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An analytical study of the capacity and potential of karnataka state road transport corporation

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Abstract

The Karnataka State Road Transport Corporation (KSRTC), to all intents and purposes, came into being on September 12, 1948 to cater to the transport needs of the people of Karnataka. With over 70 years of service behind it, a brief review of its operations during the recent past is welcome. The researcher investigated the various aspects of its operations during the period FY 2014 to FY 2019, to ascertain if it had fulfilled the lofty objectives underlying its constitution. The researcher's findings led him to conclude that an augmentation of its fleet had led to a rise in its traffic revenue. The augmentation of the fleet did not happen at the requisite pace though. The number of passengers the corporation transported daily also trended higher with each passing year. The passenger fare generated by the corporation in the process, registered a healthy and consistent CAGR. However, the profit figures had followed an erratic trend-so erratic that it defied all logic! During the six years under review, it was in positive territory only on two occasions, transitioning to the negative territory on four occasions. Interestingly, this happened despite the traffic revenue not faltering significantly during the period under review. Augmentation of the fleet must be taken seriously since a CAGR of under one percent in the fleet size made sad reading. The corporation must innovate its services basket to raise its traffic revenue.

Keywords: Augmentation; falter; fleet; innovate; lofty; logic; services basket; transition

Introduction

Theoretical Background of the Topic

India is a fast-growing economy. The proof is there for all to see -- rapid urbanisation, urban infrastructure bursting at its seams, the rising gap between revenue and expenditure of the urban and rural self-governments, to mention only a few. If the state's economy is to grow and stabilise, the grievances of several associated stakeholders must be addressed. The workforce should be helped to commute to the workplace, which by and large operates outside the city limits. Often, the workers must travel to neighbouring districts for the purpose. The student community must be helped to commute to schools and colleges which may operate in an adjoining district. The community of traders and farmers in the state should be helped to move their produce to the marketplace competitively, conveniently, and efficiently. Then there are people who must criss-cross the state for personal reasons and business reasons; they may have to criss-cross the state for onward journey to destinations in other states for personal or business reasons. These segments of society must be helped to commute affordably, safely, and reliably-something which could not be entrusted to the private sector for obvious reasons, at least to begin with. The government had to step in to cater to the transport needs of these stakeholders. Thus KSRTC, which started off as a small government-promoted transport venture, has today emerged as a leading player in Karnataka's public transport space, aided to a certain extent by private players.

Statement of the Problem

KSRTC must grow from strength to strength since it has always been able to boost the economy of Karnataka state. Under no circumstances, can its growth be allowed to remain stagnant. In the circumstances, optimising the corporation's operations, raising its financial health and improving its relevance to the growing economy of Karnataka is something that has to be taken serious note of and immediate note of, by the powers that be. Towards this end, the weaknesses in the corporation's operations need to be identified and addressed. Any

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delay here may harm the economic growth of Karnataka. It is this problem that needs to be investigated.

Review of Literature

1. Things are not exactly looking up for KSRTC. The cost of maintaining air-conditioned and ordinary buses has exceeded the earnings the said buses generate (The Times of India, 2019). On each air-conditioned bus, the corporation spends INR 83.70 per Km while the earnings generated by the bus is only INR 63.10Km. In respect of ordinary buses, the corresponding figures are INR 57.9 per km and INR 41.5 per Km (2019-20, till April). In fine, the corporation incurs an average loss of INR 20.6 per km in respect of AC buses and INR 16.4 per km in respect of non-AC buses.
2. Srinivas Alavilli remarks that the KSRTC has not been receiving much by way of financial assistance from the state government relative to Namma Metro (Srinivas, 2019)^[3]. It is the responsibility of the state government to financially support the KSRTC to help it curtail its loss. In other words, it is the KSRTC that has been subsidising Bengaluru heavily-after all, it reduces pollution and traffic, asserts the researcher.
3. Induction of electric buses by KSRTC was delayed with the transport minister of Karnataka insisting that they be bought rather than leased (Thammanna, 2019)^[4]. In fact, the KSRTC's entitlement to subsidy of INR 74.8 crore from the Centre lapsed owing to the delay in the induction of e-buses under the FAME scheme. KSRTC had issued a letter of intent to the Hyderabad-based Olectra Greentech (formerly Goldstone Infratech) on the subject. The latter's quote of lease rental was the lowest-it was much lower than the KSRTC's present cost of operating AC and non-AC buses. According to the corporation, under the lease model, the operational cost of an AC e-bus for KSRTC was INR 60.9 per km, while it was INR 40 per km for non-AC buses.
4. In a move that could rile the 300,000 plus students spread across the sprawling Bangalore city, the Metropolitan Transport Corporation has raised the price of student bus passes (Christin, 2019). According to KSRTC, a new smartcard will cost INR 700 for high school girls, INR 900 for high school boys, INR 1,250 for PU students, INR 1,460 for college students, INR 1,600 for professional college students, INR 2,120 for technical students and INR 1,880 for evening PhD students. The renewal fee concerning smartcards issued to high school girls rose from INR 570 to INR 670, issued to high school boys from INR 770 to INR 870, issued to PU students from INR 1,070 to INR 1,220, issued to college students from INR 1,270 to INR 1,430, issued to professional college students from INR 1,320 to INR 1,570, issued to technical students from INR 1,850 to INR 2,090, and issued to evening PhD students from INR 1,650 to INR 1,850. Bus passes are issued free of cost to SC/ST students. They need to pay only the processing fee of INR 200 for new cards and INR 170 for renewal of existing cards.
5. The Indian bus industry, since independence, was organized along public and private sector ownership in various proportions (Sanjay, 2017). The industry was dominated by state-owned State Transport Undertakings (STUs) since the private sector was

highly fragmented. The STUs had a special responsibility to provide road-based passenger mobility in the country, as they were the largest undertakings of the respective state/municipal governments. However, most of the STUs have, over the years, run up huge financial losses. They were unable to keep pace with the rapid and substantial spurt in demand; their service quality had taken a hit and their market share had been further clipped with passengers turning to personalized transport and intermediate public transport.

Research Gap

The social responsibility mandate underlying the provision of services by the public transport operator, namely, KSRTC, to the people of Karnataka, is an open secret. In the circumstances, one must examine how the entity can be transformed into a self-sustaining one. It does not matter even if the entity does not generate profit. But its operations should at least help the entity make both ends meet. Otherwise, it may have to wind up sooner than later. Towards this end, the relevant metrics should be examined in detail. The reviewed literature would have done well to take up such an examination. It is this gap the present study proposes to bridge.

Scope of the Present Study

The study covers the operations of KSRTC across Karnataka.

Objectives of the Study

The objectives of the study are to:

1. Examine the exploitation of the fleet by KSRTC
2. Examine the trend of passenger fare generated by KSRTC in the backdrop of the number of passengers it transports.
3. Examine the profit growth of KSRTC in the backdrop of the traffic revenue generated by it.

Research Design

The following paragraphs furnish the research methodology.

Research Methodology

The study is descriptive in nature and has used the 'fact-finding' survey method

Sources of Data

The study is purely secondary data driven. Secondary data has been collected in soft version and hard version from the annual reports of KSRTC

Data Processing and Analysis Plan

Statistical tests like standard deviation, correlation coefficient and compounded annual growth rate (CAGR) have been undertaken to process and analyse the data.

Analysis of Data

In the following paragraphs, the relevant secondary data is analysed.

Fleet Size and Traffic Revenue of KSRTC

The fleet size and traffic revenue of KSRTC are examined in the following Table and paragraphs for the period FY 2014-FY 2019.

Table 1: Fleet size and traffic revenue of KSRTC

Year	Fleet size	Traffic Revenue (in INR Lakhs)	Rho
FY 2014	8294	2,60,835	0.74
FY 2015	8227	2,84,057	
FY 2016	8090	2,77,833	
FY 2017	8326	2,73,804	
FY 2018	8784	2,97,503	
FY 2019	8695	3,13,171	
CAGR (%)	0.95	3.72	
SD	275	18,494	

(Source: Annual Reports of KSRTC)

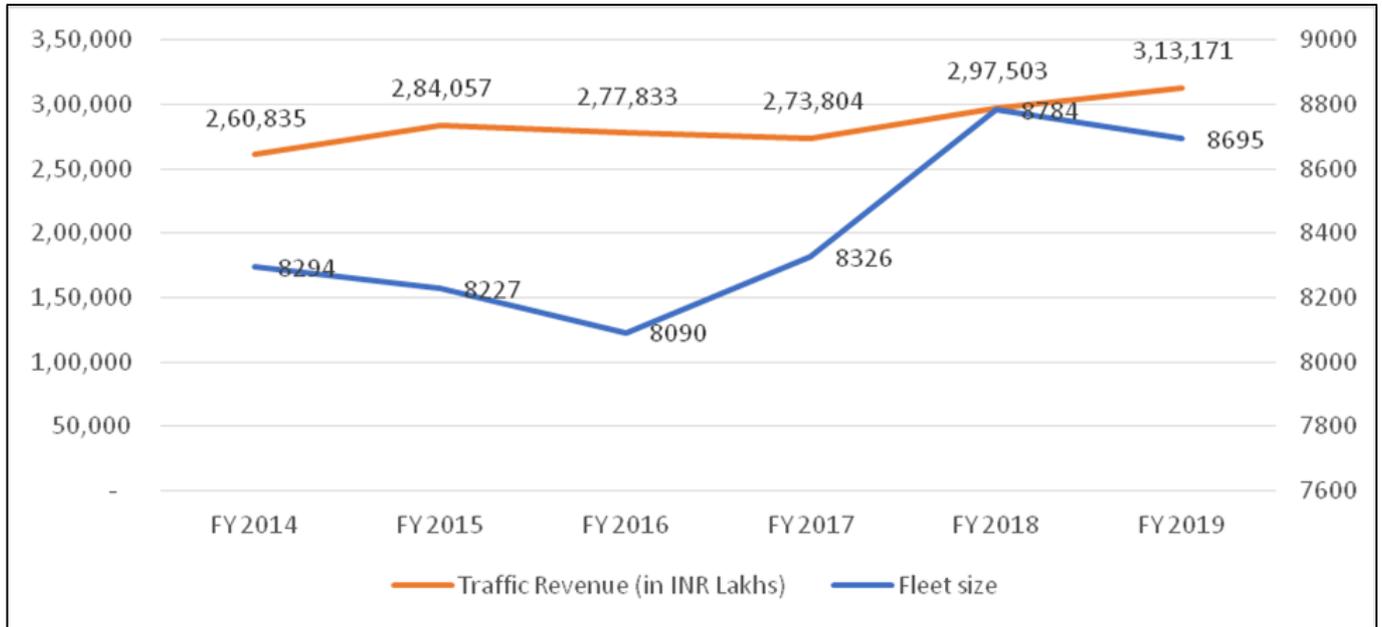


Fig 1: Fleet size and traffic revenue of KSRTC

(Source: Annual Reports of KSRTC)

There has been a strong correlation between the fleet size and traffic revenue of KSRTC during the period under review. The correlation coefficient or Rho is 0.74, suggesting that a rise in fleet size has led to a healthy rise in the traffic revenue of KSRTC Coverall.

However, when one reviews the figures at annual intervals, the outcome is rather anomalous and does not augur well for the KSRTC. For example, between FY 2014 and FY 2015, the fleet size fell but the traffic revenue rose. Between FY 2016 and FY 2017, the fleet size rose but the traffic revenue fell. Between FY 2018 and FY 2019, the fleet size fell but the traffic revenue rose all the same! Such an erratic correlation between the fleet size and traffic revenue points to a strategic weakness in the operations space of KSRTC.

The fleet of the corporation has grown at a compounded annual growth rate (CAGR) of under one percent during the period under review. This is nothing to write home about. The corporation must investigate the issue in all seriousness. The traffic revenue has grown at 3.72 percent which is not something the corporation can be proud of.

The standard deviation (SD) of fleet size is 275 buses and that of revenue is INR 185 crores approximately. These two measures show how widely dispersed are the fleet size and

revenue from the average or mean values of fleet size and revenue. The dispersion in respect of traffic revenue could have been better, though.

Passengers carried daily and passenger fare generated by KSRTC

The daily passenger numbers and the passenger fare generated by KSRTC are examined in the following paragraphs for the period FY 2014-FY 2019.

Table 2: Passengers carried daily and passenger fare generated by KSRTC

Year	Passenger Numbers/day (in Lakhs)	Passenger Fare (in INR Lakhs)	Rho
FY 2014	27.50	2,36,610	0.93
FY 2015	28.35	2,58,430	
FY 2016	27.61	2,52,869	
FY 2017	27.28	2,52,356	
FY 2018	29.68	2,73,724	
FY 2019	30.10	2,87,662	
CAGR (%)	1.82	3.98	

(Source: Annual Reports of KSRTC)

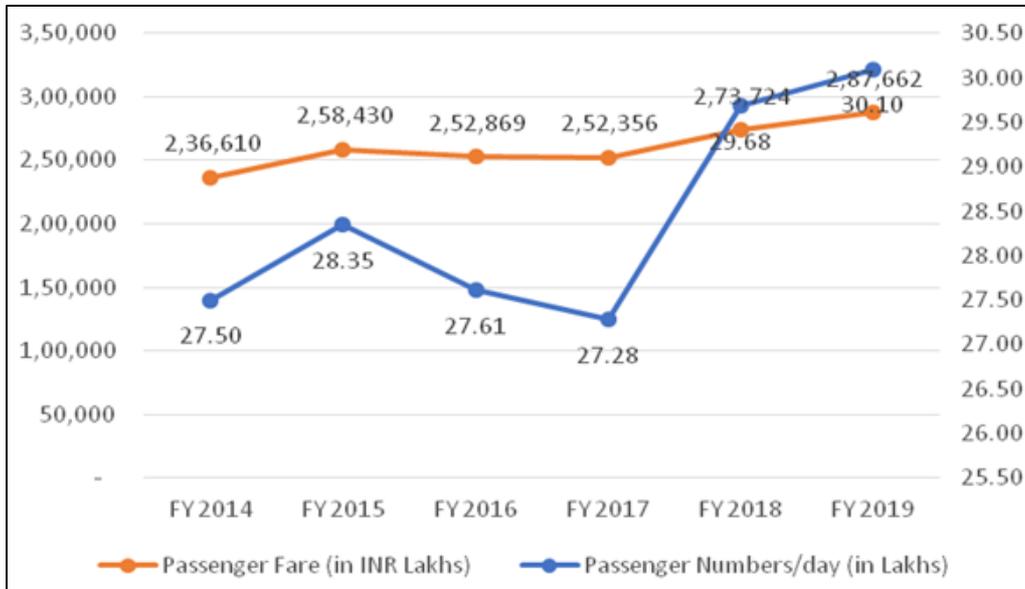


Fig 2: Passengers carried daily and passenger fare generated by KSRTC

(Source: Annual Reports of KSRTC)

There has been a strong positive correlation, almost approaching unity, between the daily passenger numbers and passenger fare generated by KSRTC during the period under review. The correlation coefficient or Rho between the two is 0.93, suggesting that a rise in passenger numbers has led to a corresponding rise in the passenger fare of KSRTC. This augurs well for the KSRTC.

Profit and Traffic Revenue of KSRTC

The profit and revenue of KSRTC are examined in the following Table and paragraphs for the period FY 2014-FY 2019.

Table 3: Profit and traffic revenue of KSRTC (in INR Lakhs)

Year	Profit earned	Traffic Revenue	Rho
FY 2014	-7,556	2,60,835	-0.06
FY 2015	-4,349	2,84,057	
FY 2016	5,095	2,77,833	
FY 2017	-17,708	2,73,804	
FY 2018	450	2,97,503	
FY 2019	-13,493	3,13,171	
CAGR (%)	12.30	3.72	
SD	8517	18494	

(Source: Annual Reports of KSRTC)

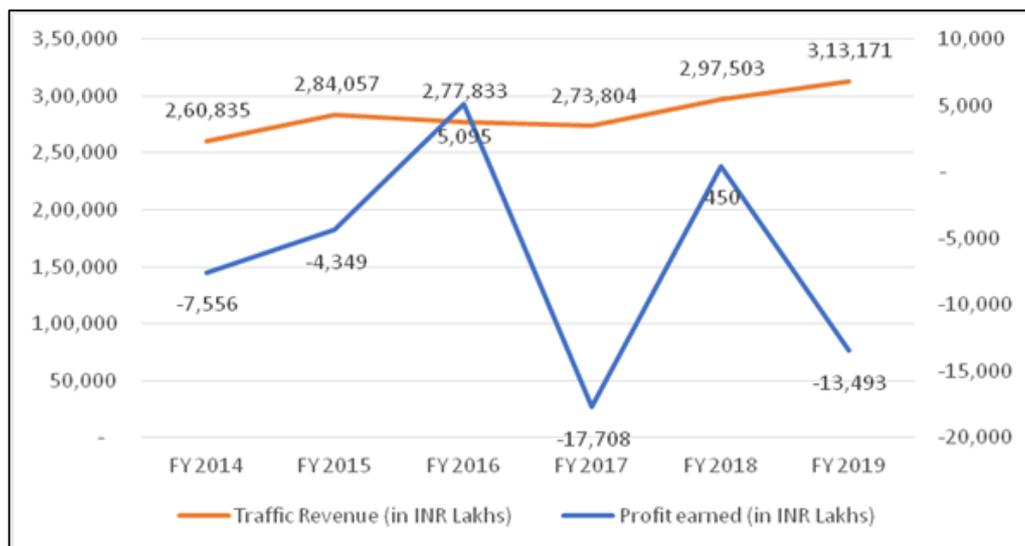


Fig 3: Profit and traffic revenue of KSRTC (in INR Lakhs)

(Source: Annual Reports of KSRTC)

There has been a negative correlation between the profit earned and traffic revenue generated by KSRTC during the period under review. The correlation coefficient or Rho is -0.06, suggesting that a rise in traffic revenue has led to a fall in the profit earned by KSRTC. All the same, the profit CAGR clocked by the corporation in

the context of the traffic revenue earned by it does not look unimpressive owing to the sheer inconsistency characterizing the profit figures. Further, the CAGR of traffic revenue earned by KSRTC, which is 3.72 percent, is simply not good enough for the corporation to emerge as a self-sustaining entity in the near as well as distant future.

Summary of Findings

The following are the summarized version of the findings:

1. There has been a strong correlation between the fleet size and traffic revenue of KSRTC during the period under review. The correlation coefficient or Rho is 0.74, suggesting that a rise in fleet size has led to a healthy rise in the traffic revenue of KSRTC overall.
2. However, when one reviews the figures at annual intervals, the outcome is rather anomalous and does not augur well for the KSRTC. For example, between FY 2014 and FY 2015, the fleet size fell but the traffic revenue rose. Between FY 2016 and FY 2017, the fleet size rose but the traffic revenue fell. Between FY 2018 and FY 2019, the fleet size fell but the traffic revenue rose all the same! Such an erratic correlation between the fleet size and traffic revenue points to a strategic weakness in the operations space of KSRTC.
3. The fleet of the corporation has grown at a compounded annual growth rate (CAGR) of under one percent during the period under review. This is nothing to write home about. The corporation must investigate the issue in all seriousness. The traffic revenue has grown at 3.72 percent which is not something the corporation can be proud of.
4. The standard deviation (SD) of fleet size is 275 buses and that of traffic revenue is INR 185 crores approximately. These two measures show how widely dispersed are the fleet size and revenue from the average or mean values of fleet size and revenue. The dispersion in respect of traffic revenue could have been better, though.
5. There has been a strong positive correlation, almost approaching unity, between the daily passenger numbers and passenger fare generated by KSRTC during the period under review. The correlation coefficient or Rho between the two is 0.93, suggesting that a rise in passenger numbers has led to a corresponding rise in the passenger fare of KSRTC. This augurs well for the KSRTC.
6. There has been a negative correlation between the profit earned and traffic revenue generated by KSRTC during the period under review. The correlation coefficient or Rho is -0.06, suggesting that a rise in traffic revenue has led to a fall in the profit earned by KSRTC.
7. All the same, the profit CAGR clocked by the corporation in the context of the traffic revenue earned by it does not look unimpressive owing to the sheer inconsistency characterizing the profit figures. Further, the CAGR of traffic revenue earned by KSRTC, which is 3.72 percent, is simply not good enough for the corporation to emerge as a self-sustaining entity in the near as well as distant future.

Researcher's Recommendations

The following are researcher's recommendations:

1. The traffic revenue has not moved in consonance with the fleet size. Logically, the latter should move ahead when the former did. In the case of KSRTC, the movement has not manifested any logic. The traffic revenue has moved in fits and starts during the period under review. This is something the corporation must focus on.
2. The CAGR of under one percent in the fleet numbers makes sad reading. The corporation must invest in the

fleet space and scrap buses that have outlived their usefulness.

3. The standard deviation of traffic revenue, namely, INR 185 crores, leads one to conclude that there is scope to reduce the deviation by raising the traffic revenue. The corporation must innovate its services basket to raise its traffic revenue.
4. The near-unity correlation between the daily passenger numbers and passenger fare only reveals that the corporation has priced its services competitively, inducing more and more passengers to use its services. It is a strong message to the corporation that if it can provide the bus, passengers would willingly patronise the bus. It is for the corporation to invest in the fleet, mobilise more passenger traffic and generate more income. It will make eminent business sense and financial sense for the corporation.
5. The negative correlation between the profit earned and the traffic revenue generated by the corporation is a glaring anomaly, to say the least. Such an incongruity points to operational lapses on the part of the corporation. It could have stemmed from any or many factors. It is high time the corporation unearthed the factors and addressed the issues arising therefrom. It could have resulted from over-staffing or under-pricing of services or under-exploitation of the rolling stock or poor maintenance of the rolling stock, etc. The earlier the corporation got down to the task, the better.
6. Despite the sheer inconsistency characterizing the profit figures, the corporation has clocked a healthy profit CAGR. The CAGR of traffic revenue, namely, 3.72 percent, strikes a discordant note. It only shows that if the corporation pulls its socks up, it can clock a superior traffic revenue CAGR and emerge as a self-sustaining entity in the near as well as distant future.

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