

Enhancing the Efficiency of the Sri Lanka Railways and its Contribution to Transportation

Introduction

The national highways network of Sri Lanka has heavily congested with increasing both vehicle population and the demand for transport services. Due to the traffic congestion caused by heavy vehicles such as prime movers, large trucks and passenger transport busses, school, office and factory staff transports are also getting delayed resulting in a waste of a huge number of man-hours, daily. But the room for further expansion of highway transport, particularly in the developed and urbanised areas, is limited due to the huge financial and social costs involved with the required acquisition of valuable assets and the compensation payable for them.

In contrast to highways, the use of railways gives huge economical, social and environmental benefits and savings for a country. Globally, next to transport by water, railways is the second least-cost mode of transport of passengers and goods in terms of labour requirement, fuel consumption and other expenses.

Our neighbour, India, can be considered as a country which reaps the maximum benefits of railway transport. But, even in India, the passenger transport sector is operated at levels below the breakeven, but due to the surpluses in the goods transport sector, the overall railway transport system is making profits.

At the same time, a large number of developed countries are in the process of substituting air transport with rail transport, and such efforts are generating positive results. Railways are competing with air transport to enhance revenue by various measures such as exceeding the speed of land transport above 350 km per hour, providing comparable on-board luxuries and railway tickets at prices many times below the air tickets for a similar distance. Accordingly, countries such as Japan, United Kingdom, France, China and United States of America have launched high-speed (bullet) trains.

A power-set with 06 wagons can transport 1,800 passengers. The fuel consumption for that will be around 04 litres per km. The fuel consumption of a passenger transport bus will be around 0.2 litres per km. Accordingly, a train consumes 200 litres of fuel for a 50 km journey, while a bus needs 10 litres for a similar distance. But, to transport 1,800 passengers, 30 busses (1,800/60) and 300 litres of fuel (30*10) will be required. The man-power requirement for 30 busses will be 60, while that for the train will be 04. The pattern is similar in respect of administrative

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and technical services too. For additional busses, the administrative and technical staff will also have to be increased, but it is not so in respect of trains. Currently, there are about 300 trains in use, and if the capacity of a train is considered as that of 30 busses, current capacity of the railway is an equivalent to 9,000 busses. When the current staff strength of the railways (15,000) is divided by that 9,000, it indicates that the average number of railway staff per unit of passenger bus is even less than 02. But the number of staff per bus is more than 10 in the Sri Lanka Transport Board (SLTB).

The reduction of transport cost could narrow down the existing enormous gap between the farm gate prices of agricultural produce and the retail prices paid by the consumer. When the contribution of the railway to national transport increases, it will lead to reduce the cost of living. Further, environmental benefits such as low carbon emissions can also be obtained.

Table 1 Revenues and expenditures of the Railways in some initial years

Year	Railway network (miles)	Passenger transport income (Rs)	Goods transported (Tons)	Total revenue (Rs)	Total expenditure (Rs)	Profit/(Loss) (Rs)
1905	562	6,281,537	580,120	9,690,653	4,766,872	4,923,781
1920	731	11,262,657	863,120	20,415,816	14,473,439	5,942,377
1930	957	14,919,282	1,013,893	25,324,379	21,910,247	3,414,132
1940	957	10,405,985	1,018,030	17,107,451	21,157,355	-4,049,904
1950	896	24,316,310	1,280,891	57,650,139	71,272,521	-13,622,382

Source: Administrative Reports of the Sri Lanka Government.

In this context, it is important to review the contribution made by the railway in the past, its current status and the targets and potentials for development in the future.

Sri Lanka Railways at the Initial Stages

Sri Lanka Railways (Ceylon Government Railways) was commenced in 1867, with the objective of transporting coffee and tea from the upcountry to Colombo. Accordingly, for several decades, the main source of revenue for the Railways was transport of goods, but subsequently that position was replaced by the transport of passengers, due to the gradual expansion of the services sector. Table 1 indicates that the Railways earned profits for the government during those initial stages.

At the inception, tea industry contributed to the profitability of railway transport. The outputs of the plantations were transported to Colombo in the downward journey, and machinery, fertiliser, food items and labourers were transported in the upward journey from Colombo. According to Government's Administrative Reports for the year 1900, Rs. 55.7 mn out of the total export revenue of Rs. 90.8 mn was earned through tea exports. The revenue of the Railways too increased correspondingly. In the year 1905, 28% of the total revenue of the government was contributed by the Railways earned mainly from goods transport. In 1905, 25% of the total revenue of the Railways had been contributed by the plantation sector. According to the administrative reports of the second half of the 19th century, even after setting off of interests on loans obtained to construct the Railways, there had been a surplus of Rs. 2 lakhs.

The Commencement of incurring losses by the Railways

The Railways commenced incurring losses during the period of 1935-1941 (Table 1). The volume of goods

transported during this period shows a decline. The reason was the commencement of bus and lorry services for the transport of passengers and goods respectively. The losses of the Railways had continued to increase since 1947, and the same situation continues even today. According to government's administrative reports, by the year 1950, the expenditure of the Railways exceeded revenue by 10%, but by the year 1968, the loss had increased to 52.4%. The wages policy of the government and the policy limitations imposed by the government in the pricing of passenger and goods transport were factors that contributed to this situation. Another significant event was the removal of limitations imposed on lorry transport in 1951. Thus, the Railways lost the monopoly it enjoyed on goods transport.

The factors that contributed to the decline of goods transport by Railways

By the year 1969, all the coal-fired engines had been decommissioned, and all the fleet became diesel-powered. In 1959, the system of colour signals was introduced, minimising the delays and facilitating the deployment of an increased number of trains. But the Railways could not catch up the next global trend of electric trains. This contributed to increase the recurrent expenditure while reducing the efficiency of the Railways. Since gaining of the independence, welfare concepts came to the fore, leaving aside profitability and competitiveness, the Railways became an institution providing public welfare while depending on funds from the Treasury. While prioritising on passenger transport, goods sheds, yards, access roads to port, etc. that facilitated goods transport were neglected and allowed for misappropriation.

Similarly, the process of privatisation and restructuring of State institutions since the 1980s resulted in the loss of transport contracts that the Railways had with them. Due to the privatisation of activities of the Food Department, Cement Corporation, Fertiliser Corporation, Flour Manufacturing Corporation and Oils and Fats Corporation, the Railways lost the opportunities for transport of their finished goods as well as raw materials. Later, bowser trucks joined the transport of petroleum, thus making the Railways redundant in that sector too. When rail transport is used, goods have to be transported to and from the railway stations using other modes. Therefore, it is inevitable that the costs associated with loading and unloading would increase. These higher costs also contributed to the gradual diminishing of transport of goods by the Railways. Due to economics of transporting goods from farm or factory straight to market, lorries became the preferred and more established mode of goods transport.

Another factor that contributed to the failure of the Railways as a mode of cargo transport is the fact that the institution is still being governed by the rules and regulations of the colonial era. For 145 years, these regulations had been preventing new commercial strategies being adopted. Financial Regulations, Establishments Code and Government Circulars are discouraging responsibilities by the management. The officers are discouraged, and they resent new experiments or changes. Even a small improvement in lengthy processes relating to minute matters are difficult to be implemented. In this context, the only option for the minimisation of losses was to reduce expenditure. Accordingly, loss-incurring routes such as Awissawella-Opanayake were closed down, and some services and out agencies situated away from the railway lines were

withdrawn. The staff of the Railways comprised of public servants who were governed by the rules and regulations of the government; their skills and efficiency were not recognised or encouraged, but job security was ensured even for the most lethargic. As a result, recruitments, particularly for the skilled technical grades, faced various difficulties, a number of vacancies left unfilled and the productivity of the railway staff deteriorated.

Infrastructure facilities of the Railways

The Railways is in possession of adequate infrastructure to provide an islandwide service. Table 2 summarises the existing physical and human resources available with the Sri Lanka Railways.

Reasons for the non-expansion of the Railway Transports

Cargo transport

One of the reasons for non-popularity of the railway transport is the higher prices. At the same time, non-adherence to a specified timetable also contributes to this. The Railways charges a minimum of Rs. 950 (considering only the operational costs) to transport goods for one kilometre. For an example, if one cube of sand is transported from Manampitiya to Colombo, the transport cost charged by the Railways alone exceeds the sale price of one cube of sand in the open market. Accordingly, transporters prefer the least-cost method which is still the road transport. Due to insufficiency of locomotive engines, the cargo transport could not be given priority, and therefore, delays could not be avoided and consequently rail transport was grinding to the lowest level.

Passenger transport

If passenger transport by rail is somewhat popular, it is only in urban areas. Except for long-distance trips and office-time in-bound/out-bound trips, all other trains run with below-capacity number of passengers.

Development of a network of highways and opening of expressways will further reduce the popularity of train travel. The increase in the number of privately-owned vehicles, particularly those of low-cost small vehicles such as three wheelers and two wheelers, has reduced the propensity of the people to use public transport. But, as undesired side-effects of that development, road traffic congestions and accidents have also increased. At the same time, at the macro level, the country is incurring a huge cost on fossil fuels. Therefore, it is crucial for the country, if the public once again, commences using more public transport.

Improvement of the efficiency of the Railways and enhancing its share of transport

The steps that should be taken to improve the efficiency of the Railways and its share of the transport sector in the country are discussed in this section.

Re-organisation of administration

The continuation of the Railways as a government department is no longer beneficial for the country's economy. Delays in decision making are inevitable under the government regulations. Centralised decision making makes an institution fully dependent on a single person's abilities or disabilities. Instead, decisions should be taken collectively, and target setting, restructuring and assigning of responsibilities should be decentralised. An administration structure which is free of

unnecessary political interferences and devoid of acting and covering appointments should be established.

The administration model of the colonial era has become extinct even in the imperial countries which introduced it. This system of a single head should be done away with and replaced with a main administrative council which should be comprised intellectuals and experts in the relevant fields. In the current scenario, the chief manager is compelled to spend most of his time on matters irrelevant to running of trains and consequently time available for him for railway policy planning has become insufficient. Due to the procedural inflexibilities of the State administrative model, approximately 50% of the approved cadre remains vacant, while a substantial part of the annual allocations of funds remain unutilised.

Efficient utilisation of the resources of the department

If the assets of the Department of Railways are properly utilised, a substantial amount of income could be earned. Such funds could be utilised to set off some of the operating expenses. Assets with huge values remain under-utilised, and due to the State rules and regulations which have to be complied with, no capital infusions could be made to enhance the value of such assets. For an example, under the Lands Ordinance of the Government, the maximum period that the properties of the Railways could be leased is 05 years and the

Table 2 Some infrastructure facilities of the Railways in 2011

Type of facility	Number	Operational	Not operational
Locomotive engines	138	92	46
Power sets	69	57	12
Railways (km)	1,440		
Railway stations	363		
Approved cadre	17,173		

Source: Records of the Department of Railways.

lessee can use such assets only for short-term purposes such as crop cultivation. As a result of such limitations, valuable investment opportunities are missed and assets remain unused or misused. To develop these assets, a State-owned company (based on the Indian Model) should be established under the Companies Act. Accordingly, catering services, reception halls, parking spaces, and rest rooms of the Railways can be reorganised and can be made profitable.

Minimisation of the under-utilisation of railway lines

It has been estimated that the existing railway lines are used only for 25% of the available time. For an example, trains run only for 80-120 minutes per day in the 1.5km section between Kalutara North and Kalutara South. As such, the line is under-utilised for 20 hours per day. This is a substantial issue, and the lines utilisation should be increased at least up to 12 hours a day. Increase of the transport of cargo could be a viable alternative for this purpose.

Short-term concessions from the government

The main reason for the non-attractiveness of the Railways for cargo transport is the higher cost (per tonne of cargo). Therefore, there is a need to subsidise goods transport charges for a short period. The operational expenses per unit of cargo can be minimised only with the increase of volumes, and subsidies will have to be continued until the demand reaches to that level.

Minimisation of the transport of empty carriages

Minimisation of the transport of empty carriages is also a must. The carriages which transport raw materials should bring in finished goods on the return journey and vice versa. The main (up country) line was profitable at the initial stages due to the minimisation of unit cost achieved through transport of food, machinery, fertiliser and labourers on the upcountry journey and tea on the Colombo-bound journey.

Use of new technology

The traditional institutions and positions created during the initial stages to suit the social and economic environment at that time still prevails, and there is a large number of service-providing points too. All these contribute to increase the wage bill of the Railways. An example is collection of revenue from railway stations is still done using an iron safe which has been in use from the 1800s. The minimum use of information technology in the offices results in waste of labour. Sub contracting of non-mechanical civil constructions, sanitary and security services, etc. would help minimise costs, which in turn would help make the Railways profitable.

Replacement of the existing container-type wagons with improved high-speed wagons

The Indian Railways is already using carriages which are capable of exceeding 100km per hour. When goods are transported in such carriages, goods trains do not have to give way to the passenger trains. This would help augment the goods transport by the Railways.

Protection of the existing resources

It is essential that the existing lands and buildings are well protected. The release of the Railway lands for large-scale long-term projects might seriously jeopardise future development activities of the Department. To recommence goods transport and expand passenger transport, it is essential to protect the land reservations of the Railways.

Construction of new railway lines

In the construction of new railway lines, rather than focusing on thinly-populated areas based on speculative future projections, it is important to give priority to urgent requirements such as double lines between Colombo-Homagama, connection of Jayawardhanapura - Kotte to the railway network and a

third line up to Moratuwa, etc. Such a policy would also help reduce the road traffic congestion in and around Colombo.

Other strategies

The main reason for the reduction in the number of passengers, particularly during night, is the potential risks of thefts and burglaries. Running few trains during night also contributes to the same problem. For an example, the day's last train on the coastal line is the Aluthgama-bound one at 9.30 p.m. and the next train will be the Kalutara-bound one at 5.30 a.m. in the following morning. Enhanced security in the trains at night and parking facilities for motor vehicles and bicycles of the passengers at the railway station would help attract more passengers. Similarly, deployment of modern carriages with high-quality facilities for the office-time trains and other passenger trains and also initiation of an appropriate security mechanism for such facilities may help attract and retain more passengers. Already, two luxury coaches have been deployed in the Inter-City service as a joint venture between the Railways and the private sector. The tickets have been priced at rates six times higher than the normal rates, but the fact that advanced bookings for six months exists for that service reveals that a demand prevails for high-quality services.

Conclusion

The Railway service which spends a huge amount of public funds should face the current challenge of maximising efficiency of utilisation of its resources and management to minimise losses and to reach at least the break-even point. If the losses are reduced, the prevailing higher prices for goods and passenger transport could be reduced and rationalised. Time should not be lost by the Railways in realising and enhancing its share of national transport by implementing the measures suggested above. ■