u>			
Ln (GSDP)	=	$8.34 + 0.08 \ln (\text{CAPEX}_{t-1}) + 0.14 (\text{TRD})$	
		26.33	1.5 32.63
<u>REVENUE SIDE</u>			
<u>Taxes on income such as agricultural tax</u>			
Ln (INCTAX)	=	$-4.91 + 0.72 \ln (\text{GSDP})$	
		-3.2	4.8
<u>Taxes on capital transactions such as stamp duties</u>			
Ln (CAPTAX)	=	$-6.06 + 1.12 \ln (\text{GSDP})$	
		-19.6	36.8
<u>Taxes on commodities such as sales tax and excises</u>			
Ln (COMTAX)	=	$-2.89 + 1.04 \ln (\text{GSDP})$	
		-12.3	45.4
<u>Non-tax revenue including loan recoveries</u>			
Ln (NONTAX)	=	$-0.86 + 0.74 \ln (\text{GSDP})$	
		-1.8	8.1
<u>EXPENDITURE SIDE</u>			
<u>Employees compensation</u>			
Ln (WAGES)	=	$20.99 + 4.48 \ln (\text{SEMPLOYMT})$	
		13	8.3
<u>State Government employees' number</u>			
Ln (SEMPLOYMT)	=	$-6.69 + 2.23 \ln (\text{POP})$	
		-16.6	9.4
<u>Operation and maintenance, i.e. expenditure on goods and services</u>			
Ln (OM)	=	$-0.19 + 0.63 \ln (\text{GSDP})$	
		-0.2	11.1
<u>Direct subsidies</u>			
Ln (SUBSIDIES)	=	$-26.91 + 19.10 \ln (\text{POP})$	
		-7.2	8.9
<u>Current transfers including grants to local bodies</u>			
Ln (TRANS)	=	$-5.75 + 7.23 \ln (\text{POP})$	
		-5.8	12.4
<u>Capital expenditure@</u>			
Ln (CAPEX)	=	$1.68 + 0.53 \ln (\text{GSDP}_{t-1})$	
		1.7	9.0
<u>Stock of outstanding debt including public account balances</u>			
DEBT	=	$119.73 + 0.79 \text{DEBT}_{t-1} + 1.77 \text{BORROW}$	
		0.3	7.5 2.6
<u>Debt servicing expenditure#</u>			
INTEREST	=	0.11DEBT_{t-1}	
		27.7	
BORROW	=	$\text{WAGES} + \text{EMPLOYMT} + \text{OM} + \text{SUBSIDIES}$ $+ \text{INTEREST} + \text{TRANS} + \text{CAPEX} - \text{INCTAX}$ $- \text{CAPTAX} - \text{COMTAX} - \text{NONTAX} + \text{CENTRAN}$	

GROWTH RATES OF FISCAL VARIABLES : 1981-98 (Percent per annum)

1.	GSDP	15.42
2.	REVEX	16.31
3.	WAGES	18.72
4.	OM	09.62
5.	SUBSIDIES	29.69
6.	TRANS	10.36
7.	INTEREST	19.44
8.	CAPEX	07.71
9.	TAXREV	16.24
10.	INCTAX	10.99
11.	CAPTAX	17.41
12.	COMTAX	16.17
13.	NON-TAXREV	12.62
14.	BORROW	14.23
15.	DEBT	13.66
16.	POP	01.37
17.	CENTRAN	14.07
18.	SEMPLOYMT	03.08

Note: Figures below the coefficients are t-statistics.
 @ Capital expenditure is guided by availability of borrowings. Non-tax revenue is not a factor for capital expenditure. Tax revenue is not relevant.
 # Current debt moves over 80% and barely 20% with current borrowings

STATUS-QUO SCENARIO

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 2. In particular, the income-buoyancy of major taxes is assumed to remain the same as in the past. 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. 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.

The base line scenario shows that during the next eight years, 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 source receipt-GSDP ratio is likely to remain constant at 12.3 percent. there is likely improvement in own tax-GSDP ratio whereas other sources of receipts will fall. Consequently, there will be a steep deterioration in the fiscal balance. The fiscal deficit will reach a high 6.7 percent 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. The total expenditure as a ratio to GSDP is likely to rise from 20.3 percent to 22.4 percent. 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 and falling. Current transfers including grants to local bodies are also likely to fall. Capital expenditure is going to fall consistently below 1.3 percent of GSDP.

THE REFORM STRATEGY

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 current 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:

Table 2: 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 source receipts	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
Non-tax	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
Employees 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
Other 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 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 percent 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.

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 PSEs, 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.

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.

There is also a need to step up the operation and maintenance 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 operation and maintenance 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.

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.

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 operation and maintenance along with a one-percent additional return. The reform strategy is as depicted in Table 3.

Table 3: Assumed strategy for fiscal reforms during 1998-99 - 2005-06

Year	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)	Non-tax 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 SCENARIO

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

The summary results of the first stage of reform scenario are shown in Table 4. 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.

With expenditure restructuring, the ratio of expenditure to GSDP will be fast declining from 19 percent to as low as 12.5 percent by 2005-06. With restraints on new recruitment, employees' compensation is likely to be below 9 percent of GSDP by 2001-02. 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 by 2004-05.

Table 4: Reform scenario – Summary of projections: 1998-06
(Percent to GSDP)

Variable	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 source receipts	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
Non-tax	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
Employees 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
Other 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

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 percent of GSDP. The results of this simulation are as given in Table 5.

Table 5: Simulation results of pegging fiscal deficit at a specified level along with the fiscal reforms
(Percent of GSDP)

Variable	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 source receipts	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
Non-tax	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
Employees 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
Other 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

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.

CONCLUSIONS

Though the fiscal management of Tamil Nadu 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.

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 deficit 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.

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