CHAPTER VII
FINDINGS AND SUGGESTIONS

7.1 FINDINGS

Going by the latest report of the Comptroller and Auditor General (CAG) of India, the state government-owned Public Sector Undertakings (PSUs) are in dire need of reforms if the accumulated losses are to be tamed.

Of the total fifty-seven PSUs in the state, as many as twenty-one have accumulated losses to the tune of Rs. 4,418.59 crores between March 2006 and March 2007, against a public investment of Rs. 3,508.48 crores in the same period. There were 32 PSUs that made aggregate profits of Rs. 1,421 crores, seven of them declaring dividends of Rs 82.98 crores, the report said.

The CAG report said twelve of the twenty-one should either undergo immediate reforms or shut down shop to tide over the losses. "In view of the poor turnover and continuous losses, the Government should review and either improve the performance of these 12 PSUs or consider their closure," the report said.

The report also showed that despite the increasing losses, the government had been flowing against the tide, increasing its total investment in the PSUs from Rs. 44,336 crores in March 2006 to Rs. 47,007 crores in March 2007. During the same period budgetary support to these PSUs also increased from Rs. 4,282 to 5,927 crores, it said.

Of the twelve, seven – Gujarat Sheep and Wool Development Corporation, Gujarat State Road Development Corporation, Gujarat State Rural Development Corporation, Gujarat Growth Centers Development Corporation, Gujarat Urban Development Company, Gujarat Minorities Finance and Development Corporation, and GSFS Capital and Securities — have had turnovers less than Rs. 5 crores even five years after they were set up.

The remaining five — Gujarat State Land Development Corporation, Gujarat State Handloom and Handicrafts Development Corporation, Tourism Corporation of Gujarat, Gujarat State Road Transport Corporation (GSRTC), and Gujarat State Financial Corporation — incurred losses for the last five consecutive years leading to negative net worth, it said.
According to the report, of the loss making giants, GSRTC takes the cake with investments of Rs. 553.06 crores and accumulated losses worth Rs. 1,242 crores — over 25 per cent of the total. Next in terms of size of the losses comes the Gujarat State Textiles Corporation at Rs. 908 crores.

GSRTC is incurring loss due to lack of proper planning. In year 2008-09 it has incurred a loss of Rs. 158.28 crores. The fixed route of Corporation is making it difficult to fight against the private operators. As per the recommendation of CAG, Corporation should utilize the Vehicle fully and properly and should use the unutilized land and other assets for commercial purpose.

Corporation has 7861 total number of fleet this comprises of 3791 old buses (Bus has already covered more than 7 lacs kilometers of route) as per the norms of government bus can be used up to 7 lacs kilometers. After that the RTO passing is not given. The state government has increased the kilometer distance up to 8 lacs. On an average the use of bus is 92% where as the use of buses of GSRTC is 87.7%. GSRTC keeps 10% of the fleet as reserve. As per the recommendation of CAG it should reduce it to 4% only. So that 6% of the fleet can be used to earn revenue.

Parcel service of GSRTC has been privatized. The party with which the agreement was signed had not paid Rs. 63.59 lacs .As per the report of CAG, Corporation is able to make profit but no steps to improve the performance has been taken by it. Corporation has 4.78 lacs sq. mts. of land which is not used. This land can be commercialized to earn revenues. Corporation has 125 depots functioning under it; more revenue can be generated by adding more floors on the depot.

After analyzing data with appropriate tools, inferences, observations were made which are incorporated in this chapter. Following are some of the broad findings and observations of the study.

1. **Debt Equity Position**

The debt equity position of GSRTC has constantly gone up from the year 2005-06. The higher ratio of debt-equity reveals the facts that the outside creditors have a larger claim than the owners of the business. The capital contribution has gone down to Rs. 15 crores in year 2008-09 from Rs.17.86 crores in year 2002-03. Whereas the amount of Loans for various purpose like purchasing of new buses, upgradation of information technology and for paying passenger tax has shown an increasing trend.
Many new buses (mainly CNG) were purchased. Looking at the competition from a private operator, GSRTC has also felt a need to upgrade the facility and considering this information technology is implemented, which led to increase in the amount of loan borrowed. The organization with high-debt position will have to accept stricter conditions from the lenders while borrowing money.

2. Liquidity Position

Year after year the current position of GSRTC has become worst. It is generally believe that 2:1 ratio shows a comfortable working capital position. None of the year the thumb rule of 2:1 i.e. current assets should be more than that of the current liabilities has been maintain by the Corporation.

3. Fixed Assets Position

The Fixed Asset Turnover Ratio of GSRTC is appreciating. In last two year i.e. 2007-08 to 2008-09 there was a tremendous growth in the ratio. From 12.88 in year 2006-07 it has increase to 53.91, i.e. there was a increase by approximately 400%, which mean that GSRTC has managed and utilised their fixed assets fully. As per the report of CAG, presented to the government of Gujarat, few recommendation were made for improving the performance of GSRTC. As a part of implementing the same recommendation given, GSRTC has implemented the plan of maximum utilisation of the available resources. According to CAG report, GSRTC has 4.78 lacs sq. mts. of land lying unused. As per the recommendation given by CAG on the performance of GSRTC and steps recommended, corporation is planning to implement few in the first phase.

- 22 Bus terminals plan are ready and for that consultants are appointed. GSRTC has already prepared R.F.T. The plan includes 13 direct level and other important cities like Rajkot, Bhavnagar, Amreli, Patan, Surat- Karodara, Navsari and others.
- Depots/Bus Station building will also be covered under the commercialization plan. Under the plan approximately 60% of the ground floor will be reserved for GSRTC and rest 40% will be commercially developed. The front side of the building will be reserved for the corporation.
- 40% of the building will be given for 90 years of lease, where by the party is suppose to make one time premiums payment.
- Advertisement
ATM-41 ordered released. Each Divisional level possibility is also being evaluated.

4. Return on Capital Employed

- The ratio has shown a negative trend (except in year 2006-07). There was a huge negative return till year 2005-06. Only in year 2006-07 it has a positive return. The main reason for the positive return was implementation of new schemes for passengers. For example 50% concession for daily commuters etc. The schemes was welcomed by all the passenger and has resulted into a positive return. Then after again it has shown a negative trend but as compare to the initial year of 2002-03 the negativity has reduced.

- Out of the total vehicles held, GSRTC reserves 10%. Reserved vehicles are utilized for the purpose of RTO passing, Breakdowns, Casual Contract, any other emergency. So the proportion of the reserve ratio of fleet is also a major factor responsible for low return on the total capital employed. The fleet reserve proportion of GSRTC was much higher as compare to other STUs.

- Many a time it was observed that, due to poor management more time was taken for the repair purpose, which results into number of off-road vehicles.

- Number of passenger travelled by GSRTC in year 2002-03 was 12733.63 lacs which had drop to 8501 lacs in year 2005-06. Again in year 2006-07 there was a drop in the number which had increased to 8750 lacs in the recent year.

- One of the prime factors responsible for the utilization was number of breakdown. In the same year 2008-09, the number of breakdown in a year had reduced drastically. One can say as the number of breakdown had gone down it had resulted into improvement in the utilization rate.

5. Return on Equity

Since long GSRTC was incurring a huge loss, the ratio of return on equity has shown negative result. It means that GSRTC was not in a position give return on the contribution made by it. The state government and Central Government have even reduced the contribution towards the equity. We can not conclude by saying that the GSRTC should try to improve the position of the return as the objective behind working of GSRTC is Social Obligation. One should not expect it to earn a profit, but
at the same time it should also try to maintain the position of no profit no loss. The contribution made by the Sate Government and the Central Government towards GSRTC is as follow:

- During the year 2001-02, State Government had release Rs. 45052.57 lacs of equity capital, the capital contribution of Central Government remains at Rs. 10627.82 lacs as on 31<sup>st</sup> March, 2002.

- During the year 2003-04, State Government had release Rs. 2011 lacs of equity capital, so as on 31<sup>st</sup> March, 2004; the equity share capital of State Government had increase to Rs. 48468.31 lacs. The capital contribution of Central Government remains at Rs. 10627.82 lacs as on 31<sup>st</sup> March, 2004.

- During the year 2004-05, State Government had release Rs. 1769 lacs of equity capital, so as on 31<sup>st</sup> March, 2005, the equity share capital of State Government had increase to Rs. 50237.31 lacs. The capital contribution of Central Government remains at Rs. 10627.82 lacs as on 31<sup>st</sup> March, 2005.

- During the year 2005-06, State Government had release Rs. 1769 lacs of equity capital, so as on 31<sup>st</sup> March, 2006, the equity share capital of State Government had increase to Rs. 52006.31 lacs. The capital contribution of Central Government remains at Rs. 10627.82 lacs as on 31<sup>st</sup> March, 2006.

- During the year 2006-07, State Government had release Rs. 33 crores of equity capital, so as on 31<sup>st</sup> March, 2007, the equity share capital of State Government had increase to Rs. 553.06 crores. The capital contribution of Central Government remains at Rs. 10627.82 lacs as on 31<sup>st</sup> March, 2007.

- As on 31<sup>st</sup> March, 2007, corporation had total contribution of Rs. 553.06 crores of State Government and Rs. 106.28 crores of Central Government.

- As on 31<sup>st</sup> March, 2009, corporation had total contribution of Rs. 583.06 crores of State Government and Rs. 106.28 crores of Central Government.

6. **Return of Assets**

Corporation’s fixed assets mainly represents vehicles which was having 83.01% of total Fixed Assets, Land represents 0.72%, Building represents 10.36%, Departmental Vehicles represents 3.31% and other Plants and Machinery represents 2.60% of fixed assets. There was a huge variation in the ratio of return on assets. In year 2006-07 to
2007-08, there was a positive return whereas for all other period the trend was negative. The ratio gives a clear indication of the position getting worst.

- Around 89% of the total routes are running into losses and most of these routes are not even covering running cost. According to CAG report presented, most of the route of GSRTC was unproductive. For e.g. many parallel routes are operated in between Baroda to Ahmedabad etc. Such parallel run routes result into unproductive routes. The seating capacity was not fully utilized. The total cost remains same, but the revenue from the similar routes results into less traffic revenues.

- The arguments against such parallels run routes by the top authority was that, during a peak hours, mainly from 7:00 A.M to 10:00 A.M and 4:30 P.M to 7:00 P.M, even if routes are parallel at certain point, they have to run, looking at the requirement of daily commuters. During rush hours, they have to plan routes from different places.

- There was no control on parallel run routes. For e.g. a route started from Bhavnagar to Baroda and a route from Ahemadabad to Baroda can come to a parallel line some where. Now the point is there are so many routes starting from different depot and meeting at one particular destination. One can not planned or not possible to differentiate such routes.

7. **Profitability Position**

- **Operating Profit Ratio**
  
  An average Operating Profit Ratio of GSRTC was (1.50). The ratio was very high in year 2002-03, which had decreased drastically in the next year. In the year 2003-04 the ratio was showing positive result by improving the result by 70% in totality. Year 2006-07 and 2007-08 was significant year as in both the year the result was positive. The recent year 2008-09 is the year of concern as the ratio of -1.64 is more than the average of last seven years.

- **Net Profit Ratio**
  
  Year by year the net profit ratio has become worsened. Against an average of -5.78; the position for all the seven years was not appreciating. The amount of loss in the year 2003-04 to 2005-06 added to the worst condition of the corporation, where the amount of loss was even more than that of the average position.
• Operating Profit or Loss

As such, in the last seven years, GSRTC had not earned any profit. But at the same time it had added to the total amount of loss. Year by year the loss had accumulated and in the last year it has accumulated to Rs. (20498). If one analysis the data, in the previous year 2007-08, the loss was amounting to Rs. (698) and in the recent year 2008-09, it had increased by 129%. In year 2003-04 the amount of loss had reduced by 46%, i.e. from Rs. (15860) to Rs. (8707). After 2004-05, there was an increasing trend in the loss, which in the year 2007-08 has tremendously decrease to Rs. (698). Year 2007-08 was a significant year for the corporation.

8. Revenue Assessment

From year to year, corporation has revised its fare structure, looking at the increase in the price of Diesel, Fuel and Spare Parts etc. In the last seven years the per cent change in the fare structure are as follow:

- Year 2002-03, fare increased by 9.36% against the scheduled kilometer of 10199.21 lacs resulting into EPKM of 943.11.
- Year 2003-04, fare increased by 5.28% against the scheduled kilometer of 10126.16 lacs resulting into EPKM of 997.57.
- Year 2004-05, fare increased by 5.12% against the scheduled kilometer of 9250.79 lacs resulting into EPKM of 1057.87.
- Year 2005-06, fare increased by 7.52% against the scheduled kilometer of 8899.04 lacs resulting into EPKM of 1134.16.
- Year 2006-07, no revision in the fare structure against the scheduled kilometer of 7355.97 lacs resulting into EPKM of 1233.34.
- Year 2007-08, no revision in the fare structure fare against the scheduled kilometer of 9970.21 lacs resulting into EPKM of 1258.66.
- Year 2008-09, fare increased by 5.32% against the scheduled kilometer of 10106.81 lacs resulting into EPKM of 1333.11.

(a) Revenue from Passengers

➢ The revenue from passengers was the main source of revenue for the corporation. In the last seven years the revenue from passengers had increased. On 10th November, 2005 new schemes for daily commuter was introduced, where by
passengers are suppose to pay only 50% of the total fare. Under the schemes 3.70 lacs of daily concession pass was issued which has generated Rs. 60 crores.

- Passenger oriented schemes like “Returned Advance Ticket”, “Group Booking Ticket”, “Weekend Tour Ticket” etc. is offered at concessional rate.
- To door-step delivery of ticket, agents are nominated by Corporation in each city.
- For half ticket the age limit is raised to 5 years.
- Free luggage per passenger limit raise to 25 kg.
- Mobile/Cell phone facilities for passenger traveling in long route bus.
- For the first time in Luxury bus the fare of Local bus (upto 30 kms) is charge.

a) During the year 2008-09, the total traffic revenue in crores was at 1281 and out of the total traffic revenue; the revenue from the passenger was at Rs. 1220 crores. The average seating capacity of the fleet was at 50.32 and only 66% of the seat was occupied. The revenue from passenger has increased by 10% as compare to the previous year.

b) During the year 2007-08, the total traffic revenue in crores was at 1255 and out of the total traffic revenue; the revenue from the passenger was at Rs. 1128 crores. The average seating capacity of the fleet was at 50.53 and only 63.18 % of the seat was occupied. The revenue from passenger has increased by 8% as compare to the previous year.

c) During the year 2006-07, the total traffic revenue in crores was at 1154 and out of the total traffic revenue; the revenue from the passenger was at Rs. 1055 crores. The average seating capacity of the fleet was at 50.91 and only 61.19 % of the seat was occupied. The revenue from passenger has increased by 12% as compare to the previous year.

d) During the year 2005-06, the total traffic revenue in crores was at 1009 and out of the total traffic revenue; the revenue from the passenger was at Rs 944 Crores. The average seating capacity of the fleet was at 51.16 and only 59.66 % of the seat was occupied. The revenue from passenger has increased by 8 % as compare to the previous year.

e) During the year 2004-05, the total traffic revenue in Crores was at 979 and out of the total traffic revenue; the revenue from the passenger was at Rs. 931 crores. The average seating capacity of the fleet was at 51.05 and only 57.99
% of the seat was occupied. There was a nominal increase of 1% as compare to the previous year.

f) During the year 2003-04, the total traffic revenue in crores was at 1010 and out of the total traffic revenue; the revenue from the passenger was at Rs. 968 crores. The average seating capacity of the fleet was at 51.05 and only 57.97% of the seat was occupied. The revenue from passenger has increased by 5% as compare to the previous year.

(b) Revenue from Student Concession & Loss Due to Student Concession

GSRTC was established for the benefit of general public. Commonly known as S.T among the public, GSRTC carry on an average 23 lacs of passengers daily all over the State. To facilitate GSRTC in fulfilling its social obligation and to adhere to the Road Corporation Act, State Government from time to time, had contributed in the form of financial grant.

➢ The Corporation grants concession to students in casual contracts also. Huge percentage of concession was given to students. Government has reimbursed the concession given to various categories of people, but still 100% reimbursement was never received. Again this whole issue of reimbursement was leading to huge loss year by year.

a) This reveals the facts that year by year there was an increased in the revenue earned by the corporation from issuing students pass at concessional rate. During the year 2008-09, it had increased by 12%. The state government has reimbursed Rs. 36162 lacs for student’s concessions. Corporation had incurred a loss of Rs. 13299.28 lacs.

b) During the year 2007-08, the revenue earned by the corporation under the head of student concession has increased by 10% as compare to the previous year 2006-07. The state government had reimbursed Rs.36162 lacs for student’s concessions. Corporation had incurred a loss of Rs. 12072.03 lacs.

c) During the year 2006-07, there was an increase of 5% in the revenue from student concession. The Corporation has given free concession to students in form of pass amounting to Rs. 48585.1 lacs. Against the total amount the state government had reimbursed Rs.35600 lacs for student’s concessions. Corporation had incurred a loss of Rs. 12985.1 lacs.
d) During the year 2005-06, an increase in the percentage was 7%. The Corporation has given free concession to students in form of pass amounting to Rs. 48577.48 lacs. Against the total amount the state government had reimbursed Rs. 35600 lacs for student’s concessions. Corporation had incurred a loss of Rs. 12977.48 lacs.

e) During the year 2004-05, there was a nominal increased in the revenue by 2%. The Corporation has given free concession to students in form of pass amounting to Rs. 45277.5 lacs. Against the total amount the state government had reimbursed Rs.34211 lacs for student’s concessions. Corporation had incurred a loss of Rs. 12063.61 lacs.

f) During the year 2003-04, the revenue from issuing the concessional pass to students had increased by almost 41%, which was considered as good financial indication. The Corporation has given free concession to students in form of pass amounting to Rs.46274.61 lacs. Against the total amount the state government had reimbursed Rs.33198 lacs for student’s concessions. Corporation has incurred a loss of Rs. 12084.5 lacs.

g) During the year 2002-03, the Corporation has given free concession to students in form of pass amounting to Rs. 28787 lacs. Against the total amount the state government has reimbursed Rs. 14300 lacs for student’s concessions. Corporation has incurred a loss of Rs. 14487.5 lacs.

Coefficient of Correlation was calculated for knowing the relationship between loss due to student concession pass and total cost. As per the test, the result was 0.226, which mean that there was a weak positive relationship. Student Concession Pass does not have any impact on the change (increase) in total cost. Student concession pass was reimburse by the government (Full reimbursement was never received) but then too giving concession to students was not having any impact on the total cost of GSRTC.

Correlation was also applied to know whether the loss due to student concession has relation with the amount of gross margin. The test has given a negative result of (0.691) which means that the margin amount has not gone down due to the loss incurred by way of student concession. The negative coefficient of Correlation between student concession and gross margin makes it very clear that the result of
gross margin was not dependent on the amount of student concession being given. Loss due to student concession has shown an fluctuating result where as the gross margin year by year has increase (except in the year 2005-06 & 2008-09) where loss due to student concession has decreased (government has reimburse) but at the same time gross margin has not change in the same direction.

(c) Revenue from Casual Contract
Huge fluctuation has been found in the revenue earned from Casual Contract.

a) During the year 2008-09, the revenue earned from Casual Contract was above the average of the seven years. But as compare to the previous year 2007-08, there was a huge reduction in percentage of revenue earned from the casual contract. The data reveals that there was a decrease of 78% in the revenue earned by the corporation under the head casual contract.

b) During the year 2007-08, the revenue earned from Casual Contract was above the average of the seven years. The revenue earned by the corporation under this head was marvelous. It has hit all time high of earning Rs.4116.54 crores. In percentage term it has increased by 155%.

c) During the year 2006-07, the revenue earned from Casual Contract was below the average of the seven years. The average was 1986.60 crores and the yearly revenue for this year was 1686.4 crores. But still as compare to the previous year it had increased by 26%.

d) 2005-06 was the year, where the revenue from casual contract had decreased by 7%.

e) During the year 2004-05, the revenue from casual contact earned by GSRTC had increased by 26%.

f) There was again drastic reduction in the revenue earned under the head. It had reduced by 38%.

(d) Revenue from Luggage
From the recent year 2008-09, GSRTC has introduced new schemes for passengers. One Passenger can carry 25 kg of luggage free. The average of seven years revenue from luggage was Rs 354 Crores.
a) During last two years, the revenue from luggage had gone below the average level. In year 2007-08 and 2008-09, percentage wise it has reduce by 14% and 1% respectively.

b) In the year 2006-07, the revenue has increased by 4%.

c) The amount of revenue was constant for year 2004-05 and 2005-06, i.e. 360 crores.

d) During the year 2003-04, the revenue had increased by 6%.

(e) Revenue from Reservation
GSRTC have launched its own website www.gujaratsrtc.com. Online time table for express services had been uploaded on website and also through SMS. GSRTC wishes to introduced computerization at all level viz. depot, division, and central level. Online ticket reservation system in 10 depots (pilot –in Feb 2009).

The computerization of reservation has shown a welcoming response. Since 2006-07, there was a tremendous increase in the amount of revenue earned by GSRTC from luggage. In the year 2006-07 the revenue had increased by 53%. From the year 2003-04 there was a decreasing trend.

(f) Revenue from Parcel
GSRTC had privatized parcel service. Part privatization was done in year 2007-08 and full in the year 2008-09. Tenders are invited and the highest bidder is given a contract of conducting parcel service on the behalf of Corporation.

9. Total Cost Assessment

(a) Total Gross and Effective Kilometers/PBKM
The total gross kilometer and the effective kilometer of GSRTC had improved in the last three years. The average gross kilometer was 89.96 lacs. The dead kilometer had increase to 86.06 and 96 lacs in the year 2007-08 and 2008-09.

Year 2006-07 was remarkable as the dead kilometer was lowest of all the seven years and at the same time the gross and effective kilometer has increased by 4%. Whereas, in the recent year 2008-09, the dead kilometer has gone up by 10% with only 1% increase in the gross and effective kilometer.

An average Per Bus Kilometer, for total gross and effective kilometers is 13.32 paisa. The last three years, i.e. from 2006 -07 to 2008-09 the PBKM/Paisa have increased.
The year wise analysis reveals the facts that in year 2003-04, the amount of earning had increased by 3% but at the same time the effective kilometers has reduced by 7%, resulting into increased in per bus kilometers by 11%. Effective kilometer has no doubt added to increased in per bus kilometers. Off late, the effective kilometer in last two years has also increased, which was more than the average of last seven years. The total earnings had increased by 6% and at the same time total effective kilometers had increased by 1%, resulting into an increased by 6% per bus kilometers.

Coefficient of Correlation was calculated to know the impact of total effective kilometer on the total earnings of GSRTC. The result was 0.204, which was showing a weak positive relationship between both. The positive relationship was there but very low. One cannot generalize the statement by saying that total earning can definitely improve if the total effective kilometer increased.

Coefficient Correlation was used to know the relationship between effective kilometers and total earnings. The result of Coefficient of Correlation was 0.2045 which was positive but the result was very nominal. One can say that effective kilometer had not added any significant towards earnings. There was insignificant relationship between both. An increase in effective kilometers has not supported GSRTC in terms of improvement in the earning capacity. One can say that effective kilometer had increased but the load factor has not increased by same percent. The earning can increased only if, along with the increase in the effective kilometers, the occupancy ratio also increased.

(b) Operational Cost Analysis

- Year by year the cost of operation had shown an increasing trend. The total effective Kms (lacs) in the recent year 2008-09 has improved to 10106.81 from 9970.21 of the previous year 2008-07. In spite of improvement in the effective kilometers the cost of operation had gone up. On an average the cost of operation in each year has increased by 2%. In year 2007-08 the cost has reduced by 5% and in the year 2008-09 it has increased by 4%.

- In year 2003-04, the cost of operation had reduced by 3% and against that the earning has reduced by 4%. Where as in the year 2004-05 the cost of operation has increased by 9% and the earning for the same year has reduced by 2%. Again in the year 2006-07 the earning has improved by 25% and cost by just 2%. The
main reason for such a huge rise in the earning level was introduction of new schemes for daily commuters. Corporation was able to collect huge amount by introducing new schemes in that year. In the recent year earnings remain almost constant but the cost of operation had increased by 4%.

- Main component of cost of operation comprises of Fuel, Tyres, Tubes, Batteries, Reconditioning of assys & spares, depreciation, lubricants, passenger tax etc. Amongst all these components, fuel cost was very high. Huge variation has been found in terms of cost of batteries.

- In the recent year 2008-09 the cost of depreciation was Rs. 7901.98 lacs which has almost double as compare to the previous year 2007-08. Even in year 2004-05 the cost of depreciation was huge, and for rest of the year consistency in terms of amount has been maintained.

- The cost of fuel year by year was showing an increasing trend. As compare to 2004-05, where the cost of fuel was Rs. 44736.4 lacs, which had increased to Rs. 66528.8 lacs in the recent year. Kilometer per liter of diesel gives on an average 5 to 5.50 range. Where as the operating cost of running CNG bus was 0.75 paisa less than that of a diesel.

(c) **Total Operating Cost**

The operation cost of GSRTC shows an increasing tendency year after year. Out of the seven years taken for analysis, during the year 2004-05, the total operational cost had reduced as compare to the previous year 2003-04. The main reason for the reduction was decreased in the cost of crew, other traffic staff and passenger tax. The reason for the reduction in these three components was reduction in the number of staff (both crew as well as other traffic staff) and in the amount of passenger tax paid.

As the effective kilometers in year 2003-04 had reduced resulted into reduction in passenger tax. The number of scheduled routes in this year had reduced to 16217 from the previous year 17275. At the same time the number of depos in operation had also reduced by 6, i.e. from 138 of 2003-04 to 132 in the year 2004-05.

Another factor to be evaluated for the same year was reduction in the average duty of driver and conductors (kms) in the particular year has also reduced to 194 kilometer, to justify the same the number of staff has also reduced to 52043 in the year 2004-05 from 54523 in the year 2003-04.
The major component of operational cost includes fuel cost. The cost of fuel for each of the year was huge. One can say it was near about 35% to 44%. Out of 100 Rupees of cost, 35 to 44 Rupees was just spent for fuel. Year by year the fuel charges had also increase.

PBKM was showing an increasing tendency. In the recent year PBKM has touched 15.39 paisa, which was alarming. Cost of operation in year 2003-04 had increased mainly due to increase in the cost of staff. There was a revision in the percent age of D.A given to the employees. Along with the increased in the amount of Dearness Allowance, the taxation policy has also undergone a change, adding to the increased in the overall cost of operation in that particular year. Even reconditioning of buses and spares parts consume around 5 to 7% of the total cost every year. GSRTC had restrained new recruitment of staff, so the cost of Staff has also gone down. The cost incurred under the heading depreciated also decrease as the number of fleet has reduced by the Corporation.

(d) Total Direct Overheads

In year 2003-04, Corporation had borrowed Rs 6000 lacs from GSFC at a lower rate of interest to repay the LIC loan. Rs. 3789.70 lacs was repaid to LIC, Rs.1376.43 lacs to banks, Rs. 1.99 lacs to HUDCO and Rs. 345.37 lacs to GSFC. In year 2004-05 Rs.30,667,380 was borrowed from GSFC, where as in year 2005-06 Rs. 170,938,049 has been repaid to GSFC. In the same year Rs. 105,00,000,00 of 13% GSRTC Debenture Bonds was also redeemed.

The number of accident had reduced, but at the same time number of person died due to accident had increased. Corporation has compensated a huge amount of claim due to fatal accident. In the last two years amount of Rs. 2172.8 lacs and 2338.59 lacs was spend for compensating the accident claims.

In year 2002-03 the direct overheads was 245.27 paisa which had reduced to 113.22 paisa in year 2003-04. The main reason for the reduction was reduction in interest on bus. Interest on bus has taken the major portion of the direct overheads in all the years. One can say that interest on bus has a direct impact on the overall direct overheads.

In year 2004-05 again due to increase in the interest on bus, the direct overheads had also increased. There are other component of direct overheads, like, government taxes
on bus, other local taxes and P.F. Since 2006-07, direct overheads were less than the average direct overheads. In recent year direct overheads was constant, which was less than the average direct overheads.

(e) Total Indirect Overheads
Out of the total component of indirect expenses, the administrative Cost was around 43%, which was considered very high. The total indirect cost in year 2004-05 had increased by 29%. Again in the year 2005-06 it had increased by a huge percent of 60%. In the last three years the total indirect cost had reduced (except in the year 2008-09), where it had increased as compare to the previous year, but still it was less than the average of last seven years.

(f) Total Cost
An average cost of GSRTC for last seven years was 161000.76 crores. The total cost for year 2002-03 to 2005-06 was less than that of an average. The cost had shown an increasing tendency from 2006-07, which was 5% more than its previous year. In the recent year 2008-09 the total cost was Rs.181839.21 crores, which was 9% more as compare to its previous year.

After the implementation of new pay commission the financial burden in terms of salary and wages had increased tremendously. Apart from 6th pay Commission Corporation was also liable to clear the dues in terms of increased in the dearness allowances on a regular basis. Payment of gratuity and leave encashment was another burden adding to the overall cost of the GSRTC. Managing administrative cost was still big challenge in front of GSRTC. A direct and indirect overhead had also shown an increasing tendency. Putting all this, cost had increased the overall cost position.

Coefficient of Correlation was applied to know the relationship between total costs due to student concession. The result was 0.226 which was positive by nominal figure.

(g) Costs Per Kilometers (Excluding Passenger Tax)
There was a reduction in the cost per kilometers till year 2004-06. Then cost had increased by 7% (from 129757.49 to 140215.05). The same increase trend was observed for all the rest of the year. In the recent year 2008-09 the cost had increased
by 9% i.e. (159283.41) which was consider as high against the average of 142570.19. The recent year cost was giving a signal of the rise of cost for the upcoming years.

**Total Cost per Bus Kilometers**: An average per bus kilometer was around 16 Paisa. The cost per bus kilometer was less in the year 2002-03 (it was 14.58 Paisa) which then increased year after year by nominal amount. Year 2005-06 the cost per bus had increased by 13% resulting into 17.52 Paisa of cost per kilometer. The total cost in terms of per bus kilometer had increased to 123% in the recent year.

10. **Margin**

Wide fluctuation was observed in the amount of margin. From year 2002-03 the amount of margin had reduced by huge amount in the year 2003-04 and 2004-05. The amount of margin had jump to (42480.71) i.e. increased by 47%, then after it had again reduce by 38% which was below the average of last seven years.

(a) **Margin in terms of Per Bus Kilometers**

Year 2005-06 was significant in terms of increased amount of margin. In percent terms it had increased by 56%, then after it has reduced drastically by 51% in year 2006-07 and reduction continue up to year 2007-06. In the recent year 2008-09 again the amount had increased by 15%.

11. **Average number of vehicles held and average number of vehicles on road**

Gradually, GSRTC has stop adding new buses to the total fleet position. Since year 2003-04 the number of bus held and on road has reduced by 5%, which continue in the next year resulting into decreased by 6% and 3% respectively. Only in the year 2007-08, the number of vehicle held as well as on road has increased by a nominal amount of 82 and 80 respectively. According to the officials- there will be a requirement of around 1,000 CNG buses in Gujarat every year. The number of CNG buses required every year throughout the country was around 5,000. GSRTC official said, at present they have just two per cent of the total fleet of over 9,000 buses. Corporation has 7628 total number of fleet this comprises of 3791 old buses (Bus has already covered more than 7 lacs kilometers of route). As per the norms of government- bus can be used up to 7 lacs kilometers. After that the RTO passing is not given. The state government has increased the kilometer distance upto 8 lacs. On an average the use of bus was 92% where as the use of S.T was 87.7%. At Present Corporation are having 6697 buses on road.
GSRTC has made a provision of keeping 10% of the total vehicles as reserves for meeting contingency. Other State Own Road transport Undertaking are maintaining around 2 to 3% reserve ratio. So as compare to any other state road transport 10% reserve ratio was very high. In year 2006-07 Corporation has increased the on road vehicles by 1% and in year 2007-08 by 2%. This percent increased in the number of vehicles was very nominal.

Coefficient of Correlation was used to know the relationship between the number of vehicles and number of accident done by GSRTC. The result of correlation was 0.7232, which was positive and near to 0.99. The result was positive but one can not prove it true always. If the actual data’s are studied, one can see that in year 2006 number of vehicle has reduced, but at the same time number of accident as compare to the previous year has remain constant. Similarly in the year 2008, number of vehicles has increased and number of accident has decreased.

12. Fleet Utilization and Crew Utilization

89% of the total routes are making loss. Most of them are not even covering fuel cost, which was around 43% of the total cost. The fuel cost was 658.26 Paisa in the year 2008-09, whereas it was 627.21 Paisa in 2008-09. Crew (i.e. Driver/Conductors) cost was 347.37 Paisa in the year 2008-09 and 331.73 Paisa in the year 2007-08. So year by year there was a sharp rise in the cost of both the sector. Out of the total cost of operation of 1799.15 in the year 2008-09, total staff cost was 635.21 (35.31%) and fuel cost was 658.26 (36.59%).

With respect to earning of 1506.73 Paisa, (Total EPKM) it was seen that 42.16% was the staff cost and 43.69 was the cost of the fuel. This indicates 85.85% of the total earning was utilized against staff and fuel. As the cost was high compare to earning, it clearly indicates that out of Rs.100 earned by the corporation total expenses was Rs.119. In a simple term this can be explained as for earning Rs.100 Corporation has to spend Rs.119.

An average of seven years earning per bus kilometer of GSRTC was 1335.47 Paisa (up to 2008-09 and the total average cost was 1643.68) i.e. seven years loss of Rs. 308.21 Paisa per kilometer.

In the recent year the vehicle utilization in kms per day was 417.24. As compare to any other year the kms traveled by each vehicle per day has improved. In percentage
terms it was 87.79. There are various factors contributing to the utilization of the vehicles. One of the prime factors responsible for the utilization was number of breakdown. In the same year 2008-09, the number of breakdown in a year has reduced drastically. One can say that as the number of breakdown has gone down it has resulted into improvement in the utilization rate.

13. Average Operating Expenses

Average operating expenses of the initial years were quite low as compare to an average of last seven years. Average expenses are 17.20 Paisa and against that year 2002-03 was holding the highest amount of expenses of 20.97 Paisa. After that it has reduced till 2006-07. Year 2007 to 2009 the expenses have increased by 2% in the both respective years.

14. Average Operating Revenues

Year 2002-03 was holding a significant position in terms of highest amount of operating revenues as compare to all last seven years. An average of last seven years was 17.62 Paisa. From year 2003 to 2006, the amount of revenue earned by the corporation was below an average. The improvement was seen in the last two year, where the amount of revenue was more than 17 Paisa.

15. Break Down

- An average number of break down year by year has reduced. In the last year 2008-09 it has gone down to 3.6 i.e. out of 10,000 kms of run a bus has lost 3 to 4 kilometer due to the break down problem. The past history of the Corporation shows that due to break down problem it has to loose around 8 to 13 kilometer.

- Further evaluation also reveals that normally breakdown accrues mainly due to the fault on mechanical side and due to tyre puncher. The fault on mechanical side was more as compare to tyre puncher. The data of expenses incurred on repairs & Maintenance by the corporation has also reduced. Mostly it has being observed that due to poor planning on the side of Mechanical department most of the time the repair work was not done in time. The time taken by the mechanical department also results in lost of effective kilometers.

16. Accidents
Number of accidents has gradually reduced year after year. But at the same time number of fatal accidents and number of persons died has gone up. In the year 2007-08 and 2008-09, number of fatal accidents has increased to 311 and 303 respectively. At the same time corporation has to compensate the claim of accident. The amounts spend on compensating the claim was huge.

Only in year 2005-06, the amount of compensation was less as compared to all seven years. But the number of fatal accidents and person died increased in the same year. That means that in year 2005-06 the corporation had not release the compensation amount to the family of victim. In year 2007-08 the amount of compensation and number of fatal accident has increased and the recent year 2008-09 the number of fatal accidents as well as the amount of claim compensated has also reduced.

17. Average Kilometer per Liter in terms of Diesel and Oil

In terms of diesel, GSRTC has maintained the consistency of giving an average of 5 kilometer per liter of diesel. Year 2003 to 2006 an average kilometer was below 5.30, but again it is not much significant.

In terms of Oil, wide fluctuation was observed year after year. Against an average of 1860.6 kilometer per liter of oil, year 2003 to 2006 was giving less kilometer per liter of oil. The recent year 2008-09 has given the highest average kilometer of 3244 per liter.

18. Tyre Expenses

An average life of a tyre till scraped was ranging between 110300 to 113700 kilometers. If we analyse the tyre expenses on an average few Divisions are on lime light. Out of 16 Divisions of GSRTC, Bhavnagar, Bulsar, Jamnagar, Amreli, Rajkot, Bharuch are incurring maximum tyre expenses as compared to other Divisions. All this divisions are having their own re-treading plant. One can even interpret that this all division are running the maximum number of route, so the wear and tear of the tyre was more. On an average GSRTC incurred 44.88 Paisa per kilometer of the run. Since 2006 to the recent year 2008-09 the total tyre expenses has crossed an average amount of 44.88 Paisa. In the recent year the expenses has increased by 13%.

19. Spare Part Expenses

The overall spare parts expense of corporation has increased year by year till year 2005-06, then after it has shown a decreasing trend. Few divisions like Godhra,
Kutch, Nadiad, and Bharuch has constantly incurred the maximum amount of expenses on spare parts. There expenses in each of the year are more than that of the average. The division wise analysis of the seven years data analysis shows that to a large extend Godhara, Ahmedabad, Kutch, Nadiad and Bharuch are the divisions where the expenses of the spare parts is more than that of an average.

Bulsar, Palanpur, Amreli, Junagadh and Jamnagar are the divisions were the minimum amount was spent on spares parts. The total spares parts expenses in year 2005-06 was highest i.e. 25.72. From the year 2006-07 it has maintain a stability of decreasing trend. The recent year the expense on spare parts has reduced to 14.99 Paisa, which was less than an average of 17.68 Paisa.

ANOVA test was used to know the significance in means of spare parts expenses between 16 divisions of GSRTC. F-test was 3.23 and p-value was 0.00. Accordingly, null hypothesis was rejected and alternate hypothesis was accepted. It was tested at 5% significant level. One can see a difference between the spare parts expenses incurred by each division. There was a huge variation among all the 16 divisions as far as spare parts expenses are concerned. There was a huge variation in the amount of expenses in all seven years of each division.

20. Auto Parts Expenses

Division like Bharuch, Bhavnagar, Kutch and Surat has constantly showing an increasing trend. There expenses on auto stores are more than that of an avarage of the respective year. Whereas for the divisions like Bulsar, Palanpur, Amreli, Junagadh and Rajkot, the expenses was less than that of an average expenses of auto stores.

Overall expenses incurred by GSRTC year by year was showing an increasing trend. But in the recent year it has gone down as compare to the previous four years.

An average auto stores for the corporation was 51.92 paisa. In year 2002-03 it was just 37.14 paisa, which latter on increased year by year. In the recent year 2008-09 and the previous year the expenses is less than that of an average expense. There was a huge increase of 21% in expense in the year 2005 and 2006. Then expense has reduced by 23% in year 2007 and by 25% in the year 2008.

21. Earning Per Kilometers –Division and Overall Corporation
Division like Amreli, Kutch, Bhavnagar has shown poor results. Their earning per kilometer throughout seven years are less than that of the overall GSRTC earnings. Division like Rajkot, Ahmedabad, Surat, Baroda, Bharuch has shown good performance. Divisions falling in major cities of Gujarat and well connected to national highways have performed well as compared to other divisions not well connected to major cities or highways.

Year by year the performance in terms of earning per kilometers has improved. In most of the year it has shown an increasing tendency (except year 2006 and year 2008), where it has gone down. In the recent year the performance is very good as compared to all the last seven years.

An average of seven years earning per kilometer of GSRTC was 1335.47 Paisa. The Corporation has tried to maintain good financial conditions by increasing the earning per kilometer in the last two previous years. The earning in the recent year has touched 1506.73 Paisa, which was considered good signal for GSRTC.

ANOVA test was applied to know the relationship between the performance in terms of Earning Per Kilometer (EPKM) of all 16 divisions in all seven years’ value for the same was 0.5333 and the p-value was 0.91577. The p-value was more than 0.05, i.e. at 5% significant level. Accordingly the null hypothesis was accepted, i.e. the EPKM was all the 16 division in 7 years are not similar and there was a difference in there performance level. The alternate hypothesis was rejected, i.e. there was a significant difference of EPKM between all 16 divisions of GSRTC. In a nutshell one can say from the findings that there was no wide difference between the performances of all the 16 divisions in terms of EPKM.

22. Operational Results - Division Wise and Overall – Earning Per Kilometer

Amongst all 16 divisions of GSRTC, Rajkot, Ahmedabad, Jamnagar, Palanpur, Surat and Junagadh are having the highest amount of EPKM. The earning per kilometer by all the divisions are more than an average performance of GSRTC. The divisions having low amount of EPKM among all the 16 are Bulsar, Himatnagar, Nadiad, Bhavnagar, Baroda etc. are below an average of GSRTC.

An average traffic earning per kilometer of GSRTC was 11.48 Paisa, i.e. one kilometer of run earns 11.48 Paisa for GSRTC. In the last two previous years the
earning was more than an average of GSRTC, and the recent year it has increased by 8%.

ANOVA test was applied to know the significant between all 16 divisions in all seven years value for the same was 18.091 and p-value was 0.00. On the basis of the calculation null hypothesis was rejected i.e. there was no significance difference between earning per kilometers among all the divisions of GSRTC. The result of the test concludes that the performance of divisions in terms of traffic EPKM not similar and there are differences in the figures of EPKM.

23. Z-Score Analysis

Z score of GSRTC from year 2004-05 to 2006-07 was falling under gray area, which means careful monitoring. But no concrete step was taken to improve the performance of the corporation. As a part of improving the revenue earning capacity of the corporation, various new revenue generating schemes were introduced and it has earn a warm welcome from the passengers. To maintain the same level of stability in the revenues, the corporation lack the requires resources in terms of more number of vehicles, route rationalization, more number of crew and good condition buses. The effective kilometers has increased but has not resulted into increase in total earning for GSRTC. Steps were taken but professional approach in implementing the decision and evaluating the performance from time to time was not done. As a result of no accountability for the performance in the next coming year’s i.e. 2007 to 2009, the performance in terms of financial position has worsened. As a part of social obligation, corporation is dragging itself adding more losses to it.

Z score for the year 2007-08 onwards has fallen in a danger zone. This distress zone gives a signal of likelihood of insolvency with 12 months. An intensive care is must for saving itself from going into insolvency. Looking at the figure of loss year by year, the position was of insolvency. Corporation has used all the resources and state government has given all possible financial aid. Now, whatever financial help offered by the corporation will go into vein. It will not help the corporation to give any return on the capital employed by the government.

At this stage if corporation wish to improve and save itself from further loss its solvency position, then the whole corporation has to undergone into a process of reviving itself. A well plan approach from government is needed. Government can
even think of waiving the capital loan given to the corporation has a step towards relieving the corporation from the debt position. A budgetary position for the same can be done. A professional approach from the bottom to top is needed.
7.2 RECOMMENDATIONS

Keeping in view the above observations and other surveillances made throughout the study, the following measures are suggested which would go a long way with a view to improving performance of GSRTC:

1. Liquidity and Debt Position

- The debt position of the Corporation has become worse due to increasing amount of loan taken for purchasing new buses and implementing information technology. This loan amount can earn a return if the purchased assets are utilized properly. GSRTC should try to take maximum utilization out of it. If information technology is implemented, then it should be replaced in place of man power, resulting into saving in the indirect overheads, as the administration cost is high at 32.84 paisa.

- Being a government enterprise GSRTC is totally financed thought the contribution from Central as well as the State Government. Already a huge sum of amount has been spent by the government in forms of capital, which has gradually come down. Government can waive the capital loan granted to GSRTC. By doing so the Corporation can come out of the huge liabilities of repaying the principal as well as the interest amount.

2. Fixed Assets Position

- As per the CAG recommendation of utilizing the available assets, corporation has started implementing the suggestions. 60% of the space of depos/bus stand is reserved for the purpose of its own and 40% will be commercialized. The front space will be used for the corporation purpose and the back part for the private purpose. GSRTC should start implementing the plan of commercializing in a phase manner. Corporation should even think of giving more than 40% of the space, if GSRTC is not utilizing it.

- While selecting the party for leasing, care should be taken to lease the assets for such a purpose, where more number of public are visiting the premises. So that, the chance of converting these visitors into the passenger can be increased.
➢ The idle land of the corporation should be use for commercial purpose. Un-utilized/un-productive land should be put to a valuable use. Most of the lands are taken on a lease basis.

➢ Scrapped material of GSRTC should be immediately auctioned by inviting tender. Even scrapped buses-engine and spares, tyres, tubes be auctioned without delay. Delays in sell off scrapped material prove to be danger for GSRTC. At many depots the scrapped tyres and tubes which are accumulated since many years are causing health problem harmful to the resident residing in the near by areas.

3. Capital Employed Position

GSRTC should come out of new schemes for attracting more and more passenger. Special routes can be scheduled looking at the traffic position. Few vehicles which are lying idle can be utilized for arranging traffic potential route. More passenger oriented schemes as per the requirement should be implemented.

4. Revenues

➢ GSRTC is not able to utilize full load. Their load factor in the last seven years is near about 50%. So putting that in a word, 50% of the seating capacity is resulting into a loss of revenues. More amounts of revenues are earned from the passenger. Corporation can increased the amount by rationalizing the routes and catering to the need of the passengers. As a part of social obligation it is providing concessional pass to the student commuters, this loss of revenues are compensated by government later on. But the full amount of the concession is not reimbursed, resulting into a loss for the Corporation.

➢ It has been observed that most of the time; conductors of the bus are not bothered to check the weight of the luggage. The passengers are carrying the luggage along with them. GSRTC should take a strict action towards such practices being followed and an action plan should be formulated to convert such luggage into a revenues.

➢ Casual Contract is another area of improvement. The whole system of providing bus on casual contract can be professionalized. One person should be given a responsibility to increasing the number of casual contract. Publicity at the time of say marriage season can be done and it can be developed as a profit center for the corporation. Casual contract rate should be made seasonal, instead of keeping it
fixed for all season. Say for example, during monsoon the traffic as well as the demand of casual contract is less, so in such season the rate of casual contract should be less as compare to the peak season.

- Since last two years the parcel services has been privatized and the tender are invited. GSRTC should try to make this parcel service more profession by providing more and more facilities. Facilities in terms of more space at bus station can be provided.

- Corporation is even earning revenues from reservation services. After implementing the use of information technology more advantage can be taken out of it. Corporation should even entertain agent system and keeping track on on-line reservation. Corporation should develop and update the website. On-line information should be available of the running scheduled. Advance software should be used so that passengers can take the print out of the ticket. But this required 99% regularity in service. GSRTC should plan the schedule in such a way that regularity in route operation is maintained. First of all it should implement this on-line system for long route sleeper services.

- The corporation should go through the fare structure again and make necessary revision in fare when ever necessary but at the same time facility should also be provided. GSRTC should even decrease short distance route and increase long route. For operating long distance routes, A/C and sleeper coach should be used. Non-performing A/c and Sleeper services should be put in inter-state traffic potential sector covering maximum kilometers.

5. **Total Cost**

a) Direct over head cost must be brought down. In the year 2002-03 interest on buses was 172.50 paisa and in the year 2003-04 it was drastically brought down to 42.55 paisa and in 2008-09 it was brought down to 15.77 paisa, a drastic reduction. It can be brought down to below 10 paisa by making high rate loan payment.

b) In the component of direct overheads administrative cost is very high. It was 32.84 paisa in the year 2002-03 and 32.75 paisa in the year 2008-09. It is constant since last four years but still on a higher side. The cost can be brought down to below 15 paisa by reducing 50% of regular staff ratio. The ratio of regular staff can be reduce by introducing computerize system at depot and divisional level.
GSRTC at divisional level carry lot of departments such as Traffic Administration department, Account department, Statistical department, Workshop, Security department etc. and at depot level various department like workshop, booking and cash, fuel, stores etc. All such departments can be merged into linked department. Paper work should be reduced to a minimum level and staff can be reduced by not recruiting new staff. If computerized system is implemented automatically the requirement of manpower will come down.

c) Proper planning of the implementation of whole system is required at each level. The software should be design in such a way that the department at each depot in Gujarat should be linked with depot, division and with the central office at Ahmedabad. The information should be available on-line. All the correspondence work related to GSRTC should be done with the help of computer. Excessive use of internet should be made to ease the work of communication within depot/division or Central Office.

d) Work relating to repairing/maintenance of bus should be given to private party on a contractual basis, or it can be outsource from the private service provider. For giving future contract of such work the best performer party should be consider. A proper system of taking feedback of the work, reasonable amount charged, timely delivery of the services etc should be consider. For doing so a proper track report has to be prepared. Depot manager should be entrusted with the duty of preparing the report, selecting the party and taking the feed back. Depot/division spending less amount of such activity of repairing, maintenance should be awarded. Body building work should be done by the Corporation. Latest equipment should be purchased and it should be kept at one place at central workshop.

e) Two tyre systems of Zone and Depot can be implemented. Large number of division (16 divisions) is also a matter of great concern. GSRTC should merge this division into a separate zone i.e. a Zone wise division should be made, so as to reduce the administrative cost (which include house rent allowances and so on)of 16 divisions. Four (4) zones should be created out of these 16 divisions and at the same time Central office should also be abolish step by step. A research should be carried out before taking such a drastic decision of removing central office. First of all on a trial basis few activity of central office should be entrusted to zonal head and the decision taken by them should be evaluated. Depending upon the
performance and decision taking capacity of such head further entrustment of more authority should be given. This task will take a long time but after few years the requirement of central office with each zonal heads should be entrusted with all authority, responsibility and should be made accountable. Zonal head at each zone at take joint decision whenever required. Implementation of such decision requires more time and it should be done in a systematic order step by step. For instance, Zonal system should be implemented and performance of work and service should be studied and appropriate steps should be taken. For instance, Zonal system should be implemented and performance of work and service should be observed in terms of saving in cost and appropriate step should be taken.

f) At almost all major depots Bio-Gas electricity system should be applied to reduce electricity bills.

g) GSRTC restrict on medical bills to regular as well as retired employees. This is also a step towards reducing cost.

h) After making all efforts of reducing losses the government should subsidies the losses incurred taking into consideration remote rural services on the -------- to social obligations.

i) After implementation of 6th Pay commission recommended with effect with 01/01/2006, the total cost will further go up. Government should offer financial aid to cope up with such a situation of high financial burden on GSRTC. Government should also make budgetary provision in its annual budget.

j) The cost of tyres and tubes is around 45 Paisa per kilometer and it contributes 3% towards the total cost. GSRTC should seriously think of proper maintenance of tyres & tubes.

k) Dead kilometers (in lacs) which is on higher side i.e. on an average 86.01 lacs should be brought down by taking reformative measures to reduce numbers of break down.

6. **Total Gross and Effective Kilometers**

   - For increasing the number of gross and effective kilometer, GSRTC should go for proper planning. A well developed and thought off plan will definitely result into more effective kilometers. Effective kilometer has reduced due to dead kilometer.
Now these dead kilometers are due to inefficiency at the operational level. If there is any break down of the bus, the repairs and maintenance work is not done in time. For a simple repair work more days are spent. Even at divisional work shop number of days lost are on a higher side.

➢ If Corporation go for precautionary maintenance this dead kilometers can be avoided. A person in charge of the mechanical department (at each depot or Division) should prepare a chart of the vehicles containing following items:

7. Traffic Scheduling

Demand should be assessed by a genuine traffic survey conducted for the purpose. In order to decide upon the route pattern, frequency of operation, time schedule and the number of trips, the entire area of operation should be carefully studied. The study should mainly concentrate on the following aspects:

a) Number of Villages and town in the area and their population.

b) Importance of the area under the study.

c) Business and Industrial importance of the area and the expected number of people likely to travel by bus.

d) Rail heads en-route requiring connection to feed and pick up train traffic.

e) Density of traffic, frequency of services and number of buses required at various timing in the day, first and last timing considered necessary for the terminals, special timings required for train connections, schools etc.

f) Locating and determining the “Parent Towns” which attract traffic in the morning and disperse it in the evening in various directions.

g) Availability of alternate modes of transport such as owns vehicle, auto-rickshaw, other private bus services etc.

h) Inter state routes for running new schedule should also be studied carefully in consultation with the concern SRTC authority.

While traffic survey helps assess traffic demand, road survey helps judge the feasibility of operation. Route length, road condition, traffic points, running time, fixation of bus stops and fare stages etc should be a part of the road survey.
8. Vehicle Utilization and Crew Utilization

- Liberal running time, stand time and maintenance time automatically mean reduced vehicle utilization. Tightening up any of these will improve vehicle utilization. While the concern for higher vehicle utilization should not be allowed to sacrifice other important factors, it should be realized that indifference to vehicle utilization will directly affect the overall strategy of optimizing available resource and result in low profitability.

- GSRTC should decide the standard for vehicle utilization considering the road condition. The standard vehicle utilization should range between 450 to 460 kilometer per day.\(^4\) Average vehicle utilization should be different for express and passenger services for the simple reason that they have different running times. With increasing costs of operation, GSRTC should strive to increase vehicle utilization in order to distribute the fixed costs over a large number of kilometers and thereby reduce the unit cost of operation. After a certain point this can be achieved, for a given pattern of routes, by operating more and more limited-halt and non-stop services in addition to long distance and night express services.

- There is, therefore, vast scope for improving vehicle utilization. Higher vehicle utilization may result in a fall in earning per kilometer since the available traffic demand is shared with more units. Inversely, low vehicle utilization may boost up earning per kilometer. It is, therefore, necessary to strike a balance and arrive at an optimum utilization. The ultimate that of profitability is neither higher vehicle utilization nor higher earning per kilometer separately by themselves.

- GSRTC has to short list the loss making routes, rationalize them and all efforts must be made to convert them into profit making. This can be done by forming an expert official’s team (including traffic and statistics department) and entrusting the responsibility of converting the loss making routes into profit making. Time period should also be given to them. The team should not be disturbed by any other work load for a time being.

- Vehicle utilization and crew utilization in terms of kilometers should be increased. Average vehicle utilization of GSRTC must be more than 450 kilometer per day and crew utilization should be more than 280 /300 per day. But mere enhancement

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\(^4\) It has been surveyed in India.
in terms of vehicle and crew utilization is not enough. Such increase in kilometer must be converted into increase in traffic revenue and cost cutting. All effort should be put to this sector by the team till the goal is achieved. Route can be extended further to the traffic potential areas.

- Low traffic revenue route can be curtailed and diversified to huge traffic area. Inter-state traffic potential sector can be covered by introducing long route using new bus and it should be allowed to cover 600 kilometer per day with a simple crew. Long run routes covering more than two states can also be operated.

- Further crew cost can be reduced by not sending conductor in a route where 90 to 100% direct passengers are available. GSRTC should short list such route and conductor-less route should be scheduled on a regular basis. Corporation has already experimented conductor-less bus services, where driver takes the responsibility of issuing tickets. For a few express routes it was implemented, but there was financial indiscipline and so later on it was stopped. Before implementing such system, corporation should do home work and should select few routes where it can be implemented. For implementing such route, GSRTC should calculate total operational cost + 10% to 15% additional cost should be added to it. The route can be given to a particular driver on a fixed basis, i.e. it should at least cover operational cost + 10% to 15% of profit margin monetary incentives can be offered to the driver who achieve the target revenue. This way vehicle and crew utilization can be increased and traffic revenue can also be improved resulting into cost cutting.

For reducing crew cost, GSRTC should recruit retired drivers/conductors on ad-hoc basis.

9. Route Rationalization

- Through implementation of computerized system, GSRTC should be in a position to cut down loss making routes. It has been observed that many routes are run parallel. For example a route starting from Bhavnagar to Baroda and a route starting from Rajkot meet at a same time at Baroda. Due to such route both the route incurred loss due to less occupancy rate. Looking at a present system it is not possible to avoid such route meeting at a destination at same time. If on-line system is implemented, at least one can keep a track on such routes.
As a part of social obligation GSRTC has been providing bus services into the remote areas of villages. Most of such services are not covering fuel cost, i.e. 89% of the total routes are running into a huge loss and are not even covering operational cost. The fuel cost of GSRTC is around 42% of the total cost. If this cost is not covered by running bus service than such totally uneconomical services should be curtailed by corporation.

Recently corporation has introduced A/C bus service including sleeper coach. Number of such buses is less but if we go into the depth of passenger revenue from these bus services, it is hardly Rs.12.48 paisa per kilometer which is less than the ordinary bus service. AC bus service of GSRTC is making huge loss, where as that of the private operators are making profit. So corporation should reconsider the fare structure and rationalizes such loss making routes.

Many a time it is not possible for GSRTC to cancel loss making route, mainly operated in remote areas. Such loss making routes should be subsidies by government or some kind of budgetary provision can be think off.

Recently Corporation has introduced “VAN BANDHU” and “SAGAR BANDHU” services to provide traveling facilities to the people of remote and costal areas. Such services are not getting satisfactory traffic; such services should be utilized as a filler service for short distance where 100% load is utilized. This action can lead to increase in vehicle and crew utilization rate.

10. Average Number of Vehicle Held and on Road

a) Fleet utilization of GSRTC is around 85% and vehicle utilization is near about 86%. This mean 14% of the vehicles are unused resulting into revenue loss and adding it up to the total loss of corporation. The total number of schedule in the year 2007-08 were 6679 and total number of scheduled were 7069, where as only 6710 scheduled were operated. So 359 scheduled were not operated and vehicle utilization was 86%. Such factor plays a big role in revenue loss and increased in cost.

b) In the same way, load factor i.e. utilization of bus seating capacity is around 63% or even some time less than this, which mean 37% or more seats of the buses are not being used, leading to huge revenue loss and increasing in the total cost. For example in the year 2008-09, average number of vehicles held was 7628 where as
number of vehicles on road was 6697. So there is a gap of 1031 vehicles, which remains unutilized.

c) GSRTC has a provision of keeping 10% of vehicle as spare for RTO/Major repairing work/extra operation etc. Instead of 10% it should make a provision of keeping it at only 5%. By doing so the number of off road vehicle can be brought to “0” level. Thus extra fleet is given to private party if vehicle maintenance work is given to them. Sleeper services i.e. A/C semi luxury bus services should be given at affordable fare in major cities. Instead of purchasing new diesel bus, city bus should be introduced as the running cost of city route is less by 0.75 Paisa than that of diesel run bus. By doing so, corporation can bring down the cost of fuel. GSRTC should seriously plan for installing CNG filling Pump. Filler service of short distance up to 30 km can be implemented at affordable fare.

d) It is logical that requirement of buses should be determined by finding of traffic survey and the consequent assessment of demand. Frequency of service is decided on the basis of the assessed demand. Given the number of service and the running time plus stand time, it is easy to calculate the number of vehicles required for operation by applying the following formula:

\[
\text{Number of Vehicle required} = \frac{\text{Running time for return Journey} + \text{Stand time at both terminal}}{\text{Frequency of Services}}
\]

Although it is evident that the requirement of vehicles should be worked out on the basis of traffic survey, yet due to paucity of resources it may not be possible to provide all the required buses. In such cases, a balance needs to be struck by approximating demand and supply. Where buses are in short supply, depending upon the number of buses available, frequency can be arrived at by the following formula:

\[
\text{Running time (Twice) + stand Time (Twice)} = \text{frequency} \\
\text{Number of buses available}
\]

The “market share” of GSRTC ultimately depends upon the ability to deploy and invest in buses in keeping with the statutory restriction and periodic assessment of traffic demand.
11. Accident and Compensation

a) Accident claims and compensation should be brought down drastically by giving elaborated training to driver/conductor and after giving training their performance should also be evaluated. “NO ACCIDENT” in 10 years, 15 years and 20 years and onwards services should be evaluated and incentives should be given to appreciate them.

b) GSRTC should also organized medical camp at depot/divisional level. From time to time medical check should be done and unfit drivers/conductors should be given proper treatment. For a time being such medically unfit drivers/conductors should be given some other work which they can perform. Proper guidance should be given from time to time. If such action is taken by the corporation, definitely the amount of accident and its resulting claim of accident can be brought down to below 08 paisa. The cost of accident in the year 2008-09 is 23.14 paisa.

c) Corporation should also carry out accident analysis cause wise and age group wise. From the analysis of accident corporation can come out with different factor causing accident. Age-wise analysis will help the corporation in knowing the number of accident done by particular group. After that a training targeting to that specific group (accident prone group) can be under taken with the objective of reducing number of accident. The course of training should include topics like how to avoid accident, preventive measures etc.

12. Matching Responsibility and Authority

Responsibility without authority destroys motivation. Authority without responsibility could lead to decisions that are not congruent with the organizational objectives. The principle of matching responsibility and authority has resulted in the organizational concept of “responsibility centers”.

The depots, divisions, workshops, senior managerial positions etc can be classified as responsibility centers.

➢ Depot as a responsibility centre

Depot is always located strategically. It cater to the needs of that area as well as being able to connect the areas to the towns, district head-quarters and to the capital of that state. The depots are the primary units of operation looking after the maintenance of the fleet and are in close touch with the traveling public. More amounts of revenues
are earned through the operation of buses at depots. Nearly 60 to 70 % of the total expenditure in a Corporation is incurred at the depot level. The depot is, therefore, the nerve centre of GSRTC.

- **Division as a responsibility center**

  The depots are generally grouped into divisions on the basis of contiguity and administrative conveniences. The geographical divisions co-ordinate, supervise and control the work of the depots in their jurisdiction. While day-to-day operations are appropriately the job of the depots, operations of guidance and supervision for the depot managers is the basic responsibility of a divisional manager.

  The principal advantage of the profit centre system is that the depot/divisional/regional management is forced to be concerned with profitability. This can have two effects on depot/divisional operations:

  - The depot/divisional management can relate revenue factors to cost factors or relate one cost factor to another. By making the depot/divisional manager responsible for contribution, he will be motivated to maximize contribution.

  - The impact of each action (for example, to improve cost performance) is automatically increased in the performance report as a weight that reflects its relative importance to the corporation.

  - The depot/division will resist uneconomic actions. In case of regular demand from the public to start certain trips/routes which are not profitable or only marginal, then such demand will not be accepted by depot/division if they are made profit center. Although certain uneconomic actions will always be necessary in a service organization like GSRTC, the impact of these actions on profits should be known at the time when action is to be taken. The profit deficiencies in this case can be explained with the fact of such action being taken looking at the demand of the public.

  - Emphasis on profit performance will tend to make depot/divisional personnel concentrate on potential areas of profit improvement. They will be in continuous search for locating new services which will be more profitable and new methods to increase the fleet utilization and vehicle utilization.
All responsibility centers produce output and all have inputs. Based on the organization set-up and the difficulty in measuring output, input and the relationship between them can be identify the following types of responsibility centers:

a) Standard Cost Centers
If one can establish standard costs for a cost centre like central workshops in a Corporation, a measure of output can be determined by multiplying the physical quantity of the output by the unit standard costs for each of the products produce and summing the results. The outputs are measured at their standard costs. The total actual cost is compared to the total standard cost of the output and variances are analyzed. The work Managers in Corporation can be evaluated on how well they must meet their standard costs.

b) Revenue Centers
The output of the traffic operations function in corporation can be measured in terms of the revenue or earnings.

c) Profit Centers
Standard cost centers and revenue centers are measured on a sub-set of profitability rather than on total profitability. When a responsibility centers has responsibility for only a sub-set of profitability, it is necessary to maintain separate central of other important decisions that affects the other sub-sets. This situation limits the degree of decentralization that is possible. When full profit responsibility is delegated however, a great many day-to-day decisions can be delegated that were not possible under the conditions described. Significant decentralization of authority is usually accomplished by decentralization of profit responsibility.

When an organizational unit can be assigned profit generating responsibility and when top management decide that it is advisable to decentralize operating decision-making, the organizational unit becomes a profit centre.
7.3 CONCLUSION

GSRTC being a government undertaking is going through a tough time. In last 50 years of its existence till date lot many social obligations are done. The changing time, living standard and development in transportation mode and its availability has posed a big question in front of a government—Whether to continue with such a loss? At the same time government can not do away with the corporation. A very critical question need to be answered is how long and how to manage with the financial need.

Corporation should think of changing the method of its operation. Some touch of commercialization the resources need to be implemented. Going by the latest report of the Comptroller and Auditor General (CAG) of India, the state government-owned Public Sector Undertakings (PSUs) are in dire need of reforms if the accumulated losses are to be tamed. Of the total 57 PSUs in the state, as many as 21 have accumulated losses to the tune of Rs. 4,418.59 crores between March 2006 and March 2007, against a public investment of Rs. 3,508.48 crores in the same period. There were 32 PSUs that made aggregate profits of Rs 1,421 crores, seven of them declaring dividends of Rs 82.98 crores, the report said.

The report also showed that despite the increasing losses, the government had been flowing against the tide, increasing its total investment in the PSUs from Rs. 44,336 crores in March 2006 to Rs. 47,007 crores in March 2007. During the same period budgetary support to these PSUs also increased from Rs. 4,282 to 5,927 crores, it said.

According to the report, of the loss making giants, GSRTC takes the cake with investments of Rs. 553.06 crores and accumulated losses worth Rs. 1,242 crores — over 25 per cent of the total. GSRTC is incurring loss due to lack of proper planning. In year 2008-09 it has incurred a loss of Rs. 158.28 crores. The fixed route of Corporation is making it difficult to fight against the private operators. As per the recommendation of CAG, Corporation should utilize the Vehicle properly and should use the unutilized land and other assets for commercial purpose.