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A CONCESSION MODEL TO PROMOTE RURAL BUS SERVICES IN SRI LANKA

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ABSTRACT

Sri Lanka has a public transport system that dates back to the 1860s. Buses entered the service in 1907 and have become the most widely used mode of transport. The penetration level of buses is 1 bus per 1000 population. The per capita bus travel is approximately 12 km per day. These services cover urban, inter-urban as well as rural services. Rural services however have always been loss making. This is due to the fact that such areas have lower household incomes and are therefore unable to generate high volumes of travel and are also unable to pay higher fares for resulting lower vehicle occupancies.

Since over 70% of Sri Lanka's population resides in rural areas, successive governments have provided subsidise for such bus services. However many such rural routes have remained loss-making in spite of receiving grants for decades. This has resulted in the Government being unable to expand the rural bus services as it has not been possible to develop the revenues on such routes to ensure profitability and to move on to other routes. As a result, the reliability of such services has diminished and rural

communities do not have appeared to have developed on account of the provision of subsidised bus services.

This paper is an evaluation of a new model for subsidising rural bus routes under the 'Gami Saeriya' program which was initiated in 2004. These concession contracts rely on the intervention of a Community Based Monitoring Committee where the subsidy payments are paid by the regulator only on the certification of the compliance by the bus operator to selected operational targets. There are presently around 500 such services operated by both the public and private sector. Of a total of 18 such awards made in 2004/5, 13 services have now completed their contract period successfully. The paper analyses the results of an evaluation of these services in terms of the increase in ridership, the reliability of services, the resulting benefits to the community and the level of financial viability they have reached to continue without subsidy.

The paper is based on the analysis of feedback through participatory group surveys of passengers, members of Community Based Monitoring Committees and officials of the Transport Commission. The paper concludes by identifying key criterion which determines the success of these agreements and makes recommendations how such agreements could be developed further to meet specific rural community development objectives.

HISTORY OF RURAL TRANSPORTATION

The history of civilization in Sri Lanka dates back to 5th Century B.C where society was organized in units of agriculture based villages each of which had a temple, lake and paddy fields as fundamental components of village existence. The people of this era had very limited needs and most managed with resources that were available within the village. Thereby travel needs of these people were minimal and limited only to trips of a religious and social nature. However with the global industrialization which took place when Sri Lanka was under British rule, many urban centers were created. Bullock Carts were the dominant mode of transport at this time.

Even though railways have been in operation in Sri Lanka since 1867, the first recorded motorised road passenger service which was a bus-cum-lorry service from Colombo to Chilaw had commenced in 1907 and later extended to Puttalam in 1910. The first bus service, Colombo to Kandy, was introduced only after World War I. These buses operated by private individuals carried both passengers and goods.

The commercial, industrial and educational activities of the urban nodes grew as the bus services between urban centres increased in number. Therefore, more rural communities were attracted to neighbouring urban centers in their search for employment, trading opportunities and educational facilities. Even though passenger transportation between urban centers steadily improved, it did not extend to rural routes which were only served by bullock cart.

In 1958, bus services were nationalized and placed under a single state organization - the newly formed Ceylon Transport Board (CTB). By the end of 1970s, the per-capita bus usage, supported by a policy of low fares and an efficient bus transport system, was among one of the highest in the world. An important element in this was the mobility

the state controlled bus service provided to rural areas, which contributed immensely to the relatively low urbanization in Sri Lanka. This was also driven politically since the new mobility was sought after by the rural population in much earnest. A large number of such routes were established in the 1960s and 1970s and even though many of them were unprofitable, the CTB being a monopoly state operator was able to cross subsidise these losses with the more remunerative inter-urban and urban services.

Though rural transportation considerably improved after the establishment of the CTB, it also experienced a rapid decline with the deterioration of the CTB mainly due to the government policy on low fares and inability to continue subsidising the loss making services many of which were from the rural areas.

In 1978, with the intention of overcoming these deficiencies in public transport, the government gave the opportunity to the private sector to invest again in passenger transportation while at the same time re-establishing the CTB as with 9 regional Transport Boards. However this lead to both private and state sectors vying for the profitable routes and thus all loss making routes and services were neglected. Therefore rural bus passenger transport deteriorated completely along with other services such as school and night services.

In 1989, the government intervened and provided a lump sum subsidy to the state operator to provide routes identified as uneconomic rural routes. However, more and more routes were added to this list without an increase in the subsidy thus making the level of subsidy too small to motivate an operator. Since it was more viable even for the cash strapped state operator to deploy buses on more lucrative routes, these routes were maintained only with skeleton services just in order to qualify for subsidy payments. The services were unreliable and rural communities had to resort to private or para-transit modes of transport in order to attend to even basic travel requirements. There was no audit or regulatory function in the delivery of these services as it was a direct subsidy from the Treasury to the Operator.

Considering these issues encountered with the rural transport sector, when establishing the National Transport Commission (NTC) under Act. 37 of 1991, it was stated that the National Transport Commission is required to provide “financial support” to those selected to serve “un-remunerative routes”. Based on this and the poor state of rural transport, the NTC deployed a “Gami Saeriya” project in 2005 to address problems encountered in rural transportation in Sri Lanka.

GAMI SAERIYA PROJECT

The government in recognition of the wider socioeconomic policy of promoting rural socioeconomic wellbeing and equity based growth has agreed in its policy statement to provide special consideration with respect to transport needs of rural and under developed or developing areas.

Moreover the proposed National Transport Policy sets out that bus fares will be equitable for all people. The interpretation of this statement is that rural people should not be required to pay more for basic transport services than other citizens elsewhere in the country. Such a policy however has implementation problems and becomes unviable

since providing bus services in areas which are so sparsely populated that filling a bus for most trips of the day is unlikely. However, not providing such services leads to stagnation of socioeconomic development of such rural areas and migration of people to cities. Hence in an effort to keep such communities economically and socially active and developing, bus services need to be continued.

Based on this policy, the National Transport Commission has initiated a compensation scheme for subsiding unremunerated rural bus transport services under a project called "Gami Saeriya". Such compensatory payments are paid on actual delivery of services as stipulated through a contract with the NTC and monitored by a committee of leading citizens of the community to which such services are provided. Both the State and private operators are offered such contracts for a period of three years. It is expected that communities together with the operator will promote and develop the service sufficiently in order to ensure continuity of services after this period by achieving financial viability without the compensatory payment. There are over 200 such concessions that have been awarded and operating successfully to date.

Selection of services

Community groups, transport sector officials and elected representatives, make requests for new service or for inclusion of existing services, under the Gami Saeriya program. The National Transport Commission thereafter conducts a preliminary inquiry to determine if such as route has a demand that justifies a subsidy. The request is denied if near full load factors are found or if households in the community are too few to justify a bus service. Moreover, if even a single operating bus exists on that route, then too the route is rejected at the preliminary level of assessment. Another pre-requisite is that the length of the unremunerated route which should be greater than 5 km and more than 50% of the total route length being be in a rural area. Moreover there should be an adequate demand for at least 3 trips (morning, mid-day, evening) per day for a bus having a minimum seating capacity of over 25 seats. At present the Gami Saeriya program funds only single bus operations.

Selection of Operator

The NTC adopts (a) competitive bidding and (b) fixed price agreements for the award of concessions.

Competitive Bidding

Competitive Bidding is carried out when it is likely that there will be a high demand for these negative concessions. Early attempts to award negative concessions by competitive bidding led to several failures as many operators in an endeavour to obtain a route made very low bids and pulled out of service within a short period. Since most bidders are single bus owners, they lack the financial knowledge to make accurate assessments or ability to carry out a sound due diligence study. Hence the failure rate is high. Once an operator fails, it becomes that much more difficult to attract another operator. This leads to disruption of the service and loss of public confidence in the regulator. Thus the system of competitive bidding is used only where it is likely that there are many potential bidders.

Fixed Rate Agreements

More success has been achieved with fixed rate agreements, where the NTC determines a concession rate based on a standard bus operating cost formula. Here a standard 25% cost per km is granted as a subsidy. This is based on the general observation that most such routes are unable to have load factors of greater than 75% of allowed capacity.

An upper kilometerage of 150 km per bus per day is set and at the current bus operating cost of Rs 70 per km (US 0.65 cents per km) this works out to a subsidy of around Rs 2,635 per bus per day. The annual cost of providing this subsidy for all days of the year works out to around Rs 1 million (US $ 8,500 per annum). Under this scheme option of operating a route is offered first to the state-owned SLTB and if the right of first refusal is received, the provincial regulator is requested to nominate a suitable operator who is willing to provide a service from the locality of the route. If there is competition then it is listed for bidding. These routes based on fixed rates have shown a much higher rate of success than those awarded on open bidding as they are offered a reasonable price which allows whoever who takes the contract to succeed. The bus fare charged is the same as for other remunerative routes set by the NTC.

SERVICE DELIVERY

In either case, the operator has to maintain a set of operating standards in order to qualify for the payment. This includes:

- Completing at least 90% of the trips scheduled for the month
- Obtaining a certification of operation from the service monitoring committee
- School children are carried at half rate
- The concession is granted for a three year period, during which he is expected to develop rider-ship and make the route financially viable.
- Furthermore an operator who successfully operates a route and makes it viable within three years will be awarded a further concession for another route.

COMMUNITY SERVICE MONITORING COMMITTEE (CSMC)

Once the operator is selected, the NTC appoints a Community Service Monitoring Committee (CSMC) to report the quality of services provided under the Gami Saeriya program. The monthly subsidy payment to an operator is processed only on receipt of a report from the CSMC recommending the service and assessment of service provided for the month. In addition, the NTC conducts ad-hoc service supervision through their mobile service monitoring and enforcement units. Complaints received by phone or letter from end users are also investigated.

This monitoring mechanism is found to be a key component in the success of this scheme. This is because operators have a tendency to ultimately not provide the required level of service once they have got used to the system of making claims and persuading government officials to provide recommendations. However members of the CSMC are usually leading citizens of such communities and have been found not to provide false information as they are liable to be questioned by the other members of the community if services fail. In this respect the names and contact details of the members of the CSMC are displayed inside the bus along side the timetable and fare chart and hence all users know whom to complaint to. Since members of the CSMC

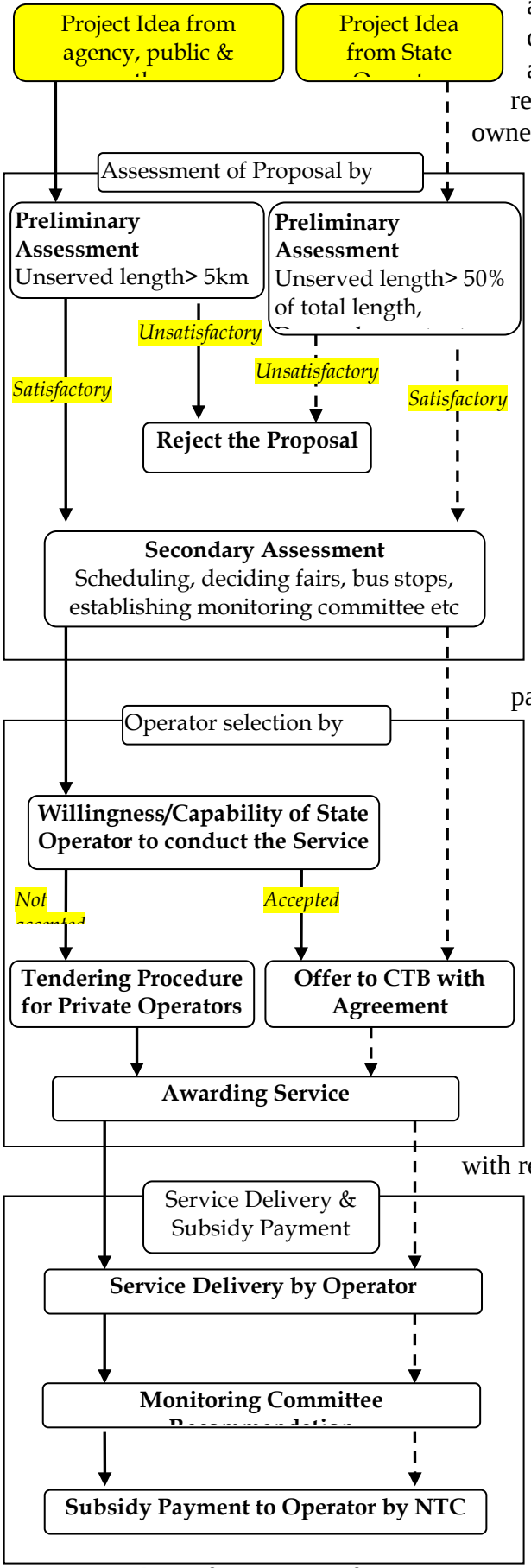

Figure 1: Chart of Activities of Gami Saeriya Project

also interact with the community on a daily basis, there is pressure to report the actual position of the service and to not recommend payments for defaulting owners.

ASSESSMENT OF SERVICES - PERFORMANCE INDICATORS

For forecasting service viability and socio-economic enhancement in the long run, it is necessary to assess the current trend of both socio-economic benefit derivation and improvement of the service provided throughout this program. Though determining exact socio-economic upliftment due to the program needs several indicators, service improvement can be assessed based on monthly operational revenue/km and socio-economic indicators in terms of different output parameters. Assessment of the services should be done annually and also at the end of the 3 year concession period.

Annual Assessment

With respect to the point of assessment (annual assessment of the project) Figure 2 shows all possible operational standings of the service combining short run as well as long run service conditions. Short run status is indicated on the vertical axis by the conditions with respect to the beginning which are namely, (a) deteriorated, (b) stagnant and (c) improved. The long-term or end of concession period outcomes are plotted on the x axis and represented by the same indicators. Only the four operational standings represented by four black dots are possible while all the others are impossible to occur even in the short run.

The four standings numbered and shown in the figure as O1, O2, O3 and O4 are in the order of service strength.

- O1- Service has improved up to point of assessment and still is in an improving trend.
- O2- Service has not improved thus far but currently (just before the assessment i.e. in the short run) indicates an improving trend.
- O3 - Service has improved thus far but there has been no further improvement in the short run.
- O4- Service improved thus far, but there is currently a declining trend.

For all the other standings, the standing assessment is not viable at least in the short run.

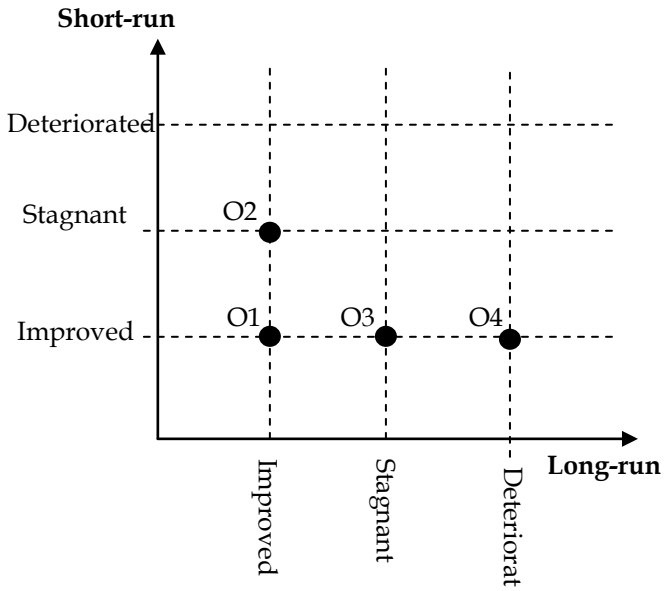

Figure 2: Possible Standings of Service

The short term and long term indicators may be assessed using the monthly km operated. Using this, it is possible to locate their positions in above diagram.

Transport Based Socio-economic Benefits

Once a transport service is deployed for a rural area, the transport based socio-economic parameters are also expected to improve. Black dots represented in Figure 3 indicate the probable socio-economic changes in general which can be imparted due to the implementation of such a bus service. The standing S1, S2, S3, and S4 in terms of achievement of pre-defined socio-economic outcomes can be represented as follows:

- S1- Socio-economic improvements have been observed thus far and it is still found to be improving further.
- S2- There have been no socio-economic improvement thus far but currently there is an improving trend

- S3 – There have been socio-economic improvements thus far but there has been no further improvement observed in recent times
- S4- Socio-economic improvements were observed so-far but it is now in a declining trend

As in the case of operations standings, no other standings of socio-economic improvements are possible.

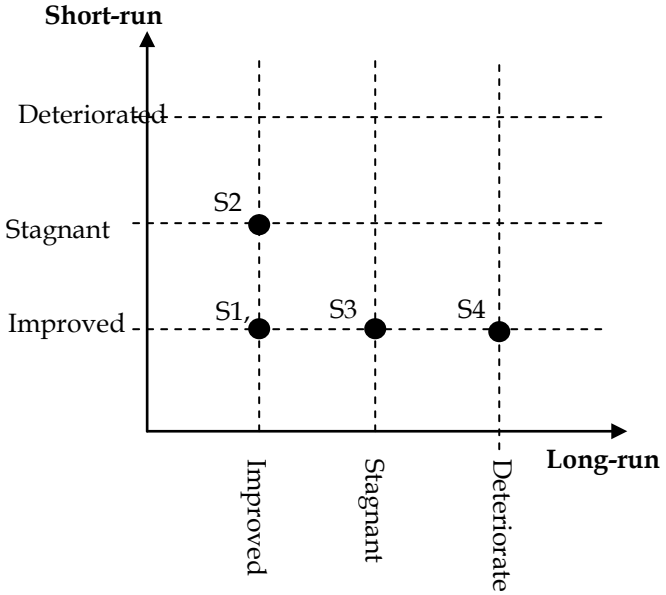

Figure 3: Possible Socio-economic Changes

Socio-economic development due to a rural transport service could be expected in two different ways.

Making current socio-economic activities more efficient

It is observed that once a reliable Gami Saeriya bus service is established, the rural population gradually shifts from their expensive modes of transport to this service with the intention of reducing their transport cost. Basically this leads to an increase in the passenger km carried and revenue in the short-run. Improvements due in the service of short run can be assessed using these parameters.

Creating new socio-economic opportunities

Once the service is operational for a certain period, it induces development resulting from the lower transport costs. This in turn increases the value of rural properties such as lands and buildings in the long run. Travel demand of working and schooling population is among the best representatives of socio-economic enhancements of the region. The following Key Performance Indicators (KPI)s along with their short and long term trends are used for assessing the respective socio-economic development due to the Gami Saeriya transport service.

1. Number of persons working outside community
2. Schooling population

3. Average Ridership of community
4. Land value

The nature of the demand can be assessed by plotting the value of each item on a monthly basis. Thereby the respective position as illustrated in the Figure 3 could be redrawn.

Ranking Services

By combining the operational and socio-economic standing figures into a single plot, it is possible to assess the socio-economic development stages under different standings of the service delivery of each Gami Saeriya service. In real practice some red dots indicate the improbable events.

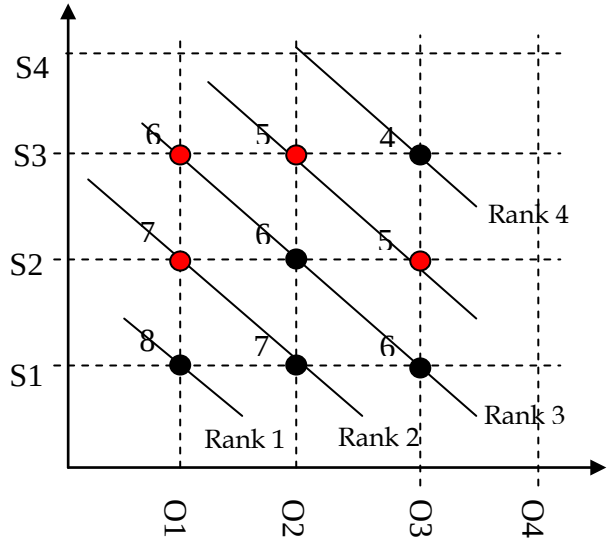

Figure 4: Ranking Scheme of Services

Weights are assigned for operating and socioeconomic standings with a weight of 4 assigned for O1 and S1; 3 for O2, S2; 2 for O3, S3 and 1 for O4, S4. The combined weight for each combination of O and S values are shown in Figure 4. The final ranking is based on the total score obtained for each position. Thus O1,S1 gets ranked 1 and O3,S3 gets ranked 4th.

By using this diagram as an assessment tool, it is possible to identify unsuccessful services (which will be ranked lower than group 4) annually or at the end of the concessionary period. Also it provides a platform for the ranking of successful services.

CASE STUDIES

The case study is based on the feedback of participatory group surveys of passengers, members of Community Based Monitoring Committees and officials of the NTC. For this purpose, five representative services that have completed 2 years of operation under the Gami Saeriya program were selected from different parts of the country.

Route 1: Mirigama- Giriulla (via Paragoda, Divuldeniya, Karawilakumbura, Nawana, Nalla villages)

This route is in the Gampaha District of the Western Province where 5km out of its total length of 15 km was in an underserved rural area prior to deploying the service. Though agriculture is the main livelihood of this area, there are considerable amount of workers residing in the area who commute daily to town centres. The private operator who has the concession for this route deploys a 30-seater bus providing 5 round trips per day.

Route 2: Horowpathana-Ihala Diulwewa (Via Galahitiyagama, Pattewa, Thamarawewa, Weerasolei, Phala Diulwewa, Kapugolllewa villages)

This service operating in the Anuradhapura District of the North Central Province is now nearing the completion of the 1st year of a 3 year concessionary period. This service covers a distance of 28 kms with 14 km of uneconomical route length at the tail end of the route. Nearly 1500 families reside in these areas and the majority of them are engaged in full time agriculture as their main form of livelihood. However school children, teachers and a few people working in Colombo and other distant towns are the main beneficiaries of this service. The private operator provides 4 round trips per day under the Gami Saeriya Program.

Route 3: Puttalam-Saliyawewa (Via Ihala Puliyankulama, Pahala Puliyankulama, Palugaha Wewa, Ottupallama, Neela Bamma Villages)

This is one of the services implemented in 2007 in Puttalam District of the North Western Province. The total distance of the route is 55.1 km of which 27.7 km portion is considered to be an uneconomical section or route. A lower population density is observed in these villages where agriculture is the major form of livelihood. The service which has 3 round trips is operated by a private operator who was selected through the competitive bidding process.

Route 4: Kebithigollewa-Kapugollewa(Via 11 villages including Lunuatulewa, Alawattewa, Anapathwewa, Ataweerawewa Rahumad Nagar)

This route operates in Anuradhapura District of the North Central Province and covers a length of 26 km of which the last 11 km is considered to be uneconomical. Nearly 2000 families live in this area and the majority of them are engaged in agriculture as their primary form of livelihood. However, school children and workers holding jobs in distant towns are the main beneficiaries of this service. Farmers and people engaged in small scale businesses also use this service for the transportation of their goods. This service which has 4 round trips per day has been operating since 2006 under the Gami Saeriya program.

Route 5: Dambulla-Alakolawewa

This service, operated by the Dambulla Depot of SLTB is in the North Central Province. It is nearing 3 years in its first concessionary period. Total distance of the route is 23.9 km and nearly half of the length is considered to be an uneconomical section of route. A comparatively lower population density is observable in these villages where agriculture is the major form of livelihood of the people in the area. SLTB operates 4 round trips per day on this route.

Financial viability of the service in the short-run as well as long run is heavily based on operational revenue as discussed in the previous section. Due to the unavailability of data logs over the concessionary period, it has been assessed in consultation with the operator and the NTC. Table 1 summarizes the results of these interviews.

Table 1: Standings of Service Viability

	Service Viability		
Route	**Short-run**	**Long-run**	**Standing**
Route 1	Improved	Improved	O1
Route 2	Stagnant	Improved	O2
Route 3	Stagnant	Stagnant	-
Route 4			O3
Route 5	Improved	Stagnant	O3

The Socio-economic assessment is based on the participatory group surveys of passengers and the members of the respective community service monitoring committee (CSMC). Table 2 summarizes the socioeconomic standing of these five routes based on responses from interviews with the committees.

Table 2: Standings of Socio-economic development

	Socio-economic		
Route	**Short-run**	**Long-run**	**Standing**
Route 1	Improved	Improved	S1
Route 2	Improved	Improved	S1
Route 3	Improved	Stagnant	S3
Route 4	Improved	Improved	S1
Route 5	Improved	Improved	S1

The final ranking is derived by combining the socio-economic development standing and the service viability based on the standing order in Table 1 and Table 2. The final ranking is given in Table 3.

Table 3: Final Ranking of Services

Route	**Standing**		**Rank**	
	Service Viability	**Socio-economic**	**Overall**	
Route 1	O1	S1	O1S1	1
Route 2	O2	S1	O2S1	2
Route 3	-	S3	-	-
Route 4	O3	S1	O3S1	3
Route 5	O3	S1	O3S1	3

Based on the results in Table 3, Route 3 which is the longest route is considered as being unsuccessful service since it does not demonstrate either a financial viability or an economic benefit. On the other hand Route 1 which is the shortest route has the best results.

CONCLUSION

During the period of state bus transport monopoly, the Ceylon Transport Board (CTB) provided regular services to rural areas thereby ensuring a high degree of accessibility to rural communities which contributed towards preventing mass people migration to cities. These services though financially unprofitable were cross-subsidised with profits from urban and inter-urban bus routes.

The privatisation of the bus industry that followed the growing inefficiency of the state operator caused by many political and management issues saw the state operator having to serve only the rural areas since the profitable routes were taken up by the private sector. The state operator has been since then subsidised by the government through a block subsidy which does not have any route based performance indicators or targets.

The Gami Saeriya program which commenced in 2005 has successfully initiated over 200 services based on a community based service monitoring program, minimum operational requirements and a fixed concession period. Operators are paid subsidy only on recommendation of the committee which performs this service on a voluntary basis. There are two methods of awarding contracts based on the ability to find an operator. Where there is no interest among potential suppliers, operators are persuaded on a fixed rate. These have been found to be more successful than the open bidding process, as in the latter case, bidders are often ignorant regarding the actual cost of operations and revenue and thus submit low bids which are in adequate. Such services are often abandoned early.

Giving opportunity to the private sector to be involved in the provision of these uneconomical services has eased the work-load on the state bus service provider. The state services too have shown an interest in this program, as they are getting a subsidy based on operations as opposed to the lump sum general subsidy which was not adequate for the reliable provision of these services.

Since the concession period and subsidy ends after 3 years, the viability of the service in the long run depends on the demand that is induced for the service during this period. The paper has developed a ranking methodology to identify services that are performing well both in the short run and in the long run.

Success of the subsidized bus services in operation under Gami Saeriya scheme shows the efficiency and the effectiveness of this scheme over other concessionary programs tried out in the past.