POTENTIAL TO REGULARISING THE MINIBUS-TAXI INDUSTRY: A POSITION PAPER

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ABSTRACT

The minibus-taxi industry is the largest public transport mode in Cape Town and South Africa. Estimates vary but as of 2020 the National Household Transport Survey showed that minibus-taxis carried 83% of public transport passengers.

Despite its importance as a mode of public transport to South African commuters the minibus-taxi remains an uncontracted and unsubsidised service, with passengers commonly citing overcrowding and safety as problems. Illegal operations, oversubscribed routes and violent competition between minibus-taxi associations are endemic. Maximising passenger numbers to generate profit (as opposed to maintaining a schedule) encourages unsafe driving. As such, minibus-taxis are generally cheaper with their fares compared to formal subsided services such as bus and rail. They also have the ability to undercut and therefore compete for passengers. Finally, the ability of taxi association leaders to extract fees from members encourages ever-expanding association membership, while government, for its part, has struggled to regulate the industry effectively.

This position paper suggests ways to regularise the taxi industry, including changes to existing business models through formalisation and collective operational management, regulatory interventions and leveraging innovative technologies to collect the data needed to better understand conditions on the ground and improve decision-making. It is also important that government's ability to enforce the law is continually strengthened. Over time, these interventions are anticipated to lead to a system which aligns incentives, regulations, and enforcement to improve outcomes.

1. INTRODUCTION

Minibus-taxis are an essential part of South African urban transport systems, but the industry faces significant shortfalls as a public transport mode. This paper describes taxi associations and their role in the industry. It then argues that the imbalance between the supply and demand is a major contributor to the industry's challenges. Finally, this paper lays out some new proposals that the City of Cape Town could consider to improve the industry's performance and safety, while reducing violent conflict. These include the formalisation of the industry by establishing companies, which would have the potential to self-regulate supply and demand, and the associated use of technology.

1.1 Importance of the Minibus-Taxi Industry

Minibus-taxis are the primary provider of public transport services in Cape Town and South Africa at large (See e.g. Statistics South Africa, 2021:18). They are particularly important for lower-income users, who typically do not have access to private transport and often live far from places of work, education and other opportunities due to the legacy of Apartheid spatial planning.

It is important to understand that despite the litany of challenges faced by the minibus-taxi industry, they are firmly entrenched as part of the fabric of South African cities, including Cape Town. The collapse of rail in the Cape Town area has made minibus-taxis indispensable, given that there are few other practical ways for many people to move across Cape Town. While scheduled bus services do operate within Cape Town, minibus-taxis are highly adaptable, readily available and provide a faster, more frequent service, particularly during peak hours. It is also cheaper in most instances to catch a taxi. This situation is not unique to Cape Town, and it is likely that minibus-taxis will continue transporting people for decades to come in South African cities.

This reality is garnering increased recognition. There are concerted moves by National, Provincial and Local Government, as well as global agencies such as the World Bank, the Development Bank of South Africa (DBSA), the International Association of Public Transport (UITP), and the Transport Research Board to find better ways of managing and improving paratransit in South Africa and across the developing world. (See, e.g. Jia et al., 2022 on improving paratransit in Africa, and the UITP's 2021 Knowledge Brief).

This shift is also reflected in the way the country's political leaders walked back COVID-19 regulations in the face of resistance from the taxi industry. With the advent of the pandemic, National Government imposed restrictions on the number of passengers that could be carried by minibus-taxis, specifically limiting taxis to 70% capacity (Department of Transport, 2020). However, the Minister subsequently relaxed these regulations, recognising, perhaps, that the minibus-taxi industry could not be constrained in this fashion (Smit, 2020).

The Western Cape Government also recognised the importance of the minibus-taxi industry in the context of the pandemic, with the Red Dot Taxi programme providing COVID-related transport services. This was followed by the Blue Dot pilot programme, which took elements of the Red Dot programme to the wider industry, providing an incentive framework designed to address industry challenges (Solomons, 2021).

In summary, the minibus-taxi industry is indispensable and cannot practically be replaced, but it has significant service quality challenges. Current management models, regulations and enforcement have not proven entirely effectual in managing these challenges, largely because they address symptoms rather than the underlying economic fundamentals. It is thus very important to explore innovative approaches to address industry challenges.

2. PROBLEM STATEMENT

Passenger safety concerns, both from unsafe driving and crime, are a significant problem in the minibus-taxi industry. Overcrowding is another problem, which contributes to a poor customer service experience. Suggestively, a survey of passengers on their perceptions of public transport safety found that most minibus taxi passengers chose them not because they felt it was a safe or comfortable mode, but because it was readily available or faster than other alternatives (Govender, 2014:323).

Beyond just the immediate problems of customer satisfaction, the industry has wider challenges. Illegal operations, oversubscribed routes and violent competition between minibus-taxi associations are common problems. As the official responsible for liaising with the industry, the author can confirm that the industry has developed a reputation for violence amongst themselves and in some cases links to organised crime. Indeed, City officials are regularly tasked with addressing issues of violence and organized crime within the taxi industry. As noted later in this paper, while law enforcement has sought to address illegal operations, this has not been entirely successful, and there are limits to their ability to police the industry.

To properly address these challenges, it is necessary to understand the role of taxi associations in the industry, and the dynamics of supply and demand.

2.1 Associations and Their Role

Associations play a central role in the functioning of the industry and, crucially, in allowing operators to operate – both legally and illegally. In a very real way, associations' executive members are the "gatekeepers" of participation. For example, operators are required to be members of an association and have their formal support to successfully apply for an operating licence (OL). These letters of support are only authorised by the associations' executives.

Currently, when an operator joins an association, they are required to pay a substantial membership fee, sometimes in the order of R100 000, and they are then granted permission to operate on the association's routes. Often, this is done without securing an OL from government or considering whether there is a need for additional services on the route – in many cases the association's executive is fully aware that there is little prospect of government awarding any additional operational licences. Therefore, these unlicensed members operate illegally, while trying to secure an OL. From the operator's perspective, they have financed a vehicle and joined an association, at considerable cost, and it is, therefore, essential that they recoup their investment through earnings from operations.

It is important to note that if additional OLs do become available for the route, they are typically reserved for the association executive who, in turn, often blame government for the limited availability of OLs. Authorities are keenly aware of this problem and, as far back as 2013, the City's Operating License Strategy noted that: "It has been experienced that the senior officials and/or executive members of the taxi associations are limiting their support to applicants to themselves, close friends, and family" (City of Cape Town, 2013: 108).

In this context, the associations' executive are incentivised to increase its membership numbers to maximise revenue from membership fees. Without a parallel growth in passenger demand, the fare revenue earned by each operator will decline. This in turn creates an incentive for the association to expand its territory and invade the routes on which other associations operate to increase opportunities for their operators to generate sufficient revenue to remain viable.

Law enforcement authorities respond to the proliferation of unlicensed operators by impounding vehicles or taking other appropriate action, leading to tension between government and affected taxi operators and drivers. As previously noted, from the taxi operator's perspective, they've financed a vehicle, joined an association, and it is essential that they recoup their investment through earning, but without an operating license they are subject to impoundments and law enforcement action.

Economically, this also hampers the ability of existing operators to make money; overtrading of routes reduces profit for existing operators and introduces inefficiencies, since minibus-taxis have to make more trips to generate the same revenue.

2.2 Supply and Demand Assessment

Government issues OLs, granting operators the legal right to provide specified minibus taxi services. In the Cape Town context, the Provincial Regulatory Entity, part of the Western Cape Provincial Government, issues OLs based on the directions of the City of Cape Town.

The City's directions are, in turn, based on the outcome of supply and demand assessments. The purpose of these assessments is to determine whether there are enough vehicles (supply) servicing the route to comfortably transport the passenger travelling on the route (demand). If it is found that there are enough or too many vehicles servicing the route relative to the number of passengers, as reflected in low average vehicle occupancies, then no additional OLs are warranted. Conversely, if it is found that there are too few vehicles to comfortably meet passenger demand, as reflected in long queues and wait times for passengers or overcrowded vehicles, then additional OLs may be warranted.

A key input to these assessments are field surveys which are conducted at ranks (and sometimes on-board the vehicle), typically during the weekday morning and afternoon peak periods.

Vehicle occupancy is counted, along with the number of vehicles servicing a particular route, during a specific time. Figure 1, below, summarises the process:

There are a number of problems with this approach to the regulation of the industry. Firstly, these surveys are done irregularly, due to budget and capacity constraints, and there can be significant periods of time between surveys. As a result, the survey data, and the associated assessment of demand and supply, can be out-of-date by the time they are used to determine whether or not an OL can be awarded by an applicant. In some cases, government is simply not able to keep up with rapid developments on the ground.

Two recent examples of this issue in the Cape Town area are the developments around Brackengate and the Table Bay Mall, in Sunningdale. Despite lengthy planning and construction periods for both developments, there have been no OLs awarded to date to service these areas. The MBT industry was fully aware of these new developments and responded by initiating new (unlicensed) services to and from these unserved areas. This agility to respond rapidly to new developments is a valuable capability, which government struggles to match. Despite there being a legitimate need for these services, in the absence of any OLs being issued for these routes, the operators who service this demand are illegal.

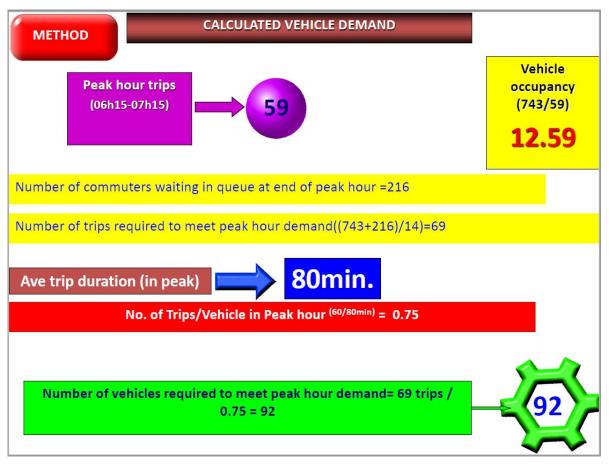


Figure 1: Process of conducting a demand supply assessment. Author's own image.

Secondly, the nature of the industry makes the valuation of OLs challenging. Since 2013, the perceived value of an OL has increased substantially - rising from approximately R50,000 to about R1 million, driven by IPTN compensation offers. The value of an OL (by the City) is determined by estimating operator profit over a 5 to 7-year timeframe. This is an example of how the sector's informality makes engaging it more complicated - business valuations, and associated financial analyses, would be far easier if the industry was structured into formal companies. This is compounded by the aforementioned paucity of survey data; understanding the actual ridership on a given route is an important input into any discussion around the value of an Operating License.

Thirdly, government struggles to effectively enforce these regulations and maintain a balance between supply and demand in line with its own assessments. As a result, overtrading and illegal operations proliferate. This "destructive" competition incentivises poor driving, as drivers compete for a finite passenger pool, and is a key cause of violent conflict, as associations compete for route dominance. The City of Cape Town has mounted campaigns against infringing taxi operators. This is a legitimate response to illegal operators and is within the City's mandate. However, given the scale of the industry and the growth in operators, both legal and illegal, the City simply does not have the resources to effectively police illegality. There are also many competing issues, such as gangsterism, drug trading and street crime, which require the attention of law enforcement authorities.

In addition, government's ability to enforce regulations is sometimes challenged, both directly and indirectly, by criminal elements of industry. This includes frequent violent protests and attacks on other modes of public transport, such as the burning of MyCiTi

buses, often in response to enforcement and impoundment operations by conducted by City law enforcement (See e.g. Swart, 2023 and MyCiTi 2022). More indirectly, anecdotal accounts relayed to the authors indicate that some associations are actively taking steps to undermine the City's enforcement initiatives by implementing "insurance" for impounded vehicles, whereby illegal operators pay a regular fee to the association, and as soon as their vehicles are seized, the fine is paid by the association, and they immediately begin operating again.

While the City of Cape Town has made concerted efforts to effectively control illegal MBT operations, including through vehicle impoundment, an 'enforcement only' approach cannot address the underlying problems driving this behaviour and, therefore, must be complemented by measures which do so.

Any long-term reform of the taxi industry must operate to align the incentives and operating models of taxi associations with government regulations to create better outcomes for passengers, the taxi industry and government.

3. TOWARDS INDUSTRY REFORM

Associations play a central role in the MBT industry, both by way of their influence over operators, and their role in controlling the participation – both legal and illegal – of operators in service provision.

As discussed previously, OLs are issued by government to individual MBT operators based on demand-supply assessments and there are a number of challenges with this approach.

To address some of these challenges, an alternative approach is for government to issue OLs to formalised associations, in the form of Association Based Companies (ABCs), based on business plans developed by these ABCs.

In this model, taxi associations would form Association Based Companies (ABCs), with the assistance of the City of Cape Town. These companies would be managed professionally and would have to present business plans to the City for consideration. These business plans would articulate how the company intends to service demand in its area of operation, including the proposed routes, operating schedule (which would be required) and fleet. Government would then issue OLs to ABCs, based on the City's critical review of the submitted business plan.

ABCs would determine their shareholder operators, with existing license holders transferring their OLs to the company in exchange for shareholding. The services provided and the company finances would be managed collectively for the benefit of shareholders. ABCs would no longer have an incentive to add more and more members (now shareholder operators) or recklessly expand supply, since this would undermine the company's financials and dilute shareholder earnings. Rather, they would have an incentive to maximise efficiencies and profits by ensuring that passenger demand is provided for in the most efficient manner possible.

Given that the ABC model envisages collective operational and financial management, it would include a fundamental shift in the current business model, which is based on drivers leasing vehicles from operators for a daily fee and then keeping the remaining fare revenue. In the ABC model, fare revenue would be collected and pooled by the ABC,

either via the driver – with a high risk of revenue leakage – or through the use of automated fare collection methods. The ABC would pay the driver a regular salary, in line with the relevant labour laws, eliminating the incentive to drive unsafely. Operators would receive dividend income, subject to the performance and profitability of the company.

As additional demand is established or demand patterns change, the ABC would prepare and submit a revised business plan to government and, if supported by the City, could receive additional OLs, which would allow them to expand operations, or potentially recruit new shareholders.

The formalisation of associations into ABCs would also enable their participation in other business opportunities, such as the City's IPTN, through the provision of incentivised feeder services to the trunk (see Springleer et al., 2023 for more information).

This proposed shift in the regulation of MBT services is similar to the approach taken by government in managing contracted bus services, such as the Golden Arrow Bus Service (GABS). For example, GABS determines the number of buses needed, based on its assessment of current and projected demand and its understanding of local conditions.

4. OPERATIONAL MANAGEMENT

The details of this approach need to be developed further, with widespread stakeholder consultation.

A comprehensive understanding of supply and demand and the operational environment would be one of the first steps needed to determine the potential scope and scale of any formalised ABC-type arrangements. Following this, engagement with the taxi industry would be required to discuss the proposals, including the prospect of formalisation into companies. Once there is industry buy-in to these proposals, the City of Cape Town would provide professional support to associations who are willing to proceed.

Formalisation would also come with additional costs for government, such as subsidised driver's wages, and professional support to assist associations through this process. It is likely that the City would develop a number of preconditions that associations would need to meet to be viable candidates for transformation into ABCs.

4.1 Legal and Regulatory Considerations

The proposed ABC model should be possible under current legislation, which should allow for OLs to be issued or transferred to ABCs for a suggested period of 7 years, potentially linked to the vehicle purchase agreement period. It will be necessary to consider how best to manage illegal operators. Some, especially long-serving, non-licensed association members, may be included as ABC shareholders. Older vehicles could be scrapped, through a partnership between the City and the new Taxi Recapitalization Programme. Functional, excess vehicles (if any remain) could then be re-directed to other revenue generating activities, such as scholar transport and staff transport services.

Additionally, allowance should be made for operators servicing routes not yet authorised by regulatory authorities, possibly by offering shareholding in a legitimate company. An authorization process for undefined or new routes should be developed to include them into the ABCs.

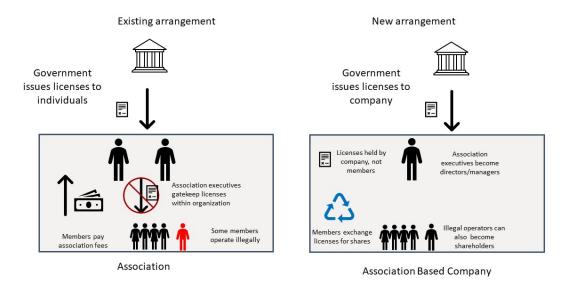


Figure 2: Diagram of proposed vs existing licensing regime

Within this wider set of reforms, there is also scope to improve the OL database. A detailed "scrubbing" of the database would include the removal of non-active operators and those with serious criminal records alongside a process to verify operator compliance with licence conditions. This should result in a substantially improved view of the state of the industry. The City, together with the Western Cape Government is also currently busy with a special regulatory process, which is in essence a "clean-up" of the operating licensing system.

Ultimately, robust and workable solutions to these questions will need to be developed, in a process that will require extensive engagement. To avoid excessive delay and drift from the original intent, this process must be managed as a special project, within defined timelines with measurable outcomes.

4.2 Technology and Data

Technology would be a key enabler of the ABC model. Electronic monitoring of all vehicles, using on-board trackers, will allow government to monitor the level of service provided by ABCs and for ABCs to manage their operations effectively. ABC's would have to comply with minimum technology and data sharing requirements.

Fortunately, this type of technology has already been developed and is readily available. The City has, as part of its pilot TOC project installed tracking technology and developed bespoke computer applications to facilitate the various data analysis and optimisation strategies. An extensive amount of relevant data was collected and transmitted for collation and analysis. This included data such as distances travelled and routes taken each day. Information about incidents such as harsh acceleration, sharp braking and speeding was also collected.

This system could be further developed for use by ABCs, with all their vehicles being fitted with trackers to provide a live operational feed to the company. This continuously updated supply data would assist ABCs to keep their business plans up-to-date. At present, trackers only monitor vehicle operations (supply) and not passenger numbers (demand)

and, therefore, periodic surveys would still be needed. However, surveys would increasingly shift to becoming an occasional source of data to supplement tracking data. Alternatively, other technological advances such as on-board cameras could be explored.

One option for collecting passenger data is the introduction of an electronic ticketing system. This technology exists but would require testing and demonstration with ABCs. As noted earlier, this could be used to manage the issue of fare leakage, which would provide added incentive for its adoption.

5. CONCLUSION

This paper has suggested a set of interventions to help regularise the minibus-taxi industry. At base, the concepts presented involve formalising minibus-taxi associations (the basic organising structure of the of industry) into companies. These companies would operate under a different set of incentives to the current, often problematic incentives. Supported by modern tracking technology and potentially an electronic payments system, this would result in an improved experience for passengers.

While the initial focus would be on setting up ABCs, other longer-term benefits are envisaged. For example, it would also be possible for them to begin providing feeder services to the MyCiTi trunk routes. Moves are already afoot in this region; in a paper written in parallel to this one, Springleer et al note plans to "include the use of minibustaxis to provide feeder services to the trunk corridors and the associated introduction of transfer incentives to feeder operators and passengers," noting that "the desired outcome would see paratransit and scheduled services co-existing in a feeder-trunk relationship" (Springleer et al., 2023:1-2). Thus, this proposed arrangement of Association Based Companies has potential to synergise with existing initiatives that seek to draw MBTs into the formal system as supplementary services to existing and future IPTN systems.

This set of interventions would require imagination, patience, negotiation, consultation, and commitment from policymakers and officials, together with buy-in from the industry who has indicated readiness. However, the potential rewards for all stakeholders are significant, and the time for deep reform of the minibus-taxi industry has clearly come.

6. ACKNOWLEDGEMENTS

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