

PREPARING PUBLIC TRANSPORT OPERATORS FOR TENDERING: THE WESTERN CAPE SITUATION

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ABSTRACT

This paper is based on the findings of a research project aimed at addressing the problems preventing public transport operators from benefiting from the new tender system.

Due to a lack of competition and monitoring of service quality, the public transport industry was in a state of decline. To address these inadequacies, the National Department of Transport introduced a public tender system, instituting a number of service quality improvements. Since the majority of public transport operators have no knowledge in operating a subsidised service, there was a need to assess their competence in operations and costing techniques required by the tender.

A questionnaire was devised to get information on legal and financial issues, suitability of their vehicle fleet for the tender, operational experience, employee structure, general information and feedback on their main problems with the tender. Experiences with public transport tender systems on a national and international scale were used to inform the study.

An interesting result was that more than 10% of the operators surveyed were not even aware that a public tender would be held in the next few months. It was found that all operators using good vehicle scheduling and costing techniques had more than 20 years of transport experience. 58% of the total taxi fleet and 36% of the total bus fleet surveyed were unsuitable to be used in the tender due to the age and condition of their vehicles.

BACKGROUND

For a number of years, the bus industry in the Western Cape and South Africa as a whole has been operating inefficiently. The situation has resulted from the nature of policies employed by the Department of Transport, which allowed large operators to operate a public transport service in the absence of proper monitoring of the level of the service provided. Also competition was not encouraged, which resulted in high fares as well as no incentives to improve the levels of service for transport commuters. As a result, the system deteriorated and commuter numbers decreased proportionally.

The incumbent operator for the Western Cape region is Golden Arrow. Golden Arrow first operated as Tramway Holdings, which was founded in 1861. The Incumbent operator was previously subsidised by the number of multi-journey tickets sold. The government wished to improve efficiency and to implement a more efficient system of subsidy provision, taking into account the number of revenue kilometres operated by the operator.

The government wishes to enable a modal split of 80% to public transport and 20% to motorists. In order to achieve this target, a number of changes need to be implemented, not the least of which is an improvement of the efficiency of public transport operation as a whole.

In 1988 a new policy was introduced to improve this situation. Buses were required to operate at a minimum of half seat loads and operators were to be paid by the revenue kilometres travelled (National Department of Transport, September 1996).

Since efficient monitoring services were not in operation, these policies could not be properly implemented.

The NDOT adopted the policy to "...improve South Africa's competitiveness and that of its transport infrastructure and operations through greater effectiveness and efficiency..." (National Department of Transport, September 1996). To encourage competitiveness and greater efficiency of the system, private bus operators would need to be introduced into the subsidy scheme, currently only enjoyed by the incumbent operator.

In an attempt to attract smaller operators for tendered services, a new tender system was to be developed for each province. On 1 April 1997 (Cape Metropolitan Council, September 1999) all subsidised bus services were changed to interim contracts in anticipation of the new tender system. These contracts were valid for three years and would culminate in the implementation of the new tender system.

The National Department of Transport has taken the initiative to implement an open public tender system. This will open up the market to smaller transport companies, previously unable to operate a subsidised commuter service. The National Transport Authorities take care of the design of the actual routes and draw up tender documents as well. These tender routes are advertised to the public to inform interested operators of the tender.

Operators are allowed to collect tender documents and are charged a certain fee for this privilege. They are then given an opportunity to formulate their tender bids by complying with the conditions of the tender document. Bids are then collected and evaluated on the basis of total cost as well as a number of other quality criteria. The successful tenderer is awarded the contract and a Supervisory and Monitoring Firm, which is appointed by the Transport Authority to manage the contract, monitor the operator's service.

As a rule, the incumbent operator has the first right of refusal and will be allowed to match the lowest bid if it is less than 10% lower than its own bid. If an operator other than the incumbent is eligible for the tender, it will only be awarded if the operator is proven to be able to fulfil the regulations as stated in the tender document. The successful operator should also have a bus fleet to provide an adequate service and have provided sufficiently for repairs and replacement of vehicles in the pricing of the tender bid.

The purpose of this paper is to describe a recent study in which the preparedness for tendering of small bus and taxi companies was established (Jakoet, January 2001).

The scope of this paper is to determine whether bus and taxi operators are sufficiently prepared for the new tendering system in so far as business practice, levels of expertise and capital requirements are concerned. These criteria are related to the requirements outlined in the model tender document for public transport operations (Provincial Administration of the Western Cape, 1999).

DESIGN OF SURVEY

A questionnaire survey was designed to obtain baseline information on details of public transport operations of operators in the Western Cape region. This method was used, as it is ideal in surveys where many questions are required.

The model bus tender document (Provincial Administration of the Western Cape, 1999) was used as a basis for the construction of the questions used in the survey. This document provides a good understanding of the issues involved in the tendering process.

The new tendering process affects both minibus taxi and bus operators. Similar questionnaires were designed for both, taking into consideration the main issues concerning tendering requirements as well as issues specific to each type of operator.

Questions were classified under legal, financial, technical and sensitive information. The questionnaire was structured by placing general questions at the start, detailed tables in the middle and more intrusive questions at the end.

FINDINGS OF SURVEY

The response rate was 20% for both bus and taxi operators. 17 bus and 14 taxi questionnaires were retrieved.

General Information

The survey results showed that 88% of bus and 86% of taxi operators were aware of the new tender system. The remaining 12-14% of operators would therefore not be in a position to tender due to lack of awareness of the actual tender. Although members of the South African Bus Operators Association (SABOA) were informed by post, notices are often not opened at all.

The South African Companies Registrar Office (SACRO) has a web site: www.dti.pwv.gov.za/sacro/default.asp. 35% of bus respondents are registered with SACRO and their contact details could be verified using their company registration numbers on the company web site. No taxi respondents were registered with SACRO.

77% of the taxi operators surveyed were registered with the Provincial Taxi Registrar.

Bus respondents costed their vehicle operating costs at R4.50/km with a standard deviation of R1.50/km. This is lower than the cost of R5.00/km calculated from information provided by the incumbent operator in 1997 (Duff-Riddell, 1997). Respondents appear to be underestimating their vehicle operating costs.

Operating cost estimates for taxi operators measure favourably with estimates taken from the incumbent operator in the 1997 study, but are still slightly lower than inflation would suggest.

The average mileage for the standard bus used by the incumbent operator is higher than that for smaller operators. The mileage for the incumbent operator in 1997 was 1202km/bus/week compared with the average of 880km/week obtained from bus operators in the current study.

Buses have higher operating costs per kilometre than taxis and also travel fewer kilometres per week.

Legal Issues

18% of bus and 23% of taxi operators were not registered taxpayers. Many non-taxpayers refused to fill in the questionnaire. This could result in an overestimation of the number of taxpayers.

Financial Issues

41% of bus and 59% of taxi operations were financially sustainable. Although financial sustainability is linked to the concept of ring fencing, the issues were separated to promote clarity in the questionnaire. 88% of bus operators and 83% of taxi operators felt that their businesses were ring fenced.

The minimum suretyship required by the smallest contract value was calculated to be R100 000. 76% of bus and 36% of taxi operators had the required collateral to obtain this suretyship. 71% of bus and 86% of taxi operators had financial records for the past year.

Suitability of Vehicle Fleet

The average number of buses per company is 8 with a standard deviation of 10. The average number of taxis is 3 with a standard deviation of 3. Many bus companies own medium (11%), midi (10%) and mini buses (13%) in addition to the standard sized buses (65%). This allows them to provide a more diversified and flexible service to its clients (See Figure 1).

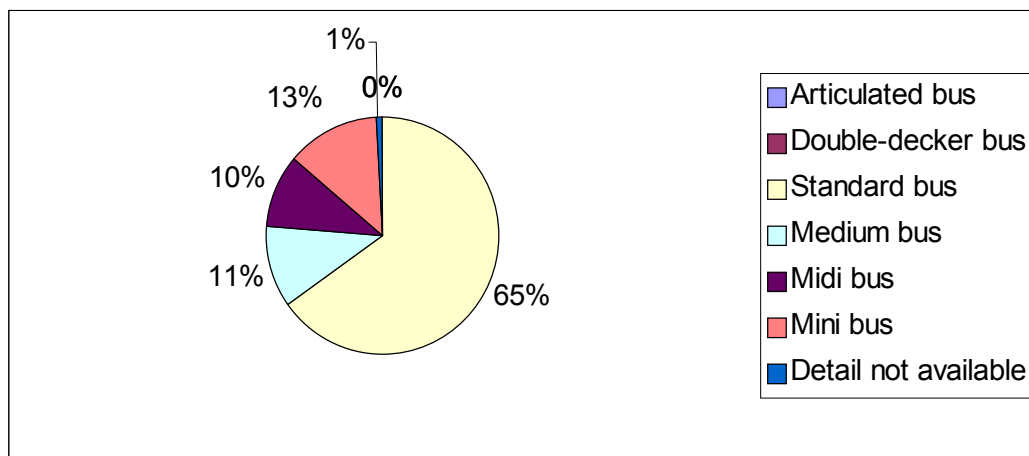


Figure 1: Bus Fleet Structure

When demand decreases, vehicle size can be adjusted to make provision for this. Without this option, the frequency of service would have to be altered to cover the costs of operating a large vehicle.

The taxi fleet consists predominantly of 16-seater vehicles with few (3%) 17 to 35-seater vehicles. This gives them very little scope but to operate as a feeder service.

59% of taxi operators replace their vehicles before seven years of service and 25% after 10 years of service. 92% of taxi operators repair their vehicles every 3 months.

Using a maximum vehicle age of 15 years for buses and 7 years for taxis, the number of unsuitable vehicles could be calculated. It was found that 36% of the bus fleet and 58% of the taxi fleet were unsuitable by these standards. The rebuilding and rehabilitation of vehicles were taken into account in this calculation.

Operational Experience

To determine their level of experience with operating a public transport service, bus respondents were asked for the date their company was started. Five age categories were devised to determine levels of experience. Two years was used as a benchmark for minimal experience. Five years old companies are considered having reasonable experience, ten years considered well experienced and 20 years very well experienced. Six percent of respondents had newly entered the market (were less than two years old) and an amazing 64% were well experienced (over ten years old). Figure 2 shows the age distribution of the bus companies surveyed.

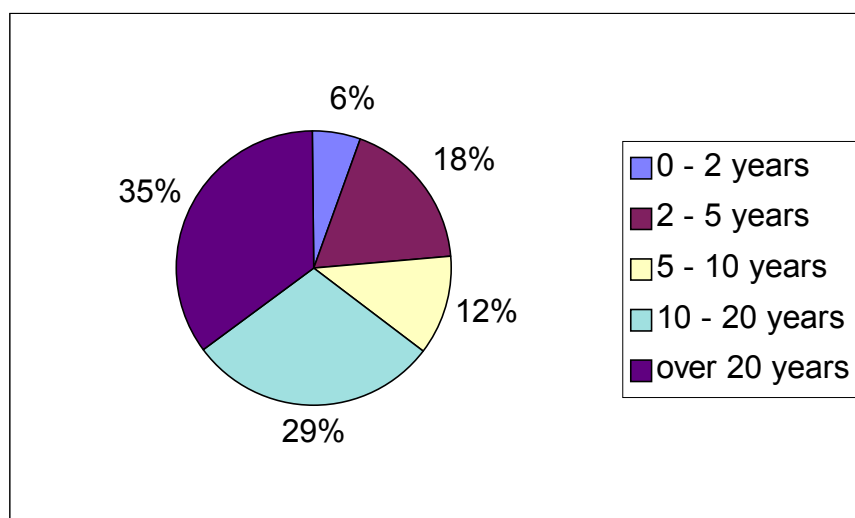


Figure 2: Age of Bus Companies

Fairly few operators are just entering the market (over the past two years), which could indicate that older companies are dominant in the market and it could be hard for new operators to establish themselves. Also the lack of profitable routes could be a deterrent to prospective businesses. The market for this service could also be saturated. The open public tender system could be an ideal solution to this problem and would encourage competition in the market. Existing operators would be open to serve a larger segment of the population and new business would be encouraged.

Vehicle scheduling requires calculating required fleet sizes for a certain contract as well as drawing up time tables and allowing for repairs, breakdown as well as spare vehicles. Respondents were asked whether they used vehicle scheduling and if so, what method they used. This information was used to classify the quality and accuracy of their method used. Experienced-based methods were separated from methods derived from a certified course.

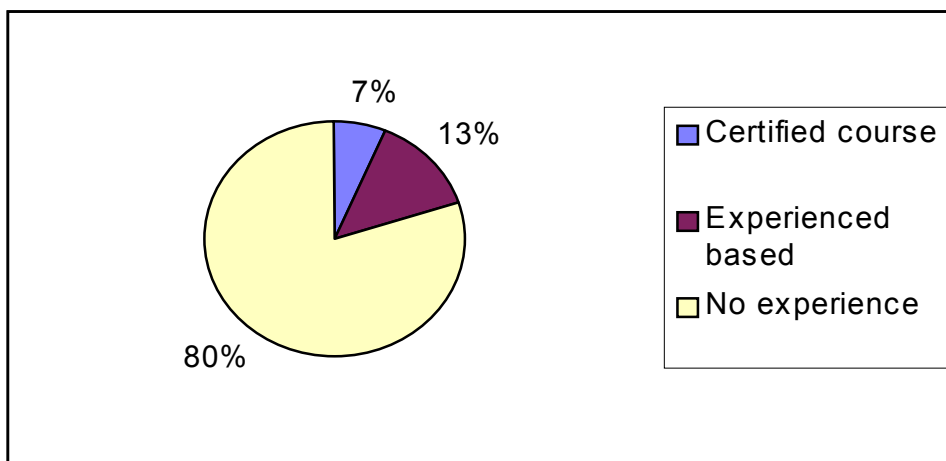


Figure 3: Vehicle Scheduling Methods for Buses

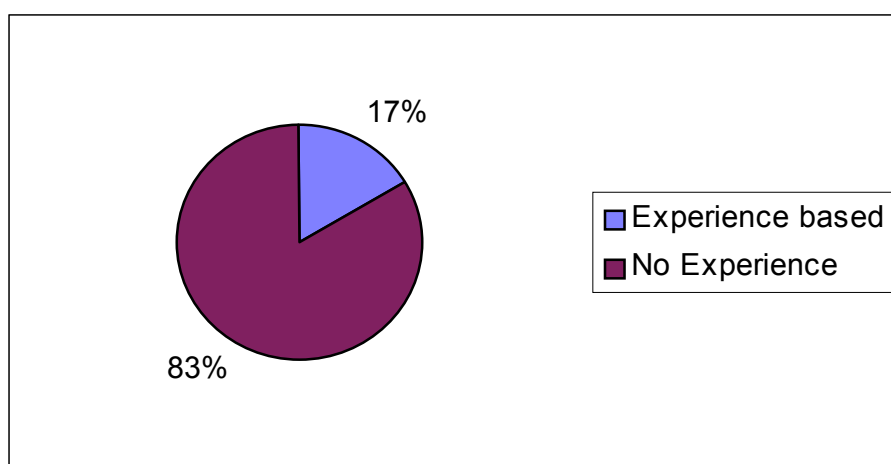


Figure 4: Vehicle Scheduling Methods for Taxis

See Figure 3 and Figure 4. The results showed that only 29% of bus companies surveyed used vehicle-scheduling methods. Of this 29%, one third used methods learnt in a certified course and the rest used their experienced-based methods. Only 17% of taxi operators used vehicle scheduling and the method used was experience-based.

To understand their levels of expertise, respondents were given a vehicle scheduling example and asked if they understood the procedure used. A simple example was used, taken from a "Transport Systems" course held by Dr. van der Voort at Stellenbosch University. 23% of both bus and taxi respondents could follow the example.

When scheduling methods are compared with company ages in Table 1, the resulting observations are interesting. Companies using experience or course-based methods all have more than 20 years of experience in public transport operations and can be considered to be well experienced.

Company age In years	vehicle scheduling technique		
	certified course	experience based	no experience
> 20	1	2	2
10 to 20	0	0	4
5 to 10	0	0	2
2 to 5	0	0	3
< 2	0	0	1

Table 1: Bus vehicle scheduling technique versus company age

Was a comprehensive costing method used?	vehicle scheduling technique		
	certified course	experience based	no experience
yes	1	2	6
no	0	0	5

Table 2: Bus scheduling techniques versus costing methods

All operators using a certified course or experience based techniques of vehicle scheduling took all operating costs into account (See Table 2). Taxi respondents using experience-based methods also take these costs into account. See Table 3.

Was a comprehensive costing method used?	vehicle scheduling technique	
	experience based	no experience
yes	2	4
no	0	4

Table 3: Taxi scheduling techniques versus costing methods

Respondents were given a list of all relevant costs associated with operating a public transport vehicle. When asked if they took these into account when costing their operations, 63% of bus operators said yes. The response of taxi operators was similar (64% said yes).

An operational record gives details of all contracts over a certain period, in this case for a year. It should provide details of fleet structure, routes, timetables, volume of passengers transferred, fares charged, etc. 65% of bus operators were used to keeping operational records for the past year and can therefore be considered to have some experience in this regard. 57% of taxi operators also have experience in this regard.

Employee Structure

The average number of employees per bus company is 16 with a standard deviation of 18. For taxi companies, the average number of employees drops to 3 with a standard deviation of 2. The percentage share of drivers is the largest in the sample surveyed, making up 56% and 74% of the bus and taxi labour forces respectively.

The education structure of bus and taxi employees respectively is shown in Figure 5. Whilst bus and taxi operators have equally low levels of university education (below 5%), employees in bus companies have a bigger share of technically qualified workers (13%) as opposed to 3% of taxi

workers. The largest proportions of both bus and taxi workers have below standard 8 education (47% of bus and 39% of taxi workers).

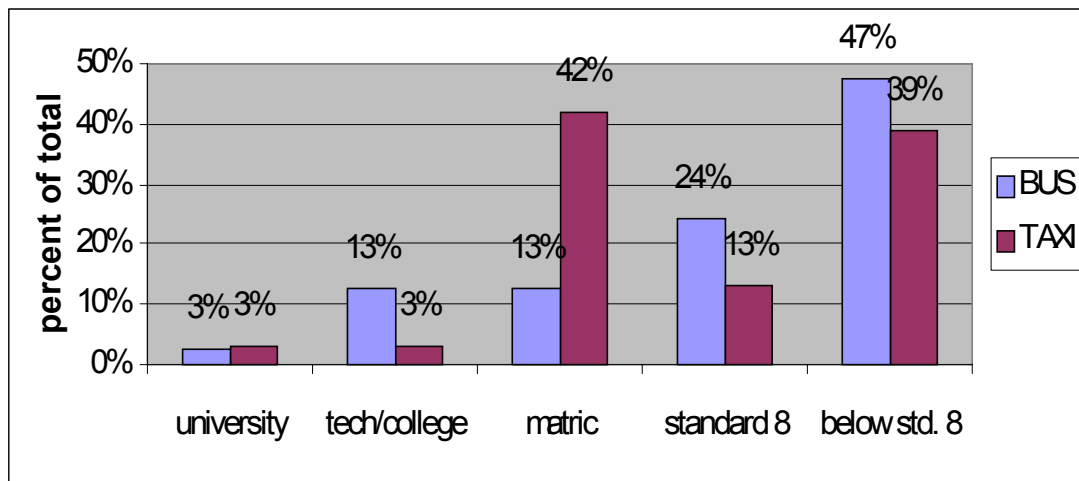


Figure 5: Education Structure of Employees

The reconstruction and development programme (RDP) is aimed at ensuring equality in terms of racial and gender balances in the workplace and forms important criteria in tender evaluation. In both taxi and bus industries, employees consist mainly of coloured and blacks, which measure favourably with Affirmative Action practice. Whites and Indians make up 10% of bus and 0% of taxi employee numbers. Females make up 12% of the total bus employees and none of the taxi employees in the sample taken. Females are mostly involved in administration (42%) and management (38%). 19% of female employees are drivers.

Feedback

Comments by bus and taxi operators were similar in nature and are therefore examined collectively. Examples of comments and suggestions have been quoted here.

"Have to be prepared to be able to tender, but can't start until tender is awarded."

"State to stand security for SMME in first five years."

"The price of new buses should be interest free."

"Training over reasonable period of time required."

"Financial institutions to be made aware of this sector of the community who have been left out in the past due to political reasons."

"That the Provincial Gov. have refresher courses on a regular basis."

"That the existing operator who enjoyed the monopoly over the years to assist SMME's."

"Taxi industry division, mistrust, absent management and its disadvantage by the subsidy enjoyed by bus, rail and private sector."

"Vehicle replacement is essential (but be heavily subsidised)."

The main tendering problems were assessed and the number of respondents with these problems noted. Many respondents entered more/less than the three main problems requested. Each issue will therefore be taken as a percentage of the total number of respondents and not actual responses to this question (See Table 4). Only bus responses are shown, as taxi response to this question was very poor. The problems envisaged by both are essentially very similar.

The need for capital has emerged as the most important tendering problem. In general, respondents felt that a capital investment would give them the means to improve their quality of service to the standards required by the tender. The need for training ranked second in level of importance. Most operators found that the training programs offered at present were inadequate in meeting their needs in terms of tender preparation required.

35% felt that affordable vehicle financing was of major concern. Many operators felt that the provision of interest-free financing would serve as compensation for the disadvantages they had suffered previously at the hands of government. Many operators were discouraged by overheads associated with preparing for the tender bid. Due to previous experience, many operators felt that the corruption present could not be rooted out of the contract distribution process. Many were sceptical that the proposed public tender would be fair and equal.

Problem Number	Problem Description	Number of Respondents	<i>Percent of Total</i>
1	Capital needed	10	59%
2	Training in tender costing techniques	9	53%
3	Affordable transport vehicle financing	6	35%
4	Tendering overheads costly	5	29%
5	Taxi operations must be regulated	4	24%
6	Corruption in tender process	3	18%
7	Lack of skilled staff/poor education	2	12%

Table 4: Main Bus Tender Problems

CONCLUSIONS

The findings of the questionnaire survey showed that public transport operators are unprepared for the new tender system in a number of ways. Firstly, the levels of education are low for both bus and taxi employees. Secondly, the degree of expertise in public transport operations and business procedures are poor. 36% of the bus and 58% of the entire taxi fleets will require rebuilding or rehabilitation for use in the tender. An investment in capital equipment will be required to prepare these operators for tendering.

RECOMMENDATIONS

Education & Training

Education and training programmes should include a series of courses involving public transport operations, business and accounting procedures as well as secondary and tertiary education of both employers as well as employees. In cases where employers cannot finance these training programmes, bursaries and/or low-interest funding should be arranged. Training programmes should consist of regular refresher courses to be held prior to the tender as well as on a regular basis thereafter. The content of these courses should be regularly updated to reflect the changing needs of operator skills.

Institutional Change

A single governing body should be established to deal with all decisions regarding public transport. The body should receive funding from government and provide low-interest or interest free financing and subsidies for public transport operators. This body should effectively be the Metropolitan Transport Authority, with the addition of certain responsibilities. The most important addition should be a stronger commitment to the empowerment of prospective tenderers in terms of financing and training.

Fuel Pricing

Concessions should be provided to lower the fuel price dependency of public transport operators. Small, medium or micro enterprises (SMME) public transport operators, in particular, spend a great deal of their operating budget on fuel (South African Bus Operators Association, 2000). The fuel price increase, which is at a high rate (44.7% in the Western Cape) at present (Golden Arrow Bus Services, 2000), causes a dramatic increase in their vehicle operating costs and makes it increasingly difficult to establish a competitive tender bid price.

This increase in vehicle operating costs causes an increase in fares, which impacts negatively on the public transport share of the commuter market. This issue is of great concern to national government and fuel concessions should therefore be viewed as a means of facilitating the modal shift in favour of public transport. This modal shift decreases operational costs for public transport operators as well and has ancillary benefits to both commuters in terms of lower fares as well as to public transport operators in terms of reduced operating costs. The entire cost could be subsidised by national government such as for the fishing and agricultural industries. Benefits that should result from this initiative include a reduction in fares, enabling a favourable modal split, reducing congestion, improving the turnover for public transport companies, etc.

Fare Pricing

Public Transport fares should be set at the marginal cost of public transport. Measures should be investigated to ensure that private transport costs are set at a level that is higher than marginal cost. Since this cost is perceived as lower than it actually is by motorists, the cost should be established whereby it is perceived by motorists to be marginal cost, even though it may be higher than the actual marginal cost. This will encourage more motorists to switch to public transport and enable a modal split in favour of public transport. On routes where communities have

been disadvantaged, fares should be more heavily subsidised to ensure that fares are priced equitably and reasonably to facilitate the aims of reconstruction and development.

Industry Structure

The formation of co-operatives amongst SMME public transport operators should be encouraged. This will enable them to pool their resources and tender for contracts collectively, with a larger base for collateral. Obtaining suretyship would be simplified in this manner. A drawback of this situation could present itself when trying to build trust between operators, who have been operating in an environment of mistrust for a long time.

It would be a challenge for decision-makers to ensure that corruption is completely rooted out of the tender system and that fairness is evident in every way.

FUTURE RESEARCH

1. Developing methods of surveying that are cost-effective, while not compromising too much on efficiency and accuracy.
2. A survey into the types of institutional structure public transport operators would prefer.
3. A survey into the how transport users would rate the different alternative structures in terms of the user benefits and disadvantages associated with each alternative.
4. Investigating the possibility of allocating part of the transport budget to the empowerment of disadvantaged public transport operators and setting up a committee to manage these funds, with the option of low-interest or interest-free loans to allow these operators to invest in capital in preparation for the tender contracts.

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