

Chapter III

Performance Audit relating to Statutory corporations

3 Performance of State transport undertakings in West Bengal

Executive Summary

The Calcutta State Transport Corporation (CSTC), North Bengal State Transport Corporation (NBSTC), South Bengal State Transport Corporation (SBSTC), The Calcutta Tramways Company (1978) Limited (CTC) and West Bengal Surface Transport Corporation (WBSTC) provide public transport in the State through their 52 depots. These State Transport Undertakings (STUs) had fleet of 2,624 buses as on 31 March 2009 and carried an average of 9.81 lakh passengers per day during 2004-09. They accounted for a share of 5.84 per cent in 2008-09 in public transport with the rest coming from private operators. The performance audit of the STUs in West Bengal for the period from 2004-05 to 2008-09 was conducted to assess efficiency and economy of their operations, ability to meet financial commitment, possibility of realigning the business model to tap non-conventional sources of revenue, existence and adequacy of fare policy and effectiveness of the top management in monitoring the affairs of the STUs.

Finance and performance

The STUs suffered loss of Rs. 518.42 crore during 2004-09. The STUs earned Rs. 30.01 per kilometre and spent Rs. 37.10 per kilometre in 2008-09. Audit noticed that with a right kind of policy measures and better management of their affairs, it is possible to increase revenue and reduce cost, so as to earn profit and serve their cause better.

Declining share of STUs

Out of 44,942 buses licensed for public transport in 2008-09, 5.84 per cent belonged to the STUs. The percentage share declined from 8.15 per cent in 2004-05. This was due to the fact that the STUs buses reduced over the period from 2,983 to 2,624 during the review period. However, the overall vehicle density per one lakh population in the State increased from 43.03 in 2004-05 to 51.84 in 2008-09.

Vehicle profile and utilisation

The STUs were not able to achieve the norm of right age buses as out of 2,624 owned buses, 940 buses were overaged. During 2004-09, the STUs purchased 1,326 new buses at a cost of Rs. 172.69 crore. The expenditure was funded through plan loan from the State Government and Bank Loans. The fleet utilisation of STUs in 2004-09 was lower than the all India average (AIA) of 92 per cent. The overall vehicle productivity at 139.89 kilometers per day per bus was less than the AIA of 313 kilometers. The passenger load factor of STUs varied from 58.59 to 61.88 per cent during the period under review against the AIA of 63 per cent.

The STUs did not carry out the preventive maintenance as required. Test check in Audit revealed that the percentage of shortfall in docking required to be done by CSTC, CTC, NBSTC and SBSTC were 23.76, 79.01, 49.01 and 41.63 per cent of the scheduled dockings required to be carried out affecting the roadworthiness of their buses. However, none of the STUs maintained complete records showing vehicle-wise preventive maintenance programme carried out.

Economy in operations

The manpower and fuel constituted 73.62 per cent of the total cost in 2008-09. Interest, depreciation and taxes-the cost which are not controllable in the short-term, accounted for 15.35 per cent. Thus, the major cost saving can come from manpower and fuel. The STUs were able to reduce overall manpower per bus from 11.37 in 2004-05 to 9.78 in 2008-09. However, the manpower cost per effective Km of the STUs increased from Rs. 12.52 (2004-05) to Rs. 17.36 (2008-09). Audit analysed that the reasons for increase in manpower cost per effective Km were low vehicle productivity, low fleet utilisation and high bus staff ratio.

None of the STUs could achieve the AIA for fuel consumption. The excess consumption of fuel by the STUs as compared to AIA resulted in loss of Rs. 136.88 crore during 2004-09.

WBSTC started operation of buses through franchisee system since November 2004. Due to non-revision of contract executed with the franchisees prior to August 2007, WBSTC suffered a loss of Rs. 67.60 lakh. Moreover, Rs. 61.11 lakh remained un-recovered from franchisees due to non-receipt of monthly franchisee fees in advance.

Revenue maximisation

The route planning in the STUs were deficient as none of the STUs had a continuous practice of monitoring profitability of different routes or undertaking surveys to assess economic viability before introduction of new routes. Audit scrutiny in test-checked depots revealed that the number of routes not meeting variable cost increased from 28.02 to 55.67 per cent during 2004-08 and reduced thereafter to 41.67 per cent in 2008-09. The share of non-traffic revenue was nominal at 1.83 per cent of the total revenue during the period under review. None of the STUs had any policy for large scale tapping of non-traffic revenue sources which could cross-subsidise their operations. The STUs have about 24.47 lakh square meters of land. As they mainly utilise ground floor /land for their operations, the space above can be developed on public private partnership basis to earn steady income.

Need for a regulator

The State Government approves the fare increase but the basis for fixation of the same

was not on record. The STUs have also not laid down norms for providing services on uneconomical routes. Thus, it would be desirable to have an independent regulatory body (like State Electricity Regulatory Commission) to fix the fares, specify operations on the uneconomical routes and address grievances of the commuters.

Inadequate monitoring

The fixation of targets for various operational parameters and an effective Management Information System (MIS) for obtaining feed back on achievement thereof are essential for monitoring by the top management. The monitoring by top management fell short as it did not fix targets for various operational parameters. Though the Board of Directors' meetings were held as per statutes, the operational performance of the STUs were seldom reviewed.

Conclusion and Recommendations

Though the STUs are incurring losses, it is mainly due to their high cost of operations. The STUs can control the losses by tapping non-conventional sources of revenue, besides controlling their cost of operations. This review contains seven recommendations to improve the STUs performance. Improving fleet utilisation and vehicle productivity, creating a regulator to regulate fares and services and framing a policy for large scale tapping of the non-conventional sources of revenue are some of these.

Introduction

3.1.1 In West Bengal, public road transport is provided by five State Transport Undertakings (STUs) viz. Calcutta State Transport Corporation (CSTC), North Bengal State Transport Corporation (NBSTC), South Bengal State Transport Corporation (SBSTC), The Calcutta Tramways Company (1978) Limited (CTC) and West Bengal Surface Transport Corporation Limited (WBSTC). The STUs are mandated to provide efficient, adequate, economical and properly co-ordinated road transport. The State also allows private operators to provide public transport. The State had not reserved routes exclusively for private operators or for the STUs. The fare structure is controlled and approved by the State Government.

3.1.2 The STUs were incorporated between April 1960 and October 1982. CTC and WBSTC were incorporated as wholly owned State Government companies under the Companies Act 1956, while CSTC, NBSTC and SBSTC were incorporated under Section 3 of the Road Transport Corporations Act, 1950 as wholly owned Corporations of the State Government. All the STUs are permitted to operate within the State and there is no defined area of jurisdiction. In August 1992, the Memorandum of Association of CTC was amended to allow it to operate the bus services from November 1992. The STUs are under the administrative control of the Transport Department of the Government of West Bengal. The Management of each STU is vested in a Board of Directors comprising Chairman, Managing Director and Directors appointed by the State Government. The day-to-day operations are overseen by the respective Managing Directors, who are Chief Executive of the STU, with the assistance of Financial Adviser & Chief Accounts Officer, and Depot Manager/ Depot-in-Charge. The STUs have six Divisional Offices, three Central Workshops, four Divisional Workshops and 52 depots. The individual STU-wise details are given in the **Annexure 8**. In all the STUs, the bus body building is carried out through external agencies while tyre retreading operations are carried out both in-house and through external agencies.

3.1.3 The STUs had a fleet strength of 2,624 buses as on 31 March 2009 and carried an average of 9.81 lakh passengers *per day* between 2004-05 and 2008-09. Their share in the passenger transport operations in the State was only about six *per cent* during 2004-09 and the remaining about 94 *per cent* was accounted for by private operators. The turnover of the STUs was Rs. 433.07 crore in 2008-09 (provisional), which was equal to 0.14 *per cent* of the State Gross Domestic Product¹. They employed 16,558 employees as on 31 March 2009.

3.1.4 Reviews on the working of the CSTC, NBSTC and SBSTC were included in the Report of the Comptroller and Auditor General of India for the year 1999-2000 (Commercial), Government of West Bengal while that of CTC was included in the Report for 2001-02. The Reports were not discussed by the COPU.

¹ Source: Economic review (Statistical Appendix) 2008-09, Government of West Bengal.

Scope of Audit and Audit Methodology

3.2.1 The present review, conducted during March to June 2009, covers the performance of the STUs during the period from 2004-05 to 2008-09. The review mainly focuses on operational efficiency, financial management, fare policy, fulfillment of social obligations and monitoring by top Management of the STUs. Audit examination involved scrutiny of records at the Head Office², three Central Workshops³, three Divisional Offices⁴ and 20⁵ out of the 52 depots. The depots were selected based on a combination of rural/ urban, city/ long distance services, intercity services, tourist services, fleet strength, revenue earning and profitability. The selected depots had a fleet strength of 1,248 buses constituting 47.56 *per cent* of total fleet strength as on 31 March 2009.

3.2.2 The methodology adopted for attaining the audit objectives with reference to audit criteria consisted of explaining audit objectives to top management, scrutiny of records at Head Office and selected units, interaction with auditee, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the management of STUs and issue of draft performance audit report to the management for comments.

Audit Objectives

3.3. The objectives of the performance audit were to assess:

3.3.1 Operational Performance

- the extent to which the STUs were able to meet the growing demand for public transport;
- whether they succeeded in recovering the cost of operations;
- the extent to which they conducted their operations efficiently;
- whether adequate maintenance was undertaken to keep the vehicles roadworthy; and
- the extent to which economy was ensured in cost of operations.

3.3.2 Financial Management

- whether the STUs were able to meet their commitments and recover their dues efficiently; and

² CSTC, CTC and WBSTC: Kolkata, NBSTC: Coochbehar and SBSTC: Durgapur.

³ CSTC : Kolkata, NBSTC : Coochbehar , SBSTC : Durgapur.

⁴ NBSTC : Raigunj and Coochbehar , SBSTC: Durgapur.

⁵ CSTC: Nilgunge, Kasba, Howrah and Garia, NBSTC: Coochbehar, Alipurduar, Raigunj, Balurghat, Malda, Berhampur and Ultadanga. SBSTC: Durgapur, Belghoria, Digha, Bankura and Arambagh. CTC: Tollygunge, Belgachia and Ghashbagan, WBSTC: Saltlake.

- the possibility of realigning the business model of the STUs to tap non-conventional sources of revenue and adopting innovative methods of accessing such revenues.

3.3.3 Fare Policy and Fulfillment of Social Obligations

- the existence and adequacy of fare policies; and
- whether the STUs operated adequately on uneconomical routes.

3.3.4 Monitoring by Top Management

- whether the monitoring by STUs' top management was effective.

Audit Criteria

3.4.1 The audit criteria adopted for assessing the performance of the STUs were:

- all India averages for performance parameters;
- performance standards and operational norms fixed by the Association of State Road Transport Undertakings (ASRTU);
- physical and financial targets/ norms fixed by the Management;
- manufacturers' specifications, norms for life of a bus, preventive maintenance schedule, fuel efficiency norms, etc.;
- instructions of the Government of West Bengal and other relevant rules and regulations;
- corporate policy for investment of funds; and
- operational procedures laid down by the STUs.

Financial position and Working results

3.5.1 The consolidated financial position of the five STUs for the four⁶ years upto 2007-08 is given below. STU-wise position is at **Annexure 9**.

(Rs. in crore)

Particulars	2004-05	2005-06	2006-07	2007-08 ⁷
A. Liabilities				
Paid up Capital	51.74	51.74	51.74	42.04
Reserves & Surplus (including Capital Grants but excluding Depreciation Reserve)	193.16	215.17	217.30	228.02
Borrowings (Loan Funds)	1,073.16	1,132.19	1,237.79	900.06
Current Liabilities & Provisions	713.90	802.27	876.63	852.95
Total	2,031.96	2,201.37	2,383.46	2,023.07
B. Assets				
Gross Block	451.17	442.78	478.35	447.31
Less: Depreciation	205.02	211.20	218.29	220.52
Net Fixed Assets	246.15	231.58	260.06	226.79
Capital works-in-progress (including cost of chassis)	10.01	12.38	10.44	9.96
Investments	13.59	23.30	14.15	13.09
Current Assets, Loans and Advances	102.11	139.18	181.62	137.50
Accumulated losses	1,660.10	1,794.93	1,917.19	1,635.73
Total	2,031.96	2,201.37	2,383.46	2,023.07

3.5.2 The consolidated working results like operating revenue and expenditure, total revenue and expenditure, net surplus/ loss and earnings and cost *per kilometre* of operations are given on the next page. STU-wise details are given at **Annexure 10**.

⁶ Four STUs (except CTC) had not finalised their accounts for 2008-09 upto November 2009.

⁷ This does not include figures of NBSTC since only provisional accounts for 2006-07 have been compiled by the Corporation.

(Rs. in crore)

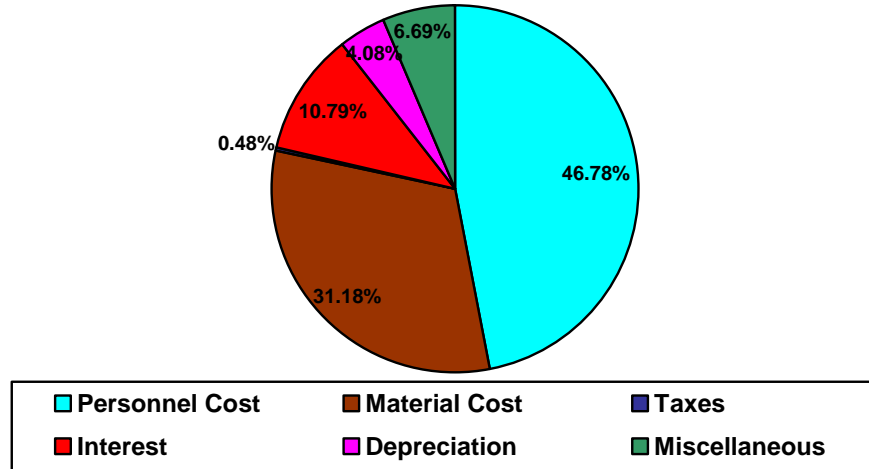
Sl.No.	Description	2004-05	2005-06	2006-07	2007-08	2008-09 ⁸
1	Total Revenue	331.04	427.88	419.16	422.81	433.07
2	Operating Revenue ⁹	164.78	184.57	196.92	209.35	215.49
3	Total Expenditure	443.21	518.85	519.18	535.78	535.36
4	Operating Expenditure ¹⁰	213.33	252.43	257.41	270.86	269.92
5	Operating Profit/ Loss	(-) 48.55	(-) 67.86	(-) 60.49	(-) 61.51	(-) 54.43
6	Profit/ Loss for the year	(-) 112.17	(-) 90.97	(-) 100.02	(-) 112.97	(-) 102.29
7	Accumulated Profit/ Loss	1,660.10	1,794.93	1,917.19	1,635.73 ¹¹	NA
8	Fixed Costs					
	(i) Personnel Costs	185.13	217.39	228.80	253.50	250.44
	(ii) Depreciation	15.74	16.57	17.74	21.15	21.84
	(iii) Interest	56.75	58.97	62.03	54.63	57.78
	(iv) Other Fixed Costs	50.18	69.09	49.37	34.98	35.82
	Total Fixed Costs	307.80	362.02	357.94	364.26	365.88
9	Variable Costs					
	(i) Fuel & Lubricants	112.08	130.11	133.97	144.12	143.71
	(ii) Tyres & Tubes	6.29	6.62	8.61	7.70	9.81
	(iii) Other Items/ spares	14.99	17.97	16.24	16.91	13.42
	(iv) Taxes (MV Tax, etc.)	2.05	2.13	2.43	2.78	2.54
	(v) Other Variable Costs	0.00	0.00	0.00	0.00	0.00
	Total Variable Costs	135.41	156.83	161.25	171.51	169.48
10	Effective Kms operated (in Cr.)	14.79	14.67	14.40	15.27	14.43
11	Earnings <i>per</i> Km (Rs.) (1/10)	22.38	29.17	29.11	27.69	30.01
12	Fixed Cost <i>per</i> Km (Rs.) (8/10)	20.81	24.68	24.86	23.85	25.36
13	Variable Cost <i>per</i> Km (Rs.) (9/10)	9.16	10.69	11.20	11.23	11.74
14	Cost <i>per</i> Km (Rs.) (12+13)	29.97	35.37	36.06	35.08	37.10
15	Net Earnings <i>per</i> Km (Rs.) (11-14)	(-)7.59	(-)6.20	(-)6.95	(-)7.39	(-)7.09
16	Traffic Revenue ¹²	164.78	184.57	196.92	209.35	215.49
17	Traffic Revenue <i>per</i> Km (Rs.) (16/10)	11.14	12.58	13.68	13.71	14.93
18	Contribution <i>per</i> Km (Rs) (17-13)	1.98	1.89	2.48	2.48	3.19
19	Operating Loss <i>per</i> Km (Rs.) (5 / 10)	(-) 3.28	(-) 4.63	(-) 4.20	(-) 4.03	(-) 3.77

⁸ Figures are provisional.⁹ Operating revenue includes traffic earnings, passes and season tickets, income from franchisee operators etc.¹⁰ Operating expenditure includes expenses relating to traffic, depreciation on fleet, repair and maintenance, electricity, welfare and remuneration, licences and taxes and general administration expenses.¹¹ Accumulated loss of NBSTC for 2007-08 was not available.¹² Traffic revenue represents sale of tickets, advance booking and reservation charges.

Elements of cost

3.5.3 Personnel costs and material costs constitute the major elements of costs. The percentage break-up of costs for 2008-09 is given below.

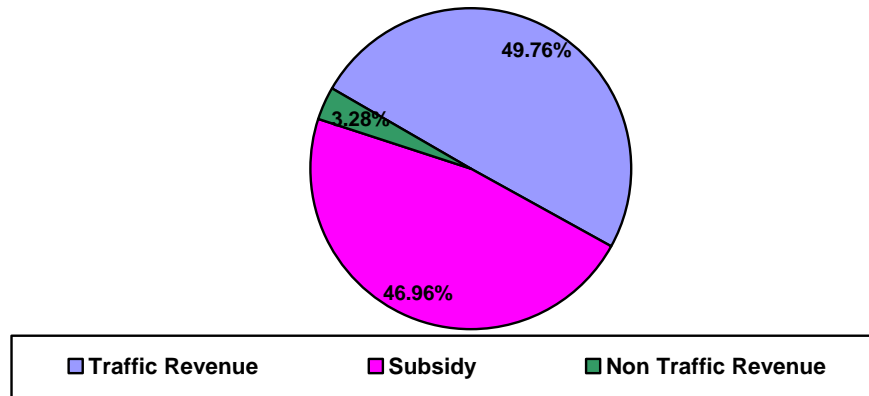
Components of various elements of cost



Elements of revenue

3.5.4 Traffic revenue, subsidy and non-traffic revenue constitute the major elements of revenue. The percentage break-up of revenue for 2008-09 is given below in the pie-chart.

Components of various elements of revenue



Audit Findings

3.6.1 Audit discussed the audit objectives with the STUs during an 'entry conference' held on 16 March 2009. Subsequently, the audit findings were reported to the STUs and to the Government in August 2009 and discussed in an 'exit conference' held on 10 November 2009, which was attended by the Managing Directors, Directors and Chief Accounts Officers of CSTC, SBSTC,

NBSTC, CTC and WBSTC and the Additional Chief Secretary, Transport Department, Government of West Bengal. The views expressed by them in the exit conference have been considered while finalising this review. Further, SBSTC replied to the audit observations in November 2009, which have been suitably incorporated under the relevant places. The audit findings are discussed below.

Operational Performance

3.7.1 The operational performance of the STUs for the five years ending 2008-09 is given in the **Annexure 11**. The operational performance of the STUs was evaluated on various operational parameters as described below. It was also seen whether the STUs were able to maintain pace with the growing demand of public transport. Audit findings in this regard are discussed in the subsequent paragraphs. These audit findings show that losses were controllable and there is scope for improvement in performance.

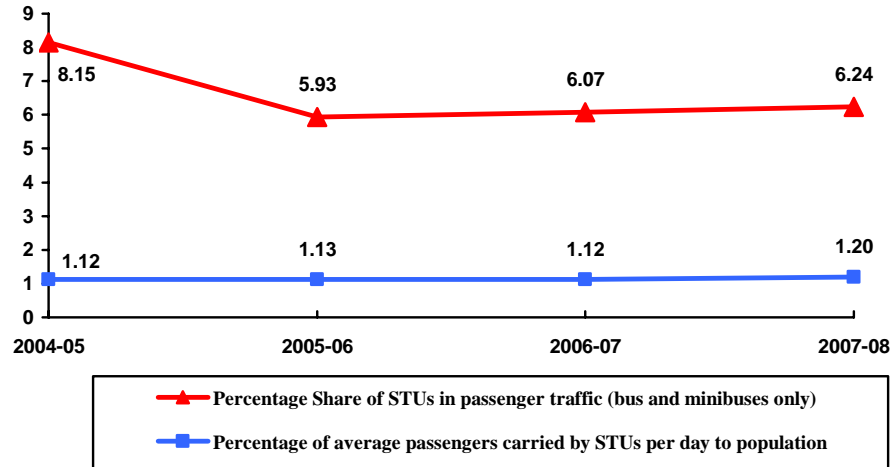
Share of STUs in public transport

3.8.1 The transport policy¹³ of the State Government seeks to improve and upgrade the STUs' service by improving operating standards and by strengthening the infrastructure of these STUs as well as to control and guide the services provided by private operators.

3.8.2 Line-graphs¹⁴ depicting the percentage share of the STUs in the passenger traffic of the State (including minibuses) and percentage of average passengers carried per day by the STUs to the population of the State during four years ending 2007-08 are given below:

¹³ Source: Economic Review, Government of West Bengal- 2006-07, 2007-08.

¹⁴ STUs passenger share in passenger traffic of the State is worked out in Audit on the basis of aggregate number of buses operated in the State to the buses operated by the STUs.



3.8.3 The table below depicts the growth of public transport in the State:

STUs share in the State public transport reduced from 8.15 to 5.84 per cent in 2004-09.

Sl. No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1	STU buses at the end of the respective years	2,983	2,751	2,764	2,815	2,624
2	Private stage carriages	33,613	43,599	42,737	42,318	42,318 ¹⁵
3	Total buses for public transport (1+2)	36,596	46,350	45,501	45,133	44,942
4	Percentage share of STUs	8.15	5.93	6.07	6.24	5.84
5	Percentage share of private operators	91.85	94.07	93.93	93.76	94.16
6	Estimated population (crore) ¹⁶	8.49	8.53	8.58	8.67	8.67
7	Vehicle density per one lakh population (Total)	43.03	54.34	53.03	52.06	51.84
8	Vehicle density of STU buses per one lakh population	3.51	3.23	3.26	3.25	3.03

3.8.4 The STUs have not been able to keep pace with the growing demand for public transport. Against an increase of 25.90 per cent of private buses between 2004-05 and 2007-08, the number of buses operated by STUs had registered a decline by 5.63 per cent during the same period, while the population in the State had increased by 2.12 per cent. This indicates failure of STUs to keep pace with the growing demand of public transport as well as to comply with the policy of the State Government. The effective per capita Km operated per year as depicted in the table below shows the decline in services by STUs except in 2007-08.

¹⁵ In the absence of availability of figures of 2008-09, the figures of 2007-08, for private stage carriers have been adopted for comparison purpose.

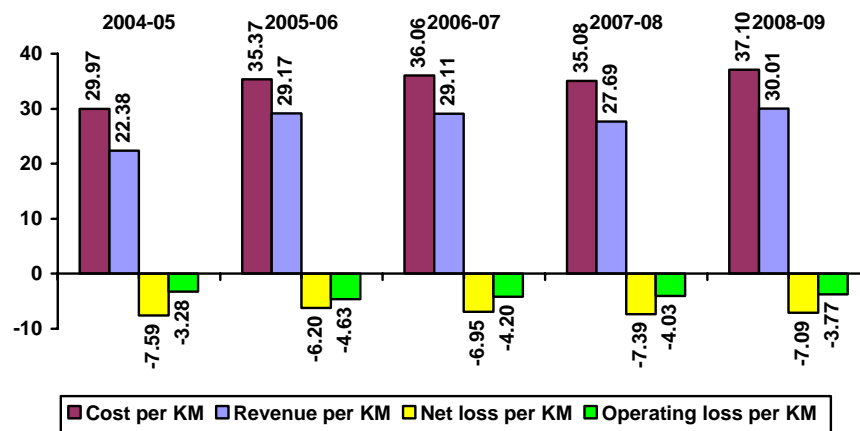
¹⁶ Source- Economic Review -2008-09, Government of West Bengal.

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Effective Km operated (crore)	14.79	14.67	14.40	15.27	14.43
Estimated Population (crore)	8.49	8.53	8.58	8.67	8.67
Per Capita Km	1.74	1.72	1.68	1.76	1.66

3.8.5 Public transport has definite benefits over personalised transport in terms of costs, congestion on roads and environmental impact. The public transport services have to be adequate to derive those benefits. However, the STUs were not able to maintain their share in transport mainly due to operational inefficiencies as described later.

Recovery of cost of operations

3.9.1 The STUs were not able to recover their cost of operations. During the last five years ending 2008-09, the net loss *per Km* remained negative as given in the graph below:



3.9.2 The graph indicates the deteriorating performance of the STUs over the

Orissa, Uttar Pradesh and Karnataka registered best net earnings *per Km* at Rs. 0.49, Rs. 0.47 and Rs. 0.34 respectively during 2006-07. (Source: STUs profile and performance 2006-07 by CIRT, Pune)

period. The net loss *per Km* ranged between Rs. 6.20 (2005-06) to Rs. 7.59 (2004-05) during the review period. Audit observed that it was very high in respect of WBSTC as it increased from Rs. 21.43 in 2004-05 to Rs. 29.68 in 2006-07 but reduced thereafter to

Rs. 5.89 in 2008-09 (refer **Annexure 10**). This was mainly due to high proportion of over aged buses in its fleet which were gradually replaced over the years. Though the revenue *per Km* of the STUs was higher than the all India average of Rs.18.22, it was due to inclusion of subsidy received from the State Government to meet working capital requirement. During 2008-09, this revenue subsidy constituted about 47 *per cent* of the total revenue. The cost *per Km* was much higher than the all India average of Rs. 19.94 *per Km* mainly due to high incidence of personnel cost. The deteriorating performance has been impacting the ability of the STUs to provide adequate

services as they are not able to replace their fleet in time or increase the fleet strength to meet growing demand.

SBSTC stated (November 2009) that efforts are on for effective utilisation of the resources which would result in deduction in cost. However, the Management is silent about the specific steps taken for curtailment of cost.

Efficiency and economy in operations

Fleet strength and utilisation

Fleet strength and its age profile

3.10.1 The STUs have their own fleet of buses. They do not hire buses from contractors. The Association of State Road Transport Undertaking (ASRTU) had prescribed (September 1997) the desirable age of a bus as eight years or five lakh kilometres, whichever was earlier. The table below shows the age-profile of the buses held by the STUs for the five year period ending 2008-09. STU-wise position is detailed in **Annexure 12**.

Sl No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Total No. of buses at the beginning of the year	2,981	2,983	2,751	2,764	2,815
2.	Additions during the year	239	141	249	497	200
3.	Buses scrapped during the year	237	373	236	446	391
4.	Buses held at the end of the year (1+2-3)	2,983	2,751	2,764	2,815	2,624
5.	Of (4), number of buses more than 8 years old	1,517	1,388	1,324	1,077	940
6.	Percentage of overage buses to total buses	50.85	50.45	47.90	38.26	35.82

The STUs had 35.82 per cent overage buses as on 31 March 2009.

3.10.2 The table shows that the STUs were not able to achieve the norm of right age buses though the percentage of overage buses had continuously improved over the review period. During 2004-09, the STUs added 1,326 new buses at the cost of Rs. 172.69 crore. The STUs availed of bank loan of Rs. 152.20 crore for funding the procurement. Besides, State Government also gave loan of Rs. 75.11 crore for procurement of buses. However, the STUs diverted Rs. 54.62 crore for meeting working capital requirement and invested only Rs. 20.49 crore for the purchase of buses. To achieve the norm of right age buses the STUs were required to buy 940 new buses additionally which would have cost them Rs. 126.34 crore approximately at an average cost of Rs. 13.44 lakh *per bus* based on the purchases in 2008-09. However, the STUs did not generate adequate resources through their operations to finance the replacement of buses. Rather, they suffered losses of Rs. 518.42 crore during 2004-09. Despite continuous reduction in overage fleet, the STUs still had 35.82 *per cent* of overage on 31 March 2009 due to diversion of funds earmarked for procurement of buses to meet operational costs and absence of long term fleet planning by the STUs. The high

incidence of over-aged buses in turn led to low fleet utilisation, excessive consumption of fuel, oil, stores and spare parts.

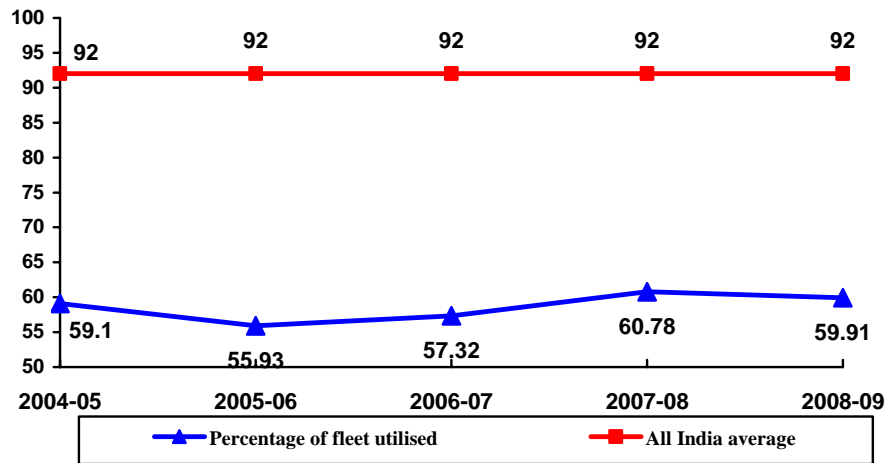
Fleet utilisation

3.10.3 Fleet utilisation represents the ratio of buses on road to the buses held.

Andhra Pradesh, Tamil Nadu (Kumbakonam) and Tamil Nadu (Coimbatore) registered best fleet utilisation at 99.4, 98.4 and 98.3 per cent respectively during 2006-07. (Source : STUs profile and performance 2006-07 by CIRT, Pune)

No STU had set targets of fleet utilisation during the period 2004-09. The fleet utilisation increased marginally from 59.10 in 2004-05 to 59.91 per cent in 2008-09, as compared to the All India Average¹⁷ of 92 per cent as indicated in the graph

given below:



3.10.4 Individual STU-wise fleet utilisation is given in the following table:

Fleet utilisation of the STUs was below the all India average of 92 per cent.

STU	Year				
	2004-05	2005-06	2006-07	2007-08	2008-09
CSTC	63.46	57.60	54.79	55.47	53.74
SBSTC	65.11	63.74	64.42	62.22	59.28
NBSTC	52.88	49.18	57.41	68.97	67.76
CTC	60.00	62.13	63.91	66.87	65.23
WBSTC	25.53	25.68	22.22	34.19	47.17

It may be seen from the above table that the fleet utilisation of WBSTC remained quite low. Further, the fleet utilisation of CSTC and SBSTC reduced over the period depicting deterioration in operations. However, in respect of NBSTC and CTC it improved upto 2007-08 though it reduced marginally in 2008-09. The factors contributing to poor fleet utilisation were as follows:

- shortage of crew (drivers/ conductors);

¹⁷ All India Average is for the year 2006-07 which has been used for comparison for the period under review.

- high percentage of overaged buses which were not road worthy; and
- breakdowns on account of inadequate servicing/ maintenance which were controllable in nature.

3.10.5 From the above it can be concluded that the STUs were not able to achieve optimum utilisation of their fleet strength, which in turn, impacted their operational performance adversely.

Accepting the fact SBSTC stated (November 2009) that utmost efforts were being given to increase fleet utilisation. The fact remains that efforts of the Management did not improve the fleet utilisation as the same decreased from 65.11 *per cent* in 2004-05 to 59.28 *per cent* in 2008-09.

Vehicle productivity

3.11.1 Vehicle productivity refers to the average kilometres run by each bus *per day* in a year. The vehicle productivity of the STUs vis-à-vis the overage fleet for the five years ending 2008-09 is shown in the table below. The STU-wise vehicle productivity is shown at **Annexure 13**.

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Vehicle productivity (Kms run <i>per day per bus</i>)	142.63	137.41	140.10	150.54	139.89
2.	Overage fleet (percentage)	50.85	50.45	47.90	38.26	35.82

3.11.2 The table shows that vehicle productivity increased from 142.63 in 2004-05 to 150.54 in 2007-08 but reduced to 139.89 in 2008-09, despite the decline of over-aged fleet from 50.85 *per cent* in 2004-05 to 35.82 *per cent* in 2008-09. Analysis of scheduled Kms in Audit revealed that the average vehicle productivity scheduled by the STUs ranged from 197.02 Kms *per bus per day* (2004-05) to 184.39 Km *per bus per day* (2008-09), which itself was much less than the all India average of 313 Kms during the review period. The lower productivity was mainly on account of:

- Deficient route planning (**Paragraph 3.12.4**)
- Cancellation of scheduled Kms (**Paragraph 3.12.6**)

In the exit conference, the Government stated (November 2009) that about 70 *per cent* of the funds of the STUs were spent on employees' cost and fuel. This left little funds for replacement of overage buses, and for repairs and maintenance. Further, increase in age of drivers rendered them incapable of being assigned on-road duty, which led to shortage of crew, in spite of excess

Vehicle productivity of the STUs reduced over the review period.

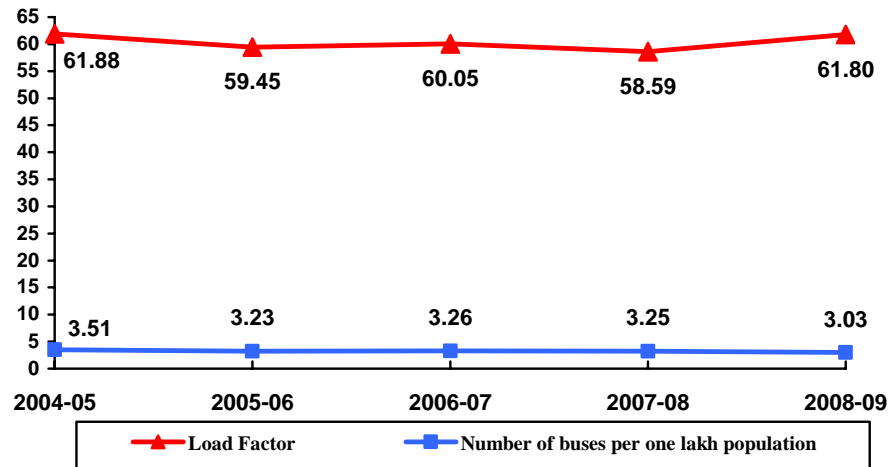
Tamil Nadu (Villupuram), Tamil Nadu (Salem) and Tamil Nadu (Kumbakonam) registered best vehicle productivity at, 474 469 and 462.8 Kms per day respectively during 2006-07. (Source : STUs profile and performance 2006-07 by CIRT, Pune)

manpower. However, the Government did not give any assurance for remedial action.

Capacity utilisation

Load Factor

3.12.1 Capacity utilisation is measured in terms of Load Factor, which represents the percentage of passengers carried to seating capacity. Schedules to be operated are to be decided after proper study of routes. Periodical reviews are necessary to improve the load factor. Based on the information furnished by the Management of respective STUs, the load factor of the STUs ranged from 58.59 *per cent* to 61.88 *per cent* during 2004-09 against the all India average of 63 *per cent*. This was mainly attributed to competition from private operators leading to drop in STUs share in public transport.



3.12.2 The table below provides the details for the break-even load factor (BELF) for traffic revenue. Audit worked out this BELF at the given level of vehicle productivity and total cost *per Km*. This cost *per Km* is inclusive of the staff costs of the STUs paid out of the revenue subsidy received from the State Government, which has already been mentioned in **paragraph 3.9.2**.

Sl. No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1	Cost <i>per Km</i>	29.97	35.37	36.06	35.08	37.10
2	Traffic revenue <i>per Km</i> at 100 <i>per cent</i> Load Factor	18.00	21.16	22.78	23.40	24.16
3	Break-even load factor (1/2)	166.50	167.16	158.30	149.91	153.56

3.12.3 The break-even load factor is quite high and is not likely to be achieved given the present load factor and the fact that the STUs are also required to operate uneconomical routes. Thus, while the scope to improve upon the load factor remains limited, there is tremendous scope to cut down

the costs of operations as explained later. STU-wise details are given in the **Annexure 14**.

Route planning

3.12.4 Appropriate route planning to tap demand leads to higher load factor. However, Audit observed that none of the STUs in the State had continuous practice of route planning or monitoring profitability of different routes operated by them. Further, the STUs did not undertake surveys to assess economic viability before introduction of new routes. Also, STUs did not fix any target for earnings *per* Kilometre (EPKM).

Audit undertook an exercise to ascertain the viability of the routes. The routes were randomly selected from the test checked depots¹⁸ of the STUs. Review of selected routes during peak period and lean period (to have a reasonable basis) to assess their profitability revealed the following:

Year	Total No. of routes	No. of routes making profit	No. of routes not meeting total cost	No. of routes not meeting variable cost
2004-05	514	27 (5.25)	487 (95)	144 (28.02)
2005-06	465	22 (4.73)	443 (95)	218 (46.88)
2006-07	463	31 (6.70)	432 (93)	243 (52.48)
2007-08	1,040	40 (3.85)	1,000 (96)	579 (55.67)
2008-09	900	119 (13.22)	781 (87)	375 (41.67)

(Percentages in brackets).

It can be seen from the above that the number of profit making routes increased from 27 to 119 during 2004-09. Similarly, the number of routes not meeting variable cost increased from 144 in 2004-05 to 579 in 2007-08. However, it had decreased to 375 in 2008-09.

In the exit conference, the Government stated (November 2009) that analysis of routes on the basis of profitability was carried out but no action for discontinuing these routes had been taken.

3.12.5 Improved fleet utilisation, reducing the bus-staff ratio and increasing the KMPL are some of the measures that could enhance route profitability. Though some of the routes now appearing unprofitable would become profitable once the STUs improve their efficiency, there would still be some uneconomical routes. Given the scenario of mixed routes and obligation to serve uneconomical routes, the STUs should decide on an optimum quantum of service on different routes so as to optimise their revenue while serving the social cause. But no such exercise was carried out by any of the STUs.

¹⁸ CSTC – Nilgunge, Howrah, Kasba, Garia.
 NBSTC – Alipurduar, Balurghat, Coochbehar, Berhampur, Raigunj & Malda Depot.
 SBSTC – Arambagh, Bankura, Belghoria, Digha, Durgapur.
 CTC – Tollygunge, Ghashbagan, Belgachia, Khidirpore & Rajabazar.

Cancellation of scheduled Kilometres

3.12.6 A review of the operations indicated that the scheduled kilometres were not fully operated mainly due to non-availability of adequate buses, shortage of crew and other factors like breakdown, accidents, late arrivals, *etc.* as shown in the following table:

(In lakh Kms)

Sl No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Scheduled kilometres ¹⁹	2,042.61	1,983.04	1,945.00	1,935.52	1,902.23
2.	Effective kilometres ²⁰	1,457.91	1,449.58	1,423.61	1,489.85	1,397.83
3.	Kilometres cancelled	584.70	533.46	521.39	445.67	504.40
4.	Percentage of cancellation	28.63	26.90	26.81	23.03	26.52
Cause-wise analysis						
5.	Want of buses	125.31	126.80	126.81	96.65	103.59
6.	Want of crew	134.92	79.73	86.10	94.57	87.52
7.	Others	324.39	326.93	308.48	254.45	313.29
8.	Avoidable cancellation (want of buses and crew)	260.23	206.53	212.91	191.22	191.11

The STU-wise details relating to the loss due to cancellation of scheduled kilometres has been shown in **Annexure 15**.

3.12.7 The percentage of cancellation of scheduled kilometres reduced from 28.63 in 2004-05 to 23.03 in 2007-08 mainly due to addition of new buses.

Tamil Nadu (Salem), State Express Transport Corporation (Tamil Nadu) and Tamil Nadu (Villupuram) registered least cancellation of scheduled Kms at 0.45, 0.67 and 0.78 per cent respectively during 2006-07.
(Source : STUs profile and performance 2006-07 by CIRT, Pune)

The same, however, increased to 26.52 in 2008-09 and remained quite high as compared to the best performers. Out of total loss of 482.84 lakh Km on account of shortage of crews, 309.08 lakh Km was in respect of SBSTC. This arose because deployment of

drivers and conductors among the depots was not rationalised as was evident from the fact that there were excess drivers/ conductors in three depots, while there were shortages in two depots among the five depots test checked in Audit. Due to cancellation of scheduled kilometres for want of buses and crew, the STUs were deprived of contribution of Rs 20.41 crore during 2004-05 to 2008-09.

Maintenance of vehicles

Preventive Maintenance

3.13.1 Preventive maintenance is essential to keep the buses in good running condition and to reduce breakdowns/ other mechanical failures. This includes regular changing of oil and lubricants, as well as checking of mechanical and

¹⁹ In the absence of availability of data, this does not include scheduled Kms of WBSTC.

²⁰ The figures here may not tally with effective Kms in the table under **paragraph 3.5.2** due to non-inclusion of effective Kms in respect of WBSTC.

electrical systems of vehicles. The entire maintenance work was carried out by private contractors in case of NBSTC and WBSTC. However, in case of CTC, CSTC and SBSTC, the same is done both by private contractors as well as in-house. However, none of the STUs maintained complete records showing vehicle-wise preventive maintenance programme carried out. There was no uniformity for undertaking in-house preventive maintenance or through private contractors amongst the STUs in the State or even amongst depots of a single STU. The different modes of preventive maintenance varied from in-house to outsourcing to the original manufacturers.

Docking of buses

3.13.2 The categorisation of the maintenance jobs in STUs is termed as 'docking'. Audit scrutiny of records revealed that the STUs did not have uniform standards for docking.

- CSTC and CTC had prescribed regular servicing schedule under 'A' docking to be performed at every 2,000 Km and 'B' docking at every 8,000 Km. Test check of records at nine depots²¹ revealed that there was a shortfall of 6,991 and 16,076 scheduled docking respectively based on gross kilometres operated. This represented 23.76 and 79.01 *per cent* of scheduled docking required to be done by CSTC and CTC, respectively.
- The Management of NBSTC stated that regular maintenance based on kilometres run was carried out. However, no records of Type-I and Type-II docking were furnished to Audit. Records relating to Type-III docking, (carried out after every 18,000 Kms) were maintained and scrutiny of records at seven depots²² relating to Type-III docking revealed that there was a shortfall of 2,431 scheduled maintenance jobs, representing 49.01 *per cent* of the total Type-III dockings required based on gross kilometres operated.
- SBSTC had a system of regular maintenance based on the prescribed periodic maintenance of the bus manufacturer. However, in the absence of availability of requisite records, adherence to such maintenance schedules could not be verified. The Divisional Workshops of SBSTC at Durgapur and Belgharia perform a thorough checking of the mechanical, electrical and body job maintenance called 'C' docking, at every 80,000 Kms. Against the annual capacity of docking 60 and 72 buses at Divisional Workshop at Durgapur and Belgharia, the actual docking carried out ranged from 42 to 57 and 48 to 60 respectively during the years 2004-05 to 2008-09 with an aggregate capacity utilisation of 78.41 *per cent*. Test check of records of three²³ selected depots of SBSTC indicated that against the total requirement of 'C' docking of 209 buses based on gross Kms operated, the depots had sent 122 buses to Divisional

²¹ CSTC – Garia, Kasba, Howrah, Nilgunge (from 2005-06 to 2007-08).
CTC – Tollygunge, Ghashbagan, Rajabazar, Belgachia, Khidirpore (from 2007-08 to 2008-09).

²² Coochbehar, Alipurduar, Raigunj, Balurghat, Malda, Berhampur and Ultadanga.

²³ Digha, Arambagh and Bankura.

Workshops during 2006-09, thereby indicating a shortfall of 41.63 *per cent*. The Management assured (November 2009) that remedial action would be taken in this regard.

- WBSTC entered into an annual maintenance contract (AMC) for undertaking maintenance work as and when need for such maintenance arose. There were no in-house maintenance procedures and no periodic check-up schedules. Need based maintenance was carried out through AMC.

Preventive maintenance schedules were not adhered to by the STUs.

From the above it may be seen that the preventive maintenance schedules were largely ignored by the STUs, which affected the roadworthiness of the STU buses having an adverse impact on operational results.

Repairs and Maintenance

3.13.3 A summarised position of fleet holding, overage buses, repairs and maintenance (R&M) expenditure of all STUs except WBSTC²⁴ for the last five years upto 2008-09 is given below:

Sl. No.	Particulars ²⁵	2004-05	2005-06	2006-07	2007-08	2008-09
1	Total buses at the end of year (Nos.)	2,889	2,677	2,683	2,698	2,518
2	Overage buses (More than eight years old)	1,431	1,322	1,280	1,029	940
3	Percentage of overage buses	49.53	49.38	47.71	38.14	37.33
4	R & M expenses (Rs. In crore)	62.76	71.53	67.53	72.70	73.43 ²⁶
5	R & M Expenses <i>per bus</i> (Rs in lakh) (4/1)	2.17	2.67	2.52	2.69	2.92
6	Percentage of manpower cost in R&M expenses	46.99	47.35	50.64	NA	NA

R & M expenses per bus increased from Rs. 2.17 lakh to Rs. 2.92 lakh during 2004-09.

From the above table, it may be seen that R&M expenses *per bus* increased from Rs. 2.17 lakh in 2004-05 to Rs. 2.92 lakh in 2008-09. The Management of the STUs had failed to analyse the reasons for increase in repair and maintenance expenditure despite the decline in the percentage of overage buses from 49.53 *per cent* in 2004-05 to 37.33 *per cent* in 2008-09.

²⁴ Since WBSTC also operate ferry services besides bus operations, separate figures of R&M expenditure for buses were not available.

²⁵ The table does not include figures of WBSTC.

²⁶ Provisional figures.

Manpower cost

3.14.1 The cost structures of the STUs show that manpower and fuel constitute 73.62 per cent of the total cost in 2008-09. Interest, depreciation and taxes – the costs which are not controllable in the short term – account for 15.35 per cent. Thus, the major cost saving can come from manpower and fuel.

3.14.2 Manpower is an important element of cost which constituted 46.78 per cent of total expenditure of the STUs in 2008-09. Thus, it is imperative that this cost is kept under control and utilisation is optimal to achieve high productivity. The Table below provides details of manpower, its cost and productivity. STU-wise

Gujarat, Tamil Nadu (Villupuram) and Tamil Nadu (Salem) registered best performance at Rs. 6.10, Rs. 6.13 and Rs. 6.21 cost per effective Kms respectively during 2006-07. (Source : STUs profile and performance 2006-07 by CIRT, Pune)

details are given in the **Annexure 16**.

Sl. No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Total Manpower (Nos.)	19,098	18,693	18,016	17,422	16,558
2.	Manpower Cost (Rs. in crore)	185.13	217.39	228.80	253.50	250.44
3.	Effective Kms (in crore)	14.79	14.67	14.40	15.27	14.43
4.	Cost per effective Km (Rs.)	12.52	14.82	15.89	16.60	17.36
5.	Productivity per day per person (Kms)	21.22	21.50	21.90	24.02	23.88
6.	Average number of buses on road during the year	1,679	1,636	1,614	1,689	1,693
7.	Manpower per bus	11.37	11.43	11.16	10.31	9.78

3.14.3 Though the manpower strength decreased in all five STUs, manpower costs had increased over the years. Increase in manpower cost by 17.43 per cent in 2005-06 over previous year was due to payment of arrears of pay and allowances on implementation of pay revision and normal increment. Although

North West Karnataka State Road Transport, Karnataka State Road Transport and Himachal Pradesh registered best performance at 4.89, 4.99 and 4.94 manpower per bus. (Source : STUs profile and performance 2006-07 by CIRT, Pune)

manpower productivity per day per person had increased from 21.22 Km in 2004-05 to 24.02 Km in 2007-08, the same was much below the all India average of 51.97 Km. Low vehicle productivity, low fleet utilisation and high bus staff ratio were the main reasons for the increasing trend of cost per effective kilometre. Audit noticed that the traffic revenue per Km earned by the STUs was not adequate to cover even manpower cost per Km. Out of the five STUs, only CTC had fixed the norm of 8.72 staff per bus which was, however, higher compared to all India average of 6.52 staff per bus. The table below (as on March 2009) indicates the actual manpower of five STUs against the all India average.

Traffic revenue per Km was not adequate to recover even manpower cost per Km.

Sl. No.	Particulars	All India Average	CSTC	NBSTC	SBSTC	CTC	WBSTC
1	Traffic	4.76	6.90	5.01	5.13	7.51	3.23
2	Workshop	1.16	3.38	2.11	1.25	1.96	0.58
3	Administrative Staff	0.60	1.90	1.39	0.94	0.33	0.53
	Total	6.52	12.18	8.51	7.32	9.80	4.34

Low manpower productivity resulted in excess manpower cost of Rs 76.03 crore.

3.14.4 Excess staff predominantly existed in traffic as well as in Workshops. Consequently, four STUs (except WBSTC) had to incur an expenditure of Rs.76.03 crore (CSTC-Rs. 46.67 crore, NBSTC-Rs. 19.77 crore, SBSTC-Rs. 5.16 crore and CTC -Rs 4.43 crore) in 2008-09 due to deployment of 3,126, 1,068, 269 and 738 staff respectively in excess of all India average of 6.52 manpower *per bus*. However, the management did not take any corrective action to control employee cost. Despite having excess staff, CSTC and SBSTC incurred an annual expenditure of Rs. 3.88 crore and Rs. 6.71 crore towards overtime payment during the last five years ending 2008-09, of which 93 *per cent* (CSTC) and 96 *per cent* (SBSTC) were in respect of traffic (drivers and conductors). This was due to the fact that overtime is paid for the difference in hours between normal duty hours and the scheduled number of hours taken to complete the assigned route irrespective of the actual time taken to complete the route. Thus, the overtime paid was inherent in the method of assignment of duties. Management had not considered the possibility of zone wise break up of the routes with change in drivers corresponding to change in zone, in order to minimize the payment of overtime. The Board of Directors of SBSTC had directed (November 2003) the Management to rationalise existing overtime allowance for crew within its depots and with other STUs in the State to avoid disparities in the system from route to route. However, the Management had not acted on this so far (June 2009).

While accepting the observation of high manpower cost, the Government stated (November 2009) in the exit conference that several proposals for DFID²⁷ funded early retirement schemes had been framed and submitted by independent consultants. However, these proposals had not been acceptable to the Government. There had been stiff opposition from the trade unions as well. Presently, a study on manpower rationalisation was being carried out by M/s Delloite & Touche.

Fuel cost

3.15.1 Fuel is a major cost element, which constituted 26.84 *per cent* of total expenditure in 2008-09. The Table below gives actual consumption, mileage obtained *per litre* (Kilometre *per litre* i.e. KMPL), all India average and extra expenditure.

²⁷ Department for International Development, Government of United Kingdom.

Sl. No.	Particulars	STU	2004-05	2005-06	2006-07	2007-08	2008-09
1	Gross Kilometre (in lakh)	CSTC	585.64	546.33	538.21	504.16	458.91
		SBSTC	378.92	391.88	369.28	362.47	384.25
		NBSTC	388.90	390.65	386.43	473.39	476.79
		CTC	165.77	182.58	190.83	203.68	153.79
		WBSTC	21.45	17.38	16.46	37.32	45.08
2	Actual Consumption (In lakh litre)	CSTC	157.30	137.55	143.92	142.23	131.22
		SBSTC	93.23	93.58	89.92	89.43	95.13
		NBSTC	101.81	100.10	98.60	120.34	115.72
		CTC	51.01	52.17	53.64	53.64	44.50
		WBSTC	7.09	7.29	9.41	10.55	15.04
3	Kilometre obtained <i>per</i> litre (1/2)	CSTC	3.72	3.97	3.74	3.54	3.50
		SBSTC	4.06	4.19	4.11	4.05	4.04
		NBSTC	3.82	3.90	3.92	3.93	4.12
		CTC	3.25	3.50	3.56	3.80	3.46
		WBSTC	3.03	2.38	1.75	3.54	3.00
4	All India Average (KMPL)		4.77	4.85	4.94	4.94	4.95
5	Consumption as <i>per</i> All India Average (in lakh litre) (1/4)	CSTC	122.78	112.65	108.95	102.06	92.71
		SBSTC	79.44	80.80	74.75	73.37	77.63
		NBSTC	81.53	80.55	78.22	95.83	96.32
		CTC	34.75	37.65	38.63	41.23	31.07
		WBSTC	4.50	3.58	3.33	7.55	9.11
6	Excess Consumption (in lakh litre) (2-5)	CSTC	34.52	24.90	34.97	40.17	38.51
		SBSTC	13.79	12.78	15.17	16.06	17.50
		NBSTC	20.28	19.55	20.38	24.51	19.40
		CTC	16.26	14.52	15.01	12.41	13.43
		WBSTC	2.59	3.71	6.08	3.00	5.93
		Total	87.44	75.46	91.61	96.15	94.77
7	Average cost/ litre (Rs.)	CSTC	24.49	28.26	31.62	31.65	32.89
		SBSTC	25.38	29.63	31.11	32.31	34.26
		NBSTC	26.20	33.00	34.18	32.86	34.58
		CTC	26.14	30.06	32.16	32.24	34.41
		WBSTC	27.39	29.35	21.68	32.04	35.81
8	Extra Expenditure (Rupees in crore) (6×7)	CSTC	8.45	7.04	11.06	12.71	12.67
		SBSTC	3.50	3.79	4.72	5.19	6.00
		NBSTC	5.31	6.45	6.97	8.05	6.71
		CTC	4.25	4.36	4.83	4.00	4.62
		WBSTC	0.71	1.09	1.32	0.96	2.12
		Total	22.22	22.73	28.90	30.91	32.12

3.15.2 It may be seen from the above table that in 2008-09, NBSTC was able to achieve highest mileage among STUs at 4.12 KMPL while WBSTC obtained least mileage at 3.00 KMPL. Considering the overall position in

North East Karnataka State Road Transport, Uttar Pradesh and Andhra Pradesh registered mileage of 5.45, 5.33 and 5.26 KMPL. (Source: STUs profile and performance 2006-07 by CIRT, Pune)

respect of five STUs, they consumed 445.43 lakh litres of fuel in excess as compared to all India average during 2004-09 resulting in extra expenditure of Rs. 136.88 crore. This was due to the inability of the STUs to retire

overage buses, poor maintenance, poor driving habits and bad road conditions. SBSTC stated (November 2009) that the steps have taken to improve KMPL through drivers' training and overhauling of fuel injection pumps.

Management of CSTC stated (November 2009) that though norms for fuel consumption were set they were not enforced. The reply indicates lack of corrective action.

3.15.3 The four STUs (except CTC) maintained records of driver-wise consumption of fuel. Audit test checked the records of 15 depots²⁸ for randomly selected drivers. The review position is summarised below:

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
No. of drivers test checked in Audit	950	1,061	1,074	1,083	1,288
No. of drivers with KMPL less than average KMPL of the respective STUs in respective years	437	549	488	542	578
Percentage of drivers with KMPL less than average.	46.00	51.74	45.44	50.05	44.88

3.15.4 The table above shows the gradual improvement in performance of drivers over the period under review, indicating improved driving habits. None of the STUs except NBSTC had, however, undertaken fuel conservation campaigns. The results of the campaign, conducted in January 2009 by NBSTC, showed an improvement in fuel efficiency from 3.89 KMPL in December 2008 to 4.14 KMPL in March 2009, resulting in savings of Rs. 33.74 lakh during January to March 2009.

Lack of control on issue of fuel in WBSTC

3.15.5 The sole depot of WBSTC at Saltlake (Kolkata) issues fuel to its buses. Scrutiny in Audit of the databases maintained by the STU revealed that during 2006-09, WBSTC issued 7,677 litres of fuel valued at Rs. 2.43 lakh to 48 buses before these were actually put to commercial operation. Further, Audit observed that during 2004-09, 6.90 lakh litres of fuel valued at Rs. 1.73 crore were issued to 188 vehicles, which were not owned and operated by the STU. Such instances led to conclude that there was lack of management control over issue and consumption of fuel in WBSTC. Besides, it was also noticed that during the review period 13,460 litres of fuel was issued without recording the vehicle number, in the absence of which the same could not be vouchsafed in Audit. Moreover, database scrutiny also revealed that without issue of fuel, 87 vehicles operated 5.38 lakh kilometres, which favourably increased the KMPL. These highlighted incomplete maintenance of records.

While accepting the audit findings in the exit conference, the Government informed (November 2009) that 6.90 lakh litres of fuel was issued to franchisee bus operators and the value of the same has been recovered.

²⁸ Depots of NBSTC (7), WBSTC (1), SBSTC (5) and CSTC (2).

However, no records were made available to substantiate the reply. The Government further assured that the matter regarding issue of fuel before actual commercial operation would be investigated.

Cost Effectiveness of Hired Buses

Franchisee Bus Operators in WBSTC

3.16.1 In November 2004, WBSTC started operation of vehicles in city and long distance routes under franchisee system. Under this system, WBSTC took buses on lease without any lease rent, obtained permits from the State Transport Authority and thereafter allowed the original bus owners to operate the buses and collect revenue as franchisee on payment of monthly franchisee fee to WBSTC ranging from Rs. 2,500 to Rs. 24,450. The basis of fixing the monthly fees was not on record. Based on 100 *per cent* load factor, the Board of Directors of WBSTC approved (August 2007) a revenue sharing model of average weighted passenger fare at 55 paise *per kilometre per seat* for buses with passenger capacity of less than 44 passengers and 38 paise *per kilometre per seat* for buses with passenger capacity of 44 and more passengers. WBSTC's share of the revenue was pegged at nine *per cent* of the revenue so calculated, irrespective of the actual operational performance of the franchisees. However, the basis for fixing the aforesaid average weighted passenger fare was not on record.

The WBSTC had executed 44 franchisee contracts on 60 routes. As on 31 March 2009, 322 buses were operated by 44 franchisees. Out of these 44 franchisee contracts, 37 contracts were executed on the above revenue sharing model. The remaining seven contracts were, however, executed prior to the Board's approval (August 2007) of the model.

Audit scrutiny of contracts pertaining to 27 routes of 20 franchisees revealed the following:

- The franchisees were selected without inviting any tender.
- The Government, while notifying the routes, had specified that the buses should not have less than 33 seats *per bus*. However, the Audit scrutiny revealed that out of 322 buses, the franchisees operated 176 buses (55 *per cent* buses) having seating capacity between 25 and 32.
- The WBSTC's share of revenue in respect of seven contracts, executed prior to the Board's approval (August 2007) of revenue sharing model, were lower by about 50 *per cent* of the franchisee fee calculated as *per the model*²⁹. These contracts were, however, not revised to enhance the share of revenue, leading to loss of Rs. 67.60 lakh during August 2007 to March 2009.

²⁹ This has been worked out in Audit by comparing the franchisee fees received against the seven contracts with the average franchisee fees received from the other 37 contracts.

- Franchisees were required to deposit in advance an amount equal to nine *per cent* of the revenue calculated on 100 *per cent* load factor to WBSTC on monthly basis. But, the same was not done resulting in accumulation of dues of Rs. 61.11 lakh recoverable from 23 out of 44 operators as on March 2009. However, WBSTC did not take any action to impose penalty nor did it terminate the franchisee agreements so far (November 2009).
- As *per* the contracts, only the buses for which the permits were obtained by the WBSTC were to be operated by the franchisees. Audit Team travelled (8 and 11 May 2009) on two franchisees operated buses and noticed that the bus numbers mentioned in the tickets were not of the buses for which the permits were obtained by the WBSTC. Subsequently, Management confirmed that another such 15 buses were operated by the franchisees. This indicates that there was lack of effective Management control over the buses operated by franchisees.
- One franchisee operator occupied about 33 *per cent* area of the Salt Lake depot of the WBSTC for parking and maintenance of buses without paying any rent for the premises.

Body Building

3.17.1 The STUs, had no in-house facility for fabrication of buses. The STUs got 1,028 buses fabricated during 2004-05 to 2008-09 through outsourcing. Delays in fabrication of buses and its impact are shown in the table below:

Sl No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1	No. of buses fabricated					
	CSTC	47	123	55	58	72
	SBSTC	50	-	-	115	7
	CTC	-	-	70	17	8
	Total	97	123	125	190	87
2	No. of buses received late from fabricators					
	CSTC	33	37	43	38	47
	SBSTC	40	-	-	6	6
	CTC	-	-	57	12	6
	Total	73	37	100	56	59
3	Total delays in days					
	CSTC	1,378	1,679	2,919	1,091	1,330
	SBSTC	680	-	-	108	78
	CTC	-	-	2058	65	136
	Total	2,058	1,679	4,977	1,264	1,544
4	Average delay per vehicle (in days)					
	CSTC	42	45	68	29	28
	SBSTC	17	-	-	18	13
	CTC	-	-	36	5	23
	Overall	28	45	50	23	26
5	Average Km covered per bus per day					
	CSTC	217	215	219	229	217
	SBSTC	228	-	-	224	207
	CTC	-	-	235	247	182
6	Average Km lost due to delay (in lakh) (3×5)					
	CSTC	2.99	3.61	6.39	2.50	2.89
	SBSTC	1.55	-	-	0.24	0.16
	CTC	-	-	4.84	0.16	0.25
7	Contribution per Km (Rs)					
	CSTC	2.55	2.59	3.30	3.42	3.60
	SBSTC	1.26	-	-	0.94	3.83
	CTC	-	-	3.53	3.45	3.35
8	Loss of contribution due to delay in fabrication (Rs in lakh) (6×7)					
	CSTC	7.62	9.35	21.09	8.55	10.40
	SBSTC	2.42	-	-	0.23	0.61
	CTC	-	-	17.09	0.55	0.84
	Total	10.04	9.35	38.18	9.33	11.85

3.17.2 From the above Table, it can be seen that there had been abnormal delay of 11,522 days in fabrication of bus bodies during 2004-05 to 2008-09, which resulted in aggregate loss of 25.58 lakh Km of operation with consequential contribution loss of Rs. 78.75 lakh.

Financial management

3.18.1 Raising of funds for capital expenditure, i.e. for replacement / addition of buses happens to be the major challenge in financial management of the

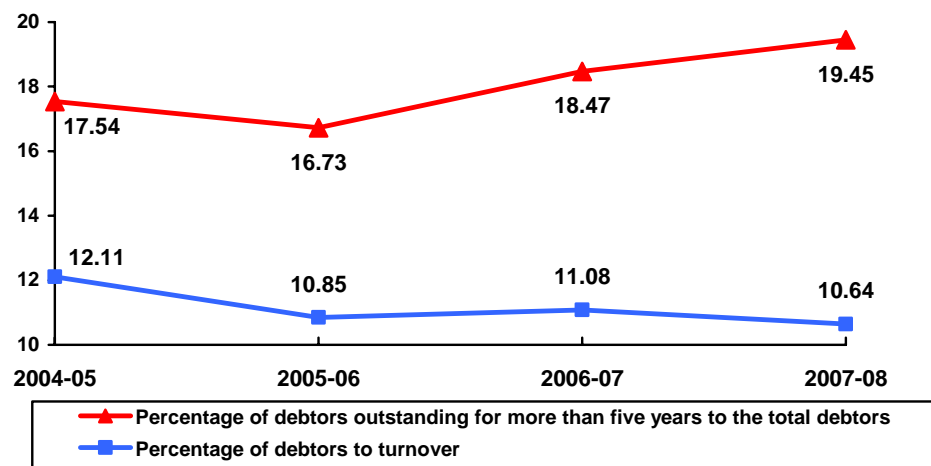
STUs. This issue has been covered in **paragraph 3.10.2**. The section below deals with the STUs efficiency in raising claims and their recovery. This section also analyses whether an opportunity exists to realign the business model to generate more resources without compromising on service delivery.

Claims and dues

3.19.1 The STUs are required to provide free/ concessional passes to various categories of public like students, physically handicapped, freedom fighters and journalists. However, none of the STUs maintains records relating to the number of persons availing such concessions along with its value. Further, the State Government does not reimburse the concessions allowed by the STUs.

3.19.2 The accounts for 2008-09 of the four STUs (except CTC) have not been finalised till date (November 2009). In respect of WBSTC, only Rs. 1.06 lakh is outstanding for more than five years and relates to the period prior to review. Further, except for 2007-08 when the outstanding debts were Rs. 38.63 lakh, the WBSTC did not have any debts outstanding as on 31 March of the respective years except Rs. 1.06 lakh mentioned above. Besides, the CSTC does not maintain age-wise details of debtors. Accordingly, Audit could not review the debts outstanding for more than five years in respect of CSTC.

In view of the above, an analysis in Audit of the debtors outstanding as a percentage of turnover in respect to four STUs (except CTC) and outstanding debtors for more than five years of three STUs³⁰ for the four years ending March 2008 is depicted in the Table below:



3.19.3 From the above, it can be seen that the percentage of outstanding debtors for more than five years to total debtors marginally increased from 17.54 (2004-05) to 19.45 per cent (2007-08) while the percentage of debtors to

³⁰ SBSTC, NBSTC and CTC.

turnover marginally reduced from 12.11 *per cent* in 2004-05 to 10.64 *per cent* in 2007-08.

Realignment of business model

3.20.1 The STUs are mandated to provide an efficient, adequate and economical road transport to public. Therefore the STUs can not take an absolutely commercial view in running their operations. They have to cater to un-economical routes to fulfil their mandate. They have also to keep the fares affordable. In such a situation it is imperative for the STUs to tap non-traffic revenue sources to cross – subsidize their operations. However, the share of non-traffic revenues (other than interest on investment) was nominal at 1.83 *per cent* of total revenue during 2004-09. This revenue of Rs. 37.17 crore during 2004-09 mainly came from advertisement, restaurant /shop rental and others. Audit observed that the STUs have other non-traffic revenue sources which the STUs have not exploited commercially.

The STUs had acquired land at prime locations in cities, district and tehsil headquarters. The STUs have land (mostly owned /leased by Government) at important locations measuring about 24.47 lakh square meters, as shown below.

Particulars	Cities (Municipal areas)	District HQs.	Tehsil HQs.	Total
Number of sites	55	5	3	63
Occupied Land (Sq. mtrs.)	24,03,279	20,204	24,006	24,47,489

The STUs did not have a policy to undertake large scale tapping of non-traffic revenue sources.

It is thus possible for the STUs to under take projects on public private partnership (PPP) basis for construction of shopping complexes, malls, hotels, office spaces etc. above (from first floor or second floor onwards) the existing sites so as to bring in a steady stream of revenues without any investment by them. Such projects can be executed without curtailing the existing area of operations of the STUs. These projects can yield substantial revenue for STUs which can only increase year after year.

Audit observed that none of the STUs have framed any policy in this regard. The STUs can explore possibilities of promoting commercial use of these sites which will help the STUs cross subsidized their operations and fulfil their mandate effectively. The STUs may like to study realigning their business model and frame a policy in this regard.

In the exit conference, the Government stated (November 2009) that due to stiff opposition from trade unions, Management could not gainfully utilise the surplus land.

Fare policy and fulfillment of social obligations

Existence and fairness of fare policy

3.21.1 Under Section 67 of the Motor Vehicles Act, 1988, the power to fix fares in respect of stage carriages operating in the State and their periodic revision is vested with the State Government. The State Government has not authorised the STUs to effect automatic revision of fares based on the rising cost of operation. The State Government revises the fares with increase in fuel prices only when the private bus operators approach the Government. However, the basis of fixation of fares, though called for, was not furnished to Audit by the State Government (November 2009). Thus the rationale of the fare structure could not be ascertained.

During 2004-09, the State Government revised bus fares for the STUs on four occasions. Mention was made in **Paragraph 4.6** of the Report of the Comptroller and Auditor General of India (Commercial) for the year ended 31 March 2007, Government of West Bengal that CSTC and NBSTC, either did not implement or delayed the implementation of the fare structure notified by the State Government, leading to a loss of revenue of Rs. 7.20 crore.

3.21.2 The fare table for ordinary buses is as follows:

Stages	(In Rupees)						
	2004-05	2004-05 (from 29.06.04)	2004-05 (from 17.01.05)	2005-06 (from 27.09.05)	2006-07	2007-08	2008-09 (from 08.07.08)
First 4 Kms	3.00	3.00	3.50	4.00	4.00	4.00	4.00
4 to 8 Kms	3.50	4.00	4.50	5.00	5.00	5.00	6.00
8 to 12 Kms	4.00	4.50	5.00	5.50	5.50	5.50	6.00
12 to 16 Kms	4.50	5.00	5.50	6.00	6.00	6.00	7.00
16 to 20 Kms	5.00	5.50	6.00	6.50	6.50	6.50	7.00
20 to 24 Kms	5.50	6.00	6.50	7.00	7.00	7.00	8.00
Beyond 24 Kms	Increase of Re.1/- for every 4 Kms	Increase of Re.1/- for every 4 Kms	Increase of Re.1/- for every 4 Kms	Increase of Re.1/- for every 4 Kms	Increase of Re.1/- for every 4 Kms	Increase of Re.1/- for every 4 Kms	Increase of Re.0.50 for every 4 Kms

3.21.3 Audit observed that the STUs could have curtailed cost and increased revenue with better operational efficiency. It may be seen from the **Annexure 17** that with better operational efficiency, the STUs could have avoided the losses of Rs. 306.18 crore, Rs. 374.60 crore, Rs. 398.65 crore, Rs. 400.28 crore and Rs. 446.96 crore during 2004-05, 2005-06, 2006-07, 2007-08 and 2008-09 respectively.

The above does not take into account other inefficiencies such as low fleet utilisation, low load-factor, excess tyre cost, defective route planning, etc. Nonetheless, it shows that the net loss *per* Km could be lower if the operations are properly planned and efficiently managed, than what they actually are. Without addressing these inefficiencies, any increase in fares would adversely

affect the commuters and compel them to pay more despite no improvement in quality of services.

The above facts lead to conclude that it is desirable to have an independent regulatory body to fix the fares, specifying the operation of uneconomic routes and address the grievances of commuters.

Adequacy of services on uneconomical routes

3.22.1 None of the STUs had analysed the profitability of different routes operated by them as mentioned in **paragraph 3.12.4**. However, some of the routes which are unprofitable now may become profitable if the STUs improve their efficiency. Nonetheless, there would still be some uneconomical routes. Though the STUs are required to cater to these routes, none of the STUs had formulated norms for providing services on uneconomical routes. In the absence of norms, the adequacy of services on uneconomical routes could not be ascertained in Audit. The desirability to have an independent regulatory body to specify the quantum of services on uneconomical routes, taking into account the specific needs of commuters, is further underlined.

Monitoring by Top Management

3.23.1 For an organisation like a Road Transport Corporation to succeed in operating economically, efficiently and effectively, there have to be written norms of operations, service standards and targets. Further, there has to be a Management Information System (MIS) to report on achievement of targets and norms. The achievements need to be reviewed to address deficiencies and also to set targets for subsequent years. The targets should generally be such that their achievement would make an STU self-reliant. In the light of this, Audit reviewed the system existing in the STUs and observed the following:

- CSTC and WBSTC did not have any system of setting targets for operational parameters. In NBSTC, SBSTC and CTC targets were set by top management only in respect of fuel efficiency (mileage obtained *per litre*). However, the same were never reviewed by the Management of CTC.
- As regards operational parameters, in WBSTC, the data was collected but never compiled for exercising management control over operations. In NBSTC, CTC and CSTC though the data was compiled it was occasionally submitted to top management for review. However, in SBSTC, the same were compiled and reviewed by the top Management but no corrective action was taken to improve efficiency.
- Though the Board of Directors' meetings of all STUs were held in accordance with the prescribed statutes, the operational performances of

the STUs were seldom reviewed and no directions were issued for improvements, despite continuous poor operating performance. The Board did not also follow-up action on its direction and evaluate the improvements, if any.

Thus, the generation of the MIS data was inadequate and monitoring of service parameters by the top Management was deficient.

3.23.2 The top management of the STUs are expected to demonstrate managerial capability to set realistic and progressive targets, address areas of weakness and take remedial action. However, neither records nor performance of the STUs during the period under review evidenced such action.

The matter was reported to the Government (August 2009); their reply was awaited (November 2009).

Conclusion

Operational performance

- **The STUs could not keep pace with the growing demand for public transport as its share declined from 8.15 per cent in 2004-05 to 5.84 per cent in 2008-09.**
- **The STUs could not recover the cost of operations in any of the five years under review. This was mainly due to operational inefficiencies and inadequate/ ineffective monitoring by top management.**
- **The STUs have scope to improve operations as their performance on important operational parameters such as fleet utilisation, vehicle productivity and load factor were below all India average.**
- **The four STUs (except WBSTC) did not carry out prescribed preventive maintenance. Audit noticed the shortfall of 23.76, 79.01, 49.01 and 41.63 per cent in maintenance in selected depots, which affected the roadworthiness of their buses.**
- **The STUs did not ensure economy in operations as its manpower and fuel costs were higher than the all India average.**

Financial management

- **None of the STUs had a policy in place to exploit non-conventional sources of revenue.**

Fare policy and fulfilment of social obligations

- The STUs have neither a fare policy based on scientific norms nor any yardstick for measuring adequacy of operation on uneconomical routes.

Monitoring by top management and future needs

- The MIS was not effectively used by the top management for monitoring key operational parameters in any of the five STUs.

Though the STUs have been incurring losses, it was mainly due to their high cost of operations. On the whole there is immense scope to improve the performance of the STUs. Effective monitoring of key parameters, coupled with certain policy measures, can see improvement in performance.

Recommendations

Operational performance

- The STUs may take effective steps to increase fleet utilisation and vehicle productivity.
- The STUs may ensure adherence to the preventive maintenance schedules to keep their fleet roadworthy.
- The STUs may rationalise their manpower for making effective utilisation of the same.
- The Management of the STUs may ensure effective monitoring of fuel consumption so as to increase efficiency on that account.

Financial performance

- The STUs may consider devising a policy for large scale tapping of non-conventional sources of revenue by undertaking PPP (Public Private Partnership) projects.

Fare policy and fulfilment of social obligations

- The Government may consider creating a regulator to regulate fares and services on uneconomical routes besides addressing the grievances of the commuters.

Monitoring by top management

- The top management may ensure regular monitoring of important operational parameters and take remedial measures for improvement.