International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

# A comparative study of financial and operational performance of RSRTC and KSRTC

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**Abstract:**
**All state government of India operate their own transport system this study present a comparative financial analysis of two major State transport undertaking stu's RSRTC and KSRTC. it used two years financial data from the 2021- 22 and 2022-23 to examine their performance. The main aim is to assess and compare The financial and operational performance of both corporations. Key performance indicators used in the study include the fleet utilization, total expenses expenses for kilometre, passenger load factor, traffic revenue**

**Keywords: RSRTC, KSRTC, State transport undertaking, financial performance comparative analysis ratio analysis.**

## Introduction

Public transport place and important role for an Indian economy and efficient and affordable transport system is very important for the development and progress of any country. In India, increasing population expansion of the road network have led to the use of personal vehicles. However, we can't ignore public transport, especially buses, which are the most popular used and convenient mode of travel particularly for rural areas and people whose income is lower.
A strong public bus system is essential for India. It helps reduce traffic jams and air pollution and ensure safe travel for everyone including those who can't afford private vehicles.

## Rsrtc

The Rajasthan State Road Transport Corporation (RSRTC) is the primary public bus transport provider in Rajasthan, established under the Road Transport Corporation Act, 1950. RSRTC commenced operations in 1964 with the objective of providing safe, reliable, and affordable transportation services across the state and to adjoining states. The corporation plays a crucial role in connecting urban centers with rural and remote regions, thereby supporting inclusive mobility and regional integration.
RSRTC operates a large and diverse fleet of buses, including Ordinary, Deluxe, AC, and Volvo coaches, servicing intercity, interstate, and village routes. As of 2022–23, the corporation manages 52 depots and a fleet of around 4,700 buses, covering more than 1,80,000 kilometers per day.
To enhance passenger convenience and promote digitalization, RSRTC has introduced a mobile application for online ticket booking, enabling users to reserve seats and make payments easily. Additionally, QR code-based ticketing has been implemented for faster fare transactions. The corporation provides a variety of travel concessions and free travel facilities for different passenger categories, including students, senior citizens, women, and the differently-abled. Notably, RSRTC also offers free travel for candidates appearing in competitive examinations, supporting youth empowerment and education.
Despite its vast network and essential public service mandate, RSRTC has been facing operational and financial challenges in recent years. These include high operating costs, aging fleet, and increasing

maintenance demands. Continuous efforts are being made to improve performance through technological upgrades, route optimization, and better financial management.

**Karnataka State Road Transport Corporation (KSRTC)**

The Karnataka State Road Transport Corporation (KSRTC) is one of India's premier public transport organizations, operating under the administrative control of the Government of Karnataka. Established in 1961, KSRTC has grown into a vital component of the state's public infrastructure, delivering safe, reliable, and efficient transportation services across Karnataka and neighboring states. As of 2022–23, KSRTC manages a vast network consisting of 82 depots and a fleet of 8,114 buses, serving both urban and rural populations.

The corporation operates a wide range of services including ordinary, express, luxury, and premium class buses, catering to the diverse mobility needs of the population. KSRTC has consistently embraced technological advancements to improve service delivery and customer experience. Passengers can avail of online ticket booking, mobile applications, and "Avataar" franchisee centers, enabling 24x7 advance ticket reservations up to 30 days before the journey date.

KSRTC's operational strategy emphasizes both passenger convenience and financial discipline, with efforts continuously made to optimize fleet utilization, reduce turnaround times, and improve customer satisfaction. In recent years, the corporation has taken several initiatives to modernize infrastructure, upgrade its fleet, and implement digital systems for route planning and ticketing.

Despite these advancements, KSRTC faces challenges such as rising fuel costs, fluctuating passenger load factors, and the need for sustainable fleet modernization. Nevertheless, the corporation remains a key model among State Transport Undertakings (STUs) in India for its operational scale, service reliability, and proactive adoption of reforms.

**Research Methodology**

This study adopts a descriptive and comparative research design to evaluate and contrast the financial and operational performance of two major State Transport Undertakings (STUs) in India—Karnataka State Road Transport Corporation (KSRTC) and Rajasthan State Road Transport Corporation (RSRTC)—over a two-year period, 2021–22 and 2022–23.

**Research Objectives**

1.To compare the financial performance of RSRTC and KSRTC by analyzing key indicators such as total revenue, total expenditure, and net loss for the years 2021–22 and 2022–23.

2.To assess the operational efficiency of both transport corporations based on metrics like fleet utilization, fuel efficiency, and employee–vehicle ratio

**Research Questions**

**1.**How does the financial performance of RSRTC differ from KSRTC over the two years under study?

**2.**What operational efficiency indicators most significantly affect the performance of RSRTC and KSRTC?

**Research Design**

The study uses a quantitative approach based on the analysis of secondary data. A comparative framework has been used to assess the trends and performance levels of both STUs using relevant financial and operational metrics.

**❖ Data Collection**

The study is based exclusively on secondary data, sourced from:

Official Annual Reports of KSRTC and RSRTC (2021–22 and 2022–23)

Performance Reviews of STUs published by the Ministry of Road Transport & Highways (MoRTH)

Other publicly available government documents and verified data portals

❖ **Data Analysis Techniques.**

1. Ratio Analysis
2. Trend Analysis
3. Comparative analysis

**Interpretation**

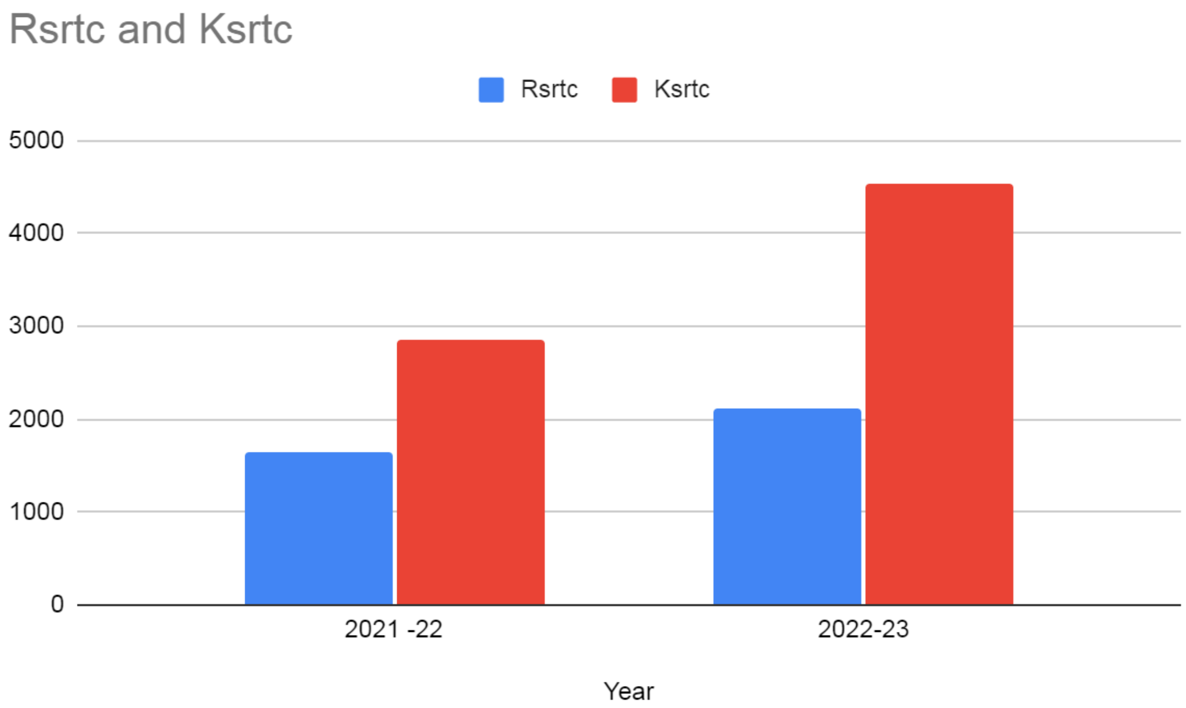
**1.**RSRTC operates on 2,230 routes.

KSRTC operates on 7,700 schedules daily, covering a broader network.
KSRTC has a more extensive route network, which may contribute to higher revenue and better resource utilization**.**

**2. Total Revenue**

| **Year** | **Rsrtc** | **Ksrtc** |
|---|---|---|
| **2021 -22** | **1641.16** | **2859.09** |
| **2022-24** | **2105.58** | **4537.68** |

**Growth rate - 28.3% 58.6%**



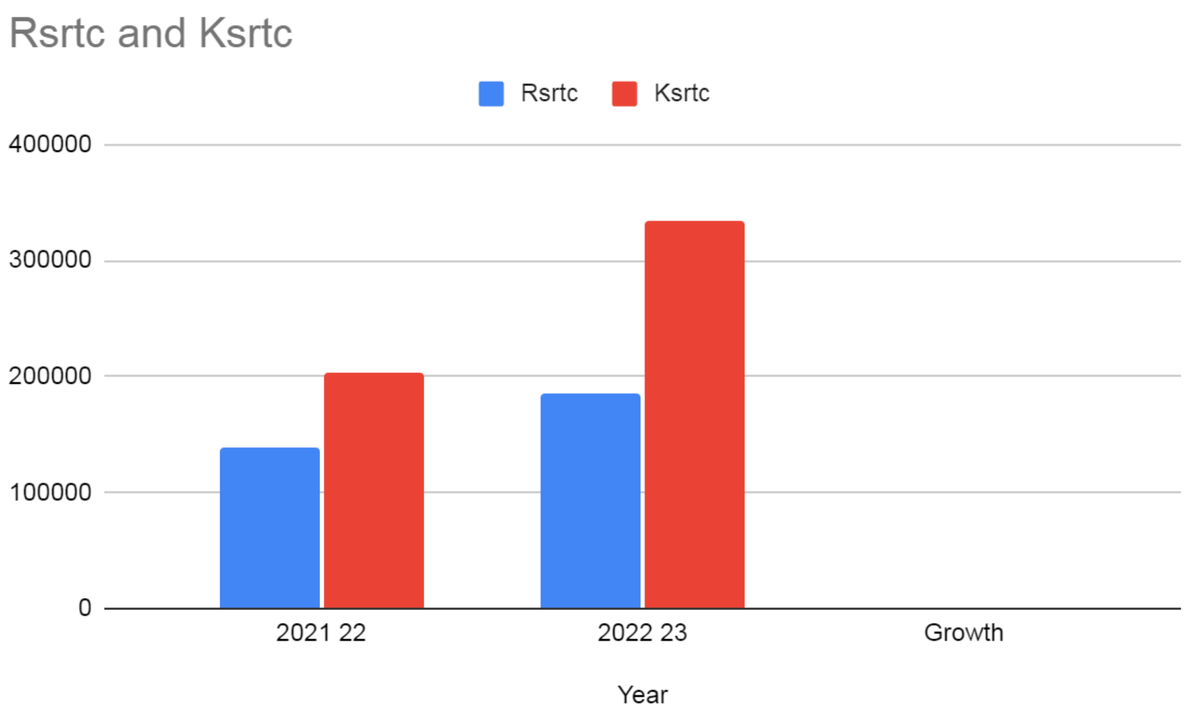

KSRTC experienced a much higher growth in total revenue (58.6%) compared to RSRTC's 28.3%.

This suggests that KSRTC was more successful in expanding its operations, increasing ridership, or optimizing revenue generation in 2022–23.

RSRTC's growth, although positive, is moderate and might be influenced by operational or demand-side constraints.

**3. Traffic Revenue Analysis**

| Year | Rsrtc | Ksrtc |
|---|---|---|
| 2021 22 | 139111.18 | 203757.91 |
| 2022 23 | 184927.18 | 334659.27 |
| Growth | 32.9 | 64.2 |




KSRTC's traffic revenue increased by 64.2%, a massive rise compared to RSRTC's 32.9%.

The improvement in KSRTC's revenue may indicate:

Better route efficiency

Increased ridership

Higher fare per kmEffective use of digital systems (e.g., app-based booking)

RSRTC also showed solid growth, but at nearly half the rate of KSRTC, suggesting more modest operational expansion or slower recovery.

**4. Net loss Ratio:**

| Ksrtc | Net loss (lakh) | Total revenue (lakh) | Ratio |
|---|---|---|---|
| 2021 22 | 42330.60 | 285908.92 | 14.80% |
| 2022 23 | 4289.40 | 457367.72 | 0.94% |

| Rsrtc | Net loss cr | Total revenue | Ratio |
|---|---|---|---|
| 2021 22 | 324.59 | 1641.16 | 19.78% |
| 2022 23 | 287.59 | 2105.58 | 13.65% |

KSRTC significantly reduce its net lost ratio in 20223 RSRTC also improved but still has a higher lost ratio then KSRTC.

**5. Total Expenses and Cost per Kilometer (CPKM)**

| Corporation | Year | Total expense (cr) | CPKM |
|---|---|---|---|
| RSRTC | 2021 22 | 2,083.24 | 52.68 |
| | 2022 23 | 2,574.87 | 54.45 |
| KSRTC | 2021 22 | 4,616.57 | 49.94 |
| | 2022 23 | 3,282.40 | 48.08 |

**Insights:**

RSRTC experienced an increase in both total expenses and CPKM over the two years, indicating rising operational costs.

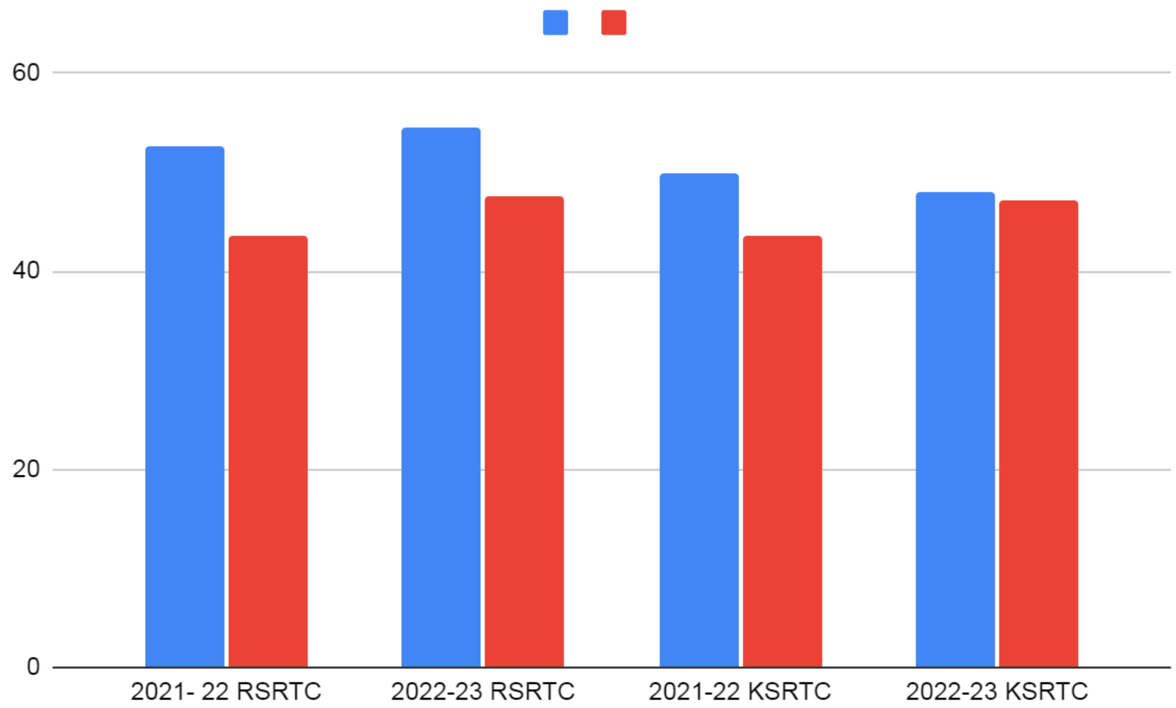
KSRTC, conversely, managed to reduce both total expenses and CPKM, reflecting improved cost efficiency.

**6. Earnings per Kilometer (EPKM)**

| Corporation | Year | EPKM |
|---|---|---|
| Rsrtc | 2021 22 | 43.49 |
| | 2022 23 | 47.63 |
| Ksrtc | 2021 22 | 43.50 |
| | 2022 23 | 47.26 |

Both corporations showed an increase in EPKM, indicating enhanced revenue generation per kilometer.

RSRTC slightly outperformed KSRTC in EPKM in 2022–23.




**7. Operating Profit per Kilometer**
Formula:
Operating Profit per Km=EPKM−CPKM
Operating Profit per Km=EPKM−CPKM

| Corporation | Year | Operating Profit per Km (₹) |
|---|---|---|
| RSRTC | 2021–22 | -9.19 |
| | 2022-23 | -6.82 |
| KSRTC | 2021-22 | -6.44 |
| | 2022-24 | -0.82 |

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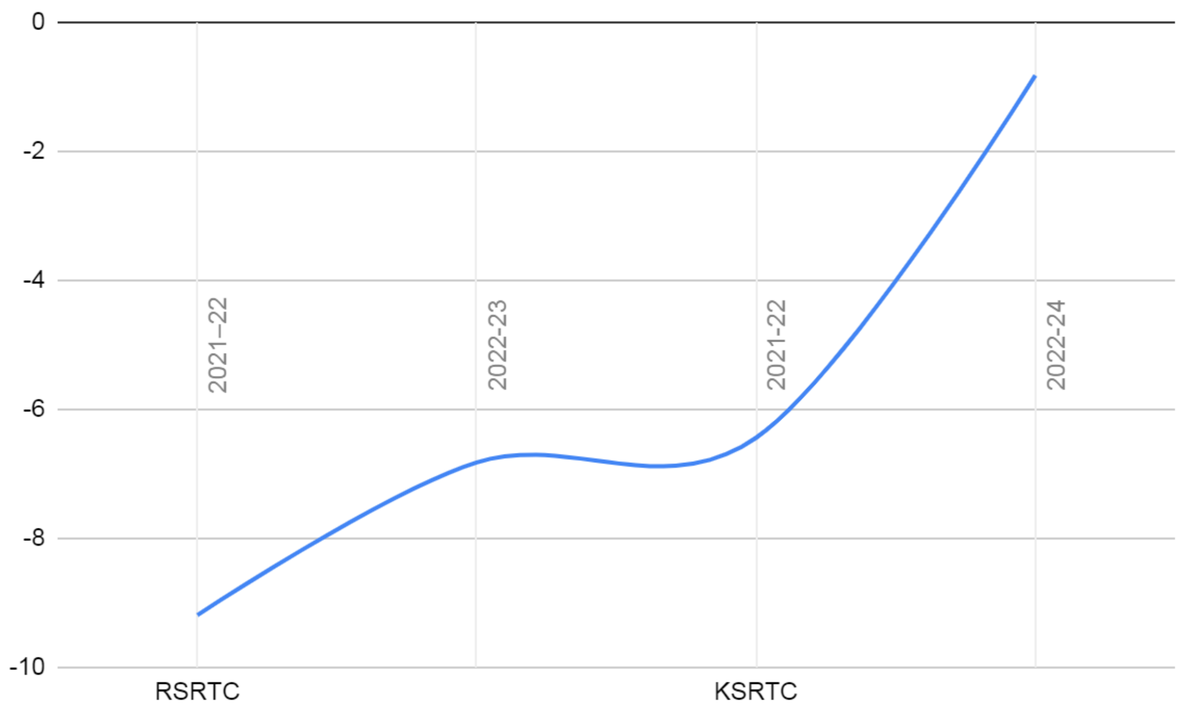


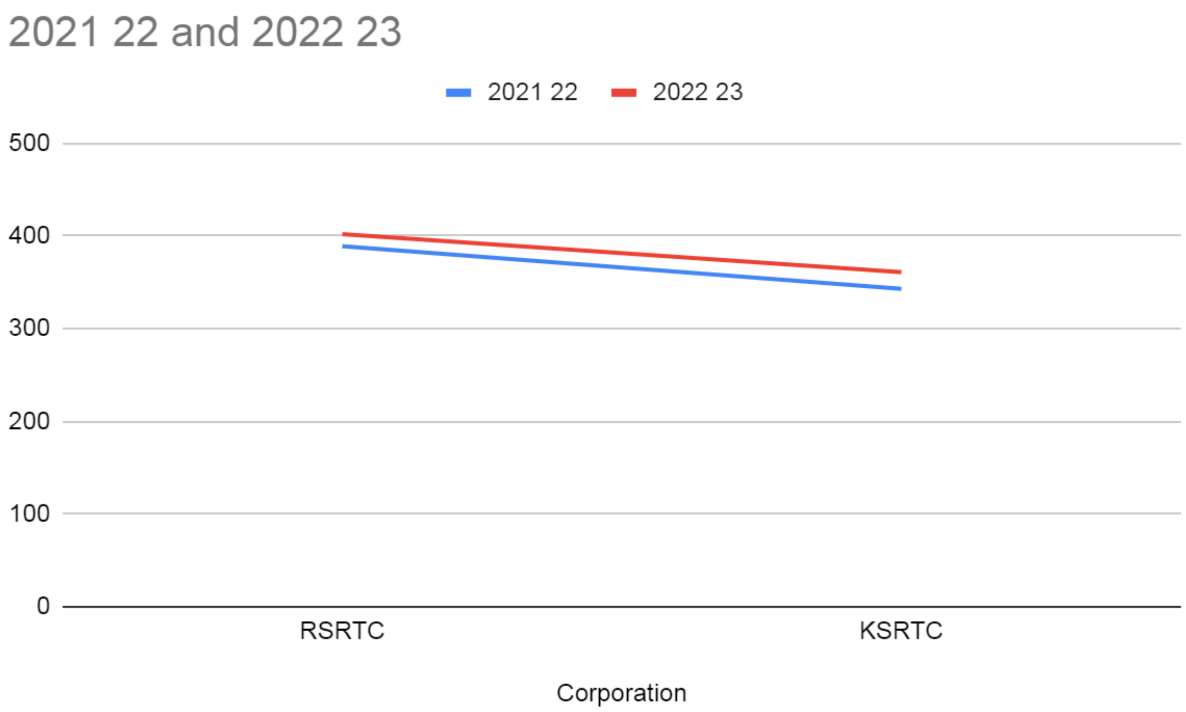

Observation: KSRTC significantly reduced its operating loss per kilometer, moving from -₹6.44 to -₹0.82, nearing a break-even point. RSRTC also improved, reducing its loss from -₹9.19 to -₹6.82.

**8. Fleet Utilization (Average Km/Day)**

Corporation

| Corporation | 2021 22 | 2022 23 |
|---|---|---|
| RSRTC | 389 | 402 |
| KSRTC | 343 | 361 |

Observation: RSRTC maintains higher fleet utilization rates, indicating more efficient use of its vehicles.




**Fleet utilisation ratio:**
**Effective kilometres/fleet size**
**Ksrtc**
**2021 22:**
6573.15/8199=0.80 lakh
**2022 23:**
9601.58/8114=1.14 lakh

Analysis:
KSRTC's fleet utilization improved from 0.80 lakh km/bus in 2021–22 to 1.18 lakh km/bus in 2022–23. This indicates better fleet efficiency and more effective use of the fleet in 2022–23.

**RSRTC**
**2021 22 :**
**3954.89/4326=0.92**
**2022 23 :**
**4729.03/3980=1.19**
Analysis:
RSRTC's fleet utilization was 0.92 lakh km/bus in 2021–22 and increased to 1.19 lakh km/bus in 2022–23. RSRTC also improved its fleet utilization significantly.

**Kilometres operated**
2021–22: 6573.15 lakh km.
2022–23: 9601.58 lakh km.
Analysis: KSRTC has shown an impressive increase in kilometers operated by nearly 46% from 2021–22 to 2022–23, which signifies greater coverage and an expansion of services.

**RSRTC:**
2021–22: 3954.89 lakh km.
2022–23: 4729.03 lakh km.

Analysis: RSRTC also demonstrated growth in kilometers operated (about 19.6% increase). However, the increase is more modest than KSRTC's expansion.

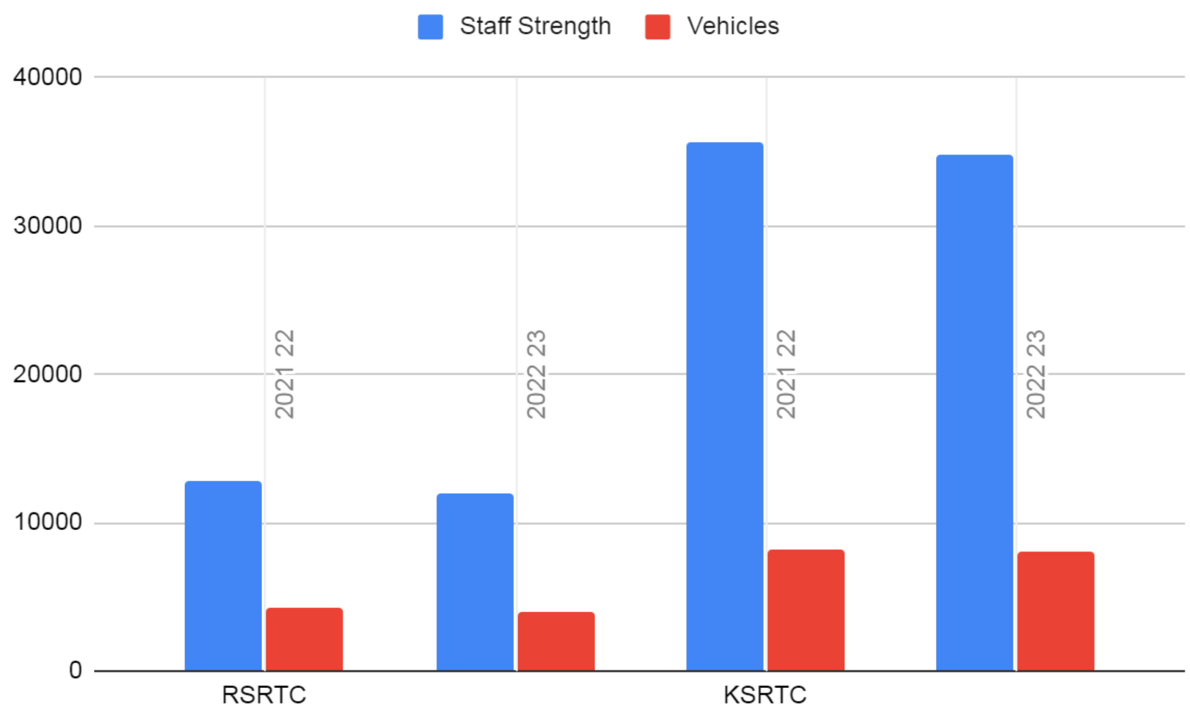
**Comparison**
Fleet Utilization:

Both STUs increased fleet utilization in 2022–23.

- KSRTC saw a significant rise in fleet efficiency (up by 47.5%), utilizing its buses much more effectively in 2022–23.
- RSRTC had a higher fleet utilization rate (0.92 lakh km/bus in 2021–22 vs. 1.19 lakh km/bus in 2022–23), which is a positive indicator of better fleet efficiency, especially given its leaner fleet size.

**9. Vehicle-to-Employee Ratio:**

| Corporation | Year | Staff Strength | Vehicles | Ratio |
|---|---|---|---|---|
| RSRTC | 2021 22 | 12,869 | 4300 | 2.97 |
| | 2022 23 | 11962 | 3980 | 3.01 |
| KSRTC | 2021 22 | 35,672 | 8,199 | 0.23 |
| | 2022 23 | 34741 | 8,114 | 0.23 |



Observation: RSRTC has a higher vehicle-to-employee ratio compared to KSRTC, suggesting a leaner workforce relative to its fleet size.

**10.Fuel Efficiency Comparison**

**1. KSRTC Fuel Efficiency:**

- **2021–22**: 5.03 km per liter
- **2022–23**: 4.85 km per liter
- **Analysis**:

○ KSRTC's fuel efficiency decreased from **5.03 km/l** in **2021–22** to **4.85 km/l** in **2022–23**.

○ **Decrease**: The drop in fuel efficiency by 0.18 km/l indicates a slightreduction in how effectively fuel is being used, which could be due to factors like aging fleet, increased distance, or higher fuel consumption.

2. RSRTC Fuel Efficiency:

○ 2021–22: 5.15 km per liter 2022–23: 5.13 km per liter

○ Analysis:

○

○ RSRTC's fuel efficiency decreased marginally from 5.15 km/l in 2021–22 to 5.13 km/l in 2022–23.

○

○ Decrease: A minor drop of 0.02 km/l indicates minimal reduction, suggesting that RSRTC maintained good fuel efficiency despite operational challenges.

Key Insights:

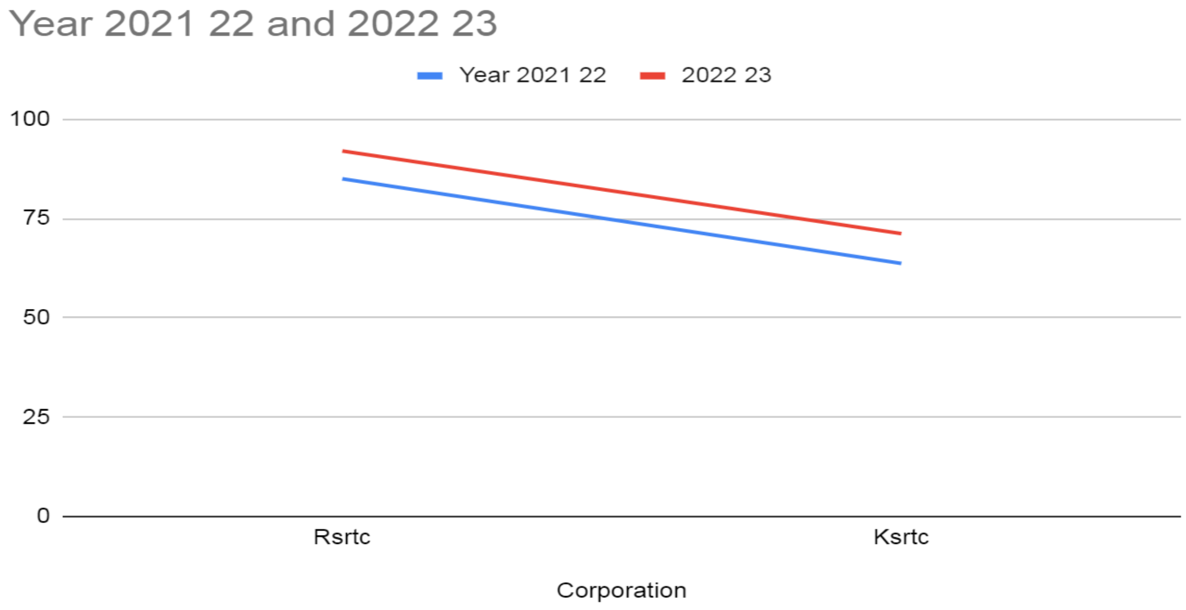
Both STUs saw a decrease in fuel efficiency, but RSRTC demonstrated a much smaller decline (0.02 km/l vs. 0.18 km/l for KSRTC).

RSRTC maintained better fuel efficiency in both years, indicating a more efficient use of fuel compared to KSRTC.

**11. Passenger Load Factor (%)**

| **Corporation** | **Year 2021 22** | **2022 23** |
| --- | --- | --- |
| **Rsrtc** | **85** | **92** |
| **Ksrtc** | **63.7** | **71.2** |

Observation: RSRTC consistently achieves a higher passenger load factor, reflecting better occupancy rates.




## CONCLUSION

This study undertook a detailed comparative analysis of the financial and operational performance of two major State Transport Undertakings (STUs) in India: Rajasthan State Road Transport Corporation (RSRTC) and Karnataka State Road TransportCorporation (KSRTC), over a two-year period (2021–22 and 2022–23). Using key performance indicators (KPIs) such as total revenue, traffic revenue, total expenses, expense per kilometre (EPKM), cost per kilometre (CPKM), fleet utilization, passenger load factor (PLF), employee-to-vehicle ratio, accident rate, fuel efficiency, and route coverage, the analysis yields several critical insights.

Financially, KSRTC significantly outperformedRSRTC. KSRTC maintained higher total and traffic revenue, indicating better fare collection, broader route coverage, and higher operational scale. Although both corporations experienced increases in revenue from 2021–22 to 2022–23, KSRTC's growth was more substantial and efficient. RSRTC's rising total expenses and persistently high expense per kilometre signified continued financial strain and lower cost control.In terms of operational performance, KSRTC again demonstrated superior metrics in key areas:

Higher average vehicle utilization (343 km to 361 km per day),

Strong improvements in fuel efficiency (from 4.85 to 5.03 km/l),

Better accident control (accident rate steady at 0.08),

A more balanced employee-to-vehicle ratio, despite a larger workforce.

Conversely, RSRTC, though showing modest improvements in some indicators such as passenger load factor and fleet utilization, lagged significantly in overall efficiency and performance. Its fuel efficiency declined marginally, accident rates remained constant but not improved, and the vehicle utilization was considerably lower.

Furthermore, RSRTC's net loss ratio and cost-to-revenue imbalance indicate structural inefficiencies and challenges in revenue generation relative to operational expenditure.

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