Regulating Land Passenger Transport in South Africa: Dynamics of Competition Across Multiple Value Chains

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August 24, 2018

1 Overview

This submission is regarding the broad regulatory principles governing the transportation and travel economies in South Africa. The interaction between transportation industries and the travel economies they supply is a little explored realm of policy research and institutional practice, although it is acknowledged internationally as part and parcel of best practice. Vehicle manufacturing in countries, such as South Africa, makes a substantial contribution to socio-economic value in the form of sustainable employment, technical skills and export revenue. With the proliferation of minibus and midibus taxi transport in South Africa, many vehicle manufacturers pursued avenues toward which they can reduce the unit costs of their supply chains as the volumes increased– even if it meant manufacturing in a foreign country. A number of large minibus taxi vehicle manufacturers based their assembly operations in South Africa, but this was not natural market behaviour. The Department of Trade and Industry (DTI) took notice of the trade potential of minibus taxi and midibus taxi vehicles in terms of the Passenger Vehicle market. These vehicles are used in airports, as rentals, as company vehicles but they are predominantly used for moving public transport passengers. The Automotive Incentive Scheme (AIS) currently absorbs a large share of the tax incentives structured by the National Treasury, and these are directly channelled to further enabling the industrial side of the minibus taxi and midibus taxi market to flourish domestically and internationally. The most recent instance of further industrial market action leaking into the travel economy, is the free lifetime vehicle service offer for all new Toyota minibus taxis. This will certain reduce the likelihood that poor quality vehicles dominate the market, but it is also another manner in which the Taxi Recapitalisation Programme is unintentionally forming part of the industrial dynamics of the minibus taxi market. However, operators have reported poor market access in terms of the cost of capital to purchase new vehicles and the high 'interest' rates charged by financial institutions when faced with a minibus taxi vehicle consumer. When these vehicles enter the transit market, they are subject to a complex web of factors leaning between the owner's exposure to a relatively lower priced asset, charged with higher interest rates which should be financed by an operator who utilises this liability productively. The productivity of this liability is among the determinants of its value as an asset once it has become the full property of the owner, of which the operator has no share or say. While the operator meets a specific quota, and should exceed it in order to generate extra value in income– which requires greater utilisation outside of the quota. This takes place in a market where route allocation, travel demand and general system characteristics can be on average stable, but as more owners and operators enter the market so does the risk of a loss of stability. This is especially the case where competition with bus services is severe and pricing is set below the nearest alternative operating service– at the cost lowering the quota, and requiring increased vehicle utilisation to meet the unit quota and exceed it as a reflection of seeking legitimate rent.

From a regulatory perspective, the vulnerability of both owners and operators to market forces and exposure to asymmetric institutional infrastructure makes the case for regulatory reform much deeper than the provision of subsidies or any other set of pecuniary measures. Owners do not have the option of a mechanism that reflects the appreciating value of their

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service over time– such as the medallion system in the United States and United Kingdom, although Commercial Transport Applications have temporarily disrupted it.[1]Such a mechanism would reflect the value of participating in each route, and enable regulators to coordinate optimal market entry, and circulate operators (and or vehicles)–where necessary– across multiple routes. Operators have no legitimate form of labour protection that ensures their wellbeing, and the last labour audit of the South African minibus taxi industry was conducted in 2003[2], while in Nairobi a recent case can easily be picked up.[3] In terms of industrial value, one may ask what are the impacts of manufacturing incentives on the cost of paratransit vehicles, devices and technology with respect to the costs and benefits of their operational existence? At the same time, one may ask what could the market wide benefits be if electric vehicle and bicycle technology manufacturing were incentivised in a manner that is aligned with transport policy?

1.1 Appropriate institutional infrastructure enables better quality implementation

A particular concern which is derived from the narrative presented here is how productivity can be rationalised in a manner that maximises welfare gains for labour markets and consumer markets alike. The asymmetry within the existing institutional infrastructure is a major attribute influencing the utility derived from transport planning alternatives that are implemented, actions that are coordinated and the responsiveness of local, district and provincial government instruments. This is the third layer of our economy in which competition takes place: the institutional and political economy. Where evidence suggests that dedicated roadway space for public transport can be equivalent to congestion charging in terms of social welfare (in the form of consumer surplus).[4]However, this has not occurred fundamentally due to this asymmetry as an insidious infection lurking in the helms of the National Department of Transport– lagging long behind the need for institutional reform to enable public passenger transport of the future to manifest itself in this liberalised market. It is not the NDoT's fault entirely: multiple stakeholders bear the brunt of ineffective behaviour. Whether it is the manner in which associations interact with municipal departments; or how provinces navigate through policies; or how research entities, and education institutions explore transport issues.

Where the policy infrastructure only enabled Bus Rapid Transit systems to occupy the project arena with dedicated busways (lanes in South Africa), the Public Transport Strategy fundamentally excluded the potential for paratransit, non-motorised transport and signal based (i.e. hailing) services in the urban system of mobility. The core of this resulted in a situation here much of the policy outputs—strategic reports—did not lean or redressing transport inequalities with a deeper understanding of why they exist and how to navigate through them. Instead, reforms did not reflect the need to improve (a) the inclusion of transport planning in Integrated Development Planning; (b) service delivery budgeting; (c) equitably financing smaller municipalities with deeper transport development needs; and (d) integrating these activities with the performance of public servants working in the public and land based passenger transport context to incentivise optimal decision making.[5]

1.2 Improving operational dynamics of planning and the institutional arrangements can reform the competitive environment

The greatest degree of welfare could be derived from improved paratransit service systems and institutional arrangements that cascade a corridor from one level in the public passenger transport market to another over a hierarchy of thresholds as the corridor becomes more dense, mixed and contextually different (which is an inherent part of transport planning). Overyime however, mass transit solutions that bear greater passenger volumes and have the capacity to

[1]See for example the medallion system in the USA and UK taxi market.

[2]In 2003, Jane Barret published a report titled 'Organising in the taxi industry: The South African experience' which is somewhat the closest market audit similar to what was covered in a recent book titled 'Paratransit in African Cities'.

[3]See for example 'Paratransit in African Cities' a book which reviews paratransit services in Nairobi, Dar Es Salaam and Cape Town written by David Mfinanga, Roger Behrens and Dorothy McCormick.

[4]Ideally policy proposals should be made that reflect this, but the policy techniques in the market are not structured around economic evaluation, but rather structural prescripts that are useful and represent the normative side of economic thought.

[5]Consider for example how the South African Reserve Bank Quarterly Bulletin reports a steady but consistent decline in incomes in the public transport sector.

articulate densities effectively will be necessary and paratransit services will be part of a broader system of feeders, and classes of trunk-routes across various areas and municipal budgets.

However, it seems that only until the 2016 amendment of the NLTA No 5 of 2000, did legitimate actions that could have been taken by municipalities to prioritise paratransit services, as dominant operators with potentially high benefits for a 6-9-15 seating vehicle, become legal. Which should then raise market questions related to the cumulative losses between bus, paratransit and rail services due to the institutional inefficiencies that plagued transport economic policy and withheld the welfare gains from the public. *In particular, should the most appropriate intervention be focused on encouraging competition, or enabling complementarity across various transit services as one way of recapturing the accumulated losses– which should hopefully not exceed the airline industry (with respect to welfare gains).* With regard to the mandate the Passenger Rail Agency South Africa represents, I firmly believe that there are opportunities to expand its footprint beyond Metrorail as a high capital service, to other local transport services that feed into passenger rail– especially in the face of persistently declining passenger volumes[6]. The value of additional trainsets and their operational characteristics is yet to be determined, but what is rather evident is that these new trains will offer a higher quality service in terms of speed and interior design. But there is a need to broaden the scope of PRASA into other transport service technologies and solutions in order to further improve modal integration and long term financial standing. A general benefit of this will be the cross-sectoral improvement that may take place as a result of this structural market change at both system and industrial development levels. Particularly if PRASA leans on light-rail technology, and integration with paratransit[7]. Modal integration is also the integration of technologies, people and industries and thus a value chain problem. My submission focuses specifically on six thematic areas that represents determinants of competition, and potentially ripple considerations when competitive markets are regulated:

- Competition regulation across the value chain of transportation and travel economic systems
- The value of the car and other dimensions to land passenger transport regulation
- Regulating transport services providing access to education
- Land transport labour markets and essentialisation
- Regulation of technology, data, information and service systems
- Transport functions, implementation and contact points of and for service delivery

2 Competition regulation across the value chain of transportation and travel economic systems– transport regulation must account for industrial value and supply chain dynamics

[8]

The constrained view around and about what transport policy, competition and regulation embody results in not only poor policy problem specification, but also inefficient instrument selection and evaluation. As mentioned in the overview, managing transport externalities involves understanding, capturing and reflecting the broad value chain of public passenger transport manufacturing, utilisation, coordination and competition. Simultaneously, it requires an understanding that the structural dynamics of competition and complementarity in the transport

[6]PRASA reports a decline in passenger volumes from 516 million in 2014/15 to nearly 292 million in 2017/18, while subsidy allocations in terms of *Estimates of National Expenditure* increase from R6.4bn to R 7.8bn in 2018, but in real terms the 2014/15 allocation is equivalent to 8bn in 2018 as a result the real value of subsidy allocations may well be declining.

[7]One of the questions asked during the hearing related to the *"differential social organisation of society along class lines represented in public transport"* of which was related to the extent to which the Gautrain could be integrated with minibus taxis (discussed later in this report). My response was specifically that minibus taxis were considered as potential feeders of the Gautrain and this is described in the 'Project Description' pg 2-13

[8]The full paper that discusses these dynamics is titled 'Paratransit Mesoeconomies: Control Measures from the Supply Side?' which was presented at the IISES 5th Economics and Finance Conference in 2016.

economic context is not only between motorised public transport modes, technologies and service designs (systems), but also with respect to the private car, non-motorised transport and telecommuting. All of which have industrial dynamics that make one or another technology alternative more affordable as a determinant of travel service supply. There are essentially two fundamental elements here: first the tax incentives that induce land passenger travel demand toward industries such as Special Economic Zones[9]; second, the tax incentives that influence vehicle manufacturing and lower domestic cost, and generate export value. This compound of policy issues remains unaddressed (at least directly) in the policy narrative, especially with regard to:

- Competition regulation across and between land based public passenger transport services by service type
- The political economy of land transport policy implementation and the welfare costs of inefficiency– Functions must be devolved
- The value of the car and other dimensions to land passenger transport regulation
- Ring fencing revenues from transport sectors to fuel mobility and access justice goals within a competitive environment

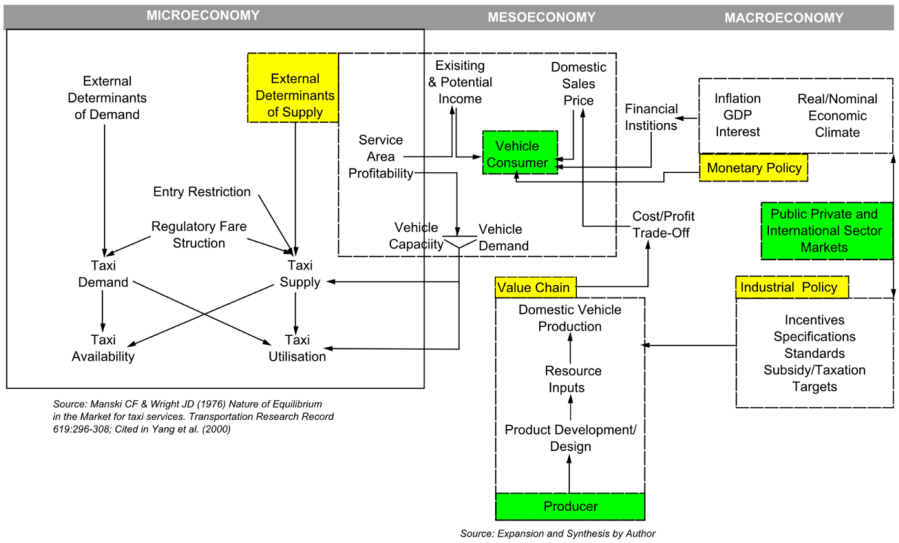

Figure 1: This figure presents the micro, meso and macroeconomic dynamics of the minibus taxi industry as an example

Regulating competition is a mispecified notion if the instruments, inquiry and techniques at a strategic level are limited to the travel economy alone. Changes in transport industries such as manufacturing, import sectors and related value chains may be key entry points to long term modifications in travel behaviour.

The figure illustrates a simlified representation of dynamics between microeconomic operational issues in transport and the macroeconomic dynamics. A particular focus is on the mesoeconomy because that is probably where the greatest interaction takes place. During the hearing, one of the questions related fundamentally to where the focus should be: on the supply side or the demand side in terms of regulation. My response remains that I am not certain, and the complexities of this dynamic need deeper exploration. A fundamental conclusion that I drew in the 2016 paper was that:

> *"From a policy making point of view, setting a mesoeconomic agenda to identify and adress industrial policy and travel policy mismatches is crucial if effective implementation is sought. Industrial policies that inform the supply of vehicles in the transportation economy need to be reinforced by the policies related to the travel economy of any transport mode. IN a similar vein, another recommendation for further research is that the treatment of public transport related industries should be structured around holistically accounting for the entire supply chain of activities that make the travel system work. Finally, macroeconomic indicators seem to flow through the*

[9]see pg 45 and Annexure B, of the Budget Review 2018

transportation economy influencing the demand for transit vehicles, and thus the supply of travel services in the travel economy."

3 Regulating transport services providing access to education

The National Learner Transport Policy reflects interactions between the Department of Basic Education and the Department of Transport at various spheres of government. However, the policy observes the provision of learner transport services as a core aspect in the basic education sector– without reflecting the need for and potential existence of transport services related directly to access to education. From an economic regulation point of view, basic and post-school education accessibility should be treated as different classes of a single policy instrument.

3.1 Basic Education

[10] This is increasingly important as learner transport operations are performed by bus and minibus taxi operators contracted either by parents; schools; and or public institutions without appropriately regulated agreements that sustain the livelihoods of the operators and ensure the safety of the learners. A tragic case involves scenarios where learner travel safety is not legislated and driver behaviour in the learner mobility sector is not considered a skill– coordinating energetic toddlers from a front seat can be extremely difficult as they can be out of control midway in the journey. Some operators are full-time scholar transport service providers; while others use the service as part of their daily trip between loading commuters at major transport terminals. Both of these categories remain unmonitored and vulnerable because they are not appropriately regulated through suitable instruments; parents may sometimes not pay them for their services; and there is little labour market intervention within this sector while many are excluded from learner transport contracts along routes and households they've served for an extended period of time.

If access to education is a Constitutional Right, proximity, service design and transport networks should be oriented around providing such access in a fair, equitable and competitive manner. This principle should apply across all essential service markets.

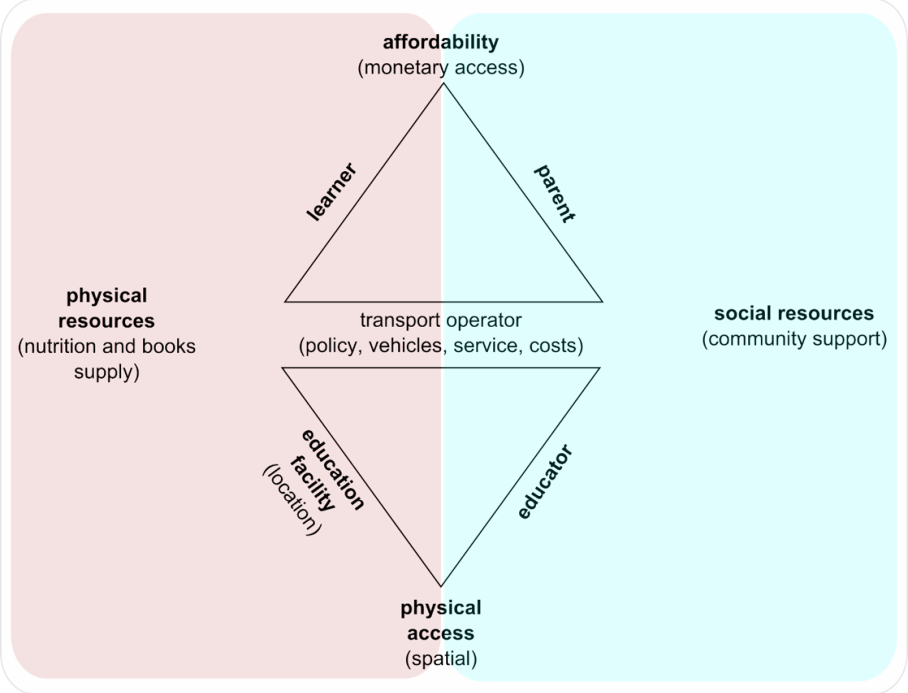

Figure 2: Dimensions of access to education

This particular figure has not been published yet in any of my research work. However, it is part of a report on learner mobility. Generally the figure argues that affordability in terms of

[10]The full paper that discusses these dynamics is titled 'How government should invest and provinces should implement on accessible education: An EVAMIX focus on benchmarking and transport' which was presented at the 35th Southern African Transport Conference in 2016.https://repository.up.ac.za/bitstream/handle/2263/57952/Mokwena_Government_2016.pdf?sequence=1&isAllowed=y

monetary access is derived from learners and parents, and transport operators don't necessarily know the difference. The transport operator is subject to policies, vehicle specifications, service designs and costs related to providing services. At the same time, the operator also makes location decisions based on the learner's school, and the educator also influences the dynamics of physical access because they too need to have access to these education facilities. Both of these result in the simplified view of physical access or spatial access. Within this context, physical resources and social resources interact to manifest the learner and parent-educator dynamics related to access to education. A key element here is that in the competitive market, many operators are not protected and are vulnerable to unfair practices as much as learners and parents may experience unfair or anti-competitive practices. What happens when learner transport services are built into subscription solutions that are shared across various operators based on their availability, will these operators need to be subsidised as a collective or based on the kilometers associated with the service?

3.2 Higher Education

[11] In the post-school sector, 9 of the 26 universities in South Africa have formal scheduled bus services transporting students between campuses, residences and major activity points. Many TVET students use their student cards or other forms of student identification to qualify for discounted tickets in commuter buses and possibly rail transport. These contracts at universities can be free for students such that they are included in the tuition fees, or the university contains the costs of operations and outsources the service. However, across all these market segments, local minibus taxis in the rank and file do not provide this discounted fare found in other transport operations (similar to the targeted categories of users who do not receive access or the benefits of discounted minibus taxi fares, unless the operator chooses to do so). There is no legislation that directly articulates the relationships between transport service providers (TSPs) and education institutions in the post-schooling sector, especially under the policy pressures to make access to post-school education more possible. From a regulatory point of view, perhaps a complexity in this market segment is the fact that they receive an allowance, and may seem to be paying for themselves, but they are actually not economic actors in the market. They only choose transport alternatives, but only incur a relative generalised cost with respect to their individual budget which may or may not be commensurate with their household income. Some students have private cars, others do not. Some depend on the contracted service, and another transport service to complete the journey. Furthermore, many graduates are most susceptible to car aspirational behaviour– and are therefore most likely to purchase a private car which will inevitably compete with public transport. From a long term average cost perspective, it does seem sensible to invest in reducing their proclivity to using private cars by providing high quality public transport services for their aggregate day in hope of manifesting a choice user even as her income rises post-graduation.

4 Land transport labour markets and essentialisation

[12]

The essentialisation of public transport, or at least parts thereof was tabled at the CCMA recently, during the course of a market enquiry into the sector under consideration for essentialisation. Therefore, the hearings took place without complete information of the competitive market dynamics and matters arising from the enquiry because consideration took place in parallel with the enquiry. This type of institutional behaviour is symptomatic of two potential problems: first, that the Essentialisation Committee (EC) is making a complementary step to add value to the Competition Commission Market Enquiry; secondly, if the EC makes a decision without full information from the CCMA then it would be making a decision irrationally subject to skewed submissions that do not account for competitive market behaviour. Another alternative problem may emerge as the EC considers public transport as essential only within

[11] The full paper that discusses these dynamics is titled 'Estimating student travel preferences in Mahikeng: A latent class approach based on behavioural indicators' which was presented at the International Choice Modelling Conference in 2017. `http://www.icmconference.org.uk/index.php/icmc/ICMC2017/paper/view/1276/0`

[12] The letter that was submitted to the National Minister of Transport was published online as a note on the issue, highlighting the dynamics between operators, users and companies. `https://hlulani.com/2018/04/24/wrong-to-strike-with-the-right-to-proposing-a-regulatory-shift-in-the-bus-labour-market/`

the current legislative infrastructure without accounting for crucial dynamics that make the transport sector unique and invaluable in this time– conditions of which may change in future.

It is of increasing importance to regulate transport labour markets in a manner that accounts for both labourers and commuter markets. This is specifically important as mobility is not only an economic instrument, it is also the means essential service providers access their points of service. It is also the means through which essential services are accessed.

4.1 Specific Concerns Related to the Essentialisation of Public Transport (and or Parts Thereof)

As a point of departure, transport related labour unions have within this year mobilised operators against employees during deadlock periods in wage negotiations. This has extended as far as the need for the Minister of the Department of Transport to intervene. Similarly, minibus taxi operators have had instances in which they were protesting key market dynamics, demonstrating their potency as a custodian of the majority of motorised land passenger transport mobility (MLPTM). Gautrain operators have also been seen striking against employer behaviour and arguing that the wage increases should take place and that there is limited transparency from the employer. This is under a backdrop of a generally contracting economy– wherein productivity is more valuable the income, and firms are increasingly under both market and labour pressures: clearly the labour market has found a significant bargaining tool used effectively across various sectors.

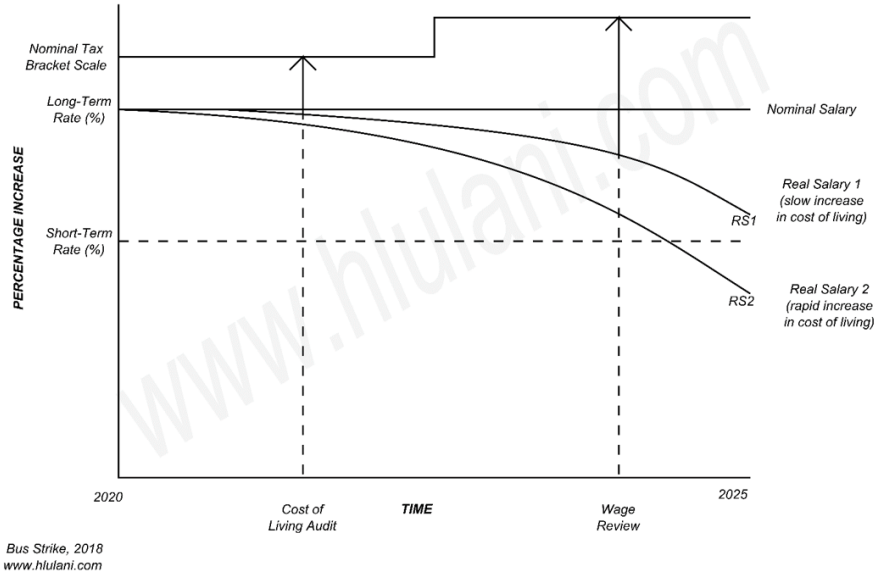

Figure 3: Cummulative value decline in terms of real salaries if long term wage reviews do not take place

If a fixed long-term increase is put on the table, it should be high and leveraged through a liability framework that is interest free, and can be allocated to growth funds or paid directly to employees. The nominal salary will be a cost-pushing burden on operating companies, and will increase the subsidy bill. At the same time, it may improve the quality of operations and force innovation and driver management solutions within the 5 year space. Someone has to fit the bill for this welfare based solution.

The importance of "strikes" as a source of bargaining power around the world has been supplemented by the fact that many public transport users are choice users of public transport, and the service offerings are diverse, integrated and efficient. In other words, all commuters have an alternative– they are not captive users of public transport services. Even if they are, the option value remains high and has commensurate service benefit under operator protest conditions– even though commuters would not use it as an alternative under normal travel conditions. Completely stopping mobility and access services for a specific mode or route should be considered as a violent act toward captive commuters under circumstances where a commensurately suitable alternative does not exist. This is specifically because the generalised cost of transport

for different users is distributed uniquely across mode, service and route preferences with respect to the trip purpose, time of day and total journey costs with respect to time. A general stoppage of services may be the most convenient "last resort" for transport operator unions, however this comes at an excessive cost to commuters and the long term use of public transport. Furthermore, if strike action, or deadlock behaviour occurs each year due to short term wage increase agreements, then the labour markets unions attempt to protect may well be exposed to substantial vulnerability. In the case of SANRAL and the Gauteng Freeway Project, SANRAL issued a policy statement indicating that road tolling, congestion charging or any travel demand measure implemented by the Agency would be supplemented by a commensurately viable alternative. It is plausible to argue that the initial viability of the Gautrain may have been due to the GFP, and the train is for some a better alternative across multiple dimensions of service and spatial accessibility. If some parts of public transport were to be essentialised that a more complex structure of "strike action" and bargaining power dynamics would be necessary– in addition to the penalties both unions and employers may be faced with if their actions increase the generalised cost of commuters unnecessarily. This is in order to contain the welfare gains of public transport subsidies, and the benefits of commuter transport operators keeping the social, political and commercial economy moving. In particular, many of the Constitutional rights depend heavily on "accessibility". The Guidelines on Access to Public Service Points clearly indicate the importance of spatial optimality in locating Government Service Points, but this spatial optimality also depends of public transport network design. Making the implementation of the South African Constitution a function of public transport services especially in related essential sectors such as education, healthcare and personal development.

5 Regulation of technology, data, information and service systems

Transportation systems thinking and practice requires a broad array of institutional infrastructure to facilitate the dynamic nature of market development (i.e. innovation) and the pace of deeply consultative public participation systems in the policy making process. As larger volumes of data can be collected, stored and converted for analysis and distribution the potential for error, algorithmic complexity and market level value-adding applications require a vast array of unique resources and commensurate regulatory instruments. The most pressing of these include:

It is of increasing importance now to expand the scope of interaction between transport policy and data management. Data collected by private and public entities should be regulated and fundamentally aligned with transport policy positions, their implementation and continuous evaluation.

5.1 Transport Functions and Data Regulation

Transport authorities with the ability to formulate, absorb and implement mobility and access related technology, data, information and service systems in a manner that accounts for the experimental nature of unique and site specific interventions that add value to local municipal level dynamics. This is fundamentally a complex system design issue between spatial demarcations bent by mobility and access behaviours that transcend the borders of municipalities, provinces and nations–for short and long distance trips; and broader policy formulation processes and their geographic dynamics of representation, power and particularly Ward level representation. A particular regulatory concern from a data management context is the nature of, and standardisation requirements between municipalities across transport plans and related plans with respect to both the Spatial Planning and Land Use Management Act 16 of 2013 and the proportional access, use and sharing within the context of the Demarcation Board. In order for transport authorities to function effectively, their functional dimensions need much greater levels of responsiveness to (a) consistently collect good quality data in a safe, constructive and valuable manner with near-immediate use; (b) account for the various SMEs that pollinate the data collection industry in SA through appropriate procurement schemes; and (c) enable municipalities to be flexible and capable of experimentation with various methods, techniques and designs. These are particularly important policy interventions, and they are fundamental for the production, distribution and market access dimensions related to competition between transportation systems, their liberalisation, deregulation and regulation across various spheres of government and municipal capacities. The non-responsiveness of municipalities with regard to Commercial Transport Applications' entry to the market can be associated with the murder, violence and intimidation manifesting itself between the incumbent operators and the new entrants– "law enforcement" is essentially not only related to police intervention, but the enforcement of

long-standing transport policies and regulation. Poor transport economic regulation has quite frankly taken more than enough lives from families, households, communities and associations– the availability of appropriate data, engagement techniques and their protection/distribution will and are profoundly essential. It is clear however, that the policy position does not reflect the dire circumstances confronted by institutions, labour and society across all municipalities, especially with regard to the importance of and economic value of data.

5.2 Public Participation Asset Creation, Retention and Distribution

Public participation methods, information systems and incorporation techniques to enable public entities to further absorb public inputs more robustly, and with greater levels of care, depth, empathy and empirical rigour. In the context of economic regulation and competition, the reduction of asymmetries between policies formulated and market realities, needs and preferences in supply and demand side contexts can produce substantial benefits. Public participation in the context of transport planning and policy making is one way to understanding the essence of competitive, complementary and institutional issues unclear in traditional surveying methods. Empirical approaches to structuring public participation are of importance because they can differentiate the policy processes that exist from the processes followed in practice; to the same extent that 'policy problems' are specified and are in proximity to the true problem experiences stakeholders have. The treatment of public participation as an asset may be viewed as a gateway to capturing the true narratives of (among others):

- Minibus Taxi Marshals, Associations, Councils, Commuters and Industry
- Commercial Transport Application providers, designers, engineers and practitioners
- Non-motorised Transport Associations, Bodies, Stakeholders and Agencies
- Wards and Community Representatives
- Education Institutions
- Labour Unions
- Government Agencies
- Targeted Categories of Users
- Law Enforcement Entities
- Passenger Rail Stakeholders
- Long-Distance and Cross-Border Stakeholders

From a regulatory point of view, the policy position on so-called public hearings is constrained by the methodological infrastructure and techniques employed to critically analyse the system of values represented across various sectors, speakers and stakeholder inputs. This is partly because public participation may not be considered as a data point, but a minimum requirement. Another part could be because conceptually, qualitative data tends to be considered as non-empirical and thus open for interpretations. However, core problem with the lack of appropriate institutional infrastructure to respond to the participatory activities results in bias, poor quality data capturing (especially in the form of minute taking) and a reproduction of asymmetries that engagements should redress. On account of this, "human data" is perhaps a much ignored element in the policy structure, and may be at the forefront of reproducing the market distortions that have plagued the passenger mobility and access economy to date.

5.3 Transport Statutes, Outputs and their Relationship with National Surveys

[13] Policy making systems that account for the use, management, regulation and protection of various avenues, partitions and attributes of data housed and shared by private, and public

[13] I have discussed this abstractly, and shared it with officials at Statistics South Africa, however I have not recieved feedback on the matter. https://medium.com/@Hlulani/nhts2018-transport-or-statistics-caac898d7a65

entities in the transport sector (i.e. commercial transport applications; operating license data; integrated ticketing policies; and consumer protection prerequisites). A key case in point here is the use and application of the National Household Travel Survey (NHTS). The NHTS is a "large" scale survey in South Africa that samples approximately 50 000 persons throughout the country and provides analytical data that is most useful at a Provincial level (although it is indicated that the data should be used for national travel analysis). The NHTS is to a large extent a powerful survey for broader strategic transport analysis that would inform the National Transport Master Plan, and is equivalent to perhaps the Land Transport Survey (as published by Statistics South Africa), and the National Freight Transport Model (see Jan Havenga's work with the Council for Scientific and Industrial Research). It is powerful specifically for applying policy outputs such as the NATMAP, not necessarily for implementing the NLTA. This is specifically because the survey is not structured to interact with the NLTA, as the NLTA itself does not articulate the appropriate household level transport system objectives– especially from a behavioural level. This is, to the author's knowledge, only visible in the National White Paper on Transport Policy– which in itself should be a core proponent of the parameters that the NHTS operates within. However, this is not necessarily the case because the NHTS could not be used to detect emerging travel behaviour preference changes as new transport service dimensions emerged in the broader transport system– ranging from the use of Commercial Transport Applications; to the dynamics of the transport labour market; the manner in which households construct their travel patterns; and the price, service and system elasticities. These are all rather crucial components of constrict infrastructure and require appropriate datasets built into the policy making process. Instead, the inefficiencies of the NHTS reveal that the NLTA as a regulatory instrument is largely procedural and prescriptive and does not make tangible transport system regulatory contributions. In this sense, then it is appropriate that the NHTS does not reflect the NLTA, but the core question should be: what value should the NHTS add to transport policy making with respect to domestic transport needs and international best practice?

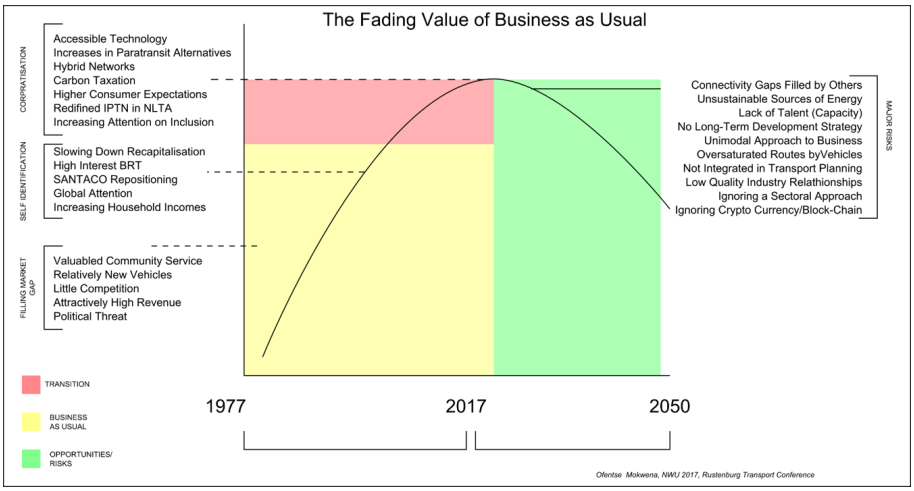

Figure 4: A conceptual framework for the evolution of the minibus taxi industry when accounting for various potentialities

5.4 Institutional Dynamics of Mobility and Access Planning and Integration

[14] Transport planning and transport authority data collection, management and distribution should begin to reflect and enable the implementation of transport functions and facilitate modal integration and derive transport system efficiencies. The regulatory infrastructure around transport intelligence (one example are Intelligent Transport Systems) seem to depend on local level transport planning models, their parameters and standard practices related to validation and evaluation. While transport planning is tied to Integrated Development Planning and Provincial

[14]My view is that the paratransit economy will evolve and access other markets once the momentum for expansion grows. This spanning behaviour is expected to stretch beyond public transport as SANTACO has indicated in its strategic (especially TR3 2020) documents and I have argued here: `https://hlulani.com/2018/01/16/shifting-the-paratransit-value-chain/0`

and Municipal levels, a large number of municipalities do not integrate their development planning with transport plans– or vice versa. While this may relate to capacity, it does relate to the manner in which data between various planning activities is transferred across various functions, in a standardised, and useful manner. There are a number of parameters that are essential for transport planning that transcend the route, facility and corridor utilisation facets of the current Transport Register, and delve deeply into travel demand and transport systems regulatory issues. While the NLTA only specifies the Operating Licence Management Systems, and other related management systems should be developed and managed their functional use, accessibility for planning purposes and implementing the formation of such data management/distribution efforts are limited. This produces important transport plans for the current institutional infrastructure, but they will not be sufficient and cooperative across various transport modes, systems and services available and emerging in the market in the medium-to-long term.

6 Transport Functions: Implementation and Contact Points

[15]

Devolved transport functions are not just for capital intensive transport systems, but for minute elements in the administration and implementation of transport policies. Local municipalities are the direct contact points between public sector and communities. Capacity on the ground is the core cog in service delivery.

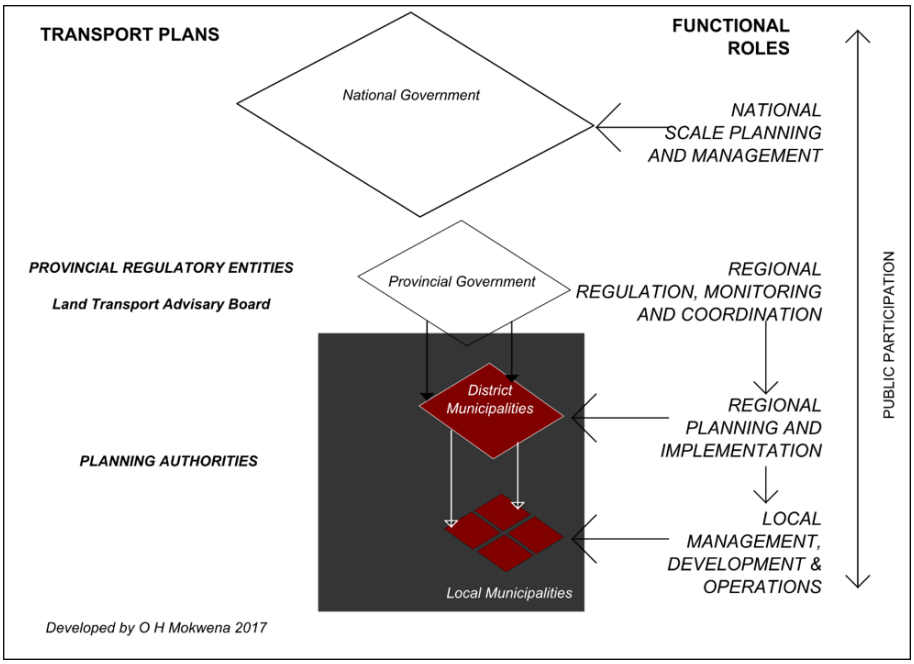

Figure 5: The transport function devolution framework and functional roles

The devolution of transport functions is a policy position found in the White Paper –old and new. Functions are specified for national, provincial and municipal spheres of government. However, the implementation of transport economic policy and the regulation of the market actually requires 'warm bodies' occupying various positions specifically related to transport. This effort is evidenced across municipalities, and the sole association of transport services with infrastructure, and not the actual mobility and access service it narrates is an expensive institutional problem. Devolving transport functions means transport entities, systems and bodies (i.e. pressure groups) can have a point of contact regarding transport planning, regulation, administration and general service experiences. It is also a place where the appropriate allocation of funds can be administered and distributed accordingly with regard to specific improvements, changes and market investments. One of the main reasons why Commercial Transport Applications and related Transport Network Companies seem to shock the South African transport economy is because they entered the market without much institutional readiness–in both for-

[15]This is a process I've been part of across multiple municipalities so far. Only one province has established the right formations. However, I am guided by submissions to the 2015/16 Division of Revenue from Ghaleb Dawood and Mathetha Mokonyama titled 'Effective assignment of transport functions to municipalities: Towards an optimal transport system'. A particular point of reference regarding the functions that need to be devolved and acted upon are outlined in the NLTA no 5 of 2009, Section 11(c).

mal and self-informed sectors (i.e. minibus taxi, meter taxi). Violence erupted potentially as a result of poor access to engagement spaces and a high dependence on equating policing with law enforcement. Devolved transport functions enable municipalities to enforce the law in an engaged and participatory manner.

They also enable highly disaggregated solution generation, and much greater innovation from the bottom-up which could improve the competitive land-scape and the relationship between NDoT and the spheres of government. From a competitive regulatory perspective, the only way in which municipalities can absorb available capacity to implement policies is if transport functions are accessible and instruments exist for implementation. One particular concern is that there is no funding programme, to the author's knowledge related to granting direct support to the new transport functions and their operations. It is rather an oversimplification that these functions only involve shuffling institutional agents which would result significant conflict and no reliable framework for coordinating competition.

7 Closing Remarks

Although this note is an non-exhaustive one, there are a number of land-passenger issues that I do not discuss. Specifically those related to long distance transport, and passenger-freight transport. Nor do I discuss the State Owned Enterprises and their core competitive and anti-competitive behaviours. This is partly due to the notion that the pressing issues are the ones listed here in the short-term. In particular:

- Competition regulation across the value chain of transportation and travel economic systems needs to occur in order to effectively regulate the market or liberalise certain aspects of the market to derive the greatest welfare.
- The value of the car and other dimensions to land passenger transport regulation need broader consideration in the regulatory framework of transportation systems. Distance consumption is at the heart of the issue, cars are only vehicles that contain the distances demanded by households as a result of their proximity to these trip purposes.
- Regulating transport services providing access to education is an essential activity for the effective development of SA. However, the challenge is whether the market is sufficiently coordinated, and whether it represents the genuine systems in place. Potentially regulating the competitive spectrum of education mobility may serve as a gateway to other public transport service markets.
- Land transport labour markets and essentialisation is a balancing act between bargaining power, equitable pay and effective welfare containment for consumers and operators alike. We may need to consider the extent to which we could construct some sectors of the passenger transport market in a manner that is professionalised and governed by daily-structured-programmes (i.e. teaching, nursing, correctional services and policing).
- Regulation of technology, data, information and service systems is fundamentally the relationship between signals to policy makers and the receiving systems that public entities have capacities to absorb. The other side, is the need for both new regulatory schemes, and an alignment between data, information and systems with the policy goals, objectives and targets across ward, municipal, provincial and national levels.
- Transport functions, implementation and contact points of and for service delivery are at the heart realising a value chain wide regulatory scheme that enables vast arrays of competitive behaviour. Competition that is fair across various sectors and spheres of formal and informal institutions. Integrated in the planning and budgeting systems, transport functions will add long term value to the effectiveness of enabling, facilitating and enabling competition across various instruments[16].

These are in my view the lowest hanging fruits in the policy making space, in addition to the guided urban transport initiatives described in the White Paper on National Rail Policy, Roads Policy and Intermodal Transport Discussion Document.
This document did not go through language editing.

[16] In the North West Province this process has already begun.