

## Chapter - III

### Performance audit relating to Statutory Corporation

#### Andhra Pradesh State Road Transport Corporation

### 3. Performance audit on the functioning of Andhra Pradesh State Road Transport Corporation

#### Executive Summary

*The Andhra Pradesh State Road Transport Corporation (Corporation) provides public transport in the State through its 202 depots. The Corporation had fleet strength of 20704 buses as on 31 March 2009 and carried an average of 1.40 crore passengers per day. It accounted for a share of 80.34 per cent in public transport while the remaining came from private operators. The performance audit of the Corporation for the period from 2004-05 to 2008-09 was conducted to assess efficiency and economy of its operations, ability to meet its financial commitments, 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 Corporation.*

#### **Finances and Performance**

*The Corporation earned a profit of Rs 110.78 crore in 2008-09. Its accumulated losses and borrowings stood at Rs 1151.84 crore and Rs 1404.47 crore as at 31 March 2009, respectively. The Corporation earned Rs 18.84 per kilometre and expended Rs 18.43 per kilometre in 2008-09. Audit noticed that with a right kind of policy measures and better management of its affairs, it is possible to increase revenue and reduce costs, so as to earn more profit and serve its cause better.*

#### **Declining Share**

*Of 24,877 buses licensed for public transport in 2007-08, about 80.34 per cent belonged to the Corporation. The percentage share declined marginally from 84.36 per cent in 2004-05. The decline in share was mainly due to procurement of lesser number of buses*

*than planned on account of non-availability of adequate funds to replace/add new buses. Nonetheless, vehicle density (including private operators buses) per one lakh population increased marginally from 28.88 in 2004-05 to 29.69 in 2007-08 due to increase in number of private buses indicating stability in the level of public transport in the State.*

#### **Vehicle profile and utilisation**

*Corporation's buses consisted of own fleet of 17,096 buses and 3,279 hired buses. Of its own fleet, 12,576 (72.76 per cent) were overage, i.e., run for more than five lakh kilometres. Corporation's fleet utilisation at 99.52 per cent in 2008-09 and its vehicle productivity at 360 kilometres per day per bus was above the AIA. Similarly, its load factor at 72.27 per cent remained above the AIA of 63 per cent. The Corporation did well on operational parameters as 40 per cent routes were profitable and preventive maintenance was appreciable as backlog declined from 3.71 per cent to 2.31 per cent during review period.*

#### **Economy in operations**

*Manpower and fuel constitute 68.24 per cent of total cost. Interest, depreciation and taxes account for 12.50 per cent and are not controllable in the short term. Thus, the expenditure control has to come from manpower and fuel. The Corporation succeeded in reducing the manpower per bus from 6.14 in 2004-05 to 5.59 in 2008-09. However, the expenditure on repairs and maintenance was Rs 550.01 crore (Rs 3.18 lakh per bus) in 2008-09, of which nearly*

39.32 per cent was on manpower. The Corporation could not attain its own fuel consumption targets resulting in excess consumption of fuel valued at Rs 222.91 crore during 2004-09.

The Corporation has 3279 hired buses where bus owners provide buses with drivers and incur all expenses. The Corporation provides conductors and makes payment as per kilometres operated. The Corporation saved an amount of Rs 245.62 crore towards cost by operating these hired buses during the period 2004-09. As this arrangement has the potential to cut down the cost substantially, the Corporation needs to explore possibility to replace overage buses by hired buses in future.

#### **Revenue Maximisation**

As it mainly utilises ground floor/ land for its operations, the space above can be developed on public private partnership basis to earn steady income which can be used to cross-subsidise its operations. The Corporation has not framed any policy in this regard. The Corporation however identified vacant sites at 133 locations of which 11 projects covering 71,575 Sq. mtrs area were given for development. The anticipated revenue was Rs 2,309 crore over a period of 30 to 33 years.

#### **Need for a regulator**

Though the Government approves the fare increase, there is no scientific basis for its calculation. The Corporation has also not formed norms for providing services on uneconomical schedules. Thus, it would be desirable to have an independent regulatory body (like State Electricity Regulatory Commission) to fix the fares, specify operations on uneconomical routes

#### **Monitoring by top management**

There is effective Management Information System (MIS) for obtaining feedback on achievement. The Board of Directors regularly monitors the operational parameters.

#### **Conclusion and Recommendations**

Though the Corporation is earning profits for last two years ending 2008-09 it can still improve its performance i.e. by hiring more number of buses. This review contains six recommendations to improve the Corporation's performance. Hiring of buses and creating a regulator to regulate fares and services are some of these recommendations.

(Chapter 3)

## Introduction

**3.1.1** In Andhra Pradesh State, the public road transport is primarily provided by Andhra Pradesh State Road Transport Corporation (Corporation), which is mandated to provide an efficient, adequate, economical and properly co-ordinated road transport. The State also allows the private operators to provide public transport. The State has reserved 95 *per cent* of the routes exclusively for the Corporation while allowing both Corporation and private operators to operate on the remaining routes. The fare structure for the Corporation is controlled by the Government which approves it. However, the fare structure for the private operators is not controlled by the Government and is generally higher than State Government rates fixed for the Corporation on majority of routes.

**3.1.2** The Corporation was incorporated on 11 January 1958 by the State Government under Section 3 of the Road Transport Corporations Act, 1950 as its wholly owned Corporation. The Corporation is under the administrative control of the Transport Department of the State Government. The Management of the Corporation is vested with a Board of Directors comprising Chairman, Vice Chairman & Managing Director (VC&MD) and eleven Directors appointed by the State Government. The day-to-day operations are carried out by the VC&MD, the Chief Executive of the Corporation, with the assistance of Executive Directors, Heads of Department, Regional Managers and Depot Managers. The Corporation comprises seven Zones, 23 Regional Offices, 202 Depots, seven Workshops and seven Tyre Retreading Shops. The bus body building operations are carried out through lone Bus Body Building Unit of the Corporation and also through external agencies.

**3.1.3** The Corporation had a fleet strength of 20,704 buses (including 3,279 hired buses) as on 31 March 2009. The Corporation carried an average of 1.40 crore passengers per day during 2008-09. The Corporation's share in the passenger transport operations in the State during 2007-08<sup>§</sup> was 80.34 *per cent* and the remaining 19.66 *per cent* was accounted for by private operators. The turnover of the Corporation was Rs 5,039.52 crore in 2008-09 which was equal to 1.52 *per cent* of the State Gross Domestic Product. The Corporation employed about 1,13,370 employees as at 31 March 2009.

## Scope and methodology of audit

**3.2.1** The present review conducted during February 2009 to July 2009 covers the performance of the Corporation during the period from 2004-05 to 2008-09. The review mainly deals with operational efficiency, financial management, fare policy, fulfillment of social obligations and monitoring by

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§ The figures for 2008-09 have not been compiled by the Transport Department so far.

top management of the Corporation. The audit examination involved scrutiny of records at the Head Office, seven\*\* out of 23 Regional Offices, 70†† out of the 202 depots and three‡‡ out of seven Workshops. The regions were selected based on financial performance and operational parameters like loss incurring, profit earning, higher/ lower cost of operations, mix of rural, urban and ghat services, revenue generation (41.32 per cent), fleet strength (42.39 per cent) and kilometers operated (39.61 per cent) so as to cover all the three geographical regions (two regions each) namely Telangana, Andhra and Rayalaseema besides one (Hyderabad) city service.

**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 the auditee personnel, analysis of data with reference to audit criteria, raising of audit queries, discussion of audit findings with the Management and issue of draft review 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 Corporation was able to keep pace with the growing demand for public transport;
- ❖ whether the Corporation succeeded in recovering the cost of operations;
- ❖ 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 Corporation was able to meet its commitments and recover its dues efficiently; and
- ❖ the possibility of realigning the business model of the Corporation to tap non-conventional sources of revenue and adopting innovative methods of accessing such funds.

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\*\*Regions - Hyderabad City, Mahabubnagar, Karimnagar, Chittoor, Kadapa, North East Coastal, Visakhapatnam.

†† Depots of the selected seven Regions.

‡‡ Karimnagar, Chittoor, North East Coastal.

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**3.3.3 Fare Policy and fulfilment of social obligations**

- ❖ the existence and adequacy of fare policy; and
- ❖ whether the Corporation operated adequately on uneconomical routes.

**3.3.4 Monitoring by top management**

- ❖ whether the monitoring by Corporation's top management was effective.

**Audit criteria**

**3.4.1** The audit criteria adopted for assessing the achievement of the audit objectives 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 India (GOI) and State Government and other relevant rules and regulations;
- ❖ corporate policy for investment of funds; and
- ❖ procedures laid down by the Corporation.

**Financial position and working results**

**3.5.1** The financial position of the Corporation for the five years upto 2008-09 is given below.

(Rupees in crore)

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09 <sup>§§</sup>
<b>A. Liabilities</b>					
Paid up Capital	201.27	201.27	201.27	201.27	201.27
Reserves & Surplus (including Capital Grants but excluding Depreciation Reserve)	237.30	210.29	189.71	141.11	101.85
Borrowings (Loan Funds)	1325.89	1157.00	1095.69	1299.74	1404.47
Current Liabilities & Provisions	609.38	617.52	1134.92	1163.99	1418.71
<b>Total</b>	<b>2373.84</b>	<b>2186.08</b>	<b>2621.59</b>	<b>2806.11</b>	<b>3126.30</b>
<b>B. Assets</b>					
Gross Block	2059.74	2133.16	2231.29	2362.12	2475.96
Less: Depreciation	1426.90	1558.82	1667.12	1714.56	1740.17
Net Fixed Assets	632.84	574.34	564.17	647.56	735.79
Capital works-in-progress (including cost of chassis)	41.62	5.32	24.51	30.99	40.50
Investments	0.62	0.62	0.62	0.62	0.62
Current Assets, Loans and Advances	455.07	319.33	634.00	864.31	1197.55
Accumulated losses	1243.69	1286.47	1398.29	1262.63	1151.84
<b>Total</b>	<b>2373.84</b>	<b>2186.08</b>	<b>2621.59</b>	<b>2806.11</b>	<b>3126.30</b>

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§§ 2008-09 figures in the Report are provisional.

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**3.5.2** The details of working results like operating revenue and expenditure, total revenue and expenditure, net surplus/ loss and earnings and cost per kilometre of operation are given below.

(Rupees in crore)

Sl. No	Description	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Total Revenue	3215.76	3676.37	4187.38	4457.54	5039.52
2.	Operating Revenue <sup>φ</sup>	3107.33	3560.95	4063.29	4313.10	4707.12
3.	Total Expenditure	3440.62	3719.15	4299.20	4321.88	4928.74
4.	Operating Expenditure <sup>ψ</sup>	3021.82	3273.38	3641.13	3790.19	4318.38
5.	Operating Profit	85.51	287.57	422.16	522.91	388.74
6.	Profit/ Loss for the year	-224.86	-42.78	-111.82	135.66	110.78
7.	Accumulated Loss	-1243.69	-1286.47	-1398.29	-1262.63	-1151.84
8.	Fixed Costs					
	(i) Personnel Costs	1165.84	1200.97	1371.99	1426.46	1513.29
	(ii) Depreciation	157.46	157.57	167.90	176.24	190.96
	(iii) Interest	102.96	84.60	76.34	91.24	116.86
	(iv) Other Fixed Costs	504.62	585.02	788.44	682.30	1021.38
	<b>Total Fixed Costs</b>	<b>1930.88</b>	<b>2028.16</b>	<b>2404.67</b>	<b>2376.24</b>	<b>2842.49</b>
9.	Variable Costs					
	(i) Fuel & Lubricants	1033.03	1279.11	1457.28	1476.34	1586.05
	(ii) Tyres & Tubes	69.55	87.51	111.26	121.18	121.22
	(iii) Other Items/ spares	45.24	53.76	65.61	68.56	70.24
	(iv) Taxes (M V Tax etc.)	361.92	270.61	260.38	279.56	308.74
	(v) Other Variable Costs	0	0	0	0	0
	<b>Total Variable Costs</b>	<b>1509.74</b>	<b>1690.99</b>	<b>1894.53</b>	<b>1945.64</b>	<b>2086.25</b>
10.	Effective KMs operated (in crore KM)	232.50	238.08	244.73	253.47	267.49
11.	Earnings <i>per</i> KM (Rs) (1/10)	13.83	15.44	17.11	17.59	18.84
12.	Fixed Cost <i>per</i> KM (Rs) (8/10)	8.31	8.52	9.83	9.37	10.63
13.	Variable Cost <i>per</i> KM (Rs) (9/10)	6.49	7.10	7.74	7.68	7.80
14.	Cost <i>per</i> KM (Rs)(3/10)	14.80	15.62	17.57	17.05	18.43
15.	Net Earnings <i>per</i> KM (Rs) (11-14)	-0.97	-0.18	-0.46	0.54	0.41
16.	Traffic Revenue (Rs in crore) <sup>§</sup>	2936.64	3192.45	3657.94	3879.13	4237.74
17.	Traffic revenue <i>per</i> KM (Rs) (16/10)	12.63	13.41	14.95	15.30	15.84
18.	Operating profit <i>per</i> Km (Rs) (5/10)	0.37	1.21	1.72	2.06	1.45

### ***Elements of cost***

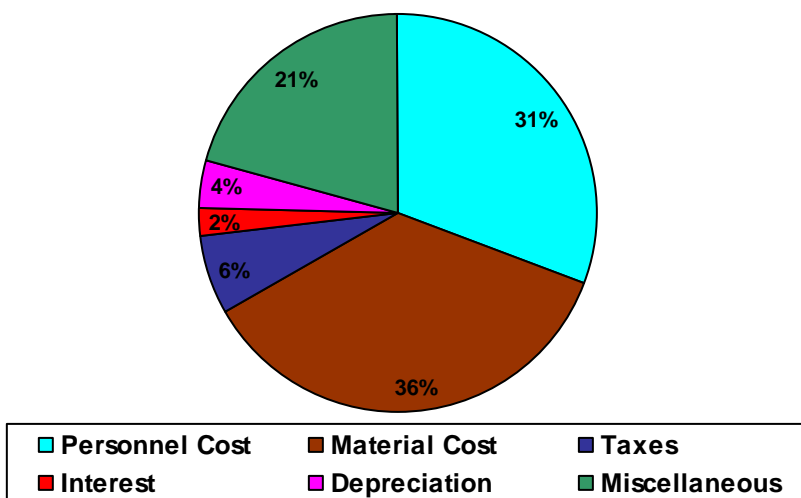
**3.5.3** Personnel costs and material costs constitute the major elements of costs. The percentage break-up of costs for 2008-09 is given below in the pie-chart.

φ Operating revenue includes traffic earnings, passes and season tickets, reimbursement against concessional passes, fare realised from private operators under KM Scheme etc.

ψ Operating expenditure includes expenses relating to traffic, depreciation on fleet, repair and maintenance, electricity, welfare and remuneration, licenses and taxes and general administration expenses.

§ Traffic revenue represents sale of tickets, advance booking, reservation charges and contract services earnings.

**Components of various elements of cost**

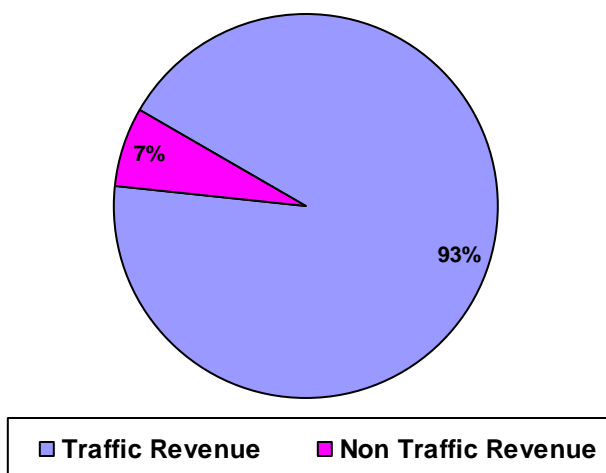


Miscellaneous element of cost includes hire charges paid to private bus operators besides other miscellaneous expenses.

**Elements of revenue**

**3.5.4** Traffic revenue 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 explained the audit objectives to the Corporation during an ‘entry conference’ held on 27 February 2009. Subsequently, audit findings were reported to the Corporation and the Government in August 2009 and discussed in an ‘exit conference’ held on 18 September 2009, which was



attended by Deputy Secretary, Transport Department, Government of Andhra Pradesh and four functional Executive Directors and Financial Advisor of the Corporation. The Corporation also replied to audit findings in September 2009. The views expressed by them have been considered while finalising this review. The audit findings are discussed below.

### **Operational performance**

**3.7.1** The operational performance of the Corporation for the five years ending 2008-09 is given in the **Annexure-18**. The operational performance of the Corporation was evaluated on various operational parameters as described below. It was also seen whether the Corporation was 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 the losses were controllable and there is scope for improvement in performance.

### **Share of corporation in public transport**

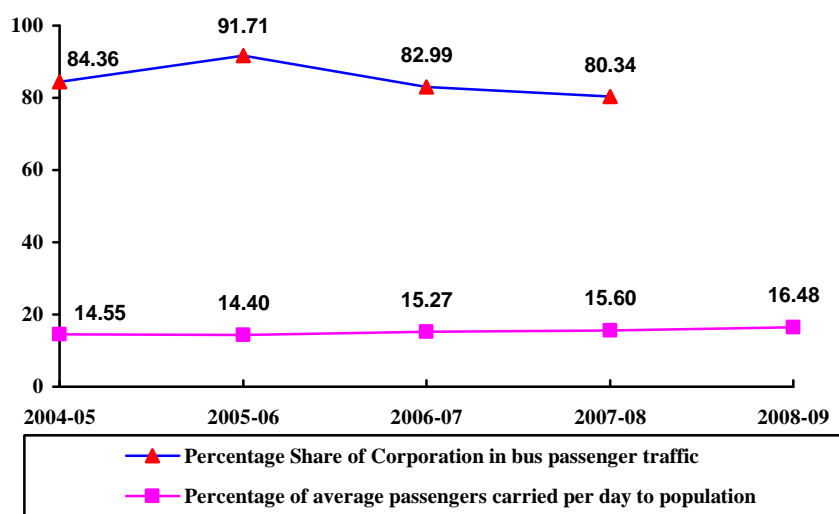
**3.8.1** The State Government did not formulate any transport policy. However, a transport policy aiming at achieving a balanced model mix of public transport and to discourage personalised transport is desirable. The focus would be on increasing mass transport options by providing adequate, accessible and affordable modes like buses, mini-buses, electric trolley buses complemented by network of rail based mass rapid transit systems like metro and commuter rail.

**3.8.2** Line-graphs depicting the percentage share of the Corporation in the bus passenger traffic of the State during four years ending 2007-08<sup>∞</sup> and percentage of average passengers carried per day by the Corporation to the

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<sup>∞</sup> Data regarding number of passenger transport vehicles in AP for 2008-09 is not available with the Transport Department.

population\*\*\* of the State during five years ending 2008-09 are given below:



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

S.No	Particulars†††	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Corporations' buses including hired buses	19609	19407	19618	19987	20704
2.	Private stage carriages	3636	1755	4021	4890	NA
3.	Total buses for public transport	23245	21162	23639	24877	NA
4.	Percentage share of Corporation	84.36	91.71	82.99	80.34	NA
5.	Percentage share of private operators	15.64	8.29	17.01	19.66	NA
6.	Vehicle density <i>per</i> one lakh population	28.88	25.93	28.58	29.69	NA

**3.8.4** The Corporation, however, has not been able to keep pace with the growing demand for public transport during the years 2004-05 to 2007-08 since percentage share of Corporation declined from 84.36 *per cent* to 80.34 *per cent* during the review period. This was as a result of procurement of lesser number of buses compared to demand. The

\*\*\* The population has been worked out on the basis of census data for 2000-01 by extrapolating the same at the annual compounding rate of 1.37 *per cent*.

††† The number of buses at serial numbers 1,2 and 3 are the figures as at the end of the respective financial years.

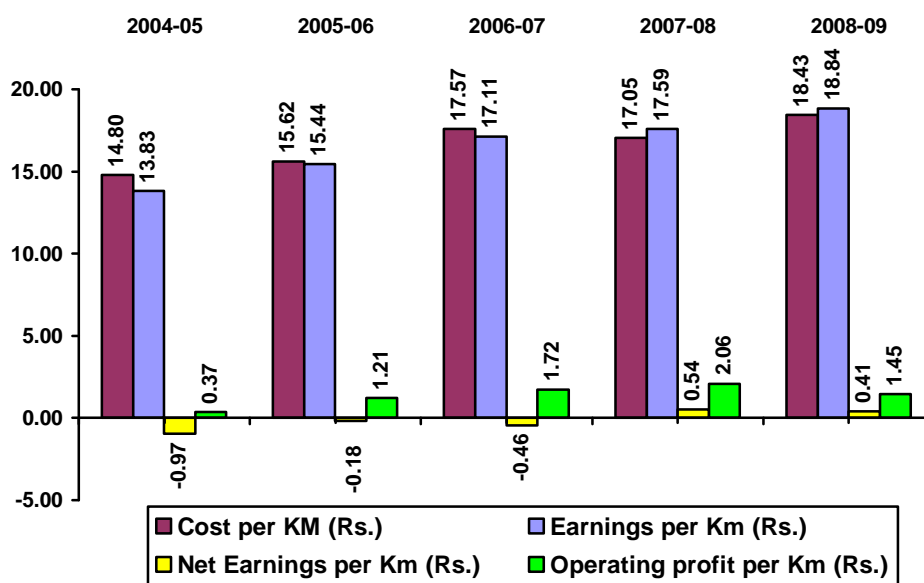
effective *per capita* KM operated per year is given below:

Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
Effective KMs operated (in crore)	232.50	238.08	244.73	253.47	267.49
Estimated Population (crore)	8.05	8.16	8.27	8.38	8.50
<i>Per Capita</i> KM <i>per year</i>	28.88	29.18	29.59	30.25	31.47

**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. In the instant case, the Corporation was not able to maintain its share in transport mainly due to operational inefficiencies as described later.

### Recovery of cost of operations

**3.9.1** The Corporation was not able to recover its cost of operations (arrived at by taking the total revenue and total expenditure) in three (2004-07) out of five years. There was, however marginal improvement and profit during two years (2007-09) as given in the graph<sup>⊗</sup> below:



⊗ Cost *per* KM represents total expenditure divided by effective KM operated.  
 Revenue *per* KM is arrived at by dividing total revenue with effective KM operated.  
 Net Revenue *per* KM is revenue *per* KM reduced by cost *per* KM.  
 Operating loss *per* KM would be operating expenditure *per* KM reduced by operating income *per* KM.

**Efficiency and economy in operations**

**Fleet strength and utilisation**

***Fleet Strength and its Age Profile***

**3.10.1** The Corporation has its own fleet of buses. It also hires buses from contractors. Audit findings in respect of hired buses are given in paragraphs 3.16.1 to 3.16.3. The table below explains the position of corporation's own fleet.

**3.10.2** The Association of State Road Transport Undertakings (ASRTU) had prescribed (September 1997) that the desirable age of a bus as eight years or five lakh kilometres, whichever was earlier. The table below shows the profile (based on Kilometres run)††† of the buses held by the Corporation for the period of five calendar years ending 2008.

S.No.	Particulars	2004	2005	2006	2007	2008
1.	Average number of buses (own) §§§	17818	16743	18017	17391	17285
2.	Buses having run above 5 lakh KMs	12855	10536	13309	12937	12576
3.	Percentage of over-aged buses (More than 5 lakh KMs)	72.15	62.93	73.87	74.39	72.76

**3.10.3** The above table shows that the Corporation was not able to achieve the norm of right age buses. During 2004-09, though the Corporation planned to buy 12,302 new buses, it added only 7,230 buses at a cost of Rs 935.18 crore leaving a shortfall of 5,072 buses. The expenditure was funded out of Depreciation fund and bank borrowings. To achieve the norm of right age buses, the Corporation was required to buy 12,576 new buses (as at the end of March 2009) additionally which would have cost it Rs 1,891.43 crore \*\*\*\* approximately. However, the Corporation did not generate adequate resources through its operations to finance the replacement of buses. It earned a profit of Rs 717.11 crore before charging of depreciation during 2004-09, which was inadequate. Audit scrutiny revealed that the Corporation did not maintain proper records indicating details of buses declared as scrap and actually scrapped as some of the buses declared scrap were also being used by the Corporation.

***Procurement of Volvo buses***

**3.10.4** The Corporation planned to procure 78 Volvo and 3120 Express buses during 2005-06 to 2008-09. However, it procured 72 Volvo and 2004 Express buses. While the average cost of Volvo bus was Rs 55 lakh, the same was

††† Age-wise profile of the fleet was not maintained by the Corporation up to 2006-07.

§§§ These figures relate to average number of buses during the calendar year while the figures in the Appendix relate to the financial year.

\*\*\*\* Worked out on the basis of procurement rate per bus during 2008-09.

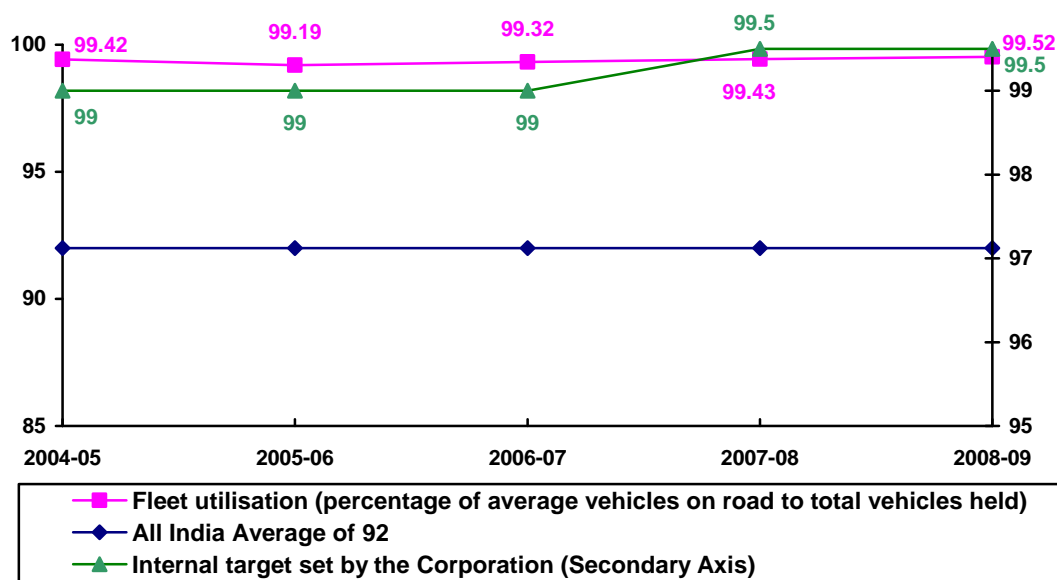
Rs 12 lakh in respect of Express bus. A detailed examination of records in Audit revealed that the profit margin of operation per KM was Rs 2.20 and Rs 0.84 in respect of Express bus and Volvo bus respectively. Thereby, the profit margin was higher in respect of Express bus by Rs 1.36 per KM as compared to operation of Volvo bus. However, the Corporation emphasised more on procurement of Volvo buses and decided to procure 92 per cent of planned procurement whereas only 64 per cent planned Express buses were procured. As a result of the decision to buy Volvo buses in preference to Express buses, the Corporation lost an opportunity to earn a profit of Rs 4.17 crore per annum. Thus, the Corporation's ability to survive and grow depends on its efforts to remove operational inefficiencies, cut costs and tap non-conventional revenue avenues so that it can fund its capital expenditure and be self-reliant.

The Management replied (September 2009) that the Volvo buses were introduced to attract the passengers who prefer to travel quickly and comfortably than other existing services.

However, the management did not strike a balance between economy in cost of operation, profitability and commuter satisfaction of a select class.

### Fleet utilisation

3.10.5 Fleet utilisation represents the ratio of buses on road to buses held by the Corporation. The Corporation had set a target of fleet utilisation of 99 and 99.5 per cent during the years 2004-07 to 2007-09 respectively as compared to the All India Average<sup>α</sup> of 92 per cent, as indicated in the graph given below.



<sup>α</sup> All India Average is for the year 2006-07 which has been used for comparison for the period under review.

**3.10.6** The fleet utilisation of the Corporation was consistently higher than the All India average and achieved the internal target fixed by it even by utilising its reserved buses to the extent possible. The percentage of buses not operated was below 0.50 *per cent* during 2008-09.

### Vehicle productivity

**3.11.1** Vehicle productivity (VU) refers to the average Kilometres run by each bus (including hired buses) *per day* in a year. The vehicle productivity of the Corporation vis-à-vis the overage fleet for the five years ending 2008-09 is shown in the table below.

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Vehicle productivity (KMs run <i>per day per bus</i> )	332	335	347	352	360
2.	Overage fleet (percentage)	72.15	62.93	73.87	74.39	72.76

**3.11.2** Compared to the All India Average of 313 KMs *per day*, the vehicle productivity of the Corporation was higher in all the years under review even with the over-aged fleet and increased from 332 to 360 KMs *per day* due to operation of more number of long distance services.

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

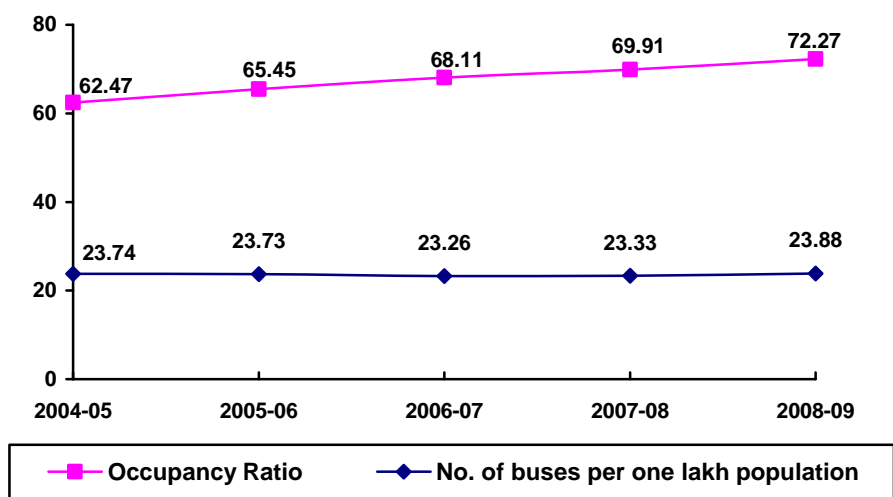
(Source: STUs profile and performance

### Capacity utilisation

#### *Load Factor*

**3.12.1** Capacity utilisation of a transport undertaking is measured in terms of Occupancy Ratio (OR) representing the percentage of passengers carried to seating capacity. The schedules to be operated are to be decided after proper study of routes and periodical reviews are necessary to improve the OR which increased from 62.47 *per cent* in 2004-05 to 72.27 *per cent* in 2008-09 against the All India Average of 63 *per cent*. A graph depicting the OR vis-à-vis number of buses†††† per one lakh population is given below:

†††† Worked out on the basis of average number of vehicles on road for the respective financial year.



Number of buses per one lakh population remained at the same level during the last five years. However, OR increased from 62.47 *per cent* to 72.27 *per cent* during review period as the passengers carried by the Corporation increased by 19.53 *per cent* as against an increase of 5.58 *per cent* in Corporation buses during review period.

**3.12.2** The table below provides the details for break-even load factor (BELF) for traffic revenue as well as total revenue. Audit worked out this BELF at the given level of vehicle productivity and total cost *per KM*.

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Cost <i>per KM</i> (in Rs )	14.80	15.62	17.57	17.05	18.43
2.	Traffic Earnings <i>per KM</i> at 100 <i>per cent</i> Load factor (Rs)	20.22	20.49	21.95	21.89	21.92
3.	Break-even Load Factor considering only traffic revenue	73.19	76.23	80.05	77.89	84.08

**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 Corporation is 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 costs of operations as explained later.

### ***Route planning***

**3.12.4** Appropriate route planning to tap demand leads to higher load factor. The main reason contributing to low load factor is operation of buses in uneconomic routes. The routes are planned based on the availability of buses, traffic potential, representations from the public and feasibility to operate. The route-wise and service-wise performance of the Depots are regularly reviewed every month at Depot level, Region level and Zonal levels to take corrective action on low performance routes/services.

**3.12.5** The Corporation is not maintaining details of total route length in the State. A total of 95 *per cent* of the routes are nationalised and the Corporation operated 7,551 routes covering a length of 9.96 lakh KM†††† during 2007-08. The Corporation operates on profitable as well as non-profitable routes. The Corporation also did not maintain the consolidated position of the routes being profitable and unprofitable. As a result it could not monitor and reschedule the routes. The position in this regard in respect of selected seven Regions as made available to audit, is given in the Table below:

Particulars	Total No. of routes (Per cent)	No. of routes making profit (Per cent)	No. of routes not meeting total cost (Per cent)	No. of routes not meeting variable cost (Per cent)
<b>2004-05</b>	1529 (100)	355 (23)	1174 (77)	395 (26)
<b>2005-06</b>	1413 (100)	470 (33)	943 (67)	269 (19)
<b>2006-07</b>	1334 (100)	467 (35)	867 (65)	276 (21)
<b>2007-08</b>	1450 (100)	543 (37)	907 (63)	296 (20)
<b>2008-09</b>	1454 (100)	584 (40)	870 (60)	339 (23)

**3.12.6** It can be seen from the table that number of routes making profit increased from 23 *per cent* to 40 *per cent* during review period. Though some of the routes now appearing unprofitable would become profitable once the Corporation improves its efficiency, there would still be some uneconomical routes. Given the scenario of mixed routes and obligation to serve uneconomical routes, an organisation should decide an optimum quantum of services on different routes so as to optimise its revenue while serving the cause. Accordingly, the Corporation is reviewing the route-wise and service-wise performance at depot, Region and Zonal levels every month and corrective action is being taken wherever necessary.

#### ***Operation of uneconomic routes***

**Operation of buses in uneconomical routes resulted in loss of Rs 815.42 crore.**

**3.12.7** The Corporation is operating ordinary/ pallevelugu buses to cater to the needs of commuters in rural areas. During the year 2004-05, it operated 11,531 pallevelugu buses on various uneconomical routes which were gradually brought down to 9,668 in 2008-09 to contain the losses as there was loss on operations of these pallevelugu buses due to higher repair and maintenance expenditure, poor road conditions, higher MV taxes etc. The recovery of cost was low due to poor load factor on account of flow of traffic only during morning and evening schedules, shorter route lengths and more number of stoppages. Audit noticed that though the Corporation was able to recover its cost of operations on other routes, the trend was negative in pallevelugu buses. The loss incurred on these routes during the period 2004-09 was Rs 815.42 crore. Thus, operating profit earned by the Corporation on

†††† Data for 2008-09 not available with the Corporation.



other routes was drastically reduced (32.33 per cent) by the losses incurred on these buses.

Though the Corporation has improved its load factor from 58 per cent in 2004-05 to 69 per cent in 2008-09 on these uneconomic routes being operated under social obligation, still it was incurring losses. The Corporation did not submit any claim for compensating the losses on these uneconomic routes.

The Management in its reply accepted the reasons for incurring of losses on these uneconomic routes.

### ***Cancellation of scheduled kilometres***

**3.12.8** A review of the operations indicated that the scheduled kilometres were not fully operated mainly due to non-availability of adequate number of buses, shortage of crew and other factors like breakdowns, accidents, late arrivals, etc.

**3.12.9** The details of scheduled kilometres, effective kilometres there against and cancelled kilometres are furnished in the table below.

(in lakh KMs)

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Scheduled kilometres	NA	23825	24168	25067	26389
2.	Effective kilometres §§§§	23250	23100	23742	24520	25925
3.	Kilometres cancelled	NA	725	426	547	464
4.	Percentage of cancellation (against Scheduled KMs)	NA	3.04	1.76	2.18	1.76
<b>Cause-wise analysis</b>						
5.	Want of buses (KMs in lakh)	NA	3	5	3	2
6.	Want of crew (KMs in lakh)	NA	114	133	120	109
7.	Others***** (KMs in lakh)	NA	608	289	424	353
8.	Contribution per KM (in Rs )	6.87	7.85	8.86	9.34	9.80
9.	Cancellation for want of buses and crew (KMs in lakh)	NA	117	138	123	111
10.	Loss of contribution (8X9) (Rs in lakh)	NA	918.45	1222.68	1148.82	1087.80

**3.12.10** It can be seen from the above table that the percentage of cancellation of scheduled kilometres declined from 3.04 per cent to 1.76 per cent during 2004-05 to 2008-09. However, it remained on the higher side as compared to the best performers. The cancellations were very high under 'others' category and amounted to 3.01 crore KM during 2005-06 on account of agitations. Due to cancellation of

**Cancellation of scheduled KMs resulted in loss of contribution of Rs 43.78 crore.**

**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 figures of effective KM will not tally with the figures given in Annexure-18 as these reflect effective KM run against scheduled KM only.

\*\*\*\*\* includes breakdowns, tyres failure, agitations, lack of traffic etc.

scheduled kilometres for want of buses and crew, the Corporation was deprived of contribution of Rs 43.78 crore during 2005-06 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. The Corporation had Tata and Leyland make buses for which the following schedule of maintenance has been prescribed by the Original Equipment Manufacturers (OEMs).

Sl.No.	Particulars	Schedule
<b>1.</b>	<b>Engine Oil change</b>	
1 (a)	Tata make	Every 18000 KMs
1 (b)	Leyland make	Every 15000 KMs
<b>2.</b>	<b>Radiator Coolant</b>	
2 (a)	Tata make	Every 3,20,000 KMs or Every 2 years
2 (b)	Leyland make	Every 75,000 KMs

**3.13.2** The Corporation has also prescribed the following schedule of maintenance as follows:

Sl.No.	Maintenance Activity	Periodicity
Schedule -I	Verifying leakages of Diesel Oil, Engine Oil and Gear oil, Inflation of Tyres	Daily
Schedule-II	Lubricating, maintenance of battery, steering, brakes (including Sch-1)	Weekly
Schedule -III	Maintenance of Engine and connected points, Front wheel alignment (including Sch-1 and 2)	For every 12000-13000 KMs
Schedule-IV	Checking of Diesel Tank, Gear Box, Clutch assemblies (including Sch-1, 2 and 3)	For every 36000 KMs

**3.13.3** The details of schedule of maintenance due and actually carried out during 2007-09 are given below:

Year	Sch III		Sch IV		Total		
	Due	Done	Due	Done	Due	Done	Variance
2007-08	107550	103578	57511	55352	165061	158930	6131
2008-09 (up to Feb 09)	97107	94807	50882	49769	147989	144576	3413

It can be seen from the above that scheduled maintenance for a total of 6131 buses in 2007-08 and 3413 buses in 2008-09 could not be completed on time. The delay in carrying out maintenance as prescribed was due to shortage of staff and extra special operations undertaken during festivals.

The Management stated that the percentage of backlog was only 3.71 and 2.31 *per cent* respectively in the years 2007-08 and 2008-09.

However, efforts need to be made to reduce the delay in scheduled maintenance of the vehicles to improve their efficiency.

***Repairs and maintenance***

**3.13.4** A summarised position of fleet holding, over-aged buses, repairs and maintenance (R&M) expenditure for the last five years up to 2008-09 is given below.

Sl. No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Total buses (No.) <sup>μ</sup>	17818	16743	18017	17391	17285
2.	Over-age buses (more than 5 lakh KMs run)	12855	10536	13309	12937	12576
3.	Percentage of over-age buses	72.15	62.93	73.87	74.39	72.76
4.	R&M Expenses (Rs in crore)	384.44	416.42	509.39	538.05	550.01
5.	R&M Expenses per bus (Rs in lakh) (4/1)	2.16	2.49	2.83	3.09	3.18
6.	Percentage of manpower cost in R&M expenses	44.45	41.36	38.99	38.37	39.32

**3.13.5** It can be seen from the above that the R&M expenditure per bus per year increased from Rs 2.16 lakh to Rs 3.18 lakh during review period. This is partly due to replacement of vehicles at an extended life of more than 12 lakh KMs as against prescribed replacement life of 11 lakh KMs. This expenditure can be further reduced by opting for hire buses as detailed in para no. 3.16.2.

**Manpower cost**

**3.14.1** The cost structure of the organisation shows that manpower and fuel constitute 68.24 *per cent* of total cost during 2008-09. Interest, depreciation and taxes, the costs which are not controllable in the short-term, account for 12.50 *per cent*. Thus, the major cost saving can come only from manpower and fuel.

**3.14.2** Manpower is an important element of cost which constituted 30.7

**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)**

*per cent* of total expenditure of the Corporation in 2008-09. Therefore, it is imperative that this cost is kept under control and the manpower is utilised optimally to achieve high productivity.

The Table below provides the details of manpower, its cost and productivity.

<sup>μ</sup> excluding hired buses.

Sl.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Total Manpower (Nos.)	117400	115946	115529	113340	113370
2.	Manpower Cost (Rs in crore)	1359.20	1405.48	1744.77	1645.10	1777.28
3.	Effective KMs (in crore)	232.50	238.08	244.73	253.47	267.49
4.	Cost per effective KM (Rs) (2/3)	5.85	5.90	7.13	6.49	6.64
5.	Productivity <i>per day per person</i> (KMs)	51	53	55	57	59
6.	Total Buses (No.)†††††	19105	19357	19232	19558	20292
7.	Manpower <i>per bus</i>	6.14	5.99	6.01	5.80	5.59

The manpower Cost per effective KM had increased from Rs 5.85 in 2004-05 to Rs 6.64 in 2008-09 while the manpower productivity had increased from 51 Kms in 2004-05 to 59 Kms in 2008-09. The pay scales of the officers and employees are revised separately every four years. Pay revisions were made with effect from April 2001 and later with effect from April 2005 during the period under review. The manpower per bus remained below the All India Average of 6.5.

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)

**Unfruitful expenditure of Rs 251.06 crore due to underutilisation of crew.**

**Underutilisation of crew**

**3.14.3** The normal duty hours prescribed for operating crew were eight hours whereas it was seen that crew links were drawn for less than eight hours. The short utilisation was up to 4 hours. The unfruitful expenditure due to such short utilisation was Rs 251.06 crore for four years as detailed below.

Sl. No.	Particulars		2005-06	2006-07	2007-08	2008-09	Total
1	Duty Hours Lost (in lakh)	Drivers	94.99	94.60	93.12	94.37	377.08
		Conductors	75.89	71.51	66.55	66.92	280.87
2	Pay & Allowances of crew (Rs in crore )	Drivers	420.14	443.55	587.68	488.97	1940.34
		Conductors	402.15	408.16	554.23	458.90	1823.44
3	No. of crew	Drivers	41451	42253	43173	43113	169990
		Conductors	41399	41853	41099	43527	167878
4	Average Salary per Hour (in Rs )	Drivers	34.71	35.95	46.62	38.84	39.09
		Conductors	33.27	33.40	46.18	36.11	37.20
5	Total Loss due to under-utilisation (Rs in crore)	Drivers	32.97	34.01	43.41	36.65	147.04
		Conductors	25.25	23.88	30.73	24.16	104.02

The Management stated that the utilisation of crew was low due to operation of long distance special type services operated during night times and inter-state services. It was also stated that operation of ordinary buses for 16 hours was not feasible.

††††† Average number of buses (including hired) on road during the year.

The Management did not furnish any data in support of such services rendered by the Corporation so that its impact on overall utilisation of crew could be perceived.

**Fuel cost**

Consumption of HSD oil in excess of internal targets resulted in additional expenditure of Rs 222.91 crore.

**3.15.1** Fuel is a major cost element which constituted 31.43 *per cent* of total expenditure in 2008-09. Control of fuel costs by a road transport undertaking has a direct bearing on its productivity. Corporation's KMPL shows a steady decline from 2003-04. Though the KMPL obtained was above All India Average of 4.94, it remained lower than its own targets. Additional expenditure on account of excess consumption of HSD oil due to decline in KMPL as compared to the targets has resulted in additional expenditure of Rs 222.91 crore as detailed below:

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Gross Kilometres (excluding hire buses) (in lakh)	21398.25	21777.41	22679.69	23274.23	22496.22
2.	Target of KMPL fixed by Corporation	5.70	5.44	5.43	5.36	5.36
3.	Kilometre obtained per litre (KMPL)	5.29	5.27	5.26	5.23	5.25
4.	Actual Consumption (in lakh litres)	4042.53	4132.47	4312.83	4446.05	4286.6
5.	Consumption as per internal targets (in lakh litres) (1/2)	3754.08	4003.20	4176.74	4342.21	4197.06
6.	Excess Consumption (in lakh litres) (4-5)	288.45	129.27	136.09	103.84	89.54
7.	Average cost per litre (in Rs )	25.11	30.46	33.11	32.44	36.13
8.	Extra expenditure (Rs in crore) (6X7)	72.43	39.38	45.06	33.69	32.35

**3.15.2** It can be seen from the above table that the mileage obtained *per litre* had shown a declining trend over the period under review though the same was more than that of the all India average. However, the Corporation could not achieve its own targets. The failure of the Corporation to achieve its target

North East Karnataka State Road Transport and Uttar Pradesh registered mileage of 5.45 and 5.33

(Source: STUs profile and performance 2006-07 by CIRT, Pune)

resulted in excess consumption of 7.47 crore litres of fuel valued Rs 222.91 crore.

The Management stated that the increase in fuel consumption was due to introduction of high powered BS-II model vehicles as per statutory provisions and high end products like Volvo, Meghdoot and Super luxury buses. It was also stated that contract drivers who have no exposure to fuel conservation techniques had to be recruited due to ban on recruitment.

**3.15.3** A test check in Audit of Petrol, Oil and Lubricants consumption (POL) statements for two months each year under review, in seven selected Regions showed that the Corporation had a mechanism in place to monitor vehicle wise or driver wise data for consumption of fuel so as to exercise effective management control. Further, the Corporation had prescribed norms for ideal driving speed to enhance fuel economy.

**Consumption of engine oil and coolant in excess of norms resulted in additional expenditure of Rs 13.60 crore.**

**3.15.4** Coolant and engine oil are changed in accordance with the schedule prescribed by the Original Equipment Manufacturer (OEM). The norm for engine oil is 16.5 litres and 10.5 litres for every 18,000 Kms in respect of TATA and Ashok Leyland buses respectively. Similarly, for Coolant the norm is 12 litres for every 3.2 lakh Kms or every two years for TATA make and 4.5 litres for every 75,000 Kms for Ashok Leyland.

The audit scrutiny revealed that there was excess consumption of engine oil which was on increase up to 2007-08 with a marginal reduction in 2008-09. The Corporation consumed engine oil in excess of norms to the extent of 12.87 lakh litres valued at Rs 7.91 crore during 2004-05 to 2008-09. Similarly, against the requirement of 6.24 lakh litres of radiator coolant, actual consumption during 2004-09 was 12.54 lakh litres resulting in excess consumption of 6.30 lakh litres valuing Rs 5.69 crore.

An analysis of the excess consumption of coolant when compared to the norms fixed revealed that though the existing coolant system was virtually 'no loss cooling' system and does not warrant any top up between the coolant change intervals, coolant were being used for top up and other miscellaneous purposes resulting in additional consumption of coolant.

The Management stated that the engine oil needs to be topped up whenever necessary depending on the condition of the engine and during overhauls, crank case dilution with HSD oil etc. It was also stated that the consumption of coolant was high due to loss of coolant on account of evaporation, spill over and leakage during checking of coolant levels and top overhauls and at the time of replacement of radiator related parts.

However, as per the OEM specifications, there is no requirement for top-up of the engines in between the oil changes. Even if done the same is to be done using reclaimed oil instead of new engine oil.

#### **Cost effectiveness of hired buses**

**Due to hiring of buses less than the authorised, Corporation could not save Rs 152.60 crore.**

**3.16.1** The Corporation started (1979) hiring private buses on Kilometer payment basis (KM Scheme). Agreements with the private bus owners were initially entered into for a period of three years. The owners of these buses were required to provide buses with drivers and incur all expenditure for the running of the buses. The Corporation would provide conductors for these buses and pay hire charges as per the actual Kilometers operated by these hired buses. During 2004-09, the Corporation incurred a net loss of Rs 71.40

crore from the operation of hired buses as shown below.

**(Amount in Rs)**

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
	<b>Own fleet</b>					
1.	Cost <i>per</i> effective KM	14.80	15.62	17.57	17.05	18.43
2.	Traffic Revenue <i>per</i> effective KM	13.83	15.44	17.11	17.59	18.84
3.	Net Revenue <i>per</i> effective KM	-0.97	-0.18	-0.46	0.54	0.41
	<b>Hired buses</b>					
4.	No. of Hired buses at the end of the year	1593	1794	1580	1719	3279
5.	Cost <i>per</i> effective KM <sup>£</sup>	13.71	14.08	14.80	14.96	16.19
6.	Traffic Revenue <i>per</i> effective KM	12.65	13.31	14.76	15.00	15.37
7.	Net Revenue <i>per</i> effective KM	-1.06	-0.77	-0.04	0.04	-0.82
8.	Total effective KMs operated (in crore)	19.13	21.01	18.82	21.32	42.73
9.	Profit/ Loss from hired buses (Rs in crore) (7X8)	-20.28	-16.18	-0.75	0.85	-35.04
10	Cost Savings <i>per</i> effective KM on operation of Hired buses (1-5)	1.09	1.54	2.77	2.09	2.24
11	Savings in cost (Rs. in crore) (8X10)	20.85	32.36	52.13	44.56	95.72

**3.16.2** It is observed from the above table that the cost of operation of hired buses *vis-a-vis* owned bus was less. The Corporation had a cost savings of Rs 245.62 crore since the saving in cost per KM was from Rs 1.09 to Rs 2.24 during the review period. The benefit of saving in cost could not be derived as the revenue per Km was still lower than own buses due to utilising the hired buses on uneconomic routes.

The Board of Directors permitted to operate 10, 15, 15, 15 and 20 *per cent* of its fleet strength as hired buses during 2004-05 to 2008-09 respectively. However, the Corporation operated only 8.29, 9.20, 8.17, 8.74 and 16.09 *per cent* respectively during the said period. As a result, desired cost savings in operation of hired buses could not be achieved. The loss of cost saving due to operation of less number of buses on hire than authorized by the Board worked out to Rs 152.60 crore as detailed below:

Sl.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	Average RTC buses held	17615	17705	17770	17944	17096
2.	Average Hire buses held	1593	1794	1580	1719	3279
3.	Total buses held (1+2)	19208	19499	19350	19663	20375
4.	Percentage of hired buses (2/3*100)	8.29	9.20	8.17	8.74	16.09
5.	Percentage of hire buses permitted	10	15	15	15	20
6.	Hire buses that could be deployed ****	1957	3124	3136	3167	4274
7.	Shortfall (6-5)	364	1330	1556	1448	995
8.	Vehicle Utilisation per day (Kms)	332	335	347	352	360
9.	KMs lost per annum (in crore) (7X8X365)	4.41	16.26	19.71	18.60	13.07
10.	Saving in CPK due to hire (in Rs per KM)	1.09	1.54	2.77	2.09	2.24
11.	Loss of saving on cost (Rs in crore) (9X10)	4.81	25.04	54.60	38.87	29.28

£ This includes the contract price plus conductors pay plus M V tax  
\*\*\*\* {(Average RTC buses held X 100) / (100 - Percentage of hire buses permitted)} minus Average RTC buses held.

The Management accepted that the private buses were engaged under hire scheme to save cost on personnel and maintenance and to register some surplus margin. It also stated that the Corporation could not hire as directed by the Board of Directors due to poor response in some Regions and anticipated industrial unrest due to surplus existing manpower and the existing infrastructure resources. The reply is not convincing since the Board might have taken into consideration all related factors.

***Reimbursement of comprehensive insurance to private bus owners***

**Avoidable expenditure of Rs 14.84 crore due to reimbursement of comprehensive insurance to hire bus owners.**

**3.16.3** As per the Notice inviting Tender (NIT) (clause 19) and hire agreement (clause 5(iii)), signed from time to time, the Corporation had no liability for damages to vehicle so hired during the period under hire with the Corporation. Further, the Corporation was neither liable to pay any claims arising out of Motor Accident Claims Tribunal in respect of accidents in accordance with the clause 4(vi) nor any damages caused to the vehicles during the period of agitation / accident. Contrary to the above provisions, the agreement also provided for payment of comprehensive insurance premiums under clause 6(iii). Accordingly, the Corporation has already paid Rs 10.05 lakh and is liable to pay Rs 2.08 crore§§§§§ towards the compensation on the directions of the court. However, these amounts were not being recovered from the bus owners since in majority of cases agreement terms had already expired. As the liability of the Corporation was limited to risk of passengers travelling in the bus and third party, if any, the Corporation should have restricted the reimbursement of premium to cover both these risks only. Thus, due to the contradictory provisions in the agreement, the Corporation incurred avoidable expenditure of Rs 14.84 crore being the difference between third party risk coverage and comprehensive insurance (48.61 *per cent* of the premium relates to passenger risk and third party risk).

The Management stated that the Corporation is reimbursing the comprehensive insurance premium as in case of damages caused to hire buses involved in accidents/ agitations etc., when operating under hire scheme, the capital investment made on hire bus by the owner is totally lost.

The reply is not convincing since the hirer is not responsible for any liability towards damages to the vehicle under clause 5(iii).

**Body building**

**3.17.1** The Corporation has a body building unit. The Corporation also outsourced fabrication of buses to private contractors. The cost per bus of body building unit *vis-a-vis* cost incurred by outsourcing the job revealed that outsourcing of fabrication of buses is economical as compared to in-house cost. While the cost of fabrication per bus was Rs 6.00 lakh in its body building unit, as compared to outsourcing cost of Rs 5.79 lakh per bus during

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§§§§§ pertains to seven selected regions.



2007-08. Thus cost saving can be achieved by closing down the body building unit. The body building is also not a core activity of the Corporation.

### 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 Corporation's affairs. This issue has been covered in Paragraphs 3.10.1 to 3.10.5. The section below deals with the Corporation's 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 Corporation provides free/ concessional passes to various categories of Commuters like students, senior citizens, State Government servants etc. The State Government reimbursed 50 *per cent* of concession up to 2005-06 and 100 *per cent* of concession amount from 2006-07 for student passes and senior citizen passes to the Corporation. The number of passes issued under each category during 2004-05 to 2008-09, amount recoverable and the amount actually recovered are shown in the Table below.

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1.	No. of student passes issued (in lakh)		67.96	72.17	74.74	79.88
2.	No. of Senior Citizen passes issued		4803	4248	3772	3589
3.	Amount recoverable for student passes (Rs in crore)		300.92	328.45	342.93	359.59
4.	Amount recoverable for senior citizen passes (Rs in crore)		3.46	3.06	2.72	2.58
5.	Amount recoverable for other concessional passes (Rs in crore)		73.83	79.21	88.31	107.20
5.	Total amount recoverable from Government including Others (Rs in crore)	167.50*	378.21	410.72	433.96	469.37
6.	Amount actually received in cash (Rs in crore)	100.00	128.00	100.00	150.00	160.00
7.	Amount adjusted to MV tax (Rs in crore)	67.50	237.31	226.20	240.79	263.36
8.	Unrealised claims (Rs in crore)*****	0.00	12.90	84.52	43.17	46.01

\* 50 *per cent* of Rs 335.00 crore being the total concession extended by RTC.

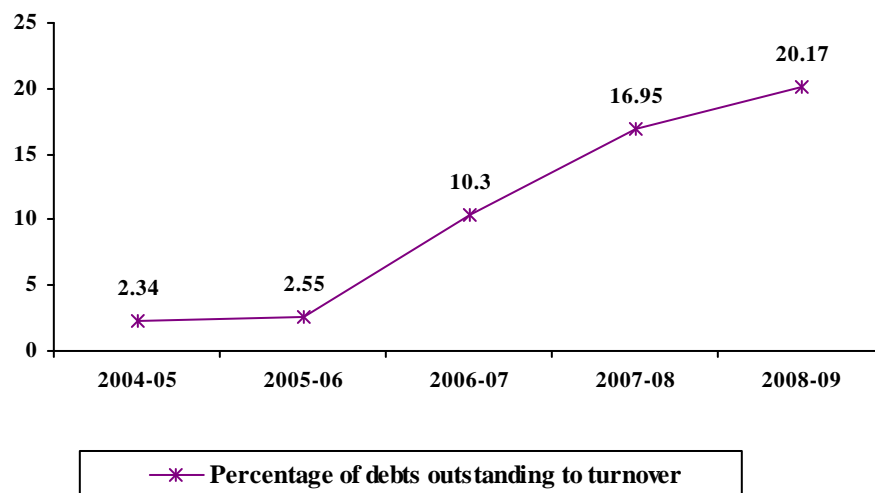
**3.19.2** It can be seen from the above that against the balance of Rs 186.60 crore due from the State Government during the five years ending 2008-09,

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\*\*\*\*\* It represents the net amount receivable from the State Government after adjusting MV Tax payable.

the State Government had guaranteed for debt servicing of the loan for Rs 140.59 crore pertaining to unrealised claims of 2005-06 to 2007-08. The unrealised amount from Government as on 31 March 2009 was Rs 46.01 crore.

**3.19.3** An analysis in Audit of the debts outstanding as a percentage of turnover for the five years ending March 2009 are shown in the graph below.



From the above, it can be seen that the outstanding dues increased from Rs 68.81 crore (2.34 per cent) in 2004-05 to Rs 854.64 crore (20.17 per cent) in 2008-09. Besides, reimbursement of concessional amount (Rs 772.83 crore), it includes receivables in respect of stall rents (Rs 10.70 crore), police warrant bills (Rs 13.29 crore), NGO's subsidy (Rs 1.32 crore) and others (Rs 56.50 crore).

The Management replied (September 2009) that constant persuasion is being made to realise the pending debts. However, the fact remains that the above amounts were pending since long.

**Realignment of business model**

**3.20.1** The Corporation is mandated to provide an efficient, adequate and economical road transport to public. Therefore, the Corporation cannot take an absolutely commercial view in running its operations. It has to cater to uneconomical routes to fulfil its mandate. It also has to keep the fares affordable. In such a situation, it is imperative for the Corporation to tap non-traffic revenue sources to cross-subsidize its operations. However, the share of non-traffic revenues (excluding reimbursement of concessional passes) was nominal at 2.94 to 6.60 per cent of total revenue during 2004-09. This revenue of Rs 800.27 crore during 2004-09 mainly came from shop rentals (Rs 294.39 crore), advertisements (Rs 33.71 crore), sale of scrap materials/vehicles (Rs 206.61 crore), clerical/service charges (Rs 86.77 crore), sale of power (Rs 19.83 crore) and others (Rs 158.96 crore). Audit observed

that the Corporation has non-traffic revenue sources which it has not tapped substantially as explained below.

### ***Development of property***

**3.20.2** Over a period of time, the Corporation has come to acquire sites at prime locations in cities, district and Tehsil headquarters. The Corporation generally uses the ground floor/ land for its operations, leaving an ample scope to construct and utilise spaces above. Audit observed that the Corporation has land (mostly owned/ leased by Government) at important locations. However, the Corporation has not maintained consolidated details of locations in Cities (municipal areas), District Headquarters and Tehsil Headquarters. Audit scrutiny revealed that the Corporation started utilising its vacant land/ terraces and invited tenders on 16 occasions between July 2003 and September 2008 for development of vacant sites at 133 locations under Build, Operate and Transfer (BOT) scheme and 13 projects were awarded between June 2005 and August 2009 for development of 74,826 Square metre (SM) area. Out of this, two projects (3,251 SM) were cancelled subsequently due to dispute with Tirupati Municipality over ownership of the land (July 2007) and backing out of the successful bidder (February 2008). Out of the remaining 11 projects (71,575 Sq. mt), three projects (42,543 Sq. mt area) are yet to commence and balance eight projects (29,032 Sq. mt area) were under various stages of construction.

As per the BOT scheme, land/ premises were handed over to the successful bidder (Licensee) for a period of 30 to 33 years. The revenue expected to be generated from these 11 projects during the entire license period is estimated at Rs 2,309 crore. As against a revenue of Rs 12.78 crore to be realised by 31 March 2009, Rs 10.19 crore has been realised from these projects.

### **Fare policy and fulfillment of social obligations**

#### **Existence and fairness of fare policy**

**Despite approval from Government, Corporation failed to revise fares in selected services.**

**3.21.1** The proposals of fare revision are submitted by the Corporation based on the increase in cost of inputs viz., HSD oil, tyres and personnel cost. Based on the proposals submitted by the Corporation from time to time the State Government approves revision of fares. The fares were revised in February 2003 and February 2006 during the period under review.

Table below indicates the fare being charged by the Corporation during the period 2004-05 to 2008-09.

**Fare table for ordinary buses**

Stages	Distance (KMs)	From 04.02.2003 to 07.02.2006	08.02.2006 onwards
1	5	Rs. 3	Rs. 3
2	10	Rs. 4	Rs. 4
3-20 (one stage for every 5 KM)	11-100	35 ps. Per KM	38 ps. Per KM

On review of the proposals of the Corporation audit observed that:

- ❖ element-wise normative cost was not calculated for each type of service;
- ❖ the Corporation did not submit claims incurred on servicing uneconomic routes under social obligation. The Corporation utilised 59 *per cent* to 71 *per cent* of the fleet (excluding city services) as pallevelugu buses during the period of 2004-05 to 2008-09 on uneconomical routes; and
- ❖ The State Government approved (February 2006) revision of fares in all sectors. However, the Corporation did not revise fares in respect of city services and suburban services up to 8 KMs as was done at earlier occasion in February 2003. This resulted in loss of revenue of Rs 23.60 crore. Consequently, fare for bus passes also could not be revised and the amount of Rs 54.69 crore remained unclaimed from the State Government. Similarly, hire charges recoverable from PSUs were also not revised in respect of City ordinary services from Rs 21 to Rs 23 causing in short recovery of Rs 2.06 crore from March 2006 to July 2008.

The Management stated (September 2009) that during the years 2003-04 to 2008-09, the load factor (OR) in respect of city services increased by 13.33 *per cent*. Therefore, the Corporation could contain the deflection of traffic to other modes of transport due to non-revision of city fares and achieved the above growth of OR. It was also stated that fare of bus passes and recovery from PSUs was also not revised since it was linked with city services.

However, the increase in OR cannot be attributed only to non-revision of fare since other factors such as increase in population, non augmentation of buses also contributed to the increase of OR. Further, revision of hire charges is not linked with general fare revision.

**3.21.2** Further, the fare policy of the Corporation has no scientific basis as it does not take into account the normative cost. Thus, there is a risk of

commuters paying for inefficiency of the Corporation. The table below shows how the Corporation could have curtailed cost and increased revenue with better operational efficiency.

(in Rs )

S.No.	Particulars	2004-05	2005-06	2006-07	2007-08	2008-09
1	Operating expenditure <i>per</i> KM	13.00	13.75	14.88	14.95	16.14
2	Operating revenue <i>per</i> KM	13.36	14.96	16.60	17.02	17.60
3	Loss of revenue <i>per</i> KM due to less vehicle productivity	0	0	0	0	0
4	Excess cost <i>per</i> KM due to low manpower productivity	0	0.24	0.24	0.29	0.23
5	Excess cost <i>per</i> KM due to excess consumption of fuel	0.31	0.17	0.18	0.13	0.12
6	Ideal revenue <i>per</i> KM (2+3)	13.36	14.96	16.60	17.02	17.60
7	Ideal cost <i>per</i> KM [1-(4+5)]	12.69	13.34	14.46	14.53	15.79
8	Net revenue <i>per</i> KM (2-1)	0.36	1.21	1.72	2.07	1.46
9	Net ideal revenue <i>per</i> KM (6-7)	0.67	1.62	2.14	2.49	1.81
10	Effective KMs (in crore)	232.50	238.08	244.73	253.47	267.49
11	Avoidable loss (Rs in crore) [(8-9) x 10]	72.08	97.61	102.79	106.46	93.62

The above Table does not take into account other inefficiencies such as excess tyre cost, defective route planning, etc. Nonetheless, it shows that the operating profit could have been higher by Rs 472.56 crore†††††, if the operations were properly planned and efficiently managed, than what they actually were. Thus, the case made by the Corporation for increase in fare, includes its inefficiencies and in a way would make the commuters pay more than what they should be actually paying.

The above facts lead to conclude that it is necessary to regulate the fares on the basis of a normative cost and it would be desirable to have an independent regulatory body (like State Electricity Regulatory Commission) to fix the fares, specify operations on uneconomical routes and address the grievances of commuters.

### Adequacy of services on uneconomical routes

**3.22.1** The Corporation had about 40 *per cent* profit making routes in the selected Regions as of March 2009 as shown in Table under paragraph 3.12.5. However, the position would change if the Corporation improves its efficiency. Nonetheless, there would still be some routes which would be uneconomical. Though the Corporation is required to cater to these routes, the Corporation has not formulated norms for providing services on uneconomical

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††††† This figure will not tally with the total of figures given in paragraphs 3.14.2 and 3.15.2 on account of rounding off the excess cost per KM due to low productivity and excess consumption of fuel.

routes. In the absence of norms, the adequacy of services on uneconomical routes cannot 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.

The Corporation was serving on all motorable routes and there were no routes served by private operators only. The Corporation was not having any specific norms for ensuring adequacy of services on uneconomic routes. However, Corporation was operating buses in almost all rural areas based on minimum demand. Though the Corporation was operating buses in these uneconomical routes ranging from 43 *per cent* to 59 *per cent* during the years 2004-09, it did not get the reimbursement of the excess cost of operation from the Government.

### **Monitoring by top management**

### **MIS data and monitoring of service parameters**

**3.23.1** For an organisation like a Road Transport Corporation to succeed in operating economically, efficiently and effectively, there has 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 the achievement of which would make an organisation self-reliant. In the light of this, Audit reviewed the system obtaining in the Corporation. The status in this regard is given below.

The Corporation has an exhaustive MIS system in place at all levels i.e., Depot, Region, Zone and Corporate Levels which covers all key performance parameters at monthly intervals. The targets are being fixed by the Corporate Office and communicated to Zones and Regions for implementation at Depot level. The MIS in the Corporation is functional, effective and aids the top management in arriving at crucial decisions. The achievements of the Depots and the Regions are compared with the targets in the regular monthly meetings at Corporate, Zonal and Regional levels and wherever deficiencies are there, necessary instructions are being issued. The operational performance of the Corporation is also being regularly monitored by its Board of Directors.

### **Conclusion**

#### ***Operational performance***

- ❖ ***The Corporation could not keep pace with the growing demand for public transport as its share declined from 84.36 per cent in 2004-05 to 80.03 per cent in 2007-08.***

- ❖ *The Corporation also did not ensure economy in operation of its manpower as the crew was not optimally utilized and fuel efficiency was not as per its own targets.*

**Financial management**

- ❖ *The Corporation could not succeed in replacing all its overage buses.*
- ❖ *The Corporation has tremendous potential to tap non-conventional sources of revenue but it did not have a policy in place to undertake large scale tapping of such funds.*

**Fare policy and fulfilment of social obligations**

- ❖ *The Corporation has no fare policy and the revision was not based on normative cost.*
- ❖ *No policy had been laid down for operation of uneconomical routes as a social obligation.*

**Monitoring by top management**

- ❖ *The Corporation has an effective system of monitoring at all levels.*

**In view of the foregoing, there is still some scope to improve the performance of the Corporation.**

**Recommendations**

**The Corporation may:**

- ❖ *maintain proper records of buses declared as scrapped and actually scrapped so as to work out the actual requirement of buses.*
- ❖ *make cost analysis at Corporate level in respect of routes operated into profitable and unprofitable so that it could be monitored at top level.*
- ❖ *monitor its fuel efficiency by implementing the norms of OEM and utilize the available manpower to the optimum level and enhance its productivity.*
- ❖ *hire more number of private buses as the cost of operation of hire buses is much lower than that of Corporation's own fleet.*
- ❖ *keep details at Corporate level, of lands owned by it in municipal cities, District Headquarters and Tehsil Headquarters so that a policy for utilisation of vacant space is chalked out.*

**The Government may:**

- ❖ *consider creating a regulator to regulate fares and also services on uneconomical routes.*